

PROJECT MANUAL

FOR

HIGHLAND DRIVE NORTH PEDESTRIAN PATHWAY

VILLAGE OF ELM GROVE

WAUKESHA COUNTY, WISCONSIN

RUEKERT & MIELKE, INC.
W233 N2080 Ridgeview Parkway
Waukesha, WI 53188-1020

February 29, 2024

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SEALS PAGE

HIGHLAND DRIVE NORTH PEDESTRIAN PATHWAY
VILLAGE OF ELM GROVE
WAUKESHA COUNTY

ENGINEER:

RUEKERT & MIELKE, INC.
W233 N2080 RIDGEVIEW PARKWAY
WAUKESHA, WI 53188

FOR:	ENTIRE PROJECT  Peter W. Gesch, P.E. LICENSE NO. 49070-6		

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ADVERTISEMENT FOR BIDS

Highland Drive North Pedestrian Pathway

Village of Elm Grove
Waukesha County, Wisconsin

Sealed Bids will be received by the Village of Elm Grove at 13600 Juneau Boulevard, Elm Grove, WI 53122 no later than 10:00 a.m. local time on Thursday, March 14, 2024. Bids will be publicly opened and read aloud at the above time and place.

Project involves approximately 2,650 L.F. of 6-foot wide multi-use asphalt pathway construction, concrete ADA ramp construction, storm sewer and culvert construction, ditch re-grading, railroad crossing improvements and coordination, curb and gutter replacement, asphalt paving, tree removal, clearing and grubbing, pavement markings, sign installation, and landscape restoration.

The Project Manager for this Project is Peter W. Gesch, P.E., who may be contacted at Ruckert & Mielke, Inc., W233 N2080 Ridgeview Parkway, Waukesha, WI 53188-1020, (262) 542-5733 regarding the Project.

All Work is included in a single prime contract.

Bidding Documents, including Drawings and Specifications, may be examined at the offices of the Village of Elm Grove, and the Consulting Engineer during regular business hours.

Digital project Bidding Documents are available at www.ruckertmielke.com for a fee of \$40. These documents may be downloaded by selecting this project from the **PROJECT BIDS** link under the **RESOURCES** tab and inputting Project Number Quest #8994976 in the website's Browse Projects Search field. Please contact QuestCDN.com at 952-233-1632 or info@Questcdn.com for assistance in free membership registration, downloading, and working with this digital project information. QuestCDN is the Issuing Office.

Partial sets of Bidding Documents are not available. Neither Owner, Engineer nor Issuing Office is responsible for full or partial sets of Bidding Documents, including any Addenda, obtained from other sources. The cost of Bidding Documents is non-refundable. Each entity obtaining Bidding Documents from the Issuing Office will be designated as a Plan Holder of Record. Bids received from entities who are not Plan Holders of Record may be returned as being nonresponsive.

A Bidder's qualification statement must be delivered to the Village of Elm Grove at least 5 days before the Bid opening date. Bids shall be accompanied by a Bond or Certified Check payable to the Village of Elm Grove equal to 5 percent of the Bid. If the successful Bidder fails to execute the Contract and furnish payment and performance bonds within 15 days after the award, the Check or Bid Bond may be forfeited to the Village of Elm Grove as liquidated damages.

Construction time is of the essence. Completion delays are subject to liquidated damages.

The Village of Elm Grove reserves the right to accept the most advantageous Bid, or to reject any and all Bids. Award of Work described herein is subject to the provisions of the Wisconsin Statutes.

Village of Elm Grove

Thomas Harrigan

Village Manager

RUEKERT & MIELKE, INC.
W233 N2080 Ridgeview Parkway
Waukesha, Wisconsin 53188-1020
Phone: (262) 542-5733
Fax: (262) 542-5631

Posted by the Village of Elm Grove to its website from February 29, 2024 through March 14, 2024.

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 - DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued.
 - B. *Plan Holder of Record* - An individual or entity that obtains Bidding Documents from the Issuing Office.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may only be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Each entity obtaining Bidding Documents from the Issuing Office will be designated as a Plan Holder of Record. Bids received from Bidders who are not Plan Holders of Record may be returned as non-responsive.
- 2.04 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit written evidence establishing its qualifications such as financial data, previous experience and present commitments as prescribed in, and within the time limit stated in, the advertisement or invitation to bid. The sworn statement of qualifications shall be submitted on the form of questionnaire furnished with the Bidding Documents.
- 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.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 - EXISTING SITE CONDITIONS, EXAMINATION OF SITE AND OTHER WORK AT SITE

- 4.01 Existing Site Conditions
- A. Subsurface and Physical Conditions
 - 1. There are no reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site or drawings of physical conditions relating to existing or subsurface structures (except Underground Facilities).
 - B. Hazardous Environmental Conditions.

1. There are no reports or drawings known to Owner related to Hazardous Environmental Conditions at the Site.

C. Underground Facilities

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

D. Adequacy of Data Furnished.

1. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions.
2. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.02 Site Visit and Testing by Bidders

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder 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.
- D. Bidder shall 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, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.
- F. The General Conditions indicate that if an Owner's safety program exists, it will be noted in the Supplementary Conditions.

4.03 Other Work at 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 or copies of contract documents (other than portions thereof related to price and other confidential matters), if any, for such other work.

ARTICLE 5 - BIDDER'S REPRESENTATIONS

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

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider 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 Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 - PRE-BID CONFERENCE

6.01 There will be no pre-Bid conference.

ARTICLE 7 - SITE AND OTHER AREAS

7.01 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment are to be obtained and paid for by Contractor.

ARTICLE 8 - INTERPRETATIONS AND ADDENDA

8.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all Plan Holder's of Record. Questions received from Bidders that do not, in Engineer's opinion, allow sufficient time to respond prior to the date for opening of Bids will not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

8.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 9 - BID SECURITY

9.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 of the General Conditions.

9.02 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 Documents, 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 Documents 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. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

9.03 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 seven days after the Effective Date of the Contract or until the Bid holding period stated in the Bid Form expires, whereupon Bid security furnished by such Bidders will be released.

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

ARTICLE 10 - CONTRACT TIMES

10.01 The number of days within which, or the dates by which, any Milestones are to be achieved and the Work is to be substantially completed and completed and ready for final payment are set forth in the Agreement.

ARTICLE 11 - LIQUIDATED DAMAGES

11.01 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 12 - SUBSTITUTE AND "OR-EQUAL" ITEMS

- 12.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during bidding and Contract award process of possible substitute or "or-equal" items. In cases where the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 12.02 All prices that Bidder sets forth in its Bid shall 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 13 - SUBCONTRACTORS, SUPPLIERS AND OTHERS

- 13.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 13.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 13.03 The apparent Successful Bidder, and any other Bidder so requested, shall, within five days after the Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work along with an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity so requested.
- 13.04 If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall 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.
- 13.05 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, or other individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 14 - PREPARATION OF BID

- 14.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, 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.”
- 14.02 A Bid by a corporation shall 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 for receiving notices and state of incorporation shall be shown.
 - 14.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership for receiving notices shall be shown.
 - 14.04 A Bid by a limited liability company shall 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 for receiving notices shall be shown.
 - 14.05 A Bid by an individual shall show the Bidder’s name and official address for receiving notices.
 - 14.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture for receiving notices shall be shown.
 - 14.07 All names shall be printed in ink below the signatures.
 - 14.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
 - 14.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

ARTICLE 15 - BASIS OF BID

- 15.01 Unit Price
 - A. Bidders shall 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 16 - SUBMITTAL OF BID

- 16.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.

- 16.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in 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 shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to the Owner at the address stated in the advertisement or invitation to bid.
- 16.03 Bids received after the date and time prescribed for the opening of the 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 17 - MODIFICATION AND WITHDRAWAL OF BID

- 17.01 Modification or withdrawal of Bids shall comply with Wisconsin Statutes.

ARTICLE 18 - OPENING OF BIDS

- 18.01 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 19 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 19.01 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 20 - EVALUATION OF BIDS AND AWARD OF CONTRACT

- 20.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder, which Owner finds, after reasonable inquiry and evaluation, to not be responsible. 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, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 20.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 20.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - 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.
- 20.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Contract Documents.

- 20.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.

ARTICLE 21 - BONDS AND INSURANCE

- 21.01 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 and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 22 - SIGNING OF AGREEMENT

- 22.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unexecuted counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement and other required documents to Owner. Within 10 days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder. If requested by either party, each counterpart shall be accompanied by a complete set of the Drawings with appropriate identification.

ARTICLE 23 - SALES AND USE TAXES

- 23.01 Each Bid shall include all sales and other taxes in effect at the time the Bid is submitted. Bidders who are uncertain as to which items are subject to tax or require explanation or clarification should contact the appropriate governmental agency.

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BID FORM

Highland Drive North Pedestrian Pathway

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Village of Elm Grove
13600 Juneau Boulevard
Elm Grove, WI 53122

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder; 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 any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the items required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. 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.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. 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;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 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;
 - 2. "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;
 - 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.

ARTICLE 5 – BASIS OF BID

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

A. UNIT PRICE BID

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1.	Mobilization	L.S.	1		
2.	Traffic Control	L.S.	1		
3.	Manufactured perimeter control devices	L.F.	865		
4.	Manufactured ditch checks	EA.	16		
5.	Inlet sediment guards, Type D	EA.	11		
6.	Field stone riprap	TON	24		
7.	Clearing and grubbing	L.S.	1		
8.	Tree Removal	L.S.	1		
9.	Storm sewer main, 12-inch CMP, w/ granular backfill	L.F.	260		
10.	Storm sewer main, 18-inch CMP, w/ granular backfill	L.F.	148		
11.	Storm sewer main, 24-inch CMP, w/ granular backfill	L.F.	6		
12.	Storm sewer main, 36-inch CMP, w/ granular backfill	L.F.	36		
13.	Storm sewer manhole, 84-inch	EA.	1		
14.	Field inlet, 2x3-feet	EA.	6		
15.	Storm sewer end section, 12-inch CMP	EA.	3		
16.	Storm sewer end section 18-inch CMP	EA.	1		
17.	Storm sewer end section 36-inch CMP	EA.	1		
18.	Construct multi-use path to subgrade	L.S.	1		
19.	Remove and salvage miscellaneous landscaping	L.S.	1		
20.	Excavation below subgrade (EBS), if required	C.Y.	225		

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
21.	Geotextile subgrade stabilization, if required	S.Y.	675		
22.	Excavation below subgrade (EBS) backfill, if required	TON	450		
23.	Crushed aggregates base course	TON	1,000		
24.	Concrete curb and gutter replacement	L.F.	30		
25.	6" Concrete ramp and landing	S.F.	450		
26.	Detectable warning field	S.F.	120		
27.	3-inch Asphaltic concrete multi-use path	S.Y.	1,650		
28.	4-inch Asphaltic concrete pathway through driveways and driveway replacement (two layers)	S.Y.	300		
29.	Asphalt ditch replacement	S.Y.	90		
30.	Pavement marking, 18-inch white stop bar, paint	L.F.	85		
31.	Pavement marking, 6-inch white crosswalk, paint	L.F.	355		
32.	Railroad signs	EA.	6		
33.	Railroad sign posts	EA.	4		
34.	Remove and reinstall mailbox, if required	EA.	5		
35.	Topsoil, turf grass seed, fertilizer and erosion matting	S.Y.	2,600		
36.	CPKC Railroad Flagger Allowance	L.S.	1	\$12,000	\$12,000
Total of All Bid Prices					

Unit Prices have been computed in accordance with Paragraph 13.03 of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

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

00 41 00-4

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security.
- B. Article 9 – Bid Submittal.

ARTICLE 8 – DEFINED TERMS

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

SAMPLE ... NOT FOR BIDDING

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ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by: _____

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Date of Qualification to do business in Wisconsin: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Attest _____

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Address for Receiving of Notices: _____

Contact Name: _____

Phone No: _____ Fax No: _____

E-mail Address: _____

SUBMITTED on _____, 20____.

Notary Attest:

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

Notary Public - State of _____

My Commission expires: _____

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:

BID

Bid Due Date:

Description *(Project Name and Include Location)*:

BOND

Bond Number:

Date *(Not earlier than Bid due date)*:

Penal sum _____ \$ _____
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur 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 shall 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 shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall 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 Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall 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 Registered or Certified Mail, return receipt requested, postage pre-paid, and shall 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 shall 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 shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

AGREEMENT

THIS AGREEMENT is by and between the Village of Elm Grove ("Owner") and _____ ("Contractor").

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:

Project involves approximately 2,650 L.F. of 6-foot wide multi-use asphalt pathway construction, concrete ADA ramp construction, storm sewer and culvert construction, ditch re-grading, railroad crossing improvements and coordination, curb and gutter replacement, asphalt paving, tree removal, clearing and grubbing, pavement markings, sign installation, and landscape restoration.

ARTICLE 2 - THE PROJECT

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

Highland Drive North Pedestrian Pathway

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by Ruckert & Mielke, Inc.

3.02 The Owner has retained Ruckert & Mielke, Inc. ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01 Time of the Essence

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

4.02 Dates for Substantial Completion and Final Payment

A. The Work will be substantially completed on or before September 13, 2024, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before June 30, 2025.

B. Parts of the Work shall be substantially completed on or before the following Milestones:

Milestone 1. Follow sequencing requirements in 01 35 13 of Project Manual and follow restoration requirements in construction sequence on Drawings.

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 times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. 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 \$1,225.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A. 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 \$425.00 for each day that expires after such time until the Work is completed and ready for final payment.
 3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will be imposed concurrently.
 4. Milestones: Contractor shall pay Owner \$575.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.

4.04 Special Damages

- A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering construction observation, inspection and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 - CONTRACT PRICE

- 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) stated in Contractor's Bid, attached hereto as an exhibit:

Total of all Bid Prices (Unit Price Work): \$ _____

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 account of the Contract Price on the basis of Contractor's Applications for Payment once each month during performance of the Work as provided in Paragraph 6.02.A.1 below. 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. Ninety-five percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional 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 as Engineer shall determine in accordance with Paragraph 15.01.C.6 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.

- 1. Prior to Owner reducing any retainage amount, Contractor shall furnish consent of surety to reduction in retainage.

6.03 Final Payment

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

ARTICLE 7 - INTEREST

- 7.01 All moneys not paid when due as provided in Article 15 of the General Conditions shall bear interest at the statutory rate of the State of Wisconsin.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. 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 any Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
 - F. 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.
 - G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 - H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 - I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
 - J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in this Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 00 52 00-1 to 00 52 00-7, inclusive).
 - 2. Performance bond (pages 00 61 13.13-1 to 00 61 13.13-2, inclusive).
 - 3. Payment bond (pages 00 61 13.16-1 to 00 61 13.16-2 inclusive).
 - 4. General Conditions (pages 00 72 00-1 to 00 72 00-72, inclusive).
 - 5. Supplementary Conditions (pages 00 73 00-1 to 00 73 00-10, inclusive).
 - 6. Specifications as listed in the table of contents of the Project Manual.
 - 7. Drawings listed on the attached sheet index.
 - 8. Addenda (numbers __ to __, inclusive).
 - 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages 00 41 00-1 to 00 41 00-7, inclusive).
 - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 Terms

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

10.02 Assignment of Contract

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, 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.

10.03 Successors and Assigns

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

10.04 Severability

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

10.05 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 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing 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.

10.06 Other Provisions: None.

IN WITNESS WHEREOF, Owner and Contractor have signed two (2) copies of this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

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

OWNER:

CONTRACTOR:

For: VILLAGE OF ELM GROVE

For: _____

By: _____
(Signature)

By: _____
(Signature)

(Print Name)

(Print Name)

Title: _____

Title: _____

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

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

13600 JUNEAU BOULEVARD

ELM GROVE, WI 53122

This is to certify that provisions have been made to pay the expense that will accrue under this Contract.

Clerk, Treasurer, or other designated Official

Approved as to form:

(Attorney for Owner)

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HIGHLAND DRIVE NORTH PEDESTRIAN PATHWAY

VILLAGE OF ELM GROVE WAUKESHA COUNTY, WISCONSIN

SHEET INDEX

<u>SHEET NO.</u>	<u>LOCATION</u>	<u>DESCRIPTION</u>
<u>GENERAL</u>		
INDEX-01		INDEX SHEET
GN-01		GENERAL NOTES
<u>EROSION CONTROL</u>		
EC-01 TO EC-03		PROPOSED EROSION CONTROL PLAN - HIGHLAND DRIVE
<u>GRADING</u>		
GR-01		PROPOSED RAILROAD CROSSING PLAN
<u>PAVEMENT</u>		
PV-01	HIGHLAND DRIVE PROPOSED PEDESTRIAN PATHWAY	FROM: HILLSIDE DRIVE TO: 500' NORTH OF HILLSIDE DRIVE
PV-02	HIGHLAND DRIVE PROPOSED PEDESTRIAN PATHWAY	FROM: 500' NORTH OF HILLSIDE DRIVE TO: CLUB DRIVE
PV-03	HIGHLAND DRIVE PROPOSED PEDESTRIAN PATHWAY	FROM: CLUB DRIVE TO: 200' NORTH OF RIDGEMOOR DRIVE
PV-04	HIGHLAND DRIVE PROPOSED PEDESTRIAN PATHWAY	FROM: 200' NORTH OF RIDGEMOOR DRIVE TO: 300' NORTH OF HAWTHORNE DRIVE
PV-05	HIGHLAND DRIVE PROPOSED PEDESTRIAN PATHWAY	FROM: 300' NORTH OF HAWTHORNE ROAD TO: ELM TREE ROAD
PV-06	HIGHLAND DRIVE PROPOSED PEDESTRIAN PATHWAY	FROM: ELM TREE ROAD TO: WEST NORTH AVENUE
<u>INTERSECTION DETAILS</u>		
ID-01		INTERSECTION DETAILS
<u>CONSTRUCTION DETAILS</u>		
DT-01 TO DT-06		CONSTRUCTION DETAILS
<u>CROSS SECTIONS</u>		
CS-01 TO CS-22		PROPOSED HIGHLAND DRIVE PATH CROSS SECTIONS

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PERFORMANCE BOND

CONTRACTOR (*Name and Address*):

SURETY
(*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONSTRUCTION CONTRACT

Effective Date of the Contract:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*not earlier than Effective Date of the Contract*):
Amount:
Modifications to this Bond Form: _____ None _____ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

Print Name

Title

By: _____
Signature (*attach power of attorney*)

Print Name

Title

Attest: _____
Signature

Title

Attest: _____
Signature

Title

OWNER APPROVAL

Signature

Print Name

Title: (*Mayor*) (*President*) (*Chairman*)

Note: Provide execution by additional parties, such as joint venturers. Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

ADAPTED FROM EJCDC C-610 (2013 EDITION) - OWNER APPROVAL ADDED

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall 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 shall not be reduced or set off on account of any such unrelated obligations. No right of action shall 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 may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall 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 shall be applicable.
12. Notice to the Surety, the Owner, or the Contractor shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
16. Modifications to this bond are as follows:

(FOR INFORMATION ONLY - Name)
AGENT or BROKER:

OWNER'S REPRESENTATIVE:
Ruekert & Mielke, Inc.

ADAPTED FROM EJDC C-610 (2013 EDITION) - OWNER APPROVAL ADDED

PAYMENT BOND

CONTRACTOR (*Name and Address*):

SURETY
(*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of the Contract:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*Not earlier than Effective Date of the Contract*):
Amount:
Modifications to this Bond Form: _____ None _____ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on reverse side hereof, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

OWNER APPROVAL

Signature

Print Name

Title: (*Mayor*) (*President*) (*Chairman*)

Note: Provide execution by additional parties, such as joint venturers. Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

ADAPTED FROM EJCDC C-615 (2013 EDITION) - OWNER APPROVAL ADDED

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 satisfy 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 shall 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 shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this bond shall 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:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
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;
4. A brief description of the labor, materials, or equipment furnished;
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;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
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 shall be 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 Document 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this bond are as follows:

(FOR INFORMATION ONLY - Name)
AGENT or BROKER:
ADAPTED FROM EJCDC C-615 (2013 EDITION) - OWNER APPROVAL ADDED

OWNER'S REPRESENTATIVE:
Ruekert & Mielke, Inc.

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



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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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 form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *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, or both; 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, or both; 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; or (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. 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), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree 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 the 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. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *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. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *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.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *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.
28. *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.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *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.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *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.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *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.
36. *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.

37. *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 furnished by Owner which are designated for the use of Contractor.
38. *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.
39. *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.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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.

48. *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 the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the 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:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. 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. 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 Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), 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 executed 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 specifically 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 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.

- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall 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.

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, shall mean 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, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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 Documents 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 Documents 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 shall 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 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 thereunder.
- 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 give written notice to Owner and Contractor 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 editions, 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 shall preclude 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 thirtieth 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 sixtieth day after the day of Bid opening or the thirtieth 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 shall 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 shall 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 shall 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 the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall 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 utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. 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.

- E. Paragraph 8.03 governs 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.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times 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.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- 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; 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 7.12, 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 at law; 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 shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site 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 known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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 upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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 either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 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 the necessity of Owner's obtaining 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 above; 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. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
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; or
 - 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 as 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, or both, then any such adjustment shall 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, or both, 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.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;

- c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. 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 in the Contract Documents, or was not shown or indicated 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), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; 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 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. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, 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. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - 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;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. 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, or both, then any such adjustment shall 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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings*: The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. 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 Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, 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.
- 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 or 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 shall obligate 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 shall obligate 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 all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, 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 shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. 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.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

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. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of 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.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect 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 shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 Contractor's Insurance

- A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 4. Foreign voluntary worker compensation (if applicable).
- B. *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:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall 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, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. 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); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.

8. 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.
- D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *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. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor’s pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds*: The Contractor’s commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor’s professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

4. remain in effect at least until final payment (and longer if expressly required in this Article) 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 Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. 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.

6.05 *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 full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available

under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.

3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
 5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed 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.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- 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 notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.

- E. *Additional Insurance*: 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 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. 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 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 Subcontractors, all individuals or entities identified in the Supplementary Conditions as 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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. 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:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial 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.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of

recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.

- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work 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 any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 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 6.05 shall 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, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

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

7.02 *Labor; Working Hours*

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

- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, 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.

7.03 *Services, Materials, and Equipment*

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

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the 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 material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

- 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- 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 shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall 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 material or equipment from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.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 material or equipment that Contractor seeks to furnish or use. The application:

- a. shall 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 that specified, and
 - 3) be suited to the same use as that 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 that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall 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 shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity 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 five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, 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, Supplier, or other individual or entity, whether initially or as a replacement, shall 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 fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.

- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create 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.

7.07 Patent Fees and Royalties

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

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of 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

7.09 *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.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work 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 shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *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.

7.12 *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. 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.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when 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.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor 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).

- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall 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.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

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

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 threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

- A. *Shop Drawing and Sample Submittal Requirements:*
 - 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified 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
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
 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.D.
 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. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction 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 shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 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.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 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, shall 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, Sample, or other submittal shall 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.D.4.
- E. *Resubmittal Procedures:*
1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
 2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
 3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.

- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
 - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal;
 - 6. the issuance of a notice of acceptability by Engineer;
 - 7. any inspection, test, or approval by others; or
 - 8. any correction of defective Work by Owner.
- D. 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 shall 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 and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their 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 shall not be limited in any way by any

limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

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 at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, anyone for whom Owner is responsible, or any utility owner 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, or both.

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 shall 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. When applicable, any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- 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. 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 to 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.
- C. 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 to Contractor.
- D. 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 shall 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 Documents (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 10.08. 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 *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 Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *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.

10.07 *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.

10.08 *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, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 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 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *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 (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not 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, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* 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 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
 - 3. *Field Orders:* 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change

involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

11.03 *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.

11.04 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall 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); or
 - 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 11.04.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 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
 - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and

11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.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 five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

- d. no fee shall 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 will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
 - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. 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. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 - 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole,

approve it in whole, or deny it in part and approve it in part. Such actions shall 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.

3. *Binding Decision*: Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 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 11.02, (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 in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *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 shall be submitted 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; and
 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.
- 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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall be incorporated in a Change Order 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, 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 property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as 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 shall not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

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 on account of any of the foregoing will be valid.

- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

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, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 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 will 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 therewith 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 shall 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 shall 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 shall 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 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 shall 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, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, 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 shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

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 rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 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 on account of 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. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 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 on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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 that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated 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;
 - l. there are other items entitling 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 shall 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 shall be treated as an amount due as determined by Paragraph 15.01.C.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 seven 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 shall 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 seven 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 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 6.05 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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall 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 disputes that Contractor believes are unsettled; 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 Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. 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. *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.

D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer

(less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- 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 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 terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then 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 other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with

respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not 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, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall 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) ten 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) 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 seven 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 shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; 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 on account of loss of anticipated overhead, profits, or revenue, 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 seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 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, seven days after written notice to Owner and Engineer, stop the

Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph 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; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising 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; or
 - 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 Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

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 shall not constitute a waiver of that provision, nor shall 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 or completion of the Contract or termination 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 *Headings*

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

SUPPLEMENTARY CONDITIONS

Section Includes:

SC-1.01.A	Defined Terms
SC-2.02.A	Copies of Documents
SC-2.03.A.2	Schedule of Submittals
SC-2.03.A.3	Schedule of Values
SC-2.04	Preconstruction Conference; Designation of Authorized Representatives
SC-2.05.A	Initial Acceptance of Schedules
SC-2.05.A.2	Schedule of Submittals
SC-2.05.A.3	Schedule of Values
SC-3.01	Intent
SC-4.01.A	Commencement of Contract Times; Notice to Proceed
SC-5.03	Subsurface and Physical Conditions
SC-5.04.A	Differing Subsurface or Physical Conditions
SC-5.05.B	Underground Facilities
SC-5.06.A	Hazardous Environmental Conditions at Site
SC-6.03	Contractor's Liability Insurance
SC-6.06.A	Waiver of Rights
SC-6.06.B	Waiver of Rights
SC-6.06.C	Waiver of Rights
SC-7.02.A.1	Labor; Working Hours
SC-7.02	Labor; Working Hours
SC-7.02.B	Labor; Working Hours
SC-7.10	Laws and Regulations
SC-7.11.A	Record Documents
SC-7.15.B	Emergencies
SC-7.16.E.2	Shop Drawings, Samples and Other Submittals
SC-10.03	Project Representative
SC-15.01.B.1	Applications for Payments
SC-15.01.D1	Payment Becomes Due
SC-15.06	Application for Final Payment
SC-15.08	Correction Period
SC-17.01.B	Final Resolution of Disputes

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract EJCDC C-700 (2013 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will 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 thereto.

SC-1.01.A Add to the list of definitions in Paragraph 1.01.A by inserting the following as a numbered item in the proper alphabetical position:

Geotechnical Data Report (GDR) — The factual report that collects and presents data regarding actual subsurface conditions at or adjacent to the Site, including Technical Data and other geotechnical data, prepared by or for Owner. The GDR's content may include logs of borings, trenches, and other site investigations, recorded measurements of subsurface water levels, the results of field and laboratory testing, and descriptions of the investigative and testing programs. The GDR does not include an interpretation of the data. If opinions, or interpretive or speculative non-factual comments or statements appear in a document that is labeled a GDR, such opinions, comments, or statements are not operative parts of the GDR and do not have contractual standing. Subject to that exception, the GDR is a Contract Document.

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

Owner shall furnish to Contractor two (2) copies of the Contract Documents and one copy in electronic portable document format (PDF).

SC-2.03.A.2 Delete Paragraph 2.03.A.2 in its entirety.

SC-2.03.A.3 Delete Paragraph 2.03.A.3 in its entirety.

SC-2.04 Add the following new paragraph after Paragraph 2.04.B:

C. At this conference Engineer shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individual shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of Engineer.

SC-2.05.A Delete the first 2 sentences in Paragraph 2.05.A.

SC-2.05.A.2 Delete Paragraph 2.05.A.2 in its entirety.

SC-2.05.A.3 Delete Paragraph 2.05.A.3 in its entirety.

SC-3.01 Add a new paragraph immediately after Paragraph 3.01.E as follows:

- F. Some Specification and Drawing text is written in imperative and streamlined form. This imperative language is directed to Contractor, unless specifically noted otherwise. Include the words "shall be" by inference where a colon (:) is used within sentences or phrases.

SC-4.01.A Delete Paragraph 4.01.A in its entirety and insert the following in its place:

- A. The Contract Times will commence to run on the thirtieth 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 30 days after the time period for acceptance of Bids by Owner stated in the Bid Form or the thirtieth day after the Effective Date of the Contract, whichever is earlier.

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

- C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:
 - 1. None.
- D. The following drawings of physical conditions relating to existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities) are known to Owner:
 - 1. None.

SC-5.04.A Replace the word "promptly" with the phrase "within two days".

SC-5.05.B Replace the word "promptly" with the phrase "within two days".

SC-5.06.A Add the following new paragraphs after Paragraph 5.06.A.2:

- 3. The following reports regarding Hazardous Environmental Conditions at the Site are known to Owner:
 - a. None.
- 4. The following drawings regarding Hazardous Environmental Conditions at the Site are known to Owner:
 - a. None.

SC-6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

- K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>

Employer's Liability:	
Bodily injury, each accident	\$ <u>100,000</u>
Bodily injury by disease, each employee	\$ <u>100,000</u>
Bodily injury/disease aggregate	\$ <u>500,000</u>

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>2,000,000</u>

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

Combined Single Limit of	\$ <u>2,000,000</u>
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4. Excess or Umbrella Liability:

Per Occurrence	\$ <u>5,000,000</u>
General Aggregate	\$ <u>5,000,000</u>

5. Additional Insureds: Include Owner and Engineer.

SC-6.06.A Replace Paragraph 6.06.A with the following:

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Contractor waives all rights against Owner and Owner's respective officers, employees, agents, and consultants for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition,

waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as 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. None of the above waivers shall extend to the rights that Contractor may have to the proceeds of insurance held by Owner as trustee or fiduciary, or otherwise payable under any policy so issued.

SC-6.06.B Replace Paragraph 6.06.B with the following:

- B. Contractor waives all rights against Owner, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Contractor and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial 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.

SC-6.06.C Replace Paragraph 6.06.C with the following:

- C. Any insurance policy maintained by Contractor covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Owner, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.

SC-7.02.A.1 Add the following new paragraph immediately after Paragraph 7.02.A:

1. When a person employed by Contractor, or anyone for which Contractor is responsible, is abusive or disrespectful to the general public or to the Owner's representative, such employee shall, upon written request by Owner, be removed from the Work.

SC-7.02 Add the following new subparagraphs immediately after Paragraph 7.02.B:

1. Regular working hours will be 7:00 A.M. to 7:00 P.M. Monday – Friday. No equipment start-up before 6:30 A.M. Work may be performed on Saturdays between 8:00 A.M. and 5:00 P.M. with Owner written approval. Work outside of regular working hours may be requested and requires Owner written approval.
2. Owner's legal holidays are Memorial Day, Fourth of July and Labor Day.

SC-7.02.B Add the following sentence to the end of Paragraph 7.02.B: Any Work performed on a Saturday or Sunday shall be requested in writing by 4:00 p.m. on the Thursday prior to the work.

SC-7.10 Add the following paragraphs after Paragraph 7.10.C:

- D. Owner and Contractor recognize that applying applicable Wisconsin public records laws to particular records requests can be difficult, in light of copyright and other confidentiality protections. To ensure that applicable laws are followed, both with regard to private rights, and with regard to public records laws, Owner and Contractor agree as follows:
1. When Owner receives public records requests for matters that Owner believes might be proprietary or confidential information, Owner will notify Contractor of the request. Within three (3) days of such notification (subject to extension of time upon mutual written agreement), Contractor shall either provide Owner with the record that is requested, for release to the requestor; or Contractor shall advise Owner that Contractor objects to the release of the requested information, and the basis for the objection. If for any reason Owner concludes that Owner is obligated to provide a record to a requestor that is in Contractor's possession, Contractor shall provide such records to Owner immediately upon Owner's request. Contractor shall not charge for work performed under this paragraph, except for the "actual, necessary and direct" charge of responding to the records request, as that is defined and interpreted in Wisconsin law.
 2. In addition to, and not to the exclusion or prejudice of, any provisions of this agreement or documents incorporated herein by reference, Contractor shall indemnify and save harmless and agrees to accept tender of defense and to defend and pay any and all legal, accounting, consulting, engineering and other expenses relating to the defense of any claim asserted or imposed upon the Owner, its officers, agents, employees and independent Contractors growing out of (i) Owner's denial of a records request, based upon objections made by Contractor, or (ii) Contractor's failure to provide records to Owner upon Owner's request; or (iii) Owner's charges made to a records requestor, based upon reimbursement of costs Contractor charged to Owner in responding to a records request; or (iv) Owner's lack of timely response to a records request, following Contractor's failure to timely respond to Owner as required herein; or (v) Owner's provision of records to a requestor that were provided to Owner by Contractor in response to a records request. Contractor's claims of proprietary rights, or any other copyright or confidentiality claims, shall be waived such that Owner may provide all requested documents, programs, data, and other records to the requestor, upon failure by Contractor to defend, indemnify or hold harmless the Owner as required herein, and/or upon judgment of a court having jurisdiction in the matter requiring release of such records.

SC-7.11.A Delete Paragraph 7.11.A in its entirety and insert the following in its place:

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

SC-7.15.B Add a new paragraph immediately after Paragraph 7.15.A as follows:

- B. In the event it becomes necessary for the Owner to perform emergency maintenance and protection which are the responsibility of Contractor under the Contract Documents, the costs incurred will be charged against Contractor, a Change Order will be issued, and Owner shall be entitled to an appropriate decrease in the Contract Price.

SC-7.16.E.2. Delete Paragraph 7.16.E.2 in its entirety and insert the following in its place:

- 2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than two submittals. Engineer will record Engineer's time for reviewing third or subsequent submittal of a Shop Drawing, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

SC-10.03 Add the following new paragraph immediately after Paragraph 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general with Engineer and Contractor and subcontractors shall only be through or with the full knowledge and approval of Contractor and RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
- C. The RPR shall:
 - 1. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences and other Project-related meetings.
 - 2. 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.
 - 3. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed.
 - 4. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - 5. Inspections, Tests, and System Start-ups:
 - a. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
 - 6. Records:

- a. Prepare a daily report or keep a diary or log book.
 - b. Maintain records for use in preparing Project documentation.
7. Reports:
- a. Furnish to Engineer periodic reports as required of progress of the Work.
 - b. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

D. The RPR shall 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 Contractor's work.
- 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. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
- 8. Authorize Owner to occupy the Project in whole or in part.

SC-15.01.B.1 Delete paragraph 15.01.B.1 in its entirety and insert the following in its place:

- 1. At least forty days before the date established 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.
 - a. If payment is allowed and requested for certain 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 Contractor shall submit three documents: an invoice from the material or equipment supplier which states item's cost; an item-specific invoice, bill of sale, or other

documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein; all of which will be satisfactory to Owner.

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

1. Within thirty days after presentation of Engineer's recommendation of payment to Owner, the amount recommended will (subject to the provisions of paragraph 15.01.E) become due, and when due will be paid by Owner to Contractor.

SC-15.06 Add the following sentence immediately after Paragraph 15.06.A.2.b:

1. Acceptable forms include AIA® G707™ "Consent of Surety to Final Payment", 1994 or later edition.

SC-15.08 Add the following new paragraph immediately after paragraph 15.08.A.4:

5. If Contractor cannot correct defective work within thirty days due to prevailing manufacturing or repair time, Contractor shall promptly provide temporary Work, satisfactory to Owner, until Work can be permanently corrected.

SC-17.01.B Delete Paragraph 17.01.B in its entirety and insert the following in its place:

- B. Final Resolution of Disputes: For any disputes subject to resolution under this Article:
1. Owner and Contractor agree that they shall submit any and all unsettled Claims or counterclaims, disputes, or other matters in question between them arising out of or relating to the Contract Documents or the breach thereof to mediation prior to either of them exercising such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.
 2. Either Owner or Contractor may request mediation of any Claim submitted under Article 12 before such decision becomes final and binding. The request for mediation shall be submitted in writing to the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 12.01.F.
 3. All mediation hearings shall take place in the Greater Milwaukee Metropolitan Area in the State of Wisconsin and shall be held within 30 days after the mediator has been appointed. If Owner and Contractor have not agreed upon a mediator within ten days of the request for mediation, the parties shall jointly request the Chief Judge for the Circuit Courts of the County in which the Project is located to appoint a mediator who shall, if reasonably available in the sole judgment of the appointing Judge, be a retired or former Circuit Court Judge for the County in which the Project is located.
 4. The mediation hearing shall be informal and the mediator shall have the right to hear and review all testimony and evidence presented by either

party. The mediator shall fix their own reasonable compensation and shall assess the costs and charges of the mediation to either or both of the parties as the mediator shall determine to be fair and reasonable. The mediator shall also be authorized, in mediator's sole discretion, to award to the party whose contention is upheld, any sums as the mediator may deem proper for the time, expense, and trouble incident to the mediation. The mediator shall issue a written finding which shall state how the mediator proposes to resolve the dispute between the parties. The mediator's decision shall be rendered within 30 days after the completion of the mediation hearings. The mediator's decision shall not be binding on either party. Both parties agree that mediation is an attempt to settle the matter, and therefore, the results of the mediation, whether written or oral, shall not be used in any proceeding of law thereafter.

5. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by the selected mediator.
6. The mediator of any dispute submitted to mediation under this agreement shall not serve as an arbitrator of such dispute unless otherwise agreed to by both parties.
7. The mediator of any dispute shall not be a witness in any arbitration or legal proceeding related to such dispute unless otherwise agreed to by both parties.
8. If the Claim is not resolved by mediation, Owner or Contractor may:
 - a. agree with the other party to submit the Claim to another dispute resolution process; or
 - b. give written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

END OF SUPPLEMENTARY CONDITIONS

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 LOCATION AND DESCRIPTION

- A. Project is located in the Village of Elm Grove and extends along the west side of Highland Drive between Gebhardt Road and North Avenue.
- B. Project involves approximately 2,650 L.F. of 6-foot-wide multi-use asphalt pathway construction, concrete ADA ramp construction, storm sewer and culvert construction, ditch re-grading, railroad crossing improvements and coordination, curb and gutter replacement, asphalt paving, tree removal, clearing and grubbing, pavement markings, sign installation, and landscape restoration.
- C. Work covered by Contract Documents is to be performed under a single prime contract, which includes all sections of Specifications.

1.02 OTHER WORK AT THE SITE (AND NOT IN THIS CONTRACT)

- A. Work by Owner's employees:
 - 1. Moving or placement of existing street signage.
- B. Work through direct contracts with Owner:
 - 1. Construction staking. Follow 01 71 23.
 - 2. Construction review by Resident Project Representative:
 - a. Follow Supplementary Conditions for responsibilities and authority.
 - b. Notify Engineer at least 3 days before starting open cut pipeline excavation Work or before adding an additional pipeline excavation crew.
- C. Work by others:
 - 1. CPKC Railroad will extend crossing surface and install new sidelight on North mast.
 - 2. Cross culvert on Highland Drive will be replaced via separate Contract prior to Work beginning.

1.03 WORK RESTRICTIONS

- A. See Agreement for Contract Times and Milestones. Other time and work-event sequence restrictions are shown on Drawings.
- B. For scheduling and progress of Work, conduct operations to not impair operations of Owner's existing facilities. Maintain normal operation of facilities and assume associated special costs due to Work.
- C. For existing storm systems to remain in place, take measures necessary to maintain in proper continuous operation. For existing storm systems to be removed, keep in service until new facilities are completed and approved for operation.

1.04 SALVAGED MATERIAL AND EQUIPMENT

- A. Existing materials or equipment that are removed as part of the Work, and not specified for reuse, shall become Contractor's property.

- B. For materials or equipment specified to be salvaged or reused.
 - 1. Remove carefully to prevent damage.
 - 2. Store and protect from damage.
 - 3. Replace damaged items in-kind with new.

- C. Contractor may furnish and install new items, in lieu of salvaged, for reuse, with Engineer approval. Removed items shall become Contractor's property.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 14 19

USE OF SITE

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes requirements for Contractor's use of lands provided by Owner for the Work.

1.02 PROTECTION OF WORK

- A. Openings and surface obstructions: Protect with barricades, signs, or other devices.
- B. Street barricades, signs or other devices: Erect and maintain for public safety and convenience. Follow applicable Laws and Regulations. Generally, mark hazards within Work limits and on detours and around Work with well-painted, well-maintained barricades, reflectors, electric lights, flashers, and warning and directional signs in quantity and size to protect life and property. Locate and use safeguards to meet changing Work conditions.
 - 1. Streets closed to through traffic: Place barricades at adjacent intersections.
 - 2. Streets totally closed: At Engineer's request, install snow fence across full width of streets or alleys.
- C. Flagmen: Use when construction obstructs or endangers a traffic lane, and no marked detour is provided. Flagman shall direct traffic through or around congested area. Add flagging personnel at Engineer's request.
- D. Snow removal: Immediately remove snow from sections of streets obstructed by construction.
- E. Property access: Do not block or unnecessarily interfere with pedestrian or vehicular access to property without Engineer's approval.
- F. Drainage: Do not obstruct. Prevent sediment from entering sewers.
 - 1. Storm or groundwater from Site: Convey to a storm sewer inlet, or, with Engineer's approval, another point of disposal. Use a continuous pipe of ample capacity and free of obstructions.
 - 2. Sanitary sewerage: Convey by closed pipe or hose to a sanitary sewer inlet, or, with Engineer's approval, to another point of disposal.
 - 3. Existing structures: Restore to a condition at least equal to condition before disturbance. Obtain Engineer's approval.
- G. Facilities access: Maintain access to fire hydrants, fire alarm and police call boxes, water and gas valves, catch basins, and sewer, water utility and other manholes. If Work obstructs or interferes with any facility, coordinate with facility owner, and remove obstruction or interferences expeditiously.

1.03 SITE RESTRICTIONS

- A. Cooperate with Owner's operating personnel and provide safe and appropriate access at all times. During construction, operation and normal maintenance of existing facilities will be Owner's responsibility.

- B. Protect trees, shrubs, lawns, fencing and other existing features designated to remain. Maintain protection until landscaping Work is completed. Pay for reparation.
- C. Utility pipe lines:
 - 1. When, in Engineer's judgment, Contractor has obstructed or closed a street or is conducting operations at a greater scale than is necessary, Engineer may require Contractor to finish sections with work-in-progress before starting additional sections.
 - 2. Length of open trench. Do not exceed:
 - a. 250 feet at any one time.
 - b. 100 feet opened in advance of completed pipe laying operations.
 - c. Obstructing more than 1 street by one trench at any one time.

1.04 SITE ACCESS

- A. Stay within public right-of-ways and easement limits.
- B. Reasonable temporary access must be maintained to residences at all times. Notify residences of progression of operations prior to temporary closure of driveways. A minimum of 24-hours' notice shall be given to a property owner before temporarily closing a driveway. Maintain access to all driveways during non-working hours.
- C. Provide a minimum 48 hour written notice to Engineer and residents prior to commencing with mobilization, pipe laying, and at other stages of construction as determined by the Owner or Engineer.
- D. Maintain emergency access at all times to all parcels.
- E. Maintain access for garbage pickup at all times.
- F. Maintain access for mail delivery at all times.
- G. Maintain access for school buses.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 22 00

UNIT PRICES

PART 1 - GENERAL

1.01 UNIT PRICES

- A. Work items shall include costs for the following, unless there is a separate bid item: Excavation, subsurface exploration for existing utilities, removal and disposal of excavated material, bracing, dewatering, bedding, pipe fittings, connecting to existing system, cover, insulation, adjustment of structures, backfill, compaction, traffic control, trench maintenance, and surface restoration.
- B. Unit Price items:
1. Mobilization.
 - a. Description: Consists of all Work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to complete the Work.
 - b. Measurement: As a single complete unit of Work.
 - c. Payment: As scheduled under State Specification 619.3.
 2. Traffic control.
 - a. Description: Temporary traffic control measures and flagging operations in accordance with State Specifications, MUTCD and Traffic Control Plan. Includes: Installation, surveillance, maintenance, and removal.
 - b. Measurement: By percentage complete for traffic control correctly provided.
 - c. Payment: At Contract Unit Price for traffic control.
 3. Manufactured perimeter control device.
 - a. Description: Provide, maintain, and remove manufactured perimeter control device. Includes surface restoration after device removal.
 - b. Measurement: By linear feet of manufactured perimeter control device provided, excluding overlaps.
 - c. Payment: At Contract Unit Price for manufactured perimeter control device measured.
 4. Manufactured ditch check.
 - a. Description: Provide manufactured ditch check structure, stakes, anchoring, excavation, trenches, and sumps. Includes maintaining manufactured ditch checks; removal and disposal of manufactured ditch checks, waste, and surplus materials including eroded materials; and shaping and restoring ditches and surfaces after check removal.
 - b. Measurement: By each of manufactured ditch check provided.
 - c. Payment: At Contract Unit Price for manufactured ditch check measured.
 5. Inlet sediment guards.
 - a. Description: Provide curb inlet sediment guards at catch basins and inlets along Project Site. Includes all Work necessary for continuous maintenance and removal, and removal and disposal of trapped sediment.
 - b. Measurement: By each inlet sediment guard provided.
 - c. Payment: At Contract Unit Price for each inlet sediment guard measured.

6. Field stone riprap.
 - a. Description: Provide field stone riprap. Includes labor, materials, equipment, excavations, and geotextile fabric.
 - b. Measurement: By ton of field stone riprap provided.
 - c. Payment: At Contract Unit Price for field stone riprap category measured.

7. Clearing and grubbing.
 - a. Description: Remove surface debris, trees under 3 inches diameter, grass, shrubs, plant life, and root systems within project limits. Includes removal, loading, hauling, and disposal.
 - b. Measurement: By percent completion of entire item.
 - c. Payment: At Contract Lump Sum Price for clearing and grubbing measured.

8. Tree removal.
 - a. Description: Remove trees 3 inches diameter and larger and root systems within project limits. Includes cutting, stump grinding, loading, hauling, and disposal.
 - b. Measurement: By percent completion of entire item.
 - c. Payment: At Contract Lump Sum Price for tree removal measured.

9. Storm sewer main.
 - a. Description: Provide storm sewer pipe. Includes bypass pumping, and post-construction televising.
 - b. Measurement: By linear feet along centerline of pipe from centerline of structure to centerline of structure, not including end sections. Follow SWS 2.9.1.
 - c. Payment: At Contract Unit Price for pipe size and backfill category measured.

10. Storm sewer manholes, and field inlets.
 - a. Description: Provide named storm sewer structure. Includes all labor, excavation, removal and disposal of excavated materials and existing structures to be removed, reconnection to main, adjustment rings, steps, inlet, and cover casting assembly.
 - b. Measurement: By each structure size category provided.
 - c. Payment: At Contract Unit Price for structure size category measured.

11. Storm sewer end section.
 - a. Description: Provide end sections, including joint ties and pipe grates. Includes bypass pumping, dewatering, excavation, bedding, backfill and all incidentals.
 - b. Measurement: By each end section provided.
 - c. Payment: At Contract Unit Price for each end section size category measured.

12. Construct multi-use path to subgrade.
 - a. Description: Remove and dispose of all surface vegetation and foreign material, soil necessary to excavate to subgrade elevations for new multi-use path, existing pavement, base course, culverts, and drainage structures designated for removal. Includes sawcutting pavement match lines, excavation beyond multi-use path area to provide adequate base material, loading, hauling, filling, grading, drainage during construction, and all equipment, labor, and materials necessary to appropriately construct multi-use path area to subgrade, provide compaction and testing of subgrade.
 - b. Measurement: By percent completion of entire item.

- c. Payment: At Contract lump sum price for multi-use path subgrade construction measured.
13. Remove and salvage miscellaneous landscaping.
- a. Description: Remove and salvage miscellaneous hardscape landscape items in conflict with construction and provide to property owner for re-use. Includes any labor or equipment necessary to remove and salvage landscape items. Item does not include reinstallation of removed items or replacement of broken or damaged items if items were damaged prior to removal.
 - b. Measurement: By percent completion of remove and salvage miscellaneous landscaping.
 - c. Payment: At Contract Lump Sum Price for remove and salvage miscellaneous landscaping provided.
14. Excavation below subgrade (EBS), if required.
- a. Description: Remove existing material unsuitable for foundation material below proposed subgrade elevations. Includes excavation, compaction, and disposal of removed material.
 - b. Measurement: By cubic yard of unsuitable material removed as verified by the Resident Project Representative at time of construction.
 - c. Payment: At Contract Unit Price for excavation below subgrade measured.
15. Geotextile subgrade stabilization, if required.
- a. Description: Provide geotextile material over subgrade areas requiring stabilization as determined by Engineer. Includes foundation preparation, geotextile material, and placement.
 - b. Measurement: By square yards of surface area on which geotextile material has been placed. Does not include joint overlap.
 - c. Payment: At Contract Unit Price for geotextile material measured.
16. Excavation below subgrade (EBS) backfill, if required.
- a. Description: Provide EBS backfill material to bring multi-use path to subgrade elevation. Includes shaping, grading, compacting, and testing.
 - b. Measurement: By ton of EBS backfill provided as verified by the Resident Project Representative at time of construction.
 - c. Payment: At Contract Unit Price for EBS backfill material measured.
17. Crushed aggregate base course.
- a. Description: Provide crushed aggregate base course in one or more layers as shown on drawings or as directed by Engineer. Includes placement and compaction.
 - b. Measurement: By tons of crushed aggregate base course delivered and placed with delivery tickets verified by the Resident Project Representative.
 - c. Payment: At Contract Unit Price for crushed aggregate base course measured.
18. Concrete curb and gutter replacement.
- a. Description: Removal and replacement of existing concrete curb and gutter. Includes sawcutting, excavation, foundation preparation, shaping, compacting, stone base course material, root grinding and pruning, removal and disposal of excavated materials, joints, felt, and curb ramp openings, tie bars, and backfilling.
 - b. Measurement: By linear feet along the gutter removed and replaced.
 - c. Payment: At Contract Unit Price for curb and gutter measured.

19. Concrete ramp and landing.
 - a. Description: Provide 6-inch thick concrete ADA ramp and landing as shown on drawings. Includes labor, equipment, materials, preparation of base, and constructing landing to meet ADA requirements. Item does not include detectable warning fields or base material.
 - b. Measurement: By square foot of 6-inch thick concrete ramp and landing provided.
 - c. Payment: At Contract Unit Price for 6-inch thick concrete ramp and landing measured.

20. Detectable warning fields.
 - a. Description: Provide detectable warning fields, as shown on drawings. Does not include concrete ramp and landing.
 - b. Measurement: By square feet of detectable warning fields provided.
 - c. Payment: At Contract Unit Price for detectable warning field measured.

21. 3-inch Asphaltic concrete multi-use path.
 - a. Description: Construct a 3-inch asphaltic concrete multi-use path in one or more layers. Includes foundation preparation, placement of material, and compaction. Does not include base course material. Item also includes removal of excess material on edges of path to provide adequate depth for topsoil placement.
 - b. Measurement: By square yard of 3-inch asphaltic concrete multi-use path provided.
 - c. Payment: At Contract Unit Price for 3-inch asphaltic concrete multi-use path measured.

22. 4-inch Asphaltic concrete pathway through driveways & driveway replacement (two layers).
 - a. Description: Construct an asphaltic concrete driveway in two layers to the compacted thickness indicated. Includes sawcutting pavement match lines, foundation preparation and tack coat between layers, placement of material, and compaction. Does not include base course material. Work under this item includes all labor, materials and equipment necessary to construct an asphaltic concrete driveway in two layers. Includes pathway areas through driveways.
 - b. Measurement: By square yard of 4-inch asphaltic concrete pathway through driveways and driveway replacement.
 - c. Payment: At Contract Unit Price for 4-inch asphaltic concrete pathway through driveways and driveway replacement in two layers measured.

23. Asphalt Ditch Replacement.
 - a. Description: Includes sawcutting, removing and replacing asphalt ditch to match existing. Includes 3-inches of asphalt. Includes salvaging existing fieldstone and reusing to match existing.
 - b. Measurement: By square yard of asphalt ditch replaced.
 - c. Payment: At Contract Unit Price for asphalt ditch replacement.

24. Pavement marking.
 - a. Description: Provide pavement marking where necessary and according to the Drawings.
 - b. Measurement: By linear foot of pavement marking type provided.
 - c. Payment: At Contract Unit Price per linear foot of pavement marking category measured.

25. Railroad sign and post.
 - a. Description: Provide new signs as shown on Drawings. Includes posts, bases, excavation, placement, backfill material, restoration and hardware.
 - b. Measurement: By each sign installed as designated on the Drawing.
 - c. Payment: At Contract Unit Price for each traffic sign of the type designated installed.

26. Remove and reinstall mailbox, if required.
 - a. Description: Remove and reinstall mailboxes and posts. Mailbox structures with multiple mailboxes and/or posts will be measured as a single unit. Rotten or broken mailboxes or posts not damaged by Contractor will be replaced by Owner.
 - b. Measurement: For each mailbox removed and reinstalled as verified by the RPR.
 - c. Payment: At Contract Unit Price per removed and reinstalled mailboxes measured.

27. Topsoil, turf grass seed, fertilizer, and erosion matting.
 - a. Description: Includes all labor, tools, materials, equipment necessary to furnish, install, and maintain topsoil, turf grass seed, fertilizer, and erosion matting where shown on Drawings or where requested by Engineer.
 - b. Measurement: By square yards of topsoil, turf grass seed, fertilizer, and erosion matting accepted at end of maintenance period.
 - c. Payment: At Contract Unit Price for topsoil, turf grass seed, fertilizer, and erosion matting measured.

28. CPKC Railroad Flagger Allowance.
 - a. Description: Includes contacting, coordinating, scheduling, and payment for the flaggers provided by CPKC Railroad as necessary and described in Right-of-Entry License Agreement document prepared by CPKC Railroad and completed and submitted by Contractor.
 - b. Measurement: By actual days and costs incurred by Contractor as provided by documented payment data to CPKC Railroad.
 - c. Payment: At actual costs invoiced to Contractor by CPKC Railroad and approved by Owner for railroad flaggers measured.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 25 13

PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitution made by Contractor after Effective Date of Contract.

1.02 DEFINITIONS

- A. Substitutions:
 - 1. Changes in products, materials, and equipment from those required by Contract Documents and proposed by Contractor.

1.03 ACTION SUBMITTALS

- A. Substitution Requests
 - 1. Submit each request for consideration in format and quantities specified in Section 01 33 00 Submittal Procedures.
 - 2. Submit completed Substitution Request form included as an attachment to this Section.
 - 3. Additional data may be requested by Engineer in order to fully evaluate and make determination.
 - 4. Engineer's Action: Engineer's review and determination will be in accordance with Article 7 of the General Conditions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 ATTACHMENTS

- A. The form listed below following "END OF SECTION" is part of this Specification Section:
 - 1. Substitution Request (two pages).

END OF SECTION

**SUBSTITUTION
REQUEST**

Project: _____ Substitution Request Number: _____
From: _____
To: _____ Date: _____
Project Number: _____
Re: _____ Contract For: _____

Specification Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____
Manufacturer: _____ Address: _____ Phone: _____
Trade Name: _____ Model No.: _____
Installer: _____ Address: _____ Phone: _____
History: New product 1-4 years old 5-10 years old More than 10 years old
Differences between proposed substitution and specified product: _____

Point-by-point comparative data attached - REQUIRED

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Engineer: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: No Yes, explain _____

Savings to Owner for accepting substitution: _____ (\$ _____).

Proposed substitution changes Contract Time: No Yes [Add] [Deduct] _____ Days.

Supporting Data Attached: Drawings Project Data Samples Tests Reports _____

SUBSTITUTION REQUEST

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
 - Same warranty will be furnished for proposed substitution as for specified product.
 - Same maintenance service and source of replacement parts, as applicable, is available.
 - Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
 - Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
 - Proposed substitution does not affect dimensions and functional clearances.
 - Payment will be made by Contractor for changes to building design, including re-design, detailing, and construction costs caused by the substitution.
 - Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.
-

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments

-
- Approve Substitution - Make submittals in accordance with Specification Section 01 25 13 Product Substitution Procedures.
 - Approve Substitution as noted - Make submittals in accordance with Specification Section 01 25 13 Product Substitution Procedures.
 - Reject Substitution - Use specified materials.
 - Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

Additional Comments: Contractor Subcontractor Supplier Manufacturer Engineer
 Other:

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SECTION 01 29 76

PROGRESS PAYMENT PROCEDURES

PART I - GENERAL

1.01 PROGRESS PAYMENTS

A. General

1. Contractor's requests for payment shall be in accordance with the Agreement, General Conditions and Supplementary Conditions, and the Specifications.
2. Applications for Payment shall be in the form of Engineers Joint Contract Documents Committee (EJCDC) document C-620, Contractor's Application for Payment.
 - a. Engineer will supply copy in electronic format.

B. Procedure:

1. Review with Engineer quantities and the Work proposed for inclusion in each progress payment. Application for Payment shall cover only the Work and quantities recommended by the Engineer.
2. Submit to Engineer an electronic copy of each complete Application for Payment and other documents to accompany the Application. Complete Application for Payment, fully executed by Contractor, shall be received by Engineer not later than the 3rd day of each month in which Contractor is requesting a progress payment.
3. Engineer will act on Application for Payment in accordance with the General Conditions and Supplementary Conditions.
4. Following Engineer's recommendation to Owner regarding payment, payment to Contractor is subject to Owner's approval.

C. Each request for progress payment shall include:

1. Completed Application for Payment form, including signed summary/signature page, progress estimate sheets and listing of Subcontractors and Suppliers. Progress estimate sheets shall have the same level of detail as the Schedule of Values.
2. For payment requests that include payment for Work under an allowance, submit documentation acceptable to Owner of the authorization of allowance Work.
3. For payment requests (other than request for final payment) that include reduction or payment of retainage in an amount greater than that required in the Contract Documents, submit on form acceptable to Owner "consent of surety to partial release or reduction of retainage".
 - a. Acceptable forms include AIA® G707A™ "Consent of Surety to Reduction in or Partial Release of Retainage", 1994 or later edition.

D. Payment for stored materials:

1. Payment will be made only for materials and equipment incorporated in the Work.

E. Requirements for request for final payment are in the General Conditions, as may be modified by the Supplementary Conditions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 COORDINATION

- A. Distribute approved Shop Drawing information, in a timely manner, to all trades that it involves.
- B. Plan Work before construction to coordinate Work of all trades. Consult with trades before construction to establish the location of piping, ductwork, and conduit to avoid conflict.
- C. Notify Engineer of construction conflicts.

1.02 WORK PLAN

- A. The Contractor shall submit a work plan at the preconstruction conference for approval by Engineer. The work plan shall indicate the various subdivisions of work, and the dates of commencing and finishing each. The work plan shall show the time allowed for testing and other required procedures prior to the work being put into operation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.01 PROGRESS MEETINGS

- A. At least every week, conduct a progress meeting at Site. Arrange attendance of subcontractors, Engineer, and others whom Contractor or Engineer may request.
- B. Agenda items:
 - 1. Progress schedule review.
 - a. Recent work accomplished.
 - b. Work planned for the following week.
 - c. Off-site fabrication and deliveries.
 - d. Problems that may impede progress.
 - 2. Field observations, problems, and decisions.
 - 3. Submittals.
 - a. Shop Drawings schedule and status.
 - b. Application for payment.
 - c. Claims and Change Orders.
 - d. Requests for Information.
 - 4. Progress Schedule corrective measures.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 31 26

ELECTRONIC COMMUNICATION PROTOCOLS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope:
1. This Section establishes the procedures to be used relative to the transmission or exchange of Electronic Data for the Project.
 2. Owner and Contractor agree to incorporate this Section by reference into any other agreement for construction or services for the Project. Follow GC 7.06.

1.02 DEFINITIONS

- A. *Electronic Data* - Electronic Data is defined as information, communications, drawings, or designs created or stored for the Project in electronic or digital form.
- B. *Confidential Information* - Confidential Information is defined as Electronic Data that the transmitting party has designated as confidential and clearly marked with an indication such as "Confidential" or "Business Proprietary."
- C. *Written or In Writing* - In addition to definitions in the Contract Documents, "written" or "in writing" shall mean any communication, including without limitation a notice, consent or interpretation, prepared and sent to an address provided in this Section using a transmission method set forth in this Section that permits the recipient to print or store the communication. Communications transmitted electronically are presumed received if sent in conformance with this Paragraph 1.02.

1.03 TRANSMISSION OF ELECTRONIC DATA

- A. The transmission of Electronic Data constitutes a warrant by the transmitting party to the receiving party that the transmitting party (1) is the copyright owner of the Electronic Data, (2) has permission from the copyright owner to transmit the Electronic Data for its use on the Project, or (3) is authorized to transmit Confidential Information.
- B. The receiving party agrees to keep Confidential Information strictly confidential and not to disclose it to any other person except to (1) its employees, (2) those who need to know the content of the Confidential Information to perform services or construction solely and exclusively for the Project, or (3) its consultants and contractors whose contracts include similar restrictions on the use of Confidential Information.
- C. The transmitting party does not convey any right in the Electronic Data or in the software used to generate the data. The receiving party may not use the Electronic Data unless permission to do so is provided in the Contract Documents, or in a separate license.
- D. Unless otherwise granted in a separate license, the receiving party's use, modification, or further transmission of the Electronic Data, as provided in the Contract Documents, is specifically limited to the design and construction of the Project in accordance with the Project protocols set forth in Paragraph 1.04, and nothing contained in this Section conveys any other right to use the Electronic Data for any other purpose.

- E. To the fullest extent permitted by Laws and Regulations, the receiving party shall indemnify and defend the transmitting party from and against all claims arising from or related to the receiving party's modification to, or unlicensed use of the Electronic Data.

1.04 PROJECT PROTOCOL TABLE

- A. Owner and Contractor agree to comply with the data formats, transmission methods, and permitted uses set forth in the Project Electronic Data Protocol Table attached to this Specification Section.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 ATTACHMENT

- A. The Table listed below is part of this Specification Section:

ELECTRONIC COMMUNICATION PROTOCOLS TABLE

Electronic Data	Data Format	Transmitting Party	Transmission Method (4)	Receiving Party	Permitted Uses by Receiver	Notes (Enter #)
3.01.A. Project communications						
General communications & correspondence	EM, PDF	O, E, C	EM, EMA	O, E, C	R	
Meeting notices and agendas	EM, PDF	E, C	EM, EMA	O, E, C	R	
Meeting minutes	PDF	E	EM, EMA	O, C	R	
3.01.B. Contractor's submittals to Engineer						
Shop Drawings	PDF	C	EMA	E	M	(1)
Product data	PDF	C	EMA	E	M	(1)
Informational and closeout submittals:	PDF	C	EMA	E	M	(1)
3.01.C. Engineer's return of reviewed submittals to Contractor						
Shop Drawings	PDF	E	EMA	O, C	R	
Product data	PDF	E	EMA	O, C	R	
Informational and closeout submittals:	PDF	E	EMA	O, C	R	
3.01.D. Contract Modifications Documents						
Requests for interpretation to Engineer	PDF	C, O	EMA	E	M	(1)
Engineer's interpretations (RFI responses)	PDF	E	EMA	C, O	R	
Engineer's clarifications to Contractor	EM, PDF	E	EM, EMA	C, O	R	
Engineer's Field Orders	PDF	E	EMA	C, O	R	
Requests for proposal	PDF	E, O	EMA	C	R	
Change Order proposals – submitted to Engineer	PDF	C	EMA	O, E	S	
Change Order proposals – Engineer's response	PDF	E	EMA	C, O		
Work Change Directives (for Contractor signature)	PDF	E	EMA	C	R	(2)
Change Orders (for Contractor signature)	PDF	E	EMA	C	R	(2)
3.01.E. Applications for Payment Template	EX	E	EMA	C	M	
3.01.F. Contractor's Applications For Payment	HC, PDF	C	U.S. MAIL, EMA	E	M	(3)
3.01.G. Notices and Claims	HC ONLY	O, C, E	U.S. MAIL	O,E,C	R	(4)
3.02.H. O&M Data	HC, PDF	C	U.S. MAIL, EMA	E	R	
3.01.I. Closeout documents Record drawings Other record documents Contract closeout documents	PDF	C	EMA	E, O	M	

3.02 KEY TO ELECTRONIC COMMUNICATION PROTOCOLS TABLE:

Data Format:

EM .msg, .htm, .txt, .rtf, E-mail text
W .doc, Microsoft® Word 97 or later
EX .xlsx, Microsoft® Excel 97 or later
PDF .pdf. Portable Document Format
HC ONLY Hard copy only.

Transmitting Party:

O Owner
E Engineer
C Contractor

Transmission Method:

EM Via e-mail

EMA As an attachment to an e-mail transmission
CD Delivered via compact disc

Receiving Party:

O Owner
E Engineer
C Contractor

Permitted Uses:

S Store and view only
R Reproduce and distribute
I Integrate (incorporate additional electronic data without modifying data received)
M Modify as required to fulfill obligations for the Project

Notes:

1. Modifications by Engineer to Contractor's submittals and requests for interpretations are limited to printing out, marking-up, and adding comment sheets.
2. May be distributed only to affected Subcontractors and Suppliers. Print out, sign document, and return executed hard copy originals to Engineer.
3. Submit printed Applications for Payment with original ("wet") signatures.
4. Submit notices, including Claims, in accordance with the notice provisions of the General Conditions, as may be modified by the Supplementary Conditions.
5. Transmitter may utilize FTP site for large files. Post to transmitter's FTP site.

END OF SECTION

SECTION 01 32 13
SCHEDULING OF WORK

PART 1 - GENERAL

1.01 PROJECT SCHEDULE

- A. Schedule must demonstrate that planned activities address existing conditions and that disruptions to residents will be kept to a minimum.
- B. Notify electric, natural gas, telephone utility companies at beginning of Project to appropriately schedule administrative and prerequisite field preparation tasks.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 DESCRIPTION

A. Scope:

1. Contractor shall provide submittals in accordance with the General Conditions as modified by the Supplementary Conditions, and this Section.
2. Provide submittals well in advance of need for the material or equipment, or procedure (as applicable), in the Work and with ample time required for delivery of material or equipment and to implement procedures following Engineer's approval or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until approval or acceptance of related submittals has been obtained in accordance with the Contract Documents.
3. Contractor is responsible to confirm dimensions at the Site, make necessary corrections, for information pertaining solely to the fabrication processes and to techniques of construction, and for coordinating the work of all trades. Contractor's signature on submittal's stamp and letter of transmittal shall be Contractor's representation that Contractor has met his obligations under the Contract Documents relative to that submittal.

1.02 TYPES OF SUBMITTALS

A. Submittal types are classified as Action Submittals or Informational Submittals. Type of each required submittal is designated in the respective Specification Sections; when type of submittal is not specified in the associated Specification Section, submittal will be classified as follows:

1. Action Submittals include:
 - a. Shop Drawings.
 - b. Product Data.
 - c. Delegated design submittals, which include documents prepared, sealed, and signed by a design professional properly licensed in the jurisdiction of the Project and retained by Contractor, Subcontractor, or Supplier for materials and equipment to be incorporated into the completed Work. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specification Section. Delegated design submittals include: design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.
 - d. Samples.
 - e. Testing plans, procedures, and testing limitations.
 - f. Operation and maintenance data.
2. Informational Submittals include:
 - a. Certificates.
 - b. Design data not sealed and signed by a design professional retained by Contractor, Subcontractor, or Supplier.
 - c. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, potential Hazardous Environmental Condition, and similar reports.
 - d. Supplier instructions, including installation data, and instructions for handling, starting-up, and troubleshooting.

- e. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.
 - f. Field or Site quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site, provided by Contractor as required by Contract Documents.
 - g. Supplier reports.
 - h. Special procedure submittals, including health and safety plans and other procedural submittals.
 - i. Qualifications statements.
3. When type of submittal is not specified and is not included in the list above, Engineer will determine the type of submittal.

B. Not Included in this Section: Administrative and procedural requirements for following are covered elsewhere in the Contract Documents:

- 1. Requests for interpretations of the Contract Documents.
- 2. Change Orders, Work Change Directives, and Field Orders.
- 3. Applications for Payment.
- 4. Progress Schedules.
- 5. Photographic documentation.
- 6. Reports and documentation required in accordance with applicable permits.
- 7. Site survey data.

1.03 PROCEDURE FOR SUBMITTALS

- A. Submittal identification system: Use the following submittal identification system, consisting of submittal number and review cycle number.
- 1. Submittal Number: Shall be separate and unique number correlating to each individual submittal required. Contractor shall assign submittal number as follows:
 - a. Number each submittal with its associated Specification section number. For subsequent resubmittals add a number. For example, if original submittal is 11 23 00-01, first resubmittal is 11 23 00-02.
- B. Letter of transmittal for submittals:
- 1. Provide separate letter of transmittal with each submittal. Each submittal shall be for one Specification Section.
 - 2. At beginning of each letter of transmittal, provide a reference heading indicating: Contractor's name, Owner's name, Project name, Contract name and number, transmittal number, and submittal number.
 - 3. For submittals with proposed deviations from requirements of the Contract Documents, letter of transmittal shall specifically describe each proposed variation.
- C. Contractor's review and stamp:
- 1. Contractor's Review: Before transmitting submittals to Engineer, review submittals to:
 - a. Assure proper coordination of the Work;
 - b. determine that each submittal is in accordance with Contractor's desires;
 - c. verify that submittal contains sufficient information for Engineer to determine compliance with the Contract Documents.
 - 2. Incomplete or inadequate submittals will be returned without review.
 - 3. Contractor's stamp and signature:
 - a. Each submittal provided shall bear Contractor's stamp of approval and signature, as evidence that submittal has been reviewed by Contractor and verified as complete and in accordance with the Contract Documents.
 - b. Submittals without Contractor's stamp and signature will be returned without review. Signatures that appear to be computer-generated will be regarded as unsigned and the associated submittal will be returned without review.

- c. Contractor's stamp shall contain the following:

<u>CONTRACTOR'S SUBMITTAL REVIEW</u>	
Project Name:	_____
Contractor's Name:	_____
Date:	_____
Item/Submittal Title:	_____
Specification(s):	_____
Section(s):	_____
Page No(s):	_____
Paragraph No(s):	_____
Submittal No:	_____
Comments:	_____

I hereby certify that Contractor has satisfied Contractor's obligations under the Contract Documents relative to Contractor's review and approval of this submittal.	
Approved by (for Contractor):	_____

- D. Submittal marking and organization:
1. Mark each page of submittal and each individual component submitted with submittal number and applicable Specification Paragraph.
 2. Arrange submittal information in same order as requirements are written in the associated Specification Section.
 3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to Engineer.
 4. Package together submittals for the same Specification Section. Do not provide required information piecemeal.
- E. Format of Submittal and Recipients:
1. Action Submittals and Informational Submittals: Furnish in accordance with Table 01 33 00-A, except that submittals of Samples shall be as specified elsewhere in this Section and submittal of operation and maintenance data should be in accordance with Section 01 78 23 - Operation and Maintenance Data:
 - a. Submittals shall include clear space at least three inches by three inches in size for affixing Engineer's review stamp.

**TABLE 01 33 00-A: SUBMITTAL CONTACTS
AND REQUIRED FORMAT AND COPIES**

	Address for Deliveries	Contact Person	E-mail Address	Format*	No. of Hard-copies
a.	Engineer: Ruekert & Mielke, Inc., W233N2080 Ridgeview Parkway, Waukesha, WI 53188	Peter W. Gesch, P.E.	pgesch@ruekert-mielke.com	E	One
* Format: E = Electronic; H = Hard copies. TBD = To Be Determined					

- F. Electronic submittals:
1. Format: Electronic files shall be in “portable document format (PDF)”. Files shall be electronically searchable.
 2. Organization and Content:
 - a. Each electronic submittal shall be one file; do not divide individual submittals into multiple files.
 - b. When submittal is large or contains multiple parts, provide PDF file with bookmark for each section of submittal.
 - c. Content shall be identical to paper submittal. First page of electronic submittal shall be Contractor’s letter of transmittal.
 3. Quality and Legibility: Electronic submittal files shall be made from the original and shall be clear and legible. Do not provide scans of faxed copies. Electronic file shall be full size of original paper documents. All pages shall be properly oriented for reading on a computer screen.
 4. Provide sufficient Internet service and e-mail capability for Contractor’s use in transferring electronic submittals and electronic correspondence. Check at least once per day for distribution of electronic submittals and electronic correspondence related to submittals.
 5. Submitting Electronic Files:
 - a. Provide electronic files via e-mail in accordance with Table 01 33 00-A.
- G. Distribution:
1. Distribution of Electronic Copies: Upon completion of review, electronic copy of each submittal will be distributed by Engineer to
 - a. Contractor.
 - b. Owner.
- H. Resubmittals: Refer to the General Conditions for requirements regarding resubmitting required submittals.

1.04 ENGINEER’S REVIEW

- A. Timing: Allow an average 7 days for Engineer’s review and response.
- B. Submittals not required in the Contract Documents will not be reviewed by Engineer and will not be recorded in Engineer’s submittal log. All hardcopies of such submittals will be returned to Contractor. Electronic copies of such submittals, if any, will not be retained by Engineer.
- C. Action submittals, results of Engineer’s review: Each submittal will be given one of the following dispositions:
1. Approved: Upon return of submittal marked “Approved”, order, ship, or fabricate materials and equipment included in the submittal (pending Engineer’s approval or

acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents.

2. Approved as Corrected: Upon return of submittal marked “Approved as Corrected”, order, ship, or fabricate materials and equipment included in the submittal (pending Engineer’s approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, provided it is in accordance with corrections indicated.
3. Revise and Resubmit: Upon return of submittal marked “Revise and Resubmit”, make the corrections indicated and re-submit to Engineer for approval.
4. Not Approved: This disposition indicates material or equipment that cannot be approved. Upon return of submittal marked “Not Approved”, repeat initial submittal procedure utilizing approvable material or equipment.

D. Informational submittals, results of Engineer’s review:

1. Each submittal will be given one of the following dispositions:
 - a. Accepted: Information included in submittal conforms to the applicable requirements of the Contract Documents, and is acceptable. No further action by Contractor is required relative to this submittal, and the Work covered by the submittal may proceed, and products with submittals with this disposition may be shipped or operated, as applicable.
 - b. Not Accepted: Submittal does not conform to applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and conformance with the Contract Documents.
2. The following types of Informational Submittals, when acceptable to Engineer, will not receive a written response from Engineer. Disposition as “accepted” will be recorded in Engineer’s submittal log. When submittals of the following are not acceptable, Engineer will provide written response to Contractor
 - a. Material safety data sheets (MSDS).
 - b. Compaction testing reports.
 - c. Soil bearing capacity test reports.
 - d. Concrete testing reports.
 - e. Manufacturer’s instructions.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 35 13

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 SECTION CORNER MONUMENTS

- A. Before removing or disturbing section corner monuments, notify Engineer and Southeastern Wisconsin Regional Planning Commission (SEWRPC). Allow seven calendar days for witness markers to be set accordingly.
- B. Protect witness markers.

1.02 ARCHAEOLOGICAL AND HISTORICAL FINDINGS

- A. For construction operations on the Project, if encountering human remains, immediately stop operations at the encounter site and notify Engineer. Cooperate, as necessary, by moving construction operations from the encounter site and complying with the Engineer's directions. Contractor may continue work elsewhere on the Project unless the Engineer directs otherwise. Do not resume operations at the encounter site without the Engineer's permission.

1.03 DAMAGE TO ADJACENT ROADWAYS

- A. The Contractor shall be responsible for and pay for repair of damage to adjacent roadways. The repair shall include removal and replacement in-kind of damaged pavement and base, saw cutting, and repair.

1.04 TRAFFIC CONTROL

- A. Local traffic shall be kept open at all times on all public streets.
- B. Provide "Road Work Ahead" signs or other advanced warning signs following MUTCD and WisDOT standard details as work progresses.
- C. Provide flagging operations as necessary if Contractor's operations impact a lane of travel.
- D. If Contractor's operations require a complete closure of a portion of the Work area, Contractor shall develop a detour plan for review and approval by the Village of Elm Grove. No full closures allowed without advanced written approval by Village of Elm Grove.
- E. Submit traffic control plan showing proposed signage and schedule of proposed closures for approval prior to commencing work.
- F. Follow additional requirements in 01 14 19.
- G. All traffic signage and detour routes shall be in accordance with the Wisconsin MUTCD.

1.05 NOTIFICATION OF UTILITIES

- A. Utility location and coordination: At least three (3) full business days prior to construction, Contractor shall contact Diggers Hotline, as well as other utilities not served by Digger's Hotline but having facilities in the Work area to locate their underground facilities.
- B. Utility protection: It shall be the responsibility of the Contractor to protect all utilities that are encountered in his work operations. All costs of protecting existing utilities such as tunneling, sheathing, bracing or relocation including utility company bracing and relocation charges shall be considered incidental to utility construction.

1.06 TREE REMOVAL & CARE

- A. Prior to commencing tree removal operations, Contractor shall schedule site walk-through Owner and Engineer to review preliminary staked path alignment and trees for removal to determine if additional tree or brush removal is necessary.
- B. Trees and brush under 3" in diameter are not specifically surveyed and shown on Drawings but are shown on Drawings within brush lines.
- C. Contractor is not permitted to remove trees not shown on drawings for removal without Owner approval. Contractor is not permitted to clear and grub brush outside of pathway corridor without Owner approval.
- D. When roots are encountered during path construction, cleanly cut roots and do not rip and pull for removal. Limit heavy equipment usage outside path area within tree drip lines.

1.07 COORDINATION

- A. The contractor shall coordinate schedules with contractors performing other Work in the Village to minimize the time frame and range that public and private areas are disturbed and to minimize inconvenience to the public.
 - 1. Utility coordination. Utility points of contact are:
 - a. We Energies (electrical): Emergency Hotline: (800) 662-4797
 - b. We Energies (gas): Emergency Hotline: (800) 261-5325
 - c. Others: Contractor to determine.
 - 2. SEWRPC (Corner Section Monuments): Robert Merry (262) 547-6721.
- B. Driveway access: The Contractor shall coordinate with property owners if Contractor's operations result in access constraints for residents to properly notify resident and coordinate access as needed.

1.08 MAILBOXES

- A. If mailbox is in conflict with Contractor's operations, Contractor shall temporarily place mailbox in temporary stand such as a bucket filled with sand or gravel. The mailbox shall be placed on the residence driveway or in a location on the property where the U.S. Postal Service can easily access for mail delivery. Contractor is responsible for reinstallation of mailboxes once construction operations allow.

1.09 CURB RAMPS AND LANDINGS

- A. Contractor shall install curb ramps and associated landings and curbs to meet ADA Standards. Contractor is responsible for ensuring that concrete work is formed, poured, and installed to meet ADA requirements. Any curb ramps and associated landings and curb not installed to ADA Standards shall be replaced at Contractor's expense. Contractor shall also be responsible for paying the cost of any additional survey, design, or inspection required to verify, redesign, or reinstall curb ramps, landings, or curb.

1.10 RESTORATION SEQUENCE

- A. As Work progresses, Contractor shall stabilize ditches and other disturbed areas, as indicated on Drawings once they are brought to finished grade. Follow Construction Sequence on Drawings.

1.11 CONSTRUCTION TRAFFIC

- A. The primary route for all construction traffic to access the project site shall be from North Avenue to Highland Drive. Heavy construction traffic is not permitted on Gebhardt Road or on Highland Drive south of Gebhardt.

1.12 STREET SIGNS

- A. Remove and safely store street signs in conflict with Work. If Contractor damages sign, Contractor shall replace sign at Contractor's sole expense. Village DPW will reinstall all street signs and replace signs, if needed, not damaged by the Contractor.
- B. Village DPW staff will relocate all existing signage.
- C. Contractor is responsible for installing new railroad signage.

1.13 CROSS CULVERT CONSTRUCTION BY OTHERS

- A. A large cross culvert is being replaced on Highland Drive between Club Drive and Jolenta Lane. Work on this culvert will be completed by others via a separate Contract. Work is planned to be completed prior to this project taking place. Contractor shall coordinate with Contractor for culvert replacement for any remaining work items being completed when this Contract begins.

1.14 RAILROAD COORDINATION

- A. The Village of Elm Grove is in coordination with CPKC Railroad for work being completed at the railroad crossing. Final approval is likely to occur after the Contract for this project is awarded but prior to Work commencing.
- B. Contractor is responsible for coordinating flagging operations and right-of-entry. Utilize forms provided in Section 01 41 00 of the Project Manual.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

01 35 13-3

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SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 ENGINEER'S RESPONSIBILITIES

- A. Engineer will obtain approval of Drawings and Specifications, and product components from those state agencies known to Engineer to have a jurisdictional review interest in the Project. The examination, charges and field inspection fees in connection with such approvals will be paid by Engineer or Owner.

1.02 CONTRACTOR'S RESPONSIBILITIES

- A. Provide Engineer with manufacturer's drawings or other information for any product or material to be incorporated into the Work which requires state or local agency approval.
- B. Fulfill Owner's responsibilities regarding construction operations, traffic control, maintenance, restoration, notice, erosion control, and warranties as stated in the following documents:
 - 1. Wisconsin Department of Natural Resources Storm Water Discharge and Erosion Control Permit (Notice of Intent or NOI).
- C. Complete and submit forms at the end of this Section to Canadian Pacific – Kansas City Railroad and undertake and fulfill all responsibilities on behalf of Owner. Electronic copies will be provided to Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 ATTACHMENTS

- A. The documents listed below, following END OF SECTION are part of this Specification Section.
 - 1. CPKC Flagman Request Form (2 pages)
 - 2. Right-of-Entry License Agreement (13 pages).
 - 3. Minimum Safety Requirements for Contractors Working on CP Property (28 pages).

END OF SECTION

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SECTION 01 41 00

CPKC FLAGMAN REQUEST FORM

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CPKC FLAGMAN REQUEST FORM

If consecutive or multiple dates are needed, please try to provide 60 days' notice, especially during peak construction season.

Work Authorization

Right of Entry/Formal Agreement/Utility Permit No.: _____ Executed Date: _____

You must have an agreement with CPKC such as a Right of Entry or Utility Permit in addition to flagging before you may enter CP property

Prior to excavation on CPKC property or ROW you must contact the following CPKC CBYD number to (866) 291-0741 and the State-One call

Project Information *Submit a detailed map of the location where protection is being requested.*

Street /Intersection: _____ City/State: _____

Railroad Subdivision & Milepost: _____ GPS Lat/Long: _____ DOT Crossing # _____

Description of work, including type of equipment (Continued on page 2): _____

Location for flagman to report: (Address): _____

Name of Site Contact: _____ Site Contact Phone: (____) ____ - _____ 24/7 Emergency Contact: (____) ____ - _____

Requested Dates/Times - *Minimum 15 business days advance notice required, but accommodation can not be guaranteed.*

Dates requested are subject to flagman availability Total Days of Flagging Needed to Complete Project: _____ Preferred Dates for Flagging Protection: _____ to _____ or _____ to _____

Anticipated Starting time: _____ Anticipated Ending Time: _____ Anticipated # Hours per Day: _____

Flagmen start and end time may vary based on type of protection required

IMPORTANT: Amount of time to be clear of track (15' FROM TRACK) upon request: (Minutes) _____

NO TRACK OUTAGES ALLOWED

ROE/License/Utility Agreement fees MUST be received before Flagman Protection will be provided.

There is a 10 hour of flagging minimum per day. Please note that flagging charges are approximately \$1200.00 per day for an 10 hour day. Invoices will be sent after the project is completed. Checks should be made payable to the railroad D/B/A listed on your Right of Entry/Permit/License or Formal Agreement.

Overtime will need to be authorized. Additional overtime hours will be paid at the appropriate rate. Weekends and Holidays will be billed at the overtime rate. Normal flagman hours are currently from 7:00 am to 5:00 pm, Monday-Thursday.

Prior to ANY excavation on CPKC property or ROW you must contact the following CPKC CBYD number to (866)291-0741 and the State-One call number to ensure that all underground facilities are located. Prior to flagging contractor must provide State One Call Ticket Number and CPKC Call Before You Dig Ticket Number.

Billing Information

All blanks spaces must be filled out

Company Name: _____ Contact Name: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Company Phone: _____ Company Fax: _____ E-Mail: _____

THIS COMPLETED FORM MUST BE EMAILED WITH A MAP, AND COI TO: greda.lynn@cpker.com

PAYMENT CHECK(S) be mailed to Greda Lynn - 120 South 6th St, Suite 700 Minneapolis, MN 55402

I agree to pay for flagging services as requested: _____

(Signature)

CPKC FLAGMAN REQUEST FORM *(Page 2 of 2)*

Prior to any project being started, CPKC requires a “Flagman Request Form” to be completed and submitted. You must have an agreement with Soo Line Railroad or CPKC railroad, such as but not limited to a Right of Entry, Utility Permit, License, Easement, or Formal Agreement in addition to any necessary flagging before you may enter CPKC property. All Right of Entry, Permit, License, or Utility Agreement fees MUST be received before Flagman Protection will be provided.

All Utilities or Third-Party Contractor’s must follow the policies laid out in “Canadian Pacific’s Minimum Safety Requirements for Contractors Working on CPKC Property in the United States.” Please refer to the attachments of your ROE, Permit, or formal agreement for that document.

In Case of Emergency on or near CPKC property, please contact 1-800-716-9132.

Utility and Gas Line Locates on CP Property

A Utility locate on CPKC may be required prior to the start of any work based on disturbance of soil on CPKC property. The purpose of Utility locates is to identify and protect Signal & Communication cables that have been installed to provide power, signal control, and wayside communications. These cables are vital to a safe and reliable railroad operation. The Utility locate will be performed by a qualified CPKC Signal & Communications employee. A CPKC CBYD ticket number will last 14 days.

Prior to excavation on CPKC property or ROW you must contact the following CPKC CBYD number (866) 291-0741 and the appropriate State-One call number to ensure that all underground facilities are located and marked.

Work Description (Continued from Page 1)

Please provide a detailed description of work you are seeking to perform. Also, please submit a detailed map of the location where protection is being requested: _____

General Information

Outside contractors are prohibited from driving on, along, or across any track that does not have a CPKC installed crossing. They may utilize an existing public crossing. The practice of allowing rubber tired equipment to operate over track with no crossing is strictly prohibited. Exceptions to this rule will require the express approval from CPKC Engineering Department.

A utility or contractor shall not commence, or carry on, any work for installation, maintenance, repair, changing or renewal of any facility, under, over, on, or near railroad property at any United State CPKC location without giving notice to the CPKC Public Works Department at the railroad’s office located at Minneapolis, MN.

A qualified CPKC flagman is required any time any work is performed; under or across any railroad track, regardless of whether a contractors work involves a physical presence on the surface of the railroad property; on the surface of the railroad property within fifty (50) feet horizontally of the centerline of any CPKC railroad track; or on, near, or over railroad property if the work may potentially encroach (intentionally or unintentionally) within fifty (50) feet from the centerline of any CPKC railroad track. Causes of potential encroachment include but are not limited to equipment that has the potential to SWING, pivot, extend or mechanically fail. Potential encroachment must also account for a distance of one-half the length of the largest load that any equipment may lift. Additionally, CPKC reserves the right to require a flagman for work on Railroad property not meeting the above criteria when there are other conditions or considerations that would indicate the need for a flagman to safeguard Railroad’s operations, property, and safety of any person.

Best Regards,

Greda Lynn
Coordinator Grade Crossings, Standards & Design
120 South Sixth Street, Suite 700
Minneapolis Minnesota 55402
(612)258-6619 - greda.lynn@cpkcr.com

SECTION 01 41 00

RIGHT-OF-ENTRY LICENSE AGREEMENT

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RIGHT OF ENTRY LICENSE AGREEMENT

THIS LICENSE AGREEMENT (this “**Agreement**”) is made by and between **Soo Line Railroad Company** doing business as Canadian Pacific and **Add Your Company Name** .

1. PARTIES

SOO LINE RAILROAD COMPANY, a Minnesota corporation doing business as Canadian Pacific with general offices at:

Address	Contact Info	
Canadian Pacific Plaza 120 South 6th St. – Suite 700 Minneapolis, Minnesota 55402	Name:	Greda Lynn
	Phone:	(612)258-6619
	Fax:	
	Email:	Gro0080@cpr.ca

hereinafter called “**CP**,”

and **Add Your Company Name** , a whose address is:

Address	Contact Info	
Add Your Address	Name:	Your Name
	Phone:	
	Fax:	
	Mobile:	
	Email:	

hereinafter called “**Licensee**.”

2. PROPERTY; SCHEDULE; GRANT OF LICENSE

2.1 Property

CP hereby grants Licensee a license to enter in and upon certain property owned or controlled by CP in **Add Your City Location**, **Add Your State Location** near railroad mile post **Add MP** +/- on the **Add Subdivision** Subdivision, as shown upon the map labeled **Exhibit A** that is attached hereto and made a part hereof (the “**Property**”)

2.2 Work Schedule

for the sole for the purpose of performing, generally, the following activities: **Add a Detailed description of your Work/Project** (the “**Work**”), as detailed in Licensee’s plans, specifications and special provisions. The Work is subject to approval by CP’s authorized representative.

2.3 Grant of License

This license is granted subject to all the terms and conditions set forth below and applies to all Work and activities upon the Property that may be performed by Licensee through its employees, agents, and contractors. For the purposes of this Agreement, the actions and omissions of such employees, agents, and contractors shall be deemed the actions and omissions of Licensee.

2.4 Agreement to be Available at Work Site

Licensee shall keep a copy of this Agreement at the Work site and shall make it available upon demand by any employee or agent of CP.

3. TERM, EFFECTIVE DATE, EXPIRATION & TERMINATION

3.1 Term

The term of this Agreement shall

Commence at 12:01 am on **Add Your Start Date, 2020** (the “Commencement Date”); and

Expire at 11:59 pm on **Add Your End Date, 2020** (the “Expiration Date”)

the “Term.” Upon agreement between CP and Licensee, the Term may be lengthened or shortened without affecting any other provisions of this Agreement.

3.2 Effective Date

This Agreement shall be effective upon the date that it has been signed by both parties.

3.3 Expiration

This Agreement will expire at the Expiration Date, or when the Work is completed, whichever occurs first. Notwithstanding any other provision of this Agreement, the preceding sentence shall not terminate or limit any claim by CP against Licensee arising prior to the Expiration Date. If the Work includes monitoring wells, and if such wells remain on the Property after the Expiration Date, this Agreement shall remain in effect for those wells until the earlier of the following:

- (i) the date they are properly closed (*i.e.*, sealed and abandoned in accordance with applicable legal requirements) by Licensee or
- (ii) the date CP assumes ownership of such wells pursuant to section 10.8.

3.4 TERMINATION; EXCLUSION

NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, this Agreement is terminable by CP prior to the Expiration Date in the event Licensee breaches any of its obligations under this Agreement. The early termination of this Agreement shall not terminate or limit any claim by CP against Licensee arising prior to such termination. If Licensee is in breach of any of its obligations under this Agreement, any employee or agent of CP may order Licensee off the Property, in which case Licensee shall immediately leave the Property; moreover, Licensee shall leave the property immediately upon termination pursuant to this paragraph.

4. PAYMENTS

4.1 License Fee

In consideration of the permissions herein granted, Licensee shall with its execution hereof pay to CP the sum of **One Thousand Five Hundred Dollars (\$1,500.00)**.

4.2 Utilities

Licensee shall assume and timely pay for any gas, electrical, telephone, computer, sewer, water, storm water, waste or trash removal or any other service or commodity connected with the Work, collectively “**Utility Service.**” If any Utility Service fee is in common with CP or other parties, Licensee shall be liable for its proportionate share of any such Utility Service Fee and upon receipt of a bill therefor, promptly pay CP or such other party for its share. It shall be a default of the terms of this license if it can be shown that Licensee has not made such payments within 30 days if due to CP, or within 60 days if payable to any other party.

4.3 Mechanics' And Materialmen's Liens

If any mechanics' or materialmen's lien, or similar lien, is asserted against the Property, or any other property of CP, as a consequence of the Work, Licensee shall immediately satisfy, defend, or obtain the release of such lien, all at Licensee's expense, and Licensee shall indemnify and defend CP against any Claims arising out of or connected with such lien.

4.4 Additional Charges

Licensee shall within 30 days of receipt of a bill therefor, pay to CP costs for flagging, track changes or damage, or other such charges as may be provided by this Agreement or that CP may reasonably impose in connection with Licensee's Work.

4.5 Due Dates; Penalties; Other Charges

4.3.1 Due Dates

Any item, submission or payment required to be made shall be deemed timely made if received by the other party on or before the specified due date, or prior to expiration of the applicable period for compliance, submission or payment.

4.3.2 Late Fees

In addition to any amounts payable by Licensee to CP, Licensee shall pay CP a late fee for any payment not timely made by Licensee. The late fee shall be at the rate for overdue accounts set by CP's Accounting Department that is in effect at the time that that any such payment is due. Said late fee shall initially be an amount equal to 1% of the invoice amount per month.

4.3.3 Fines and Service Fees

In addition to any other amounts payable by Licensee to CP, Licensee shall pay CP for any bank fines or service incurred by it in connection with the handling, non-payment, return or currency conversion incurred by CP in connection with processing of any payment made by Licensee to CP.

4.6 Work At No Cost To CP

The Work completed by Licensee shall be performed at no cost to CP.

5. CONTACT, NOTICES, ETC.

5.1 Contact Persons; Communications

Communications pursuant to this Agreement shall be directed to the contact persons designated in Section 1 or their designees. Either party may change its contact person, or the address(es), telephone number, or fax number for the contact person, by notice to the other party.

5.2 Notices

Except as otherwise provided in this Agreement, all notices pursuant to this Agreement shall be in writing and shall be effective upon delivery to the address or fax number of the contact person for the party to whom notice is being given. If notice is given by fax, the notice shall not be deemed effective until received in legible form.

5.3 Notification Prior To Beginning Work

Licensee must notify CP's contact person by telephone at least three working days prior to beginning any separate phase of the Work, and again promptly after such phase of the Work has been completed.

6. PERMITTED & PROHIBITED USES; RIGHTS OF CP

6.1 Permitted Uses

6.1.1 The Work

The use of Property by Licensee shall be limited to the completion of the Work set forth in Section 2.2., or such other activities as may be approved by CP in writing.

6.1.2 Government Authorities

Licensee may permit governmental authorities other than Licensee with jurisdiction over the Work to enter the Property for the purpose of inspecting or monitoring the Work. Whenever possible, Licensee shall advise CP (by telephone or other means calculated to bring the matter to CP's immediate attention) prior to permitting such governmental authorities to enter the Property for such purposes. The actions and omissions of such governmental authorities while on the Property for such inspections and monitoring shall be deemed the actions and omissions of Licensee. Licensee is not authorized to permit governmental authorities other than Licensee to enter the Property for any other purpose.

6.2 Prohibited Uses and Activities

Licensee shall not use, occupy or permit the Property to be used for any purpose, activity or improvement except as provided in this Agreement or as may be approved of in writing by CP. Specifically, Licensee shall not:

6.2.1 Advertising

permit any advertisements or signs upon the Property;

6.2.2 Use of Hazardous Substances

without prior written disclosure to and approval by CP, Use or authorize the Use of any Hazardous Substance on the Property, including installation of any above or underground storage tanks; subject thereto, Licensee shall arrange at its own cost for the lawful transportation and off-site disposal of any and all Hazardous Substances that it shall Use or generate;

6.2.3 Use of Premises for waste treatment or as storage or disposal facility

cause or allow the Property or any of CP's adjacent property to become a hazardous waste treatment, storage or disposal facility within the meaning of, or to otherwise bring any such property within the ambit of the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. or any similar state statute or local ordinance; or

6.2.4 Subleasing is prohibited

sublease the Property or the permissions or rights herein granted in any manner or form.

6.3 Reservations and Rights of CP

6.3.1 Railroad Activities Take Priority over Work

All Work by Licensee shall always and all times be subordinate to the needs of CP in connection with the operation and movement of railroad trains and equipment, and the repair of railroad track, structures, communications and appurtenances thereto.

6.3.2 Reservation of prior and future uses not inconsistent with Licensee's activities

The rights herein granted to Licensee are subject to the rights granted in all other licenses, permits and easements for tracks, roads, walkways, poles, wires, pipelines, sewers, billboards and other improvements that exist or may be placed upon, across, above or underneath the Property by CP, or its employees, agents, licensees, grantees, representatives or invitees. Further, CP reserves unto itself the right to place (or to give others the right to place) additional tracks, roads, walkways, poles, wires, pipelines, sewers and billboards upon, across, above or underneath the Property in any manner that does not unreasonably interfere with Licensee's Work.

6.3.3 Monitoring

CP may elect to be present during the conduct of the Work and to monitor same.

7. COVENANTS, CONDUCT & RESPONSIBILITIES

7.1 Definitions

- 7.1.1** "Claim" or "Claims" means any and all liabilities, suits, claims, counterclaims, causes of action, demands, penalties, debts, obligations, promises, acts, fines, judgments, damages, consequential damages, losses, costs, and expenses of every kind (including without limitation any attorney's fees, consultants' fees, response costs, remedial action costs, cleanup costs and expenses which may be related to any Claims);
- 7.1.2** "Environmental Law" or "Environmental Laws" means the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq., the Clean Water Act, 33 U.S.C. '§1321 et seq., the Clean Air Act, 42 U.S.C. § 7401 et seq., the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq., all as amended from time to time, and any other federal, state, local or other governmental statute, regulation, rule, law, ordinance, order or decree dealing with the protection of human health, safety, natural resources or the environment now existing or hereafter enacted;
- 7.1.3** "Hazardous Substance" or "Hazardous Substances" means any pollutant, contaminant, hazardous substance or waste, solid waste, petroleum product, distillate, or fraction, radioactive material, chemical known to cause cancer or reproductive toxicity, polychlorinated biphenyl or any other chemical, substance or material listed or identified in or regulated by any Environmental Law;
- 7.1.4** "Release" or "Released" means any actual or threatened spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, disposing or spreading of any Hazardous Substance into the environment, as "environment" is defined in CERCLA;
- 7.1.5** "Response" or "Respond" means action taken in compliance with Environmental Laws to correct, remove, remediate, cleanup, prevent, mitigate, monitor, evaluate, investigate, assess or abate the Release of a Hazardous Substance;
- 7.1.6** "Use" means to manage, generate, manufacture, process, treat, store, use, re-use, refine, recycle, reclaim, blend or burn for energy recovery, incinerate, accumulate speculatively, transport, transfer, dispose of, or abandon.

7.2 Investigation; Compliance with Laws; Safety Requirements

- 7.2.1** *Tenants and Licensees in possession of Property*
Before entering the Property, Licensee shall secure the consent of all persons or entities who are using or occupying any portion of the Property. CP will cooperate with Licensee to obtain consent from any such person or entity who unreasonably withholds consent.
- 7.2.2** *Underground Utilities and Structures*
- a. Licensee shall be responsible for determining the location of all underground utilities (electric lines, telephone lines, gas lines, steam lines, sewer lines, water lines, fiber optic cables, pipes, wires, and the like) and underground structures.
 - b. Licensee shall call **CPCBYD "Canadian Pacific Call before You Dig"** at **1-866-291-0741 for Signal, Fiber Optics, and Power for CP Facilities on Canadian**

Pacific Right of Way and the STATE “ONE CALL” a minimum of 5 business prior to commencing any excavation or boring on the Property.

- c. CP will cooperate with Licensee to identify the location of underground utilities and structures known to CP, but such cooperation shall not relieve Licensee from its primary responsibility to determine the locations of such utilities and structures.

7.2.3 Permits And Licenses; Compliance With Laws

Licensee shall secure, at no expense to CP, any permits or licenses required in connection with the Work and shall comply with all laws applicable to the Work and the Property, including (but not limited to) any laws, standards, regulations, and permit requirements relating to environmental pollution or contamination or to occupational health and safety. Licensee shall indemnify and defend CP against any and all Claims arising out of or connected with the violation of any law by Licensee while on or about the Property.

7.2.4 Compliance with CP Safety Requirements; Identification

- a. While on the Property, Licensee shall comply with the safety requirements of CP, as such requirements may be amended from time to time during the duration of the Work, all at no expense to CP. CP's safety requirements are set forth “**Exhibit B**” titled “**MINIMUM SAFETY REQUIREMENTS FOR CONTRACTORS WORKING ON RAILWAY PROPERTY**” and in CP's current safety handbook. One free copy of the current safety handbook will be provided to Licensee by the CP contact person. Additional copies will be provided at Licensee's expense. Licensee shall be responsible for ensuring that any person performing any of the Work for or on behalf of Licensee shall comply with the CP safety requirements that would apply to a CP employee performing similar work.
- b. Prior to any entry onto the Property, Licensee and every employee, agent or subcontractor who carries out any part of the Work on the Property shall successfully complete the safety training available through the e-railsafe program at www.e-railsafe.com in respect to requirements for Canadian Pacific operations.
<if applicable>
- c. Licensee and every employee, agent or subcontractor who carries out any part of the Work on the Property shall at all times wear and visibly display the identification badge issued to them following successful completion of the e-railsafe safety training together with whatever additional identification materials that CP may reasonable require.

7.3 Work In Close Proximity To Railroad Operations; Drainage

7.3.1 Interference with Railroad Operations

Licensee shall keep CP fully apprised of its proposed activities on the Property so as to prevent any interference with the operations of CP's trains or equipment (or trains or equipment of others) operating on or near the Property.

7.3.2 Clearance

No work shall be done or any equipment or other obstruction placed over or within 25 feet laterally of the centerline of any track without advance notification to CP prior to performing such work or placing such equipment or obstruction.

7.3.3 Flagging

Licensee must make arrangements with CP for such flagging or watchman service as CP deems necessary for the protection of railroad traffic. All such flagging and watchman service shall be provided by CP at Licensee's expense. The fact that CP provides such service shall not relieve Licensee from any liability under this Agreement. CP's labor and material additives are subject to change without notice to Licensee, and CP shall be reimbursed based upon its labor and material additives actually in effect as of the date of such service.

7.3.4 Certain Work Close To Track Not Permitted; Lateral Support

- a. Unless otherwise agreed to in writing by CP, excavations, borings, wells, pits, test holes, probe sites, and the like shall not be located closer than 25 feet from the centerline of the nearest railroad track on or adjacent to the Property nor shall it take or allow any action upon the Property that would materially impair the lateral or subadjacent support of adjacent lands or railroad tracks.;
- b. Unless otherwise agreed to in writing by CP, drilling and excavating equipment and related equipment shall not be located closer than 25 feet from the nearest rail of any such track;
- c. In the event that CP permits excavations, borings, wells, pits, test holes, probe sites, or the like in close proximity to tracks, embankments or other features providing lateral or subadjacent support to land or tracks, then notwithstanding anything to the contrary in this license, Licensee shall be responsible for designing and constructing at no cost to CP any measure that is required to prevent the collapse, erosion or impairment to said land or tracks.

7.3.5 Storm Water

Licensee shall not, without the advance written approval of CP, make any changes to the Property that would either increase the historic flow rate of storm water from the Property or create an impediment to the historic flow of storm water to the Property. Unless otherwise agreed in writing, as between CP and Licensee it is understood and agreed that Licensee shall, at Licensee's cost and expense, be responsible for the construction, maintenance, repair and replacement upon the real property or other land not belonging to CP such storm sewer lines, manholes, mains, rip rap, boulders, wing walls, ditches and related to improvements required for Licensee's compliance with this section.

7.3.6. Fencing <If applicable>

Licensee shall, at no cost to CP, construct and maintain during the term hereof a fence acceptable to CP in the location(s) designated on Exhibit A. Following completion of the Work, the Licensee shall remove the fencing, remove any post footings or concrete, and fill and tamp any post holes with clean fill material.

7.4 Conduct

7.4.1 Property clean, safe and free from nuisances

Licensee shall not permit the existence of any nuisance upon the Property and shall at all times keep the Property in a proper, clean, safe and sanitary condition, and free from accumulations of waste materials, debris or refuse.

7.4.2 Release of Hazardous Substances

Licensee shall not cause or allow the Release or threat of Release of any Hazardous Substance on, to, or from the Property.

7.4.3 Response Actions

Licensee shall promptly take all necessary action in Response to any Release or Use of a Hazardous Substance at the Property caused by, or attributable to, any act or omission of Licensee (or Licensee's employees, agents, representatives or invitees) that could:

- a. give rise to any Claim under any Environmental Law,
- b. cause a public health or workplace hazard, or
- c. create a nuisance.

7.5 Required Notices/Disclosures

7.5.1 *Transportation and Disposal Contracts*

Licensee shall, upon written request by CP, provide CP with copies of transportation and disposal contracts and manifests for Hazardous Waste, any permits issued under any Environmental Laws, and any other documents demonstrating that Licensee has complied with all Environmental Laws relating to the Property

7.5.2 *Releases or Suspected Releases*

Licensee shall promptly notify CP of any actual or suspected Release of any Hazardous Substance on, to, or from the Property, regardless of the cause of the Release.

7.5.3 *Notices, summons citations, etc.*

Licensee shall promptly provide CP with copies of all summons, citations, directives, information inquiries or requests, notices of potential responsibility, notices of violation or deficiency, orders or decrees, claims, causes of action, complaints, investigations, judgments, letters, notices of environmental liens or Response actions in progress, and other communications, written or oral, actual or threatened, from the United States Environmental Protection Agency, the United States Occupational Safety and Health Administration, or other federal, state or local agency or authority, or any other entity or individual, concerning:

- a. any Release of a Hazardous Substance on, to or from the Property,
- b. the imposition of any lien on the Property, or
- c. any alleged violation of or responsibility under any Environmental Law relating to the Property.

7.5.4 *Other Reports*

Licensee shall, at CP's option, provide CP, at no cost to CP, a copy of any other report, summary or written test results, collectively "**Report**," pertaining to the Work. If any such Report is to be filed or made available to any governmental agency, other than Licensee, acting in a regulatory capacity, other than Licensee, then Licensee shall also give CP a reasonable time (not less than 5 working days) to review and comment on a draft of such Report and when preparing any such final Report pertaining to the Work, Licensee or its contractor shall give due consideration to CP's comments with respect to the draft of that Report. Licensee will promptly provide CP with a copy of any final Report.

7.6 CP's right to Participate in Response Actions

Following receipt of any notice, order, claim, investigation, information request, letter, summons, citation, directive, or other communication identified in section 7.5.3 in connection with any action taken pursuant to section 7.4.3, Licensee shall notify CP of any and all investigations, telephone conferences, settlement discussions, remediation plans and all other interactions, direct or indirect, with governmental or regulatory officials, and Licensee shall take all action necessary to ensure that any indemnification, release, waiver, covenant not to sue, or hold harmless agreement benefiting Licensee and arising out of such activities, whether from a governmental or regulatory entity or from a private entity, also benefits CP to at least the same extent as Licensee.

7.7 Restoration of Property

Upon completion of the Work or expiration or early termination of this Agreement, whichever occurs first, Licensee shall remove any debris resulting therefrom and shall restore the Property to the condition it was in prior to the commencement of the Work (or such other condition as is satisfactory to CP). All excavations are to be backfilled and tamped. All borings shall be backfilled with grout. Drill cuttings shall not be used as backfill. Licensee shall dispose of all drill cuttings, soil and sediment samples, purge water, dewatering effluent, and water samples and all excess excavation material in a manner acceptable to CP and in accordance with all applicable laws, all at no expense to CP.

8. LIABILITY

8.1 Damage to CP Tracks, Facilities, and Equipment

If any tracks, facilities, or equipment owned, used, or maintained by CP are damaged in connection with the Work, CP shall repair (or arrange for the repair of) such damage and Licensee shall pay the full cost of such repair within 30 days after CP shall tender a bill therefor.

8.2 Assumption of Risk

Licensee is fully aware of the dangers of working on and about railroad property and railroad operations and knowingly and willingly assumes the risk of harm (e.g., injury to or death of persons and damage to or destruction of property) that may occur while on and about the Property. Without in any way limiting the scope of the preceding sentence, Licensee assumes the risk that monitoring wells, elevation bench marks, reference points, and other installations located on the Property may be disturbed, damaged, or destroyed by CP or third persons, and Licensee shall not make any claim against CP on account of same, even if such disturbance, damage, or destruction arises from the negligence of CP or its employees, agents, or invitees. Licensee assumes full responsibility for protecting its installations and personal property from theft and vandalism while such installations and personal property are on the Property.

8.3 Indemnity

To the maximum extent permitted by applicable law, Licensee shall indemnify and defend the Indemnified Parties (as defined below) against all claims, demands, actions, suits, judgments, losses, damages, penalties, fines, and sanctions (collectively, "Claims") arising out of or relating to any destruction of (or damage to) any property or natural resource, any injury to (or death of) any person, or any environmental pollution or contamination whatsoever, where such destruction, damage, injury, death, pollution, or contamination actually arises in whole or in part from the Work, any action or omission of Licensee while on or about the Property pursuant to this Agreement, or the exercise by Licensee of the license granted by this Agreement. As used in this Agreement, Indemnified Parties means the following businesses and their officers, directors, employees, and agents: Soo Line Corporation, Soo Line Railroad Company, Delaware and Hudson Railroad Corporation, Dakota, Minnesota and Eastern Railroad Corporation, Soo Line Corporation, Wyoming, Dakota Railroad Properties, Inc., Central Maine & Quebec Railway, The Milwaukee Motor Transportation Company, Hiawatha Transfer Company, and Canadian and Pacific Railway Company, and their respective parent companies, subsidiaries, and affiliated companies, and any railway company or contractor operating trains or rail equipment upon railway tracks in close proximity to the Property, together with the parent companies, subsidiaries, and affiliated companies of all of the foregoing.

9. INSURANCE

Licensee shall, at its own expense, obtain and maintain during the Term and prior to entering the Property, in a form and with an insurance company satisfactory to CP, policies of:

- (a) **Commercial General Liability** (C.G.L.) insurance with a limit of not less than Ten Million Dollars (\$10,000,000) for any one loss or occurrence for personal injury, bodily injury, or damage to property including loss of use thereof. This policy shall by its wording or endorsement include without limitation the following: **NOTE – For large projects that are high risk, please confirm with Risk Management whether \$10M CGL is sufficient or if a higher limit and/or additional requirements are necessary.**
- (i) CP and its associated or affiliated subsidiaries (and the Directors, Officers, employees, agents and trustees of all of the foregoing) as an additional insured with respect to obligations of the Licensee in this Agreement;
 - (ii) "cross liability" or "severability of interest" clause which shall have the effect of insuring each entity named in the policy as an insured in the same manner and to the same extent as if a separate policy had been issued to each;
 - (iii) blanket contractual liability, including the insurable liabilities assumed by the Licensee in this Agreement;
 - (iv) broad form products and completed operations;
 - (v) sudden and accidental pollution liability, if applicable;
 - (vi) shall not exclude property damage due to explosion, collapse, and underground hazards; and
 - (vii) shall not exclude operations on or in the vicinity of the railway right of way.
- (b) **Automobile Liability** insurance covering bodily injury and property damage in an amount not less than Two Million Dollars (\$2,000,000) per accident, covering the ownership, use and operation of any motor vehicles and trailers which are owned, non-owned, leased or controlled by the Licensee and used in regards to this Agreement.
- (c) **Workers Compensation** insurance which shall be in strict accordance with the requirements of the most current and applicable state Workers Compensation insurance laws, and Employers' Liability insurance including Occupational Disease insurance with limits of not less than One Million Dollars (\$1,000,000) each accident/each employee, and where appropriate coverage under said policies to be extended for liability under the FELA, USL&H Act, and the Jones Act. The Licensee shall, before any services are commenced under this License submit written evidence that it has obtained full Workers Compensation insurance coverage for persons whom it employs or may employ in carrying out the services under this License. CP and its associated or affiliated companies (and the Directors, Officers, employees, agents and trustees of all of the foregoing) shall be waived of any and all subrogation in the event of injury, death, losses, incidents, claims and potential claims.
- (d) **Contractor's Pollution Liability** insurance, including naming CP and its associated or affiliated subsidiaries (and the Directors, Officers, employees, agents and trustees of all the foregoing) as an additional insured, with a limit of not less than Two Million Dollars (\$2,000,000) for any one loss or pollution event. Coverage shall include, but not be limited to, claims for bodily injury, death, damage to property including the loss of use thereof, clean-up costs and associated legal defense expenses arising from pollution conditions caused by, and/or exacerbated by, services performed by the Licensee on behalf of CP. The policy shall be endorsed to contain a blanket contractual liability endorsement. If this policy is written on a "claims-made" basis it shall remain in effect for no less than twenty-four (24) months after the expiry or termination of this Agreement. **IF APPLICABLE – DEPENDS ON SCOPE OF WORK BEING PERFORMED – CONFIRM WITH RISK MANAGEMENT**

(collectively, the "Insurance Coverage").

Licensee agrees that the insurance requirements set out herein shall not limit or restrict its liabilities pursuant to this Agreement.

The Insurance Coverage required to be maintained pursuant to this Agreement shall be primary and not excess of any other insurance that may be available. Unless otherwise provided above, all insurance coverage shall take place in the form of an occurrence basis policy and not a claims made policy.

Licensee shall waive any and all subrogation in the event of injury, death, losses, incidents, claims and potential claims where permissible under the insurance policies required under this Insurance Section.

Licensee shall provide CP with written notice and all reasonable particulars and documents related to any damages, losses, incidents, claims, and potential claims concerning this Agreement as soon as practicable after the damage, loss, incident, or claim has been discovered. Licensee is responsible for any deductible and excluded loss under any insurance policy. The deductible in any insurance policy shall not exceed such maximum amount that a reasonably prudent business person would consider reasonable.

The Insurance Coverage shall be endorsed to provide CP with not less than thirty (30) days written notice in advance of cancellation.

Before Licensee enters the Property, CP must receive and approve certificates of insurance evidencing the Insurance Coverage outlined in this Section. Licensee may be required to annually provide a copy of updated certificate(s) of insurance evidencing the renewal of the above Insurance Coverage. Such certificate(s) of insurance shall be sent via email to matthew_miller@cpr.ca. Upon request, Licensee shall provide CP with certified copies of the insurance policies.

CP shall have no obligation to examine such certificate(s) or to advise Licensee if its Insurance Coverage is not in compliance with this Agreement. Acceptance of any certificate(s) which are not compliant with the requirements set out herein shall in no way whatsoever imply that CP has waived its insurance requirements.

CP reserves the right to require Licensee to obtain additional insurance where, in CP's reasonable opinion, the circumstances so warrant. If the Licensee fails to maintain the Insurance Coverage required in this Agreement, CP may, at its option, terminate this Agreement without notice.

10. ENTIRE AGREEMENT

10.1 Survival of Indemnity Provisions

The indemnification provisions of this Agreement shall survive its expiration or termination.

10.2 Mere License

The permission encompassed by this Agreement is a mere license to use the Property for the specified purpose and does not create any estate or interest in the Property.

10.3 No Warranty of Title

CP does not warrant that it has good title to the Property.

10.4 Assignment; Binding Effect

This Agreement may not be assigned by Licensee without the advance written consent of CP. Subject to the preceding sentence, this Agreement shall be binding upon, and inure to the benefit of, the parties' respective successors and assigns.

10.5 Governing Law

This Agreement shall be construed in accordance with the laws of the state of Minnesota.

10.6 Entire Agreement

This Agreement is the full, complete, and entire Agreement of the parties with respect to the subject hereof, and any and all prior writings, representations, and negotiations with respect to those subjects are superseded by this Agreement.

10.7 Headings

The headings used in this Agreement are provided solely as a convenient means of reference. They are not intended to, and do not, limit or expand the purpose or effect of the paragraphs to which they are appended. The headings shall not be used to construe or interpret this Agreement.

10.8 Singular and Plural

As used in this Agreement, the singular form of a word includes the plural form of that word, and vice versa, and this Agreement shall be deemed to include such changes to the accompanying verbiage as may be necessary to conform to the change from singular to plural, or vice versa.

10.9 Duplicate Copies and Counterparts

This Agreement may be executed in counterparts, which together shall constitute one and the same document. The parties may execute more than one copy of this Agreement, each of which shall constitute an original.

11. SIGNATURES.

THE PARTIES HERETO have executed this Agreement as evidence of their agreement to the terms herein.

Your Company Name

SOO LINE RAILROAD COMPANY
doing business as Canadian Pacific

By _____

By _____

Its **Your Name**

Its Greda Lynn
Grade Crossing

Date

Date

EXHIBIT A
Map of the Property

An Example for your reference
Cut and Paste a Copy and ADD a map of the location of the project

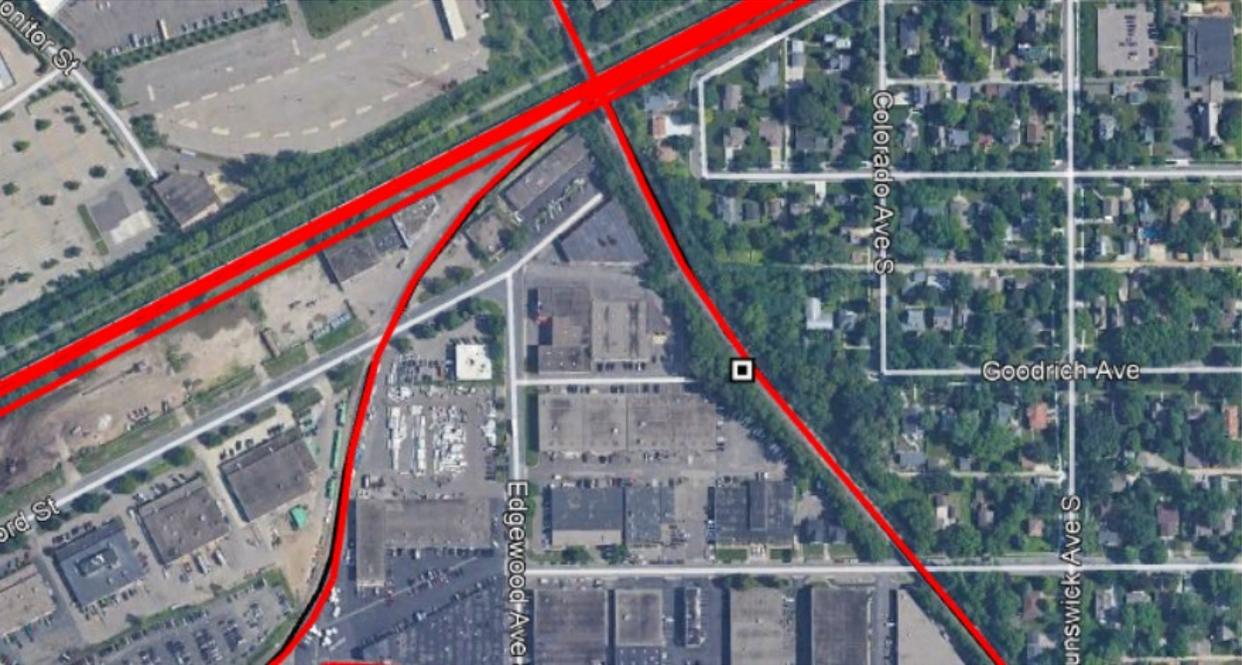


EXHIBIT B
Minimum Safety Rules for Work on Railroad Property

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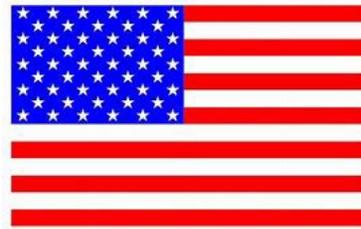
SECTION 01 41 00

MINIMUM SAFETY REQUIREMENTS FOR CONTRACTORS WORKING ON CANADIAN PACIFIC
(CP) PROPERTY IN THE UNITED STATES

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Minimum Safety Requirements for Contractors Working on CP Property in the United States



Approval Authority:	Corporate Risk	Effective Date:	October 1, 2018
Version:	3.0	Revision Date:	October 1, 2021

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Introduction

At Canadian Pacific (CP), safety is an integral part of the way we do business. We expect everyone working on Canadian Pacific's property to be unconditionally committed to safety. Safety must be given top priority and will take precedence over deadlines, production schedules, and all other considerations.

1 Application

1.1 Application

- 1.1.1 These Minimum Safety Requirements are applicable to all who work on CP property (except as noted in 1.13 and 1.14 below) including Contractors and other persons performing Work or otherwise providing services to Canadian Pacific on CP Property in the United States.
- 1.1.2 These Minimum Safety Requirements cannot be waived or altered, in whole or in part, without a prior Risk Assessment specific to the Work being conducted, and written consent has been provided by Manager-in-Charge.
- 1.1.3 Notwithstanding the foregoing, these Minimum Safety Requirements do not apply to other railroad companies who only operate trains on CP Property under various trackage or interchange agreements.
- 1.1.4 Further notwithstanding the foregoing, these Minimum Safety Requirements may not apply to Work or services provided in CP office premises, in which case, CP's Minimum Safety Requirements for Contractors Working in CP Offices may apply.

2 Definitions and Interpretation

2.1 Definitions

- 2.1.1 In these Minimum Safety Requirements, the following capitalized terms shall have the ascribed meaning below:
 - (a) **"Applicable Legislation"** means all applicable legislation, regulations, by-laws, codes, rules, standards, policies, procedures, promulgated by any federal, state, and municipal governmental body, including those of its agencies, having authority over CP and, or a Contractor in relation to the Work in the matter of health and safety of the person, property and, or the environment;
 - (b) **"Canadian Pacific"** or **"CP"** means Canadian Pacific Railway Company Ltd., and its subsidiaries and affiliates, and includes each of their respective directors, officers, employees, agent, and representatives;
 - (c) **"CP Personnel"** means CP's employees, agents, and representatives;
 - (d) **"CP Property"** means any building, facility, yard, track, right of way or other property owned or controlled by CP;
 - (e) **"Contractor"** means the company or person, and their respective employees and authorized agents, representative and subcontractors who are providing goods or services to CP; or on behalf of a third party working on CP property.
 - (f) **"Contractor Personnel"** means the Contractor's employees, and authorized agents, representative and subcontractors;
 - (g) **"Co-mingled Work"** means Work where Contractor Personnel works directly with or, in close proximity (time or space) to CP Personnel;

- (h) **“eTest”** an efficiency test. It is a planned procedure to evaluate compliance with rules, instructions and procedures, with or without the employee's knowledge.
- (i) **“Foul of Track”** means the placement of an individual or equipment within 4’ feet of the outside rail of a railway track that could be struck by a moving train or on- track work equipment (e.g. Hi-rail equipment).
- (j) **“Hazardous Materials”** means any substance, which is hazardous to persons or property and includes, without limiting the generality of the foregoing:
 - (i) radioactive, explosive, poisonous, or toxic substances;
 - (ii) any substance that if added to any water, would degrade or alter the quality of the water to the extent that it is detrimental to its use by man or by any animal, or plant;
 - (iii) any solid, liquid, gas or odor or combination of any of them that, if emitted into the air, would create or contribute to the creation of a condition of the air that endangers the health, safety, or welfare of persons, or the health of animal life, or causes damage to plant life or to property; and
 - (iv) substances declared to be hazardous, toxic or dangerous under any law or regulation now or hereafter enacted by any governmental authority having jurisdiction.
- (k) **“Manager-in-Charge”** means a CP manager as designated or otherwise identified by CP as being responsible for overseeing the Work to be performed, such Manager-in-Charge may include, but is not limited to Local CP Management, Superintendents, Chief Engineers, and Project Managers.
- (l) **“Mobile Equipment”** means any motorized and self-propelled equipment, excluding railroad equipment and highway vehicles, but including, for example, forklifts, tractors, cranes, ATVs, mules, motorized scissor lifts, telescopic boom lifts, and similar equipment that are not designed to operate or move on railroad tracks;
- (m) **“Office Premises”** means any building, facility, or portion thereof, or other premises, whether owned or controlled by CP, which is used solely for clerical or administrative purposes and which does not contain heavy equipment or machinery, as designated by CP from time to time;
- (n) **“Qualified and Authorized”** means a status attained by a person who has successfully completed any required training and demonstrated proficiency in the duties of a particular position or function and who has been given the right to act.
- (o) **“Railroad Equipment”** means trains, locomotives, railcars, on track equipment (track units), hi-rail vehicles and any other equipment designed to operate or move on railroad tracks;
- (p) **“Site Safety Plan”** means a documented plan which set out how Work is to be conducted in a safe manner, as required by Applicable Legislation, see 3.15 c);
- (q) **“Third Party Project”** means any work being performed on CP property that CP is not managing (i.e, road authority, utility company, commuter agency, or other similar entity, are on CP property for their own purposes, and not a project sponsored or managed by CP.
- (r) **“Work”** means the provision of products and services and related activities;
- (s) **“Work Site”** means any CP Property where CP Personnel or Contractor Personnel are present, or permitted to be present, while engaged in any Work, including any railroad equipment, mobile equipment and highway vehicles operated by or used to convey a person engaged in such Work. This applies also to work immediately adjacent to CP property which can pose a risk to safe railway operations (i.e., blasting, excavation next to ROW, etc).

2.2 Interpretation & Application

- 2.2.1 Where legislation is referred to in these Minimum Safety Requirements, it shall include all amendments and replacements thereto as promulgated from time to time.
- 2.2.2 Where standards, such as those of the American National Standards Institute (ANSI), are referred to in these Minimum Safety Requirements, they shall include all amendments and replacements thereof from time to time.
- 2.2.3 Where there is any ambiguity, inconsistencies, or omissions between or among any agreements with CP, expressed or implied; any Applicable Legislations; any applicable CP policies and practices; and any applicable industrial standards and practices, Contractor and Contractor Personnel shall adhere to that which is most stringent and current.

3 Contractor Compliance & Responsibilities

3.1 General Compliance

- 3.1.1 Contractor shall be fully and solely responsible for ensuring the health and safety of Contractor Personnel and for ensuring that its Work and other activities do not compromise the health and safety of CP Personnel or any other party, the protection of the environment, the protection of CP's property and those of any other party, and do not interfere with the safety of CP's railroad operations.
- 3.1.2 Contractor shall comply with and shall ensure all of Contractor Personnel are trained and qualified to safely perform the Work and that they comply with all Applicable Legislation pertaining to the protection against fire, safety, health, and environmental hazards, and with any license, permits, authorizations issued by the respective authority. Contractor shall provide CP with written certification that Contractor's safety program required by 49 CFR Part 243 has been approved by the Federal Railroad Administration (FRA) where applicable.
- 3.1.3 Contractor shall comply with and shall ensure all of Contractor Personnel comply with all terms and conditions of all agreements, expressed or implied, between Contractor and CP, and all applicable CP policies and practices.
- 3.1.4 Subject to the requirements of CP's Access Control Procedures, the contractor shall provide CP eRailsafe training for each employee engaged in work on CP property. Where there is no agreement between CP and the Contractor, the Contractor is responsible for meeting the additional requirements outlines within CP's Access Control Procedures.
- 3.1.5 Contractor shall provide Contractor Personnel, at its own expense, any and all safety equipment required to protect against injuries during the performance of the Work and shall ensure that Contractor Personnel are knowledgeable of and utilize safe practices in performing the Work.
- 3.1.6 The Contractor shall have a copy of the following documents at the Work Site at all times, and shall produce them as and when requested by CP:
 - (a) These Minimum Safety Requirements for Contractors Working on CP Property;
 - (b) Licenses, certifications, permits, training records or other documents required by Applicable Legislation or these Minimum Safety Requirements;
 - (c) Contractor's Site Safety Plan;
 - (d) Contractor's Emergency Information Sheet (see Attachment A); and
 - (e) Any additional documents required by Contract or by agreement with Manager-in-Charge.
 - (f) Employee identification (eRailsafe badge – see 9.1.1).

3.2 Compliance Assurance

- 3.2.1 CP reserves the right to observe, inspect, test and audit Contractor and Contractor Personnel for compliance with all requirements herein, and to demand and receive all relevant records, documentation, and materials evidencing compliance, at any time, and from time to time.
- 3.2.2 Failure of the Contractor or Contractor Personnel to comply with any applicable provisions herein may be considered a material breach, and in addition to all other remedies available, CP may without prejudice:
 - (a) take over control of that Work or activity;
 - (b) order the Work to stop; and/or
 - (c) order Contractor Personnel to leave CP Property.
- 3.2.3 Upon the earlier of the completion of the Work, the expiration of the applicable agreement, or the request of a Manager-in-Charge, Contractor and Contractor Personnel shall return all identification, badges, access cards, and decals, issued or provided by CP to the Manager-in-Charge.

4 Site Safety Plans

4.1 General Requirements

- 4.1.1 Prior to starting any Work on CP Property, the Contractor must have a written Site Safety Plan that identifies:
 - (a) All applicable legislation, rules, policies and work practices in relation to the work being performed;
 - (b) Specific hazards that are associated with the Work being performed on CP property for CP, and Work being performed not for CP:
 - for example:
 - (i) Construction, maintenance or inspections of buildings;
 - (ii) Working on or adjacent to railroad tracks;
 - (iii) Maintenance or inspection or railroad tracks, crossings or signal systems;
 - (iv) Operating Railroad Equipment on CP tracks; or
 - (v) When/where Contractor Personnel work directly with or in proximity (time or space) to CP Personnel; and
 - (c) Methods of verifying compliance.
- 4.1.2 The Contractor will provide Manager-In-Charge with a copy of this Site Safety Plan on reasonable request.
- 4.1.3 The Contractor must be able to demonstrate an awareness of applicable legislation, rules, policies and work practices in relation to the work being performed.

5 Safety Training

5.1 Minimum Training & Qualifications

- 5.1.1 At its sole cost and expense, Contractor shall ensure that all Contractor Personnel be fully trained and qualified for the Work they will be performing. Contractors and Contractor Personnel shall meet, or exceed, all Applicable Legislation requirements relating to training and qualification, including but not limited to the requirements of 49 CFR Part 243.
- 5.1.2 Additionally, Contractor Personnel training and qualification shall meet or exceed all applicable industry standards.

5.2 Proof of Training & Qualification

- 5.2.1 Contractor Personnel shall at all times have proof of such training and qualifications and shall produce them as and when requested by the Manager-in-Charge.
- 5.2.2 CP reserves the right to inspect qualification certificates, licenses, training records and/or Work-history records for any Contractor Personnel, and, or to be provided with copies thereof, on reasonable request. In addition, CP reserves the right to perform eTests on contractor employees, and request discipline for non-conformance.

6 Safety Orientation

6.1 General Requirements

- 6.1.1 Prior to beginning Work, all Contractor Personnel shall participate in a CP authorized safety orientation, including on-site orientation presented by the Manager-in-Charge or designate.
- 6.1.2 Any time the scope of Work, location, condition or supervision changes, Contractor Personnel may be required to attend additional safety orientation sessions.
- 6.1.3 After successful completion of such safety orientation, Contractors must be able to produce company identification or an eRailsafe photo identification badge authorizing access to CP property unescorted for the purposes of conducting work. Managers have the ability to enter the tracking code into CM (Compliance management). Third parties who hire subcontractors must ensure required compliance while on CP property. The eRailsafe identification card shall be worn or be made visible at all times, or produced upon request and cannot be transferred under any circumstances.

7 Job Safety Briefing

- 7.1.1 Contractor Personnel shall attend all Job Safety Briefings as and when conducted. Contractor Personnel shall be solely and fully responsible for understanding the content of the Job Safety Briefing, and at a minimum shall:
 - (a) have an understanding of the scope of Work to be performed and an appreciation of the nature of the location, environment, and conditions where such Work is to be performed;
 - (b) be aware of specific or unusual hazardous condition, existing or potential and the control measures required to protect against, control, mitigate, or where possible, avoid said hazard; and
 - (c) have an emergency response plan/evacuation procedures.

- 7.1.2 Where Contractor Personnel are working directly with or in proximity (time or space) to CP Personnel, job safety briefings must include both CP Personnel and Contractor Personnel, and any other affected third parties. The job safety briefing shall identify nature and extent of the interaction between the Work being performed by Contractor Personnel, and those performed by CP Personnel or other third parties. Contractor Personnel shall inform CP Personnel, and any other third parties of known or potential unsafe conditions and hazards that may be created by, resulting from, or inherent in their Work and the corresponding preventative, mitigation, and/or control measures at all job briefings prior to commencing Work, or as soon as Contractor Personnel becomes aware of such conditions.
- 7.1.3 In all situations, all Contractor Personnel are expected to:
- (a) continually identify hazards and assess risk of hazards and to continually and clearly communicate all hazards to the Manager-in-Charge and to all other parties that may be affected at job safety briefings, and at any other time as and when appropriate or necessary;
 - (b) take actions that are within their assigned responsibility to eliminate or control hazards and risks; and
 - (c) immediately notify their supervisor or the Manager-in-Charge of hazards that pose unacceptable risk that they are unable to eliminate or control.
- 7.1.4 Where Contractor Personnel are unable to eliminate or control a hazard, Contractor Personnel shall take interim measures to protect people, property, equipment and the environment until the hazard can be properly assessed and appropriate corrective actions taken.

8 Applicable Legislation

8.1 General Requirements

- 8.1.1 Contractor and Contractor Personnel shall be solely responsible for identifying and complying with all Applicable Legislation. At a minimum, Contractor and Contractor Personnel shall comply with the federal legislations set out below which list is intended solely for general guidance, and not as a comprehensive list of all Applicable Legislation.
- 8.1.2 Additionally, the Association of American Railroads (AAR) is an industry association which can provide support and guidance on matters related to railroad safety and the transportation of hazardous materials.

8.2 Transportation of Hazardous Materials

- 8.2.1 When Work involves the handling or transportation of hazardous materials (hazmat), that Work must comply with Hazardous Materials Transportation Act and regulations administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA).
- 8.2.2 Contractors shall be solely responsible for ensuring that all Contractor Personnel who handles, offers for transport and/or transports hazmat by any transportation mode are trained and hold a valid training certificate or is working under the direct supervision of someone who is trained and holds a valid training certificate. That training must be based on the Work that the person is expected to perform and the hazmat that the person is expected to handle, offer for transport or transport.
- 8.2.3 All U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations are published in Chapter I of title 49 of the Code of Federal Regulations (49 CFR).

8.3 Railroad Work

- 8.3.1 When Work involves the construction, alteration, operation, inspection and maintenance of any part of the general railroad system of transportation, that Work must comply with the Federal Railroad Safety Act and regulations administered by the Federal Railroad Administration (FRA).
- 8.3.2 Contractors shall be solely responsible for ensuring that all Contractor Personnel who perform railroad Work are trained and qualified in accordance with those regulations and hold valid certificates when required.
- 8.3.3 All FRA regulations are published in Chapter II of title 49 of the Code of Federal Regulations (49 CFR).

8.4 Occupational Safety & Health

- 8.4.1 Any Work being performed that may create a risk to the health and safety of any person, including CP Personnel and Contractor Personnel, when not covered by FRA regulations shall be governed by U.S. Department of Labor regulations administered by Occupational Safety and Health Administration (OSHA).
- 8.4.2 All OSHA regulations are published in Chapter XVII of title 29 of the Code of Federal Regulations (29 CFR).

8.5 Environmental Protection

- 8.5.1 Where Work is being performed that may impact the environment, that Work must comply with all applicable federal state, and local government legislation, regulations and standards.
- 8.5.2 Federal legislation is generally administered by the Environmental Protection Agency. A compilation of those laws and regulations can be accessed at <http://www.epa.gov/lawsregs/>

9 Security Access to CP Property

- 9.1.1 All Contractor Personnel must have personal identification and/or eRailsafe credentials authorizing access and in their possession at all times while on CP Property, and present them for review to any Manager-in-Charge, other CP managers and employees, Police Officer, security guard, or regulatory officer upon request:
 - (a) photo identification (e.g. driver's license); and
 - (b) proof of employment, document or card; and
 - (c) CP safety orientation certificate; or
 - (d) building access pass issued by CP or third party having control over CP premises; or
 - (e) CP security photo ID card or badge; or
 - (f) other proof of safety orientation and access authorization issued by CP.
 - (g) Valid eRailsafe card
- 9.1.2 Where any Work requires Contractor Personnel to ride in locomotive or other non-passenger railroad equipment, the Contractor must also possess a CP ACCESS PASS for riding non-passenger railroad equipment, signed by the responsible operating manager. Such a signed pass must be presented to the train crew or operator when boarding the equipment. Failure to possess such a pass will result in the equipment not moving, removal from the equipment, and/or the filing of trespasser charges.

9.2 Security Awareness

- 9.2.1 Contractor shall conduct employee background checks as is necessary to ensure that Contractor Personnel do not pose a security risk to CP, such security risk includes the risk of the commission of terrorist activities, sabotage, vandalism, theft, and violence. CP reserves the right, at all times, to require that Contractors undertake certain security training and/or performs background checks on Contractor Personnel, prior to allowing such Contractor Personnel to enter onto CP Property.
- 9.2.2 On request CP can make available a copy of CP's Railway Security Awareness Program for use by Contractor Personnel.

9.3 Firearms & Explosives

- 9.3.1 Firearms (loaded or empty) are not permitted on CP Property, except for Police officers and other designated government officials when authorized to do so.
- 9.3.2 No explosives will be permitted on CP Property without written approval by the Manager-in-Charge.

9.4 Reporting

Contractor Personnel must report any security concern, security incident, criminal activity (known or suspected), suspicious happenings and/or suspicious persons on CP Property to the Manager-in-Charge or to CP Police Services in accordance with Section 18.

10 Personal Conduct

10.1 Drug and Alcohol Prohibition

CP recognizes the problem of alcohol and substance abuse in today's society. This problem poses particular concerns to an employer who is subject to governmental regulations and seeks to promote the safety of the general public. CP has a concern for the safety, health and well-being of its employees as well as an obligation to comply with the United States Department of Transportation (DOT) and Federal Railroad Administration (FRA) regulations. CP will comply with all statutes and regulations administered by the FRA in implementing the required 49 CFR §219 Drug and Alcohol Program. CP also expects employees of other railroads, visitors or contractors to comply with this regulation while on CP property, consistent with federal regulations. If subject to this regulation, Contractor shall be solely responsible for compliance with the 49 CFR Part 219. Contractor shall provide CP with proof of its compliance prior to performing services for CP and continued proof of compliance must be provided to CP immediately upon request. This proof of compliance will include, but will not be limited to, a copy of the 49 CFR §219 Drug and Alcohol Program Plan and FRA Approval Letter and Continued Certification of Compliance and Statistical Reporting. Periodic audits to ensure compliance with these regulations may be performed and cooperation and compliance is expected upon request.

If subject to other DOT modalities and regulations, such as the Federal Motor Carriers Safety Administration (FMCSA), compliance of that modality's drug and alcohol program guidelines will be required and periodic audits to ensure compliance with these regulations may be performed and cooperation and compliance is expected upon request.

- 10.1.1 Entry onto CP Property when in possession of, or under the influence of alcohol, intoxicants, narcotics, or controlled substances is strictly prohibited. Controlled substances include all Schedule 1 drugs (such as marijuana and "medical marijuana") and synthetic/designer drugs and/or any intoxicants or products labeled "not intended for human consumption".
- 10.1.2 The sale, trade, and/or offer for sale alcohol or controlled substances are prohibited.

10.1.3 Additionally, Contractor Personnel shall be free of any condition which may in any way adversely affect alertness, concentration, responsiveness, or the ability react calmly and responsibly to safety hazards.

10.1.4 CP reserves the right to request drug and/or alcohol tests for Contractor Personnel as and where required or permitted by law.

10.2 Inappropriate Behavior

10.2.1 CP is committed to maintaining a work environment that supports the dignity of all individuals. No person working at CP may be subjected to any form of discrimination or harassment, including sexual harassment.

10.2.2 Acts or threats of violence are unacceptable at all times on CP Property. Uttering of threats or committing acts of violence will result in the removal of the responsible Contractor Personnel from CP Property, termination of the Contract, and/or criminal charges.

10.2.3 Horseplay, practical jokes, fighting or any other activity that may create a safety hazard is not permitted.

10.3 Electronic Entertainment and Communication Devices

10.3.1 The use of personal entertainment devices, including portable audio and video devices such as compact DVD, CD, video game players, tablets, SMART watches and MP3 players, is prohibited:

- (a) while Working on CP Property;
- (b) while transporting CP Personnel, whether on and off CP Property; and
- (c) while operating any CP highway vehicle, railroad equipment or mobile equipment, whether on and off CP Property.

10.3.2 The use of electronic communication devices, including cell phones, Smart Phones, Blackberries, walkie-talkies, PDAs, iPads, Tablets, GPS navigation units, portable computers, and similar devices, is prohibited:

- (a) while operating any highway vehicle, unless it is stopped and parked in a safe location;
- (b) while transporting CP Personnel, whether on and off CP Property;
- (c) while operating or assisting in the operation of any railroad equipment or mobile equipment;
- (d) while operating power tools, equipment or machinery;
- (e) when Foul of Track for any reason;
- (f) wherever use is prohibited by signage or by a CP manager; or
- (g) whenever use of such a device creates an unsafe condition.

10.3.3 Notwithstanding the foregoing, company cell phones, radios, walkie-talkies, GPS units, iPads, tablets and other communication devices may be used solely for the conduct of business when authorized by the CP Manager-in-Charge and where not prohibited by state or municipal legislation. Any electronic communication device may be used when it is necessary to communicate an emergency condition.

10.4 Smoking

10.4.1 Smoking, including the use of e-cigarettes is prohibited on all CP Property, and in or on all highway vehicles, Railroad Equipment, and Mobile Equipment, except for CP designated outdoor smoking areas.

11 Personal Protection

11.1 Work Clothing

11.1.1 The Contractor must ensure that Contractor Personnel wear clothing that meets applicable legislation and is suitable to perform the work safely. This includes at minimum ankle length pants and waist length shirts with a minimum quarter-length sleeves at all times. Clothing must not interfere with vision, hearing or use of hands and feet.

11.2 Personal Protective Equipment (PPE)

11.2.1 The Contractor shall ensure that Contractor Personnel wear personal protective equipment required by applicable legislation, regulations, codes and industry standards as necessary to protect against personal injuries while on railroad property. All personal protective equipment shall meet applicable legislation and American National Standards Institute (ANSI) standards and shall be in good condition and be properly fitted.

11.2.2 The following mandatory personal protective equipment (“PPE”) shall be supplied by the Contractor at its own expense, and shall be worn at all times by Contractor Personnel while on CP Property:

- (a) safety hard hat, meeting ANSI 89.1 standards, except in office buildings or in enclosed vehicles or equipment;
- (b) safety footwear with protective toe caps and puncture resistant soles, meeting ASTM F2413 standards.
- (c) safety glasses with permanently attached side shields meeting ANSI Z87.1 standards in office buildings or enclosed highway vehicles. Note- transition lenses are not permitted;
- (d) high visibility fluorescent outerwear with retro reflective striping meeting ANSI 107 Class 2 standards not covered by other clothing or equipment, except where necessary for safety reasons such as where fall protection or pole climbing equipment is being used; and
- (e) any other PPE as required by applicable legislation or referenced standard, or as otherwise required to protect Contractor Personnel from injuries.

Type of Protection	Additional Recommendations
Hard Hats	Have hi-visibility characteristics which are not obscured by markings or decals
Safety Eyewear	Tinted safety eyewear must meet military standards for red signal recognition if operating railroad equipment (safety eyewear meeting this requirement is available from ORR Safety; ask for CP approved tinted safety eyewear) Transition lenses are discouraged and should be worn with caution when working in changing light conditions Personal sunglasses are discouraged and must not be worn when operating Railway Equipment Wear mesh face shields over top safety glasses when using any striking tool while performing on track maintenance work (e.g. spiking, snapping on/off anchors, etc.). If working alongside CP employees you will be required to comply with this practice.
Safety Footwear	Have defined heels Be laced and tied securely for ankle support When snow and ice conditions are present wear anti-slip winter footwear
High-Visibility Apparel	Lime-green is recommended when working on, or near tracks, or when performing Co-mingled Work

- 11.2.3 Contractor and Contractor Personnel shall be solely and fully responsible for assessing the risks related to the work and determining whether additional PPE may be required such as:
- (a) Nomex or Proban fire-retardant protective gear when performing certain Transportation of Dangerous Goods (TDG) work and/or handling certain Hazardous Materials, or performing specialized work.
 - (b) hearing protection when working in any area where noise exposure levels:
 - (i) are consistently equal to or greater 85 dBA;
 - (ii) exceed 115 dBA at any time; and
 - (iii) any other work areas where posted, or so notified by CP management.
 - (c) respiratory protection where Contractor Personnel may be exposed to occupational dusts/particulates, fumes, mists, gases and vapors, in which case, in which case Contractors must have a written Respiratory Protection Program that meets or exceeds applicable legislation;
 - (d) additional eye and face protection meeting ANSI standard Z87.1 (i.e. face shields, impact/splash goggles, welding/cutting goggles and welding helmets); and
 - (e) fall protection systems and equipment meeting appropriate ANSI Z359 standards as required by applicable legislation and as appropriate for the related fall hazards.
 - (f) fall protection when working on an unguarded surface over water, where the water is deeper than 4 feet, or where there is a hazard of drowning due to terrain, winter conditions, water velocity or current; contractors must use a fall protection system or a personal floatation device (PFD) meeting approved standards.

12 Railroad Track Protection

12.1 Contractor's Responsibilities for the Protection of Railroad Traffic and Property

- 12.1.1 Where the Work Site is in close proximity to, or is located on, above, or below railroad tracks, special attention, care and precautions shall be taken to ensure the safety of all Contractor Personnel, CP Personnel, all other third parties and to protect CP's property and railroad operations.
- 12.1.2 Contractor shall ensure that Contractor Personnel is made aware of all unique and inherent hazards in working near, on, above or below railroad tracks and shall ensure that all Contractor Personnel are fully trained and equipped to work safely.
- 12.1.3 Contractors who perform inspection, maintenance or repair to railroad tracks or track structures must be trained in accordance with FRA On Track Safety Rules (FRA 49 CFR Part 214, Subpart C - Roadway Worker Protection Regulations).
- 12.1.4 Contractors will not be allowed to foul a track unless:
- (a) They have been properly advised of the On Track Safety awareness procedures;
 - (b) A railroad employee who is qualified to provide protection is present at the work site, or.
 - (c) The Contractor has personnel present who are specifically trained, qualified and authorized to provide that protection.
- 12.1.5 All work shall be organized or executed in such a manner as to ensure no interference with the regularity and safety of railroad operations. No step or sequence of any Work that might directly

or indirectly affect the safe movement of railroad traffic shall be started without the approval of the Manager-in-Charge.

- 12.1.6 No temporary structure, materials, or equipment shall be permitted closer than 12 feet to the nearest rail of any track without prior approval in writing of the Manager-in-Charge.

Contractor Personnel shall at all times remain alert to the movement of trains, rolling stock and other railroad equipment.

- 12.1.7 Contractor Personnel shall be especially alert in yards and terminal areas as

- (a) Railroad equipment that appears to be stationary may be moving;
- (b) the rate of movement of railroad equipment may be faster than it appears;
- (c) Railroad equipment change tracks often; and movements may be occurring simultaneously on adjacent tracks.

- 12.1.8 The Contractor shall, at all times, conduct its operations in a wholly responsible manner to avoid damage to the CP's tracks or property.

12.2 50 feet Clearance Requirement

- 12.2.1 All work shall be performed as far away from railroad tracks as possible.

- 12.2.2 Unless authorized by CP, Contractor Personnel, equipment, and vehicles are not permitted to be within 50 feet of the closest track centerline.

- 12.2.3 In the event work must be carried out within 50 feet of the closest track written authorization must be obtained from the Manager-in-Charge, and Contractor Personnel must still remain at the maximum practicable distance from all railroad tracks at all times.

- 12.2.4 When crossing tracks, Contractor Personnel shall ensure a minimum of 50 feet separation between standing railroad equipment, stay at least 15 feet away from the end of the nearest equipment, and look both ways before crossing tracks, and if clear, walk at a right angle to the tracks.

- 12.2.5 No work activities or processes are allowed within 50 feet of the track while trains are passing through the work site unless specifically authorized.

12.3 Flagging Protection

- 12.3.1 When the Work requires Contractor Personnel to be within 50 feet of any railroad tracks, Contractor or Contractor Personnel shall notify and obtain the written approval of the Manager-in-Charge in advance of the intended start date, and when approved, shall only perform Work strictly in accordance with all terms and conditions of that approval.

- 12.3.2 Unless otherwise indicated by the Manager-in-Charge, proper protection against the movement of trains, rolling stock and other railroad equipment shall be deemed required at all times whenever Work or Contractor Personnel must be within 50 feet of the closet track. Protection may be provided only by a qualified CP employee through use of a flag person.

- 12.3.3 Where CP determines that flagging is required, then Work must be strictly conducted under the direction of a CP flag person or such other person designated by the Manager-in-Charge.

- 12.3.4 Contractor Personnel shall ensure that there is clear communication at all times between Contractor Personnel and any CP flag person. Contractor Personnel shall ensure that they are aware of:

- (a) flagging distance limits;
- (b) time limits; and
- (c) any adjacent tracks where movement of railroad equipment may still occur.

- 12.3.5 Contractor Personnel shall not assume that a train movement is being stopped or cleared unless clear communication is received directly from the CP flag person.
- 12.3.6 A job briefing between the CP flag person and all Contractor Personnel must occur before beginning any Work on or Foul of Track.
- 12.3.7 Blue signal protection is used to indicate that CP or Contractor Personnel are working on, under or between railroad equipment and movement of trains or other railroad equipment is prohibited. Blue signals must not be tampered with or obstructed. Blue signals can only be removed by the person or group of persons who originally applied it. Application, use, and removal of blue signals, when appropriate, may only be done under the authorization and guidance of the Manager-in-Charge.
- 12.3.8 Red flag protection is used to indicate that CP or Contractor Personnel are working on or foul of track, or the track is out of service and movement of trains or other railroad equipment is prohibited. Red flags must not be tampered with or obstructed. Application, use, and removal of red flags, when appropriate, may only be done under the authorization and guidance of the Manager-in-Charge.

12.4 Working on or near Tracks

- 12.4.1 When authorized to perform Work foul of track or otherwise be near railroad tracks, Contractor Personnel shall ensure all Contractor Personnel, equipment, and vehicles are kept as far away from railroad tracks as practicable, and shall at all times:
- (a) be alert to train movements and shall expect the movement of trains, engines, cars, or other mobile railroad equipment at any time, on any track, and in any direction, even if they appear to be stationary or in storage;
 - (b) not rely on others to protect them from train movement;
 - (c) stay at least 15 feet away from the ends of railroad equipment when crossing the track;
 - (d) ensure a minimum of 50 feet separation prior to crossing between Railroad Equipment;
 - (e) look both ways before crossing tracks, and if clear, walk at a right angle to them.
 - (f) never climb on, under or between railroad equipment;
 - (g) be aware of the location of structures or obstructions where track clearances are close;
 - (h) not stand on the track in front of an approaching engine, car or other equipment;
 - (i) stand at least 20 feet from the track(s) when there is a passing movement of trains, engines, cars, or other mobile railroad equipment, to prevent injury from flying debris or loose rigging and shall observe the train as it passes and be prepared to take evasive action in the event of an emergency;
 - (j) not stand on or between adjacent tracks in multiple track territory when a train is passing;
 - (k) not walk, stand or sit on the rails, between rails or on the end of ties, unless absolutely necessary. As the rail surface can be extremely slippery, personnel must step over the rails when crossing tracks. Personnel shall also be aware railroad ties can also be slippery and that railroad ballast can shift while walking on top of it. Situational awareness and use of proper footwear is important;
 - (l) not remain in a vehicle that is within 50 feet of a passing train unless specifically authorized, or where this is not possible.
 - (m) keep away from track switches as remotely operated switch points can move unexpectedly with enough force to crush ballast rock. Personnel shall stay away from any other railroad devices they are unsure of. Personnel shall not disturb or foul the ballast at any time.

- (n) Third party work that has a potential to impact rail traffic must take into account machine swing radius, vertical grade differences, overhead work, etc to ensure it will not impact a passing train; work and equipment must maintain a distance of 50 feet of a passing train.
- (o) When exiting on track machinery as trains are passing; exit on the opposite side.
 - (a) use 3-point contact when getting on/off any vehicle, equipment or track unit;
 - (b) face the vehicle or equipment/track unit when getting on/off
 - (c) place handheld items onto equipment/track unit or seek help prior to getting on/off
 - (d) get on/off on the operators side when possible

12.5 Equipment on or near tracks

- 12.5.1 Contractor Personnel shall not be Foul of Track with any piece of equipment without a CP flag person or other authorized track protection;
- 12.5.2 Contractor Personnel shall not move equipment across the tracks except at established road crossings, or unless under the protection and authorization of a CP flag person and only if the Work Site has been properly prepared for such a move. Tracked equipment will require a CP flag person any time railroad tracks are crossed.
- 12.5.3 Contractor Personnel shall not move equipment across railroad bridges or through tunnels, except as expressly authorized and only under such conditions as stipulated by the Manager-in-Charge.
- 12.5.4 When there is passing rail traffic, Contractor Personnel shall move equipment away from the tracks at least 50 feet, or where not possible, park the equipment as far away from the tracks as possible, exit to the side away from the track where the movement is taking place, and walk to a safe a distance.
- 12.5.5 When there is passing rail traffic, buckets, shovels, and loads on cranes must be lowered to the ground to rest, and cranes without a load must have their load line tightened or retracted to prevent movement.

12.6 Railroad Signs, Signals, Flags and other Communication Infrastructure

- 12.6.1 Signs, signals and flags shall not be obstructed, removed, relocated, disabled or altered in any way without proper authorization and qualification.
- 12.6.2 Only qualified Contractor Personnel who are authorized by CP are permitted to operate switches, derails, electric track mechanisms, signal and communication systems or other track control appliances.
- 12.6.3 Railroad pole lines carry electric power and should be treated as any other power lines.
- 12.6.4 The Contractor shall keep all Contractor Personnel informed of current weather conditions. Personnel shall stay alert for possible high water conditions, or flash floods. During severe weather conditions:
 - a) Personnel shall be prepared to take cover in the event of a tornado
 - b) Personnel shall not work while lightning is occurring
 - c) If storm conditions arise unexpectedly, Contractor Personnel shall ensure that equipment is in the clear of the tracks and secured before seeking cover. Contractor Personnel shall stay away from railroad tracks when visibility is poor, such as during fog or blizzard conditions.

Any Contractor personnel discovering a hazardous or potentially unsafe condition, which may affect the safe passage of railroad traffic, must advise CP Police immediately by calling the CP Police Communications Centre – 1-800-716-9132

12.7 Excavation

- 12.7.1 Before starting excavation operations, the Contractor shall ascertain that there are no underground wires, fiber optic cables, pipelines or other utilities which could be damaged or, if present, that such installations are properly protected. Fiber optic cables are present on most segments of the right-of-way. Prior to commencing any excavation, the Contractor shall contact the proper authority CP and/or public utility to obtain the necessary permit and to locate and protect such cables or other underground utilities.
- 12.7.2 Excavations shall not be left unattended unless they are properly protected; and the Manager-in-Charge shall be notified.
- 12.7.3 Contractors MUST obtain and maintain utility locates in accordance with applicable law.

13 HAZCOM

13.1 General Requirements

- 13.1.1 If at any time Contractor's Work involves the use, handling, storage, or disposal of Hazardous Materials ("Handling of Hazardous Materials"), Contractor Personnel must inform the Manager-in-Charge.
- 13.1.2 Contractors shall ensure that all Contractor Personnel are fully trained in the Handling of Hazardous Materials and that Contractor and Contractor Personnel are in full compliance with all Applicable Legislation, and as directed by the Manager-in-Charge.
- 13.1.3 Contractor Personnel shall have appropriate processes, systems and controls in place to prevent or otherwise mitigate potential environmental, health and safety risks associated with the Handling of Hazardous Materials.

13.2 Access to Safety Data Sheets (SDS)

- 13.2.1 Prior to beginning any Work that may expose CP Personnel to Hazardous Materials, Contractor or Contractor Personnel shall:
 - (a) provide a copy of the respective SDS to the Manager-in-Charge; and
 - (b) keep a copy of the SDS at the work site and ensure that it is readily available at all times.

13.3 Hazardous Material Incident or Spill

- 13.3.1 In the event of a hazardous material incident or spill, the Contractor must:
 - (a) ensure that no Contractor or CP Personnel have or will be exposed;
 - (b) take all reasonable actions to contain the spill;
 - (c) respond in accordance with its emergency response plan; and
 - (d) notify CP immediately in accordance with Section 18 below.

14 Operation of Highway Vehicles

14.1 Highway Vehicles

14.1.1 The following requirements apply to all highway vehicles, when operated on CP Property; or used to transport CP Personnel.

14.2 Regulations and Inspection

14.2.1 Before using a highway vehicle, Contractor Personnel shall:

- (a) complete a pre-trip inspection;
- (b) maintain an inspection log;
- (c) ensure periodic inspections are completed at official testing locations as required;
- (d) ensure the vehicle is maintained and in safe operating conditions at all times; and
- (e) ensure the vehicle is in compliance with applicable motor vehicle regulations and license requirements.

14.2.2 Vehicle maintenance, inspection records and logs must be made available to the Manager-in-Charge on request.

14.3 Vehicle Operator Requirements

14.3.1 Operation of highway vehicles is restricted to those Contractor Personnel who are licensed, qualified and authorized to do so. Such Contractor Personnel shall be responsible for the safety of all passengers at all times. For greater certainty, such Contractor Personnel shall:

- (a) hold a valid license for the class of vehicle being operated, in accordance with applicable local, state and federal requirements, and
- (b) strictly comply with all posted traffic signs, signals, and all shall obey all applicable legislation; and
- (c) maintain the required driver log, and make the log available to the Manager-in-Charge on request, and
- (d) comply with the requirements on the use of electronic devices as set out in Section 10 above.

14.4 Driving on CP Property

14.4.1 In addition to the requirements set out above, while on CP Property, Contractor Personnel shall:

- (a) travel only on designated roadways unless otherwise instructed;
- (b) keep daytime running lights on (if so equipped);
- (c) not exceed 15 mph unless otherwise posted;
- (d) come to a full stop at all blind corners, rail and roadway crossings;
- (e) yield the right of way to all Mobile Equipment and other non-highway equipment or service vehicles;
- (f) not operate vehicles (or any internal combustion equipment) inside buildings or enclosed structures unless adequate ventilation is provided;
- (g) not park Foul of Track unless on-track protection is provided;
- (h) not leave vehicles running unnecessarily;

- (i) park only in pre-determined or designated areas;
- (j) always use the parking brake (or wheel chocks) when leaving an unoccupied vehicle running; and
- (k) prior to operation of a vehicle the driver must conduct a walk around of the vehicle to identify any obstacles, clearance restrictions, or adjacent vehicles that may interfere with executing a safe movement.
- (l) where safe and practicable, pull vehicles through or back into marked parking spaces to avoid reverse collisions when exiting.
- (m) If a passenger is present, he exit the vehicle prior to a reverse movement to provide guidance and direction to the driver during the reverse movement and applies to commercial vehicles and vehicles with restricted rear views

14.4.2 All Contractor Personnel who will be operating a highway vehicle or Mobile Equipment in any CP intermodal facilities must complete a Driver Safety Orientation program prior to first entry, and from time to time thereafter as directed by the Manager-in-Charge.

14.5 Seat Belts

14.5.1 Seat belts must always be worn while operating or riding in any equipped vehicle unless Contractor personnel is actively engaged in inspections requiring said Contractor Personnel to be free of such restraint, and then only when the vehicle is operating at less than 15 mph.

14.6 Loads

14.6.1 Contractor Personnel shall ensure vehicles are loaded according to weight and dimensional requirements as authorized by state regulations and permits, and properly load and secure tools, material, equipment and freight to avoid shifting, falling, leaking or otherwise escaping from vehicles during operation.

14.7 Riding in CP Vehicles

14.7.1 Contractor Personnel are prohibited from operating or riding in any CP vehicles unless authorized to do so, or in case of emergency.

15 Tools, Equipment and Machinery

15.1 General Safety Requirements Respecting All Tools, Equipment and Machinery

15.1.1 Contractor Personnel shall ensure that all tools, equipment, and machinery used be:

- (a) in compliance with all Applicable Legislation;
- (b) in good working order, properly serviced and maintained;
- (c) safe for their proposed use and used only for purposes specified by the manufacturer;
- (d) operated and maintained only by persons properly trained and qualified for that duty;
- (e) seat belts (if present on equipment) must be worn while operating or riding any such equipped mobile equipment;
- (f) if mobile, equipped with appropriate safety devices (e.g. lights, horns, back-up alarms, safety beacons); and prevented from moving, through use of the hand brake, wheel blocking, wheel chocking and/or a derail, where applicable.

15.1.2 The Contractor shall provide adequate lighting when performing work between sunset and sunrise.

15.1.3 Use of CP tools, equipment and machinery by Contractor Personnel is prohibited unless specifically authorized by local CP management.

15.2 Hazardous Energy Control- Lockout

15.2.1 Contractor Personnel shall employ lockout/tagout procedures as required to eliminate the accidental or unexpected start-up, energizing, or release of stored (residual) energy during maintenance, repair and/or servicing activities.

15.2.2 All tools, equipment and machinery must be made safe and isolated from all energy sources rendering the machine, equipment, or process inoperative prior to performing maintenance, repair or servicing related tasks.

15.2.3 No Contractor Personnel can remove any CP applied lock or tag, including bad-order tag.

15.2.4 Notwithstanding the foregoing, if Contractor's Work may create an energy hazard to any CP Personnel, then all affected parties must follow the requirements set forth in CP's Lockout – Hazardous Energy Control Policy and Code of Practice.

15.2.5 If CP Personnel and Contractors are jointly performing maintenance, repair or servicing activities on the same machine, equipment or using the same energy source, then a multi-lock hasp must be applied with individual locks and tags affixed (as per CP's Lockout – Hazardous Energy Control Policy and Code of Practice).

15.3 Electrical Safety Requirements

15.3.1 In addition to the hazardous energy control lockout requirements above, all electrical Work must comply with Applicable Legislation, National Electrical Code (NEC), and National Fire Protection Association (NFPA) requirements.

15.3.2 Contractor Personnel Working on electrical systems must:

- (a) if in proximity to CP Personnel, inform them of:
 - (i) existing or potential electrical hazards;
 - (ii) any specific additional personal protective equipment that may be required;
 - (iii) applicable safe work practices;
 - (iv) applicable emergency and evacuation procedures; and
 - (v) apply lock out procedures as per section above on Hazardous Energy Control-Lockout
- (b) have practices, procedures and training that comply with:
 - (i) Applicable sections of the NEC and NFPA electrical safety standards;
 - (ii) Any other Applicable Legislation; and
- (c) not operate or allow cranes or other mobile equipment to approach closer to any live electrical power line than is permitted by OSHA regulations (29 CFR 1910.333).

15.4 Lifting Devices

15.4.1 All lifting devices, including but not limited to jacks, cranes, cables, slings, chains and hooks shall:

- (a) meet Applicable Legislation governing design, inspection, maintenance and operation;
- (b) be safety certified and labeled or tagged with load capacity limits where required;

- (c) have sufficient capacity for the planned lift;
- (d) have sufficient footing or support area to properly distribute the load during a lift.

15.5 Welding and Torch Cutting

15.5.1 When welding or torch cutting, Contractor Personnel shall:

- (a) be properly trained and qualified;
- (b) ensure that all closed containers have been properly purged;
- (c) direct flame or sparks away from other Workers, equipment and flammable material;
- (d) have a fire extinguisher readily available;
- (e) keep compressed gas and oxygen cylinders stored in a secure, vertical position, with regulators removed and caps applied, labeled properly and located in vented cabinets or other designated locations.

15.6 Explosive Actuated Tools

15.6.1 Only Contractor Personnel who are qualified and licensed in accordance with Applicable Legislation, and authorized by CP, may use explosives or explosive actuated tools.

15.7 Unattended Equipment or Machinery

15.7.1 Tools, Equipment and Machinery shall not be left unattended at any time and shall not be stored on CP Property, unless expressly permitted pursuant to a written agreement with CP or by the Manager-in-Charge in writing, and where so permitted, Contractor shall ensure that:

- (a) storage shall be restricted to the designated area, or as otherwise specified by CP.
- (b) all such tools, equipment and machinery shall be secured in a safe position well clear of all tracks to prevent accidental contact with trains and moving equipment and to not restrict train crew sightlines;
- (c) as much as possible, tools, equipment and machinery shall be stored in locations out of public view.
- (d) Machines must be secured in accordance with on-track machinery rules.

16 Emergency Response

16.1 Emergency Response Plan

16.1.1 The Contractor must maintain a current emergency response plan and make it available to CP on request. Emergency response plans must include at a minimum:

- (a) contractor reporting procedures in the event of an incident or spill;
- (b) emergency response contacts and phone numbers, including phone numbers for CP incident reporting and local CP managers (See Attachment A); and
- (c) containment measures to be taken in the event of an incident or spill.

16.2 Initial Response

16.2.1 Initial response to any emergency condition must follow the following sequence:

- (a) Protect the safety and security of all individuals and communities
- (b) Provide environmental protection and mitigation
- (c) Conduct incident investigation and evidence preservation
- (d) Restore railroad operations

16.3 First Aid

16.3.1 Contractor Personnel must have sufficient First Aid qualified personnel and the required First Aid kit and any other required First Aid equipment at the Work Site, suitable for the crew size, nature of Work being performed and location, all of which shall, at a minimum, comply with OSHA regulations (29 CFR 1910.266).

16.4 Fire Protection

16.4.1 The Contractor must have appropriate fire extinguishers suitable (i.e., type, size and quantity) for nature of the work being done, in compliance with applicable legislation, and be readily available at all times on:

- (a) the work site; and
- (b) all Contractor equipment, machinery and highway vehicles.

16.4.2 Contractor Personnel shall ensure that all necessary precautions are taken to prevent fires, including the following:

- (a) storing flammable material (e.g., paper, rubbish, sawdust, oily or greasy rags, etc.) in proper containers;
- (b) storing and transporting fuel, gasoline or other flammable liquids in approved containers. Use of unapproved containers is prohibited;
- (c) proper disposal of flammable material daily;
- (d) preventing static electricity when dispensing or transferring flammable liquids by using proper grounding and bonding techniques;
- (e) avoid using cutting or welding torches during the last one-half hour of shifts, if possible;
- (f) taking special precautions with fusees, including:
 - (i) store and transport in approved containers;
 - (ii) do not allow fusees to come in contact with any combustible material, including railroad ties or wooden timbers; and
 - (iii) fully extinguish fusees before leaving the location where used;
- (g) promptly advise CP management of any fire on CP Property; and
- (h) fully extinguish or provide protection for any fire prior to leaving the Work Site.

16.4.3 Contractors Working on the CP right-of-way where a high risk of fire exists (e.g., during rail grinding, rail welding) must have:

- (a) appropriate fire prevention and suppression plans (including emergency numbers for CP, local firefighters and fire control districts); and
- (b) additional firefighting equipment and trained Contractor Personnel on site, as required by Applicable Legislation or the Manage In Charge.

17 Confined Space

17.1 Confined Space

- 17.1.1 Qualified and authorized Contractor Personnel must follow all required confined space entry procedures in accordance with applicable legislation and standards prior to entering into a confined space.
- 17.1.2 Rescue procedures and equipment must readily available when required to enter a confined space.

18 Reportable Accidents, Incidents and Injuries

18.1 Reportable Injuries

18.1.1 Reportable injuries include any personal injury to:

- (a) Contractor Personnel;
- (b) any CP Personnel; or
- (c) to any third party on CP Property.

18.2 Reportable Accidents

18.2.1 Reportable accidents include any occurrence that results in:

- (a) damage to railroad tracks, right of way, buildings or other CP Property;
- (b) damage to railroad equipment;
- (c) damage to CP highway vehicles;
- (d) release of hazardous material;
- (e) spill or loss of transported commodities; and
- (f) any threat to the environment.

18.3 Reportable Incidents

18.3.1 Reportable incidents include:

- (a) unintended movement of railroad equipment;
- (b) failure to provide track protection for Workers when required;
- (c) movement of railroad equipment beyond authorized limits;
- (d) operation of railroad equipment by an unqualified person;
- (e) unauthorized handling of a track switch;
- (f) damage, vandalism or tampering with any railroad signals, structures or railroad safety device;

- (g) seepage, leakage, spills of, or other contamination from, Hazardous Materials;
- (h) actual, threaten or suspected security related incidents;
- (i) slides, washouts or other on-track obstructions; or
- (j) any occurrence that may disrupt the movement of trains or affect safe rail operations.

19 Reporting

19.1 Emergency Reporting

19.1.1 In the case of an emergency, Contractor Personnel must call:

- (a) 911, where this emergency response system exists, or
- (b) the local police, fire or emergency department in all cases; and
- (c) CP Police Services Communication Center- 1-800-716-9132.

19.2 Accident, Incident, Injury Reporting

19.2.1 When an accident, incident or injury occurs on CP Property, the Contractor must:

- (a) immediately report it to the
 - (i) CP Police Services Communication Center 1-800-716-9132; and
 - (ii) CP Manager-in-Charge
- (b) follow all instructions given to protect the scene.

19.2.2 CP is obligated to report Contractor Personnel injuries occurring on CP property to the Federal Railroad Administration (FRA). Any state or required regulatory reporting remains the Contractor's responsibility.

19.3 Information to Report

19.3.1 Information required with the initial report includes:

- (a) type of incident;
- (b) date and time of occurrence;
- (c) location (mileage, subdivision, building, yard or other physical description);
- (d) identity of person(s) involved or injured (company & name);
- (e) description of any hazardous materials involved;
- (f) type & unit number of any railroad equipment or vehicle involved;
- (g) description of occurrence, damage and/or injury, and cause if known;
- (h) description of any emergency response;
- (i) name and contact information of person making the report; and
- (j) any such other information that CP may require.

19.4 Environmental Incidents and Spills

19.4.1 In the event of an environmental incident or spill that could have a negative impact on the environment, the Contractor must immediately:

- (a) report the incident to the Operations Center, the Manager-in-Charge, and the designated CP Contact as per the governing agreement relating to the Work;
- (b) take all reasonable actions to contain the spill;
- (c) respond in accordance with its emergency response plan; and

- (d) provide CP with the following information;
 - (i) description of location and surrounding area, including any sensitive environmental areas nearby (e.g., rivers, parks, sewers);
 - (ii) type and quantity of substance released;
 - (iii) cause of spill or deposit, if known; and
 - (iv) details of any immediate action taken or action proposed to be taken to contain spill and recover substance.

19.5 Additional Contractor Requirements

19.5.1 Contractor and Contractor Personnel must:

- (a) ensure an appropriate emergency response is initiated;
- (b) protect any evidence until released by the CP Manager-in-Charge;
- (c) cooperate fully with any CP investigation;
- (d) cooperate fully with any investigating government agency; and
- (e) notify CP if information is requested by any investigating government agency.

20 Contractor & Contractor Personnel Acknowledgement

Acknowledgement

- 20.1.1 Contractor and Contractor Personnel who Work on CP Property shall be deemed to have read and understood the content of these Minimum Safety Requirements for Contractors While Working on CP Property in the United States, as amended from time to time, and to agree to be bound by them.
- 20.1.2 These Minimum Safety Requirements for Contractors While Working on CP Property in the United States are subject to change without prior notice. The most current version of these Minimum Safety Requirements can be viewed at www.cpr.ca or by contacting the Manager-in-Charge.



***Home Safe™ is a commitment to be vigilant about personal safety
and the safety of co-workers.***

WORK SITE INFORMATION		
	PHONE	LOCATION
Work Site Location Name		
Railroad Subdivision & Mileage		
Address, Number and Street		
Nearest Town		
CP Manager-in-Charge		
Emergency Site Access Route (Describe route from nearest emergency services location in detail including access roads & physical landmarks OR provide sketch on back.)		
Contractor Supervisor		
Site Telephone		
Certified First Aid Attendant		
Location of First Aid Supplies at Site		
Location of Fire Extinguishing Equipment:		
Location of WHIMS data sheets		
UTILITY INFORMATION		
UTILITIES CONTACT	PHONE	LOCATION
Natural Gas:	()	
Electrical:	()	
Fiber Optic Line:	()	
Water & Sewer:	()	
Telephone:	()	
Cable System:	()	
Qualified employee(s) in:	()	
Confined Space Entry, (if applicable):	()	
Equipment requirements for Confined Space Entry, (if applicable):	()	
Other:		

SECTION 01 42 00

REFERENCES

PART 1 - GENERAL

1.01 ABBREVIATIONS

A. Interpret abbreviations in Specifications as follows:

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers' Association
AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Boiler Manufacturers Association
CI	American Concrete Institute
ADA	Americans with Disabilities Act
ACRI	Air Conditioning and Refrigeration Institute
ADC	Air Diffusion Council
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
AREMA	American Railway Engineering and Maintenance Association
ARI	Air-Conditioning and Refrigeration Institute
ARMA	Asphalt Roofing Manufacturer's Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWPB	American Wood Preservers' Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders' Hardware Manufacturers' Association
CBMA	Certified Ballast Manufacturers' Association
CGA	Compressed Gas Association
CISPI	Cast Iron Soil Pipe Institute
CMAA	Crane Manufacturer's Association of America
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
CTI	Cooling Tower Institute
DNR	Wisconsin Department of Natural Resources
DOT	Wisconsin Department of Transportation
EJCDC	Engineers Joint Contract Documents Committee
EPA	Environmental Protection Agency
Fed. Spec.	Federal Specifications
FM	Factory Mutual, Inc.
GAMA	Gas Appliance Manufacturers Association

HI	Hydraulic Institute
HMI	Hoist Manufacturers' Institute
HTCP	Highway Technician Certification Program
IEEE	Institute of Electrical and Electronics Engineers
IPCEA	Insulated Power Cable Engineers' Association
ISA	Instrument Society of America
MCA	Mechanical Contractors Association
MDI	Metal Deck Institute
MICA	Midwest Insulation Contractors Association
MSHA	Mine Safety and Health Administration
MSS	Manufacturer's Standardization Society of the Valve & Fitting Industry, Inc.
NACE	National Association of Corrosion Engineers
NAMM	National Association of Architectural Metal Manufacturers
NBHA	National Builders' Hardware Association
NBS	National Bureau of Standards
NEC	National Electrical Code
NEEB	National Environmental Balancing Bureau
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NICET	National Institute for Certification in Engineering Technologies
NIOSH	National Institute for Occupational Safety and Health
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastic Pipe Institute
PS	Product Standards Sections - U.S. Department of Commerce
SAE	Society of Automotive Engineers
SEWRPC	Southeastern Wisconsin Regional Planning Commission
SJI	Steel Joist Institute
SMACNA	Sheet Metal & Air Conditioning Contractors' National Association
SSPC	Steel Structures Painting Council
SPS	Wisconsin Department of Safety and Professional Services
SWS	Standard Specifications for Sewer and Water Construction in Wisconsin
TCA	Tile Council of America
TIMA	Thermal Insulation Manufacturers' Association
TPI	Truss Plate Institute
UL	Underwriters' Laboratories, Inc.
USACOE	United States Army Corps of Engineers
WQA	Water Quality Association
WWPA	Western Wood Products Association

- B. Whenever the following terms are used, interpret as follows:
1. Administrative Code: Rules of *Wisconsin Administrative Code*.
 2. Federal Specifications: United States Federal Specifications Board specifications.
 3. State Specifications: *Standard Specifications for Highway and Structure Construction* by the Wisconsin Department of Transportation including Additional Special Provisions.

1.02 DEFINITIONS

- A. Use the following definitions:
1. Follow: Comply with the requirements of.
 2. Follow XX XX XX: For this Work, comply with the requirements stated in Specifications Section number XX XX XX.

3. Follow XX XX XX: The subject is fully described in Specifications Section number XX XX XX.

1.03 REFERENCE STANDARDS

- A. Where the SWS refers to the following SWS sections, substitute this Project Manual as follows:
 1. For SWS 1.6.1 use General Conditions Article 13.
 2. For SWS 1.6.3 use General Conditions Article 13.
 3. For SWS 1.7.9 ignore entire reference.
 4. For SWS 2.1.3 use General Conditions paragraph 5.02.
- B. In SWS, do not use:
 1. All Chapters in Part I - General Conditions.
 2. Chapters 2.1.0 through 2.2.8.
- C. In State Specifications, do not use:
 1. All Chapters in Part I - General Requirements and Covenants.
 2. If Section 01 22 00 – Unit Prices is used, then do not use related State Specifications for measurement and payment of quantities.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 43 26

TESTING AND INSPECTING AGENCY QUALIFICATIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. General independent testing agency requirements for services employed and paid for by Contractor and required by other Specifications.

1.02 SUBMITTALS

- A. Before Project employment, submit:
 - 1. Description and qualifications of proposed testing agency.
 - 2. Description of certifications, qualifications, and experience of managing engineer(s), field and lab supervisors, and potential technician(s) who may work on Project.
- B. Inspection and test reports.
 - 1. Make daily and typewritten.
 - 2. State clearly whether subject Work achieved "pass" or "fail" status.
 - 3. Includes diagrammatic sketches of field test locations.
- C. E-mail report copy(s) direct from lab to Engineer within 48 hours of events.

1.03 QUALIFICATIONS

- A. Testing firm:
 - 1. Meet or exceed requirements of ASTM E329 – Standard Specification for Agencies Engaged in Construction Inspection and/or Testing.
 - 2. An agency and employees that are independent of tested material Supplier.
 - 3. A single agency for all project testing.
- B. Testing personnel:
 - 1. Trained and experienced in the necessary skills for assigned test(s) or inspection(s).
 - 2. Familiar with Contract Document requirements.
 - 3. Certified for concrete by American Concrete Institute.

1.04 SITE TESTS

- A. Furnish proper and safe space on Site for testing agency to perform and temporarily store test products.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 45 16.13

CONTRACTOR'S QUALITY CONTROL

PART 1 - GENERAL

1.01 CONTRACTOR'S QUALITY CONTROL

- A. As a condition of acceptance, arrange, conduct, and pay for tests necessary to demonstrate satisfactory performance of equipment and systems installed under the Contract Documents. Make adjustments, repairs and corrections necessary to meet the requirements of the Specifications including the instructions of the supplier of any piece of equipment.
- B. Conduct tests at full operating conditions and pressures equal to normal conditions of use. Except as Engineer may approve, no piece of equipment shall be tested for acceptance until the system of which the equipment is a part is complete and ready in all respects for use. Engineer's approval shall not relieve Contractor from Contractor's obligations and responsibilities under the Contract Documents.
- C. Inform all Subcontractors, Suppliers and other persons in connection with the testing of equipment and systems.
- D. Contractor is responsible for the accuracy, fitting and protection of all Work. Verify measurements, locations, and quantities before proceeding with installations.
- E. For each Specification section, inspect prevailing conditions before starting Work. Notify Engineer of conditions that may adversely affect proper completion.
- F. Install and erect Work level, plumb, and neatly fitted.
- G. Scales for weighing materials: Tested by a Sealer of Weights and Measures and shall bear a current stamp of approval.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 52 00
CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.01 FIRE PREVENTION AND PROTECTION

- A. Perform Work in a fire-safe manner. Keep adequate fire-fighting equipment on Site and comply with Laws and Regulations with respect to fire prevention.

1.02 TEMPORARY FACILITIES

- A. Provide the following:
 - 1. Temporary sanitary facilities.
- B. As erection progresses, secure or brace Work to resist dead and wind loads and erection stresses, and loads applied to Work by installation and operation of equipment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 57 00

TEMPORARY CONTROLS

1.01 POLLUTION CONTROL

- A. Observe Laws and Regulations for environmental pollution and protection of environment.
- B. Protect waterways:
 - 1. Do not pollute any wetland, lake, river, stream or other watercourse by dumping refuse, rubbish, debris or dredged material therein.
 - 2. Provide temporary means and facilities necessary to transport, divert and detain flows, including storm flows and flows created by construction operations, to prevent waterway silting and flood damage to property.
- C. Protect sewers. Prevent construction materials, earth and debris from entering facilities.
- D. Prevent contamination and the impairment of existing potable water facilities and piping, both public and private.
- E. Legally dispose of surplus excavated material and other waste material resulting from Work. Make arrangements and pay costs in connection with disposal of such materials.
- F. Minimize air and noise pollution resulting from Work. Do not burn material or trash on Site.
- G. Dust and mud control:
 - 1. Minimize raising dust and tracking mud from construction operations.
 - 2. Provide positive means to prevent dust from becoming airborne.
 - 3. Remove tracked mud from public streets at end of every work day.

1.02 SURFACE AND SUBSURFACE WATER CONTROL

- A. For water removal and groundwater control see Section 01 57 23 - Dewatering.

1.03 UTILITY PIPELINE CONSTRUCTION CLEANING

- A. Remove dirt and extraneous materials from sewers, water mains, and appurtenances affected by the Work as the Work progresses.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 57 13

TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Products and practices to temporarily control surface water runoff, soil, and sediment during construction.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 01 41 00 - Regulatory Requirements.
- C. 01 57 23 - Dewatering.
- D. 32 90 00 - Plantings.

1.03 REFERENCES

- A. Technical Standard: Wisconsin Department of Natural Resources (DNR) Storm Water Construction Technical Standards:
http://dnr.wi.gov/topic/stormwater/standards/const_standards.html
- B. PAL: Wisconsin Department of Transportation Erosion Control Product Acceptability List.
<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/pal/default.aspx>

1.04 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00 for:
 - a. Product data.

1.05 REGULATORY REQUIREMENTS

- A. Comply with Laws and Regulations prohibiting pollution of any lake, stream, river, or wetland by dumping refuse, rubbish, dredge material, or debris therein.
- B. Notice of Intent.
 - 1. Follow 01 41 00 and follow related Construction Sequence and erosion control plan on Drawings.
 - 2. Alterations to construction sequence only allowed with Engineer's approval.

1.06 QUALITY CONTROL

- A. Construct and maintain erosion sediment control measures following the appropriate Technical Standard.

- B. When facilities are erected as shown on Drawings, contact Engineer for an inspection. Check facilities weekly and within 24 hours following rainfall events over 1/2 inch. Make needed repairs within 24 hours.
- C. Engineer will be sole judge of the adequacy of Contractor's erosion control efforts and Owner may suspend or limit the Contractor's operations pending adequate performance of any temporary or permanent erosion control measures requested by Engineer.

PART 2 - PRODUCTS

2.01 SLOPE INTERRUPTION OR PERIMETER CONTROL

- A. Manufactured perimeter control and slope interruption products. Follow Technical Standard 1056. Use PAL listed products and submit product data.

2.02 EROSION MATS

- A. Non-channel erosion mat Class 1, Urban Type A. Follow Technical Standard 1052.
- B. Channel erosion mat Class 1 Type B. Follow Technical Standard 1053.
- C. Use PAL-listed product(s) and submit product data.

2.03 GEOTEXTILE FABRIC

- A. For subgrade reinforcement under riprap. Follow State Specification 645.2. Use Type R.
 1. Riprap: Follow State Specification 645.2. Use Type R for Light Riprap and Field Stone.
- B. Use PAL-listed product(s) and submit product data.

2.04 DITCH CHECKS

- A. Follow Technical Standard 1062 and as follows:
 1. Manufactured. Use PAL-listed product and submit product data.

2.05 SEEDING

- A. For temporary construction Site erosion control follow Technical Standard 1059.

2.06 INLET PROTECTION

- A. Follow Technical Standard 1060. Use PAL-listed product(s) and submit product data.

2.07 DEWATERING

- A. Follow Technical Standard 1061.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install temporary devices before construction activities begin, and completely remove above and below grade after Site is stabilized and after Engineer's approval.

- B. Proceed carefully with construction adjacent to stream channels to avoid washing, sloughing, or deposition of materials into stream. If possible, dike-off work area and reduce volume and velocity of water that crosses disturbed areas with planned Engineering works (diversion, detention basins, berms).
 - C. Unless noted on Drawings, do not remove trees and surface vegetation.
 - D. Expose the smallest practical area of soil at any given time through construction scheduling. Make the duration of such exposure before application of stabilization measures as short as practicable.
- 3.02 SLOPE INTERRUPTION OR PERIMETER CONTROL INSTALLATION
- A. Manufactured products: Follow Technical Standard 1056.
 - B. Sediment bale barrier: Follow Technical Standard 1055.
- 3.03 EROSION MAT INSTALLATION
- A. For non-channel erosion mat follow Technical Standard 1052.
 - B. For channel erosion mat follow Technical Standard 1053.
- 3.04 GEOTEXTILE FABRIC
- A. Follow State Specifications 645.3.
- 3.05 DITCH CHECKS
- A. Follow Technical Standard 1062.
 - B. Entrench manufactured products a minimum of 2-inches on bare soil.
- 3.06 SEEDING
- A. For temporary construction Site erosion control follow Technical Standard 1059.
- 3.07 INLET PROTECTION
- A. Follow Technical Standard 1060.
- 3.08 DEWATERING
- A. Follow Technical Standard 1061 for removing sediment from water generated from dewatering activities, including trench dewatering.
 - B. Choose dewatering sediment removal method following Technical Standard 1061 and its Dewatering Practice Selection Matrix Figure 2.
 - C. Modify dewatering method as necessary for actual field soil conditions.
 - D. Follow 01 57 23 for dewatering and groundwater control systems.

END OF SECTION

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SECTION 01 57 23
TEMPORARY DEWATERING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Groundwater control system.
- B. Removal of water encountered during excavating and construction.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 01 57 13 - Temporary Erosion and Sediment Control.

1.03 REFERENCES

- A. Wisconsin Department of Natural Resources Private Water Supply Section, Box 7921, Madison, Wisconsin 53707.

1.04 DESIGN REQUIREMENTS

- A. Design and operate dewatering system to prevent removal of existing soils. Dewater open excavations from outside their structural limits and from a point below bottom of excavation.
- B. Prevent water from rising above any footing, foundation, or bottom of trench until Work has been backfilled, protect 24-hours a day, weekends, and holidays.
- C. Coordinate design and installation of sheeting, shoring and bracing to facilitate water removal.
- D. Dewatering methods and groundwater removal shall not damage existing property and structures, both on and near the Site, including private wells and water supplies.

1.05 PERFORMANCE REQUIREMENTS

- A. Maintain groundwater table at least 1 foot below bottom of excavations and trenches (under normal excavating and pipe laying conditions).
- B. Maintain water removal operations to accommodate work performed by others within Site.

1.06 REPAIRS

- A. Protect existing property and structures from subsidence, flooding and other damage, and be responsible to act during emergencies. Follow General Conditions 7.12 and 7.15.
- B. Assume responsibility for damage or loss arising from removal or disturbance of groundwater. Loss or damage includes but is not limited to: reduction in water supply;

substantial decrease in well capacity, water quality, or water levels; subsidence of soil; or damage to foundations, structures and other property.

- C. If a private well or water supply is interrupted or detrimentally affected during dewatering operations, provide potable water to the affected user until water supply is restored.
- D. Contractor's indemnification responsibilities include claims relating to dewatering operations. Follow General Conditions 5.02.
- E. If Contractor fails to promptly respond to any claim arising from dewatering operations, or fails to correct damage resulting from dewatering operations, Owner may, after 7 days written notice to Contractor and without assuming Contractor's liability under the Contract Documents, proceed to correct the damage as Owner may deem necessary, and the costs thereof will be deducted from Contract Price. Owner's authority to act on behalf of Contractor will assume Contractor's dewatering activities were the causative factor of such damage. Follow General Conditions 14.07.

1.07 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00.
- B. Informational:
 - 1. Complete information and data for groundwater control system proposed.
 - 2. Duplicate copies of permits obtained from WDNR or other agencies.
 - 3. Contract closeout: Signed release from authority having jurisdiction certifying storm sewers and ditches have been satisfactorily cleaned and restored.
 - 4. Throughout dewatering period, monitor and record the operation and performance of groundwater control system. Provide monitoring facilities, and submit recorded information each week to Engineer.

1.08 REGULATORY REQUIREMENTS

- A. If dewatering wells are used, seal and abandon following DNR requirements.
- B. Obtain well permit from DNR Private Water Supply Section if dewatering wells will be installed or operated for which the single or aggregate capacity will exceed 70 gallons per minute.
- C. Obtain written permission from authority having jurisdiction before using storm sewers, ditches or other existing drainage facilities for water disposal.
- D. Review of proposed groundwater control system by Engineer does not relieve Contractor of responsibility to comply with requirements of authorities having jurisdiction over Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 WATER REMOVAL

- A. Maintain groundwater levels so construction occurs in dry conditions until backfilling is completed. Prevent flotation of structures from hydrostatic uplift forces. Provide reliable and adequate backup equipment.

- B. Remove temporary structures and equipment from Site at Work completion.
- C. Operate and maintain groundwater control system on a 24-hour-a-day and 7-days-per-week basis.

3.02 WATER DISPOSAL

- A. Convey groundwater removed from Site through pipes to the point of discharge. Do not convey water in open ditches or trenches. Locate discharge point on vegetated or stabilized ground.
- B. Follow 01 57 13 for disposal of dewatering discharge.
- C. Prevent flooding damage to property.
- D. Do not use existing drainage facilities in a manner which will obstruct their normal function or cause flooding or damage.
- E. Upon completion of Work, remove temporary facilities and equipment and restore existing facilities as originally found.

END OF SECTION

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SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Deliver products in original packaging. Show manufacturer's label on packages. Unidentifiable materials will be rejected.
- B. Use materials and equipment which have National Board of Fire Underwriters (U.L.) listings and label service.
- C. Where optional colors, finishes or patterns exist, follow 01 33 00.
- D. Follow manufacturer's instructions for delivery, storage, handling, protection, and installation.

1.02 STORAGE

- A. Store materials on or off Site following Laws and Regulations, manufacturer's instructions, and these requirements.
- B. Protect materials stored on Site from elements and incidental damage by watertight coverings or sheds with raised floors and suitably provided with barriers. Do not store materials on Site which may interfere with construction or cause damage to property and structures.
- C. Owner assumes no responsibility for materials stored on Owner's property or in Owner's buildings on or off Site.

1.03 HANDLING AND PROTECTION

- A. Protect materials against damage during shipping and until the time of Owner's possession of Work. After installation, protect materials from damage during subsequent construction activities. Repair or replace damaged Work as requested by Engineer.

1.04 PRODUCT OPTIONS AND SUBSTITUTIONS

- A. The cost of design changes and construction revisions necessary to accommodate alternate equipment shall be Contractor's. See General Conditions 7.05 and Section 01 33 00.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 71 23

FIELD ENGINEERING

PART 1 - GENERAL

1.01 LINES AND GRADE

- A. Lay out Work and assume responsibility for correctly transferring construction lines and grades from the primary lines and grades established by Engineer below.
- B. Engineer will do the following staking necessary to establish primary line and grade for Contractor's use. Stakes will not be set in excavations nor in water.
 - 1. Open cut pipelines: Stakes will be set parallel to Work and offset at dimension requested by Contractor.
 - a. Storm sewer main.
 - b. Culverts.
 - 2. Structures (manholes or vaults): Stakes will be set at center points and one offset perpendicular to each of the lines in and out of structures.
 - a. Storm sewer structures.
 - 3. Slope intercept points: Stakes will be set at 50-foot intervals and at offset dimension requested by Contractor.
 - 4. Sidewalks and Pathways: Stakes will be set at offset dimension requested by Contractor.
- C. Engineer will set 2 benchmarks and 3 horizontal control points for Contractor's use to layout Work. Stakes will not be set in excavations nor in water.
- D. Protect and preserve markers and stakes set by Engineer. Cost of replacing markers and stakes will be deducted from Contract Price when loss or damage results from Contractor's operations.
- E. Submit stakeout request at least 5 days before affected construction begins. Contract Time or Contract Price will not be adjusted due to delays caused by failure to give Engineer notice.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 74 23

FINAL CLEANING

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. Clean inside and outside of structures and remove and dispose of all unused materials, wastes and debris.
- B. Remove waste and surplus materials, rubbish and construction facilities from Site.
- C. Clean ditches and storm sewers.
- D. Sweep paved areas, including resident driveways.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. Before application for final payment, furnish Engineer with following:
1. Guarantees, bonds, test reports and certificates.
 2. Consent of surety to final payment.
 3. Certificate of continuation of coverage for claims-made and completed operations insurance.
 4. Satisfactory evidence of release of all liens and claims.
 5. List of Subcontractors, Suppliers, and service providers performing, furnishing, or procuring labor, services, materials, plans, or specifications on Project.
 6. Submittals required by federal and state agencies having jurisdiction over the Work.
- B. Furnish Site-maintained documents to Engineer showing permanent-inked annotations of construction changes to:
1. Drawings. Contractor will be furnished a complete Drawing set to use exclusively for record purposes and to be maintained on a daily basis by Contractor's resident superintendent. Mark up Drawings to show actual locations, sizes and depths of buried and concealed piping, conduits, foundation pilings and other Work installed or encountered during the progress of the Work. Do not make estimations or arbitrary mark-ups.
 2. Specifications.
 3. Addenda.
 4. Written Amendments.
 5. Change Orders.
 6. Work Change Directives.
 7. Field Orders.
 8. Written interpretations and clarifications.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 31 11 00
CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Surface debris removal.
- B. Plant life and grass removal.
- C. Tree and shrub removal.
- D. Tree and shrub root system removal.

1.02 QUALITY ASSURANCE

- A. Regulatory requirements:
 - 1. Conform to applicable local code for disposal of debris.
 - 2. Coordinate Work with utility companies.
- B. Schedule pre-start meeting.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PROTECTION

- A. Do not disturb buried utilities, benchmarks, nor adjacent property.

3.02 CLEARING

- A. Clear areas required for access to site and execution of Work.
- B. Clear undergrowth and deadwood without disturbing subsoil, in affected area.
- C. Remove debris, rock and extracted plant life from Site. Provide decorative landscape rock to property owner if requested.
- D. Unless shown as a Contract requirement, do not remove trees without Engineer's and Owner's approval.
- E. Contact adjacent property owner and verify if they want wood from trees removed in front of parcel. If so, cut wood greater than 3 inch diameter to maximum 8 foot lengths and stack outside right-of-way for landowner use. Otherwise, remove and dispose of wood not claimed by property owner.

END OF SECTION

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SECTION 31 22 00

GRADING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Topsoil removal, stockpiling, and replacement.
- B. Rough grading, leveling.
- C. Ditches, swales.
- D. Borrow.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 01 43 26 - Inspection and Testing Agency Qualifications.
- C. 01 45 16.13 - Contractor's Quality Control.
- D. 01 57 13 - Temporary Erosion and Sediment Control.
- E. 31 25 00 - Permanent Erosion and Sedimentation Controls.

1.03 REFERENCES

- A. Technical Standard: Wisconsin Department of Natural Resources (DNR) Storm Water Post-construction Technical Standards:
http://dnr.wi.gov/topic/stormwater/standards/postconst_standards.html.
- B. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
- C. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.

1.04 DEFINITIONS

- A. Rock excavation: Follow State Specifications 205.
- B. Unclassified excavation: Follow State Specifications 205.
- C. Excavation below subgrade: Deposits below proposed finished grade of frost-heave material, unstable silty soils, water bearing soil, topsoil containing considerable amounts of humus or vegetable matter, or other undesirable foundation material.
- D. Borrow: Material imported from off-Site includes soil or a mixture of soil, stone, gravel or other materials of a character and quality for purposes intended, free from sod, stumps, logs, brush and other organic, perishable and deleterious matter. Material shall fulfill Contract requirements and be approved by Engineer.

1.05 PERFORMANCE REQUIREMENTS

- A. Minimum soil bearing capacity of road subgrades: 3,000 PSF.

1.06 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00 for:
 - a. Test reports from soils engineer certifying proposed borrow material is satisfactory for use intended.
- B. Informational:
 - 1. Follow 01 33 00 for:
 - a. Documentation showing permits from Regulatory Agencies have been obtained for operation of borrow pit(s) and use of haul road(s).
 - b. Documentation from Regulatory Agencies showing Contractor has complied with restoration requirements for borrow pit(s) and haul road(s).
 - c. Documentation showing permits from Regulatory Agencies have been obtained for disposal sites for excess material.

1.07 QUALITY ASSURANCE

- A. Use approved soils engineer to verify quality of all soils. Follow Section 01 43 26.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Fill materials:
 - 1. Satisfactory soil or a mixture of satisfactory soil, stone, gravel or other acceptable materials of a character and quality satisfactory for purpose intended.
 - 2. Free of deleterious, organic, or frozen matter.
 - 3. Contain no chemicals that may result in materials being classified as contaminated.
 - 4. Low - expansive with maximum Liquid Limit and Plasticity Index following ASTM D4318 of 30 and 15, respectively, unless specifically tested and determined to have low expansive properties and are approved by soils engineer.
 - 5. Top twelve inches of compacted fill; maximum three-inch particle diameter.
 - 6. All underlying compacted fill; maximum six inch particle diameter.
 - 7. Tested and approved by soils engineer before placement.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Identify designed lines, levels, contours and datum.
- B. Remove vegetation, organic or other deleterious materials from areas to be cut and filled.
- C. Remove a minimum of 6 inches of parent material (including all vegetation, stumps, etc.) beneath the proposed base of embankments.
- D. Remove and stockpile topsoil from areas within grading limits.

- E. Proof roll subgrades in presence of soils engineer prior to placement of fill materials to detect soft, wet or unstable materials to be undercut. Correct any such areas.
- F. Control erosion of soil. Follow Sections 01 57 13 and 31 25 00.
- G. All compacted fill, subgrades, and grades shall be underlain by suitable bearing material.
- H. Scarify top six to ten inches of subgrades.
- I. Moisture condition subgrade soils as necessary and recompact to minimum density required for fill materials prior to placement of fill materials.
- J. Recompact and retest previously compacted intermediate fill surfaces damaged by weather or construction equipment before resumption of filling operations.
- K. Moisture condition all soils designated for use as fill material before placement.

3.02 TOLERANCES

- A. Minimum tolerances after compaction:
 1. Pavement subgrade: plus 1 inch to minus 1 inch.
 2. All other areas: plus or minus 2 inches.

3.03 EARTHWORK CONSTRUCTION

- A. Provide sufficient drainage of completed or partially completed earthwork to prevent damage or loss due to rainfall, surface water or any other cause. Recondition or remove unstable materials resulting from improper operations, inadequate drainage or overwatering, and restore or replace with stable material.
- B. Undercut or underfill all areas to depth necessary to provide specified amount of topsoil to be placed and finished to grade lines and sections shown on Drawings.
- C. Place materials in fill areas in uniform level lifts.
 1. Sandy/gravelly materials:
10-12 inch lifts maximum.
 2. Clayey/silty materials:
6-8 inch lifts maximum.
 3. Rock materials: Lifts not exceeding approximate average size of larger rocks, provided individual pieces are placed to prevent nesting and all voids filled with smaller stones and satisfactory soil or rock fines forming dense and compact mass.
 4. Engineer is final judge of soil types.
 5. Select compaction equipment specifically designed for soil compaction based upon type of material being compacted and layer thickness.
- D. Materials placed in upper 1 foot of embankments or within 1 foot of piping or other structures; maximum 3 inch particle diameter.
- E. In the immediate vicinity of minor structures and Underground Facilities, in holes, around and under isolated individual rock fragments, and elsewhere where embankment and filling materials cannot be or are not reached by normal compaction equipment, compact with machine-operated pneumatic or mechanical tampers, or with hand methods, as required to ensure intimate contact between the backfill material and the structure and to provide thorough compaction.

- F. Blend embankments and slopes uniformly into adjacent areas.
- G. Blend areas along exterior grading limits into existing ground grades 5 feet within Site at maximum 3 horizontal to 1 vertical slope.
- H. Excavation Below Subgrade must be authorized by Engineer before Contractor's operation.
- I. Minimize dispersion of dust from grading operations by application of water or other approved dust control materials at Contractor's expense.
- J. All earthwork shall be considered unclassified.
- K. Provide sufficient satisfactory borrow materials from areas(s) wholly outside and beyond limits of Owner-controlled property at Contractor's expense.

3.04 COMPACTION REQUIREMENTS

- A. In areas where materials are moisture-density testable (including storm water facility embankments):
 - 1. Tested for compaction as follows:
 - a. Moisture and density: Follow ASTM D698 (Standard Proctor).
 - 2. Shall meet the following moisture content, density and deflection requirements, each of which has equal weight and each of which must be satisfied:
 - a. Moisture content at the time of compacting the materials shall be prepared to within minus 1 to plus 3 percent of optimum moisture content for cohesive soils and minus 3 to plus 3 percent of optimum moisture content for granular soils. Material which does not contain sufficient moisture to obtain proper compaction shall be wetted, and thoroughly mixed. Material containing an excess of moisture shall be dried by manipulation, aeration, drainage, or other means before being compacted.
 - b. After compaction of each layer, the density shall be at least:
 - 1) Minimum 95 percent of maximum dry density for pavement subgrades, to a depth of 1 foot below established subgrade elevation as determined by following ASTM D698 (Standard Proctor).
 - 2) Minimum 95 percent of maximum dry density for fill depths less than twenty feet as determined by following ASTM D698 (Standard Proctor).
 - 3) Where structural fills exceed twenty feet in height, portions below twenty feet shall have minimum 98 percent of maximum dry density as determined by following ASTM D698 (Standard Proctor).
 - c. In addition to moisture-density testing, each compacted layer shall be observed by soils engineer for deflection or reaction under moving loaded triaxle dump truck to verify that no soft or pumping areas remain in any layer or foundation soil. Correct any such areas.
- B. In areas where materials are not moisture-density testable because rock fragments in material prevent moisture-density testing:
 - 1. Tested for compaction as follows:
 - a. Shall meet the following moisture content and deflection requirements, each of which has equal weight and each of which must be satisfied:
 - 1) Moisture content at the time of compaction shall allow the material to be readily compacted to form a dense and compact mass, free of pumping. This may require aeration or wetting to achieve.
 - 2) Each compacted layer shall be observed by soils engineer for deflection or reaction under moving loaded triaxle dump truck to verify

that no soft or pumping areas remain in any layer or foundation soil.
Correct any such areas.

3.05 EXCAVATED MATERIAL

- A. Remove surplus excavation from Site.
- B. Stockpiling: As space permits, stockpile excavated materials which are suitable and necessary for reuse on-site. Do not locate stockpiles in areas which will interfere with other work or could result in damage to structures and property. No runoff from stockpiles may enter waterways unless sedimentation control is provided. See 01 57 13.

3.06 PROTECTION

- A. Employ measures to prevent cave-ins or loose soil from falling into excavation.
- B. Protect bottom of excavations and soil adjacent to and beneath foundations from freezing.
- C. Protect subsurface utilities encountered. Notify Engineer when encountered. Record location and repair as necessary.

3.07 FIELD QUALITY CONTROL

- A. Arrange soil technician access to Site to:
 - 1. Inspect all excavated subgrade surfaces.
 - 2. Verify earthwork compliance.
- B. Employ a 01 43 26-qualified testing service to:
 - 1. Monitor the Work.
 - 2. Verify soil bearing pressures
 - 3. Perform compaction testing.
- C. Make daily reports to Engineer following 01 43 26.
- D. Perform representative compaction tests at disturbed and fill areas.
- E. Proof roll compacted fill surfaces under utilities, structures, driveways and pavements.
- F. If compaction is unsatisfactory, direct testing service to make additional in-place density and moisture tests to determine the extent of recompaction Work required. Perform corrective compaction.
- G. Immediately advise Engineer of surfaces with inadequate soil bearing values.

3.08 FINAL CLEANUP

- A. Follow State Specifications 104.

END OF SECTION

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SECTION 31 25 00

PERMANENT EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Products and practices to permanently control surface water runoff, soil, and sediment during and after construction.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 01 41 00 - Regulatory Requirements.
- C. 32 90 00 - Planting.
- D. 33 05 00 - Common Work Results for Utilities.
- E. 34 71 00 - Roadway Construction.

1.03 REFERENCES

- A. Technical Standard: Wisconsin Department of Natural Resources (DNR) Storm Water Construction Technical Standards:
http://dnr.wi.gov/topic/stormwater/standards/const_standards.html
- B. PAL: Wisconsin Department of Transportation Erosion Control Product Acceptability List:
<http://wisconsin.dot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/pal/default.aspx>

1.04 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00 for product data.

1.05 REGULATORY REQUIREMENTS

- A. Comply with laws prohibiting pollution of any lake, stream, river, or wetland by dumping refuse, rubbish, dredge material, or debris therein.
- B. Notice of Intent. Follow 01 41 00 and follow related Construction Sequence and erosion control plan on Drawings.
- C. Alterations to construction sequence only allowed with Engineer's approval.

1.06 QUALITY CONTROL

- A. Construct and maintain erosion sediment control measures following the appropriate Technical Standard.

- B. When facilities are erected as shown on Drawings, contact Engineer for an inspection. Check facilities weekly and within 24 hours following rainfall events over 1/2 inch. Make needed repairs within 24 hours.
- C. Engineer will be sole judge of the adequacy of Contractor's erosion control efforts and Owner may suspend or limit the Contractor's operations pending adequate performance of any temporary or permanent erosion control measures requested by Engineer.

PART 2 – PRODUCTS

2.01 GEOTEXTILE FABRIC

- A. For subgrade reinforcement under riprap: Follow State Specification 645.2. Use Type R.
 - 1. Riprap: Follow State Specification 645.2. Follow Type R for Light Riprap and Field Stone.
- B. Use PAL-listed product(s) and submit product data.

2.02 RIPRAP

- A. Follow State Specifications 606.2. Re-use existing where indicated on Drawings. Use Light Field Stone Riprap elsewhere.

2.03 SEEDING

- A. For permanent landscaping follow 32 90 00.

PART 3 - EXECUTION

3.01 GENERAL

- A. Proceed carefully with construction adjacent to stream channels to avoid washing, sloughing, or deposition of materials into stream. If possible, dike-off work area and reduce volume and velocity of water that crosses disturbed areas with planned Engineering works (diversion, detention basins, berms).
- B. Unless noted on Drawings, do not remove trees and surface vegetation.
- C. Expose the smallest practical area of soil at any given time through construction scheduling. Make the duration of such exposure before application of stabilization measures as short as practicable.

3.02 GEOTEXTILE FABRIC

- A. Follow State Specifications 645.3.

3.03 RIPRAP INSTALLATION

- A. Follow State Specifications 606.3.

3.04 SEEDING

- A. For permanent landscaping follow 32 90 00.

END OF SECTION

31 25 00-2

SECTION 31 32 19

GEOGRID FOR SOIL STABILIZATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Geogrid reinforcement of embankments, base course, subbase course, or subgrade.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 34 71 00 - Roadway Construction.

1.03 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO):
 1. AASHTO Recommended Practice for Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures, AASHTO PP46-01, April 2001 Interim Edition of the AASHTO Provisional Standards.
 2. Standard Specification for Highway Bridges (1997 Interim).
 3. AASHTO Guide for Design of Pavement Structures (1993).
- B. American Society of Civil Engineers (ASCE):
 1. Giroud, J.P., and Han, J. (2004). "Design method for geogrid-reinforced unpaved roads. Part I - Development of design method." Journal of Geotechnical and Geoenvironmental Engineering, 130 (8), 775-786.
 2. Giroud, J.P., and Han, J. (2004). "Design method for geogrid-reinforced unpaved roads. Part II - Calibration and applications." Journal of Geotechnical and Geoenvironmental Engineering, 130 (8), 787-797.
- C. American Society for Testing and Materials (ASTM):
 1. ASTM D1388-96 - Standard Test Method for Stiffness of Fabrics, Option A.
 2. ASTM D4355 - Standard Test method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in an Xenon Arc Type Apparatus.
 3. ASTM D4759 - Standard Practice for Determining the Specification Conformance of Geosynthetics.
 4. ASTM D5732 - Standard Test Method for Stiffness of Nonwoven Fabrics Using the Cantilever Test.
 5. ASTM D6637 - Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-rib Tensile Method.
 6. ASTM D7748 - Standard Test Method for Flexural Rigidity of Geogrids, Geotextiles and Related Products.
- D. European Committee For Standardization (EN) EN 12224 Weathering Resistance-Resistance to loss of load capacity when subjected to ultra-violet light and weathering assessment in accordance with ISO 13434: 1999 7.2.
- E. Geosynthetic Research Institute (GRI):
 1. GRI-GG2-05 - Standard Test Method for Geogrid Junction Strength.
 2. GRI-GG1-87 - Standard Test Method for Geogrid Rib Tensile Strength.
- F. International Standards Organization (ISO)

1. ISO 10319: 1996 Wide width Tensile Tests, Radial stiffness determined from tensile stiffness measured in any in-plane axis.
2. ISO 13434: 1999 Guidelines for the Assessment of Durability of Geosynthetics.
3. ISO 12960 Resistance to loss of load capacity when subjected to chemically aggressive environments as part of a durability assessment in accordance with ISO 13434: 1999 7.3.

- G. U.S. Army Corps of Engineers (USACOE)
1. Draft specification for Grid Aperture Stability by In-Plane Rotation.
 2. CW-02215 Determination of Percent Open Area.

1.04 DEFINITIONS

- A. Aperture stability (also known as torsional rigidity or torsional stiffness): In-plane torsional rigidity measured by applying a 20 kg/cm moment to central junction of 225mm square specimen restrained at perimeter following U.S. Army Corps of Engineers Methodology for Measurement of Torsional Rigidity, (Kinney, T.C. Aperture stability Modulus ref 3, 3-1-2000).
- B. Base reinforcement: Placement of a geogrid beneath or within the aggregate base course of a flexible pavement system to improve the system stiffness.
- C. Chemical degradation resistance: Resistance to loss of load capacity following ISO 12960 testing as part of a durability assessment following ISO 13434: 1999 7.3.
- D. Geogrid: Polymeric grid formed by a regular network of integrally connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth to function primarily as reinforcement.
- E. Junction efficiency: Load transfer capability following GRI-GG2-05 and GRI-GG1-87 or ASTM D6637: Percentage of ultimate tensile strength.
- F. Junction strength: Breaking tensile strength of junctions when tested following GRI-GG2 as modified by AASHTO Standard Specification for Highway Bridges, 1997 Interim, using a single rib having the greater of 3 junctions or 8 inches and tested at a strain rate of 10 percent per minute based on this gauge length.
- G. Radial stiffness: Determined from tensile stiffness measured in any in-plane axis from testing following scope of ISO 10319: 1996.
- H. Subgrade improvement: Placement of a geogrid immediately over soft subgrade soil to improve bearing capacity and mitigate deformation of subgrade soil.
- I. Ultraviolet light and weathering resistance: Resistance to loss of load capacity following EN 12224 as part of a durability assessment following ISO 13434: 1999 7.2.

1.05 PERFORMANCE REQUIREMENTS

- A. Subgrade improvement applications: Reinforcement benefit attributed to geogrid shall be as derived by Giroud-Han Method (2004). Appropriate partial safety factors shall be applied to results obtained using geogrids having properties or characteristics outside the range of rigorous model validation.
- B. Base reinforcement applications: The structural enhancement attributed to proposed geogrid material shall be supported by evaluation and documentation of testing of the

specific geogrid conducted in representative, laboratory conditions with repetitive loading applied by a circular plate or a passing wheel load of at least 4,500 pounds per single wheel or 9,000 pounds per dual wheel.

1.06 SUBMITTALS

A. Action:

1. Follow 01 33 00 and include:
 - a. Geogrid product data sheet and manufacturer certification that geogrid product achieves Part 2 requirements.
 - b. Geogrid product sample at least 4 by 7 inches.

B. Informational:

1. Follow 01 33 00 for manufacturer's installation instructions and recommendations.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Storage and protection:

1. Prevent excessive mud, wet concrete, epoxy, or other deleterious materials from contacting or affixing to geogrid materials.
2. Store at temperatures above minus-20 degrees F.
3. Rolled materials may be laid flat or stood on end.
4. Do not leave geogrid materials directly exposed to sunlight for longer than manufacturer's recommended time.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Tensar Corporation, Morrow, GA or their designated representative.

2.02 MATERIALS

- A. Structural soil reinforcement geogrid: Integrally formed and deployed as a single layer:
 1. Tensar NX-650 or approved equal.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Check geogrid upon delivery to verify proper material has been received. Ensure material is free of damage from manufacturing, shipping, and handling.

3.02 PREPARATION

- A. Prepare subgrade soil following Drawings.
- B. Do not allow vehicle traffic of any kind on subgrade or geogrid before base course placement.

3.03 INSTALLATION

- A. Follow manufacturer's installation guidelines.

- B. Temporarily secure geogrid in place with ties, staples, pins, sand bags, or backfill as required by fill properties, fill placement procedures, or weather conditions.

3.04 GRANULAR FILL PLACEMENT OVER GEOGRID

- A. Place granular fill material in lifts and compact following 34 71 00. Place, spread, and compact granular fill material so development of wrinkles, and movement of geogrid is minimized.
- B. Place at least 8 inches of loose fill over geogrid before allowing tracked vehicle traffic. Minimize tracked vehicle turning to prevent tracks from displacing fill and damaging geogrid. When substrate carries traffic with minimal rutting, rubber-tired equipment may travel upon at speeds less than 5 MPH. Avoid sudden braking and sharp turning movements.
- C. Use static compaction devices. Do not use vibratory compaction equipment.

3.05 INSPECTION

- A. Engineer may randomly inspect geogrid before, during, or after (using test pits) installation.

3.06 REPAIR

- A. Replace damaged geogrid rolls, regardless if before, during, or after installation.
- B. Repair or replace damage and defects (i.e. frayed coating, separated junctions, separated layers, tears, etc.).
- C. Replacement includes the defective area plus 3 feet past all four sides of affected area.

3.07 PROTECTION

- A. Follow manufacturer's recommendations for sunlight protection and exposure.

END OF SECTION

SECTION 31 41 33
TRENCH SHIELDING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Open-cut pipeline trench cave-in and ground movement prevention measures.

1.02 SYSTEM DESCRIPTION

- A. Use sheeting and bracing equipment and procedures that protect life, property, and the Work. Prevent trench cave-in, ground movement, disturbance of completed Work, and disturbance of surface or subsurface structures.

PART 2 - PRODUCTS

2.01 PORTABLE TRENCH BOX OR SLIDING TRENCH SHIELD

- A. Provide a minimum 6 inch horizontal clearance between pipe and inside face of shield.
- B. Use models approved by Wisconsin Department of Commerce; and applicable Laws and Regulations.

PART 3 - EXECUTION

3.01 PORTABLE TRENCH BOX OR SLIDING TRENCH SHIELD

- A. Move trench box or shield ahead in a manner to avoid pulling already jointed pipe apart, and to avoid creating voids around the pipe wall.
- B. Accurately reposition pipe that moves as a result of trench box or shield movement.
- C. Immediately fill pipe zone area voids between the undisturbed trench wall and the trench box or shield when a trench box or shield is positioned. Use crushed stone chips or granular backfill.
- D. Where a concrete cradle or envelope is required:
 - 1. Provide a spacer between concrete and shield.
 - 2. Use tar paper or equal bond-breaking material to separate the spacer and concrete, and to permit shield movement without disturbing pipe, cradle, or envelope.

3.02 CLOSED SHEETING

- A. Position to prevent soil from entering the trench from below or through sheeting.
- B. Closed sheeting may be set in place rather than driven if ground conditions are suitable and if trench is adequately spot braced prior to sheeting placement. Immediately fill voids behind sheeting with approved granular backfill.

- C. Where sheeting is driven below the top of a concrete cradle or envelope, use tar paper or equal material to break the bond between the concrete and sheeting to permit sheeting removal.
- D. Protect existing above and below grade property, facilities, piping and structures, including those located off-site.

3.03 SHEETING AND BRACING REMOVAL

- A. Remove all components that are within 3 feet below the established street grade or the existing surface grade, whichever is lower. This includes sections ordered left in place.
- B. Remove before trenches are flooded and after backfilling is complete or at an elevation to permit safe removal.
- C. Remove bracing, except that ordered left in place, when backfilling has reached the respective level of such bracing.

END OF SECTION

SECTION 32 90 00

PLANTING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Topsoil.
- B. Permanent seeding.
- C. Fertilizing.
- D. Maintenance.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 01 57 13 - Temporary Erosion and Sediment Control. Includes temporary seeding (cover crop) for erosion control.

1.03 REFERENCES

- A. ASNS: American Standard for Nursery Stock, ANSI; Z60.1 by the American Association of Nurserymen.
- B. Technical Standard: Wisconsin Department of Natural Resources (DNR) Storm Water Construction Technical Standards:
http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
- C. DNR Specification: Wisconsin Department of Natural Resources Specifications S100-Compost: http://dnr.wi.gov/topic/stormwater/documents/specifications_S100Compost.pdf.

1.04 DEFINITIONS

- A. Weeds: Bent grass, bermuda grass, bindweed, bird's-foot trefoil, blackberry, brome grass, canada thistle, chickweed, crabgrass, cress, crown vetch, dandelion, foxtail, garlic mustard, horsetail, jimsonweed, johnson grass, lambs quarter, leafy spurge, morning glory, mustard, narrow-leaved cattail, nimble will, nutgrass, nut sedge, perennial sorrel, poison ivy, poison oak, purple loosestrife, quack grass, ragwort, reed canary grass, rush grass, spotted knapweed, sweet clover, tansy, teasel, wild parsnip.
- B. Plants: Living trees, shrubs, and herbaceous plants specified in this Section.
- C. Project completed and ready for final payment: General Conditions 15.06.A.1.
- D. Defective: See General Conditions 1.02. Includes plants that are dead, show disease, weakness, or probability of death.
- E. Full growing season: Period from April 15 to November 15.

1.05 SUBMITTALS

A. Action:

1. Follow 01 33 00 for:
 - a. Seed data including source, species, mix composition, documentation of PLS (pure live seed) testing, percentage by weight, and percentages of purity, germination and weed.
 - b. Starter mix backfill material and fertilizers. Show certified analysis and component product data.
 - c. Product data for PAL-listed soil stabilizer product.
 - d. Anti-desiccant product data.
 - e. Herbicide product data.

1.06 DELIVERY STORAGE AND HANDLING

- A. Ship, store, and handle seed to ensure protection from moisture, heat, rodents, and other conditions that jeopardize viability and cause germination before installation. Discard damaged seeds.

1.07 SCHEDULING

- A. Perform permanent turf grass seeding between March 15 and October 1. Outside these dates temporarily stabilize Site following 01 57 13. Dormant seed between November 15 and December 15.
- B. Apply herbicide between April 1 and October 1.

1.08 WARRANTIES

- A. Correction Period: One year that begins on date Project is completed and ready for final payment. Period shall be extended for defective Work that is corrected or removed and replaced. Follow General Conditions 15.08.
- B. Defects and damage due to animal depredation and weather extremes are excluded from warranty.

1.09 MAINTENANCE

- A. Perform all maintenance for landscaping until Project is completed and ready for final payment.
- B. After Project is completed and ready for final payment, Owner will perform maintenance procedures.

PART 2 - PRODUCTS

2.01 WATER

- A. Free from impurities harmful to plants.

2.02 TOPSOIL

- A. Site-salvaged humus-bearing soil screened before final placement.

- B. Imported: Humus-bearing loam-type soil with a pH level between 6.0 and 7.0, screened before final placement.
- C. Screened: Mechanically screened free of roots, sticks, branches and stones greater than 1/2 inch diameter.

2.03 SEEDING MATERIALS

- A. Permanent turf grass seed: Deluxe 50 seed mix by Reinders, Inc., Waukesha, WI, Phone: 262-524-0200.
- B. Turf grass seed fertilizer:
 - 1. Granular or liquid marked with content analysis.
 - 2. 1-2-1 nitrogen-phosphorous-potassium ratio.
 - 3. At least 50 percent of nitrogen content in organic, slow-release form.
- C. Soil stabilizer: Land application. Follow Technical Standard 1050. Use PAL-listed product(s).
- D. Erosion control mats. Follow 01 57 13.

PART 3 - EXECUTION

3.01 TOPSOIL

- A. Preparation:
 - 1. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones in excess of 1/2 inch in size.
 - 2. Scarify subgrade to 6 inches depth by ripping, tilling, disking, or other method where topsoil is scheduled and where equipment used for hauling and spreading topsoil has compacted subsoil.
 - 3. Minimize compaction during grading operations by utilizing equipment having low unit pressure ground contact and by limiting repeat passes over the same areas in areas to receive topsoil.
- B. Placement depths, import topsoil if Site-stripped topsoil is insufficient:
 - 1. Turf grass seed and sod subgrade: 4 inches.
- C. Installation:
 - 1. Use topsoil in relatively dry state. Place during dry weather.
 - 2. Fine grade topsoil eliminating rough or low areas. Break down clods and lumps with appropriate equipment that creates uniformly textured soil. Maintain levels, profiles, and contours of subgrade.
 - 3. Remove stone, roots, and branches exceeding 3/4-inch sieve, and foreign material, and clods that cannot be broken down while spreading.
 - 4. Manually spread topsoil uniformly around trees, plants and building to prevent damage.
 - 5. Lightly compact placed topsoil, so as to negate any detrimental differential settling.
 - 6. Remove surplus subsoil and topsoil from Site. Leave stockpile areas ready to receive landscaping.
- D. Finish grade tolerance: Plus-or-minus 1/2 inch.

3.02 TURF GRASS SEEDING

- A. Preparation:
1. Before seeding, disk, harrow, drag, and rake to form a level and loose seed bed. Lightly roll topsoil before final raking to eliminate soft spots and mounds.
 2. Notify Engineer to allow inspection after fine grading and before seeding.
- B. Permanent installation:
1. Broadcast seed uniformly by hand or with combination seeder-cultipacker machine such as Brillion or Truax. If by hand, press seed into surface with cultipacker or roller to maximum 1/4-inch depth. If seedbed contains clods or is too loose, lightly roll (not on slopes).
 2. Sowing rate:
 - a. Turf grass: 4.5 pounds per 1000 square feet. Double rate for dormant seeding.
 3. Uniformly apply fertilizer and lightly disc or harrow into soil in conjunction with final topsoil preparation, before seeding.
 4. Fertilizer rate: 7 pounds per 1000 square feet.
 5. Protect seeded areas to prevent damage to completed installation.
 6. Place erosion control mats on slopes greater than 3H:1V and other areas shown on Drawings. Follow 01 57 13.
- C. Maintenance:
1. Water seeded areas as follows:
 - a. First day (after seeding and fertilizing): 1-1/2 inches water.
 - b. Days 2-14 (or until complete germination, whichever comes last): 1/2 inches water every other day.
 - c. As needed after complete germination to maintain a uniform stand of healthy grass.
 - d. Natural rain events may substitute for watering but perform additional watering on rain-event days to achieve stipulated water amounts.
 2. Lawn areas shall receive at least two 2-inch mowings before acceptance. Do not allow grass height to exceed 4 inches.
 3. Reseed areas that show inadequate catch and bare spots exceeding 2 square feet. Bare spots shall not exceed 3 percent of total seeded areas.
 4. Correct damage from erosion, gullies, washouts, traffic, or other causes by filling with topsoil, tamping, refertilizing, and reseeding.
 5. Protect grass areas with warning signs during maintenance period.

END OF SECTION

SECTION 33 05 00

COMMON WORK RESULTS FOR UTILITIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Bedding, cover and backfill.
- B. Location aids.
- C. Connections between dissimilar pipes.
- D. Excavation in pavement.
- E. Excess excavated material.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 01 43 26 – Testing and Inspecting Agency Qualifications.
- C. 01 57 13 - Temporary Erosion and Sediment Control.
- D. 32 90 00 - Planting.
- E. 33 40 00 - Storm Drainage.
- F. 34 71 00 - Roadway Construction.

1.03 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00 for:
 - a. Product data.
 - b. Mechanical trench compaction reports. Follow 01 43 26.
- B. Informational:
 - 1. Follow 01 33 00 for documentation showing permits have been obtained from Owner and from Regulatory Agencies for excess material disposal sites.

PART 2 - PRODUCTS

2.01 UTILITY PIPE AND APPURTENANCE MATERIALS

- A. Storm Drainage: Follow 33 40 00.

2.02 BEDDING AND COVER MATERIALS

- A. Crushed stone chips: Follow SWS 8.43.2.
- B. Around and over Underground Facilities: Follow respective owner's requirements.
- C. Cover: Same material as bedding.

33 05 00-1

2.03 BACKFILL

- A. Granular: Follow SWS 8.43.4.
- B. Spoil: Follow SWS 8.43.5.
- C. Aggregate slurry: Follow SWS 8.43.8.

2.04 LOCATION AIDS

- A. Warning tape:
 - 1. "Terra Tape Standard" by Reef Industries, Inc. or "Shieldtec" standard non-detectable tape by Empire Level Manufacturing Corporation.
 - 2. Tape shall read:
 - a. Storm: "CAUTION SEWER LINE BURIED BELOW".
 - 3. Color: Follow State Statutes 182.0175 and American National Standards Institute (ANSI) Uniform Color Code:
 - a. Storm: Green.
 - 4. Width: 3 inches.
- B. Tracer wire:
 - 1. Follow SWS 2.11.0.
 - 2. For open-cut: Direct-burial-rated insulated AWG #10 copper conductor.
 - 3. For trenchless installation:
 - a. Duratrace DD, Copperhead, Pro-Trace.
 - b. Extra high-strength directional tracer wire.
 - 1. Provide wire with break load greater than expected drilling loads.
 - 2. Minimum #12 AWG copper clad solid steel core.
 - 3. Minimum 867 lbs. average tensile break load.
 - 4. 45 mil. high density polyethylene jacket.
 - 5. 30 volt rating.
 - 4. Splices: Pro-Trace TW connector or equal.
 - 5. Color:
 - a. Storm: Brown.
 - 6. Anodes: 1-pound magnesium.
- C. Location boxes for tracer wire access.
 - 1. Buried:
 - a. Valvco, Inc.
 - b. Cover: Marked "SEWER" to match buried pipeline.

2.05 SURFACE RESTORATION

- A. Pavement: Follow 34 71 00.
- B. Lawn: Follow 32 90 00.
- C. Curb and gutter: Follow 34 71 00.
- D. Concrete sidewalk: Follow 34 71 00.

PART 3 - EXECUTION

3.01 CONNECTING DISSIMILAR PIPE MATERIALS

- A. Follow pipe manufacturers' recommendations and design details.

3.02 EXCAVATION IN PAVEMENT

- A. Pavement sawing: Initially saw concrete or asphalt pavements or concrete bases at least 3 inches deep before shattering. Saw, cut with spades, or use another approved method before removing pavement.
- B. Sealed surface pavement: Cut evenly along excavation edges before removal to avoid excess removal or ragged, uneven edges.
- C. Utility trench cut locations: Follow SWS File No. 1 Drawing.
- D. Bridging: Furnish and install trench bridging over open trenches crossing roadways when requested by Engineer. Use steel plates, composite timber construction, or prefabricated structural steel members. Do not fabricate structural steel bridging on job Site. Design to support HS-20 wheel loading. Secure installed bridging against shifting. Do not leave bridging in roadway during winter months without Engineer's approval.

3.03 UTILITY PIPE AND APPURTENANCE INSTALLATION

- A. Storm Drainage: Follow 33 40 00.

3.04 LOCATION AIDS

- A. Warning tape: Place 12 inches below finished grade for:
 - 1. All storm sewers.
- B. Tracer wire:
 - 1. Place maximum 6 inches directly above. Attach with tape to:
 - a. All storm sewers, sump lines and laterals.
 - 2. Do not splice between location boxes without Engineer's approval except at laterals and services.
 - 3. Anodes:
 - a. Place a minimum 1 foot to the side of main or service.
 - b. Place at end of main or service where tracer wire end is buried.
- C. Install location boxes at:
 - 1. Sewers, laterals, and sump lines.
 - a. 250 feet maximum intervals.
 - b. At least one on each buried storm sewer system.
 - c. Not required on culverts that can be lamped from end to end.
- D. Demonstrate continuity of tracer wires to Engineer. Provide a temporary above-ground wire between adjacent location boxes. Connect ohm meter in a series loop with tracer wire and above-ground wire. Circuit resistance shall not exceed 5 ohms.
- E. Test locating. Contact Director of Public Works, Richard Paul Jr. at (262) 782-6700 to locate all utilities.
 - 1. After completion of continuity test.
 - 2. Before acceptance for use.

3.05 EXCAVATED MATERIAL

- A. Dispose of surplus and unusable material.

3.06 BEDDING AND COVER

- A. Follow SWS 3.2.6(b) Class B.

3.07 TRENCH BACKFILLING AND CONSOLIDATION

A. Material:

1. From 5 feet behind existing or future back-of-curb or edge-of-pavement to and including paved areas and driveways:
 - a. Granular. Follow 34 71 00.
2. Other areas: Spoil.
3. Around and over Underground Facilities: Follow respective owner's requirements.

B. Consolidation:

1. Mechanically compact trench backfill. Follow SWS 2.6.14(b) except Contractor shall furnish and pay for compaction testing services that follow 01 43 26.

3.08 SURFACE RESTORATION

- A. Pavement: Follow 34 71 00.

- B. Lawn: Follow 32 90 00.

3.09 CLEARING AND GRUBBING

- A. Follow 31 11 00.

3.10 CLEANUP

A. Clean dirt and construction material from haul roads:

1. At end of each working day.
2. As needed during the day to avoid creating hazards or complaints.
3. As requested by Owner.

END OF SECTION

SECTION 33 40 00

STORM DRAINAGE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Storm sewer and storm water facility mains, maintenance and collection appurtenances.
- B. Underdrains.

1.02 RELATED SECTIONS

- A. 01 33 00 - Submittal Procedures.
- B. 33 05 00 - Common Work Results for Utilities.

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM C76 - Standard Specification for Reinforced concrete Culvert Storm Drain, and Sewer Pipe.
 2. ASTM C361 - Standard Specifications for Reinforced Concrete Low-Head Pressure Pipe.
 3. ASTM C443 - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
 4. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections.
 5. ASTM C497 - Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
 6. ASTM C506 - Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain and Sewer Pipe.
 7. ASTM C507 - Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe.
 8. ASTM C698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil using Standard Effort.
 9. ASTM A760 - Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains.
 10. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.
- B. American Association of State Highway and Transportation Officials (AASHTO):
 1. AASHTO M252 - Standard Specification for Corrugated Polyethylene Drainage Pipe.
 2. AASHTO M294 - Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500- mm (12- to 60-in.) Diameter.
 3. AASHTO Section 30 - Standard Specification for Highway Bridges, Division II, Section 30, Thermoplastic Pipe.
 4. AASHTO M36 - Standard Specification for Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains.
- C. United States Department of the Interior - Bureau of Reclamation. Standard Specifications for Reinforced Concrete Pressure Pipe.

- D. American Water works Association (AWWA):
 - 1. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated fittings 4 In. Through 12 In. for Water Distribution.
 - 2. AWWA C905 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated fittings 14 In. Through 48 In.

1.04 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00 for:
 - a. Product data.

PART 2 - PRODUCTS

2.01 STORM SEWER

- A. Main lines:
 - 1. Corrugated metal pipe: Follow SWS 8.14.0.
- B. Structures:
 - 1. Manholes: Follow SWS 3.5.0 and SWS 8.39.0.
 - 2. Follow ASTM C478.
 - 3. Catch basin frame and cover: Neenah R-3067-C with Type C grate.
 - 4. Catch basin: Follow SWS 3.6.0 for precast.
 - 5. Manhole frame and cover: Neenah R-1661 open grate.
 - 6. Inlet and catch basin mortar: Follow State Specifications 519.2.3.
 - 7. Grade adjusters for castings:
 - a. Follow SWS 8.39.11 precast concrete grade rings.
 - b. Do not use bricks, stones, wood, nor pieces thereof.
- C. Apron endwalls: Follow State Specifications 520 through 525 for apron endwalls and same material as pipe.
- D. Pipe grates: Follow SWS 8.16.0.
 - 1. Grate shall be hinged on top.

2.02 INCIDENTAL CONSTRUCTION

- A. Follow 33 05 00 for:
 - 1. Bedding.
 - 2. Cover.
 - 3. Backfill.
 - 4. Location aids.

PART 3 - EXECUTION

3.01 STORM SEWER INSTALLATION

- A. Follow SWS Part III.
- B. Set manhole frames to finished grade. Set casting flanges onto a full bed of mortar.
- C. Set inlet frames to finished grade. Set casting flanges onto a full bed of mortar.

- D. Before testing, repair or replace piping, valves, fittings, structures or other parts of system which have visible defects or leakage even if leakage or pressure loss may be below allowable limits.

3.02 INCIDENTAL CONSTRUCTION

- A. Follow 33 05 00 for:
 1. Connecting dissimilar pipe materials.
 2. Excavation in pavement.
 3. Bedding.
 4. Cover.
 5. Backfill.
 6. Location aids.

END OF SECTION

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SECTION 34 71 00
ROADWAY CONSTRUCTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Earthwork.
- B. Base course.
- C. Pavement and surface course.
- D. Incidental construction:
 - 1. Curb and gutter.
 - 2. Curb ramps.
 - 3. Drive approaches, and driveways.
 - 4. Pavement sawing.
 - 5. Pavement markings.
 - 6. Drainage facilities.
 - 7. Signs.
 - 8. Traffic control.

1.02 RELATED SECTIONS

- A. 01 22 00 - Unit Prices.
- B. 01 33 00 - Submittal Procedures.
- C. 01 43 26 - Inspection and Testing Agency Qualifications.
- D. 31 22 00 - Grading.
- E. 31 32 19 - Geogrid for Soil Stabilization.

1.03 SUBMITTALS

- A. Action:
 - 1. Follow 01 33 00 for:
 - a. Product data.
 - b. Sieve analyses from State-certified laboratory.
 - c. Concrete Mix design. Submit at least 7 days before paving:
 - 1) Portland cement concrete sidewalk and ADA ramps.
 - 2) High-early-strength concrete. Follow State Specification 415.2.1.
 - d. Wisconsin DOT-verified hot mix asphalt (HMA) pavement mix design for each pavement classification specified. Submit at least 7 days before paving.

- B. Informational:
1. Base compaction test reports: Follow 01 43 26.
 2. Subbase compaction test reports. Follow 01 43 26.
 3. Paving mix delivery tickets.
 - a. Asphaltic materials:
 - 1) Furnish ticket before placing material.
 - 2) Display on ticket:
 - a) Project.
 - b) Date.
 - c) Time.
 - d) Ticket number.
 - e) Type of mix.
 - f) Gross weight.
 - g) Tare weight.
 - h) Net weight.
 - i) Job total.
 - b. Concrete:
 - 1) Furnish tickets after delivery.
 - 2) Display on ticket:
 - a) Project.
 - b) Date.
 - c) Time.
 - d) Ticket number.
 - e) Class of concrete.
 - f) Grade of concrete.
 - g) Cement Weight.
 - h) Fly Ash type and weight.
 - i) Fine aggregate weight.
 - j) Coarse aggregate weight.
 - k) Gallons of water.
 - l) Time water was added.
 - m) Additives.
 4. Base course delivery tickets that display:
 - a. Project.
 - b. Date.
 - c. Ticket number.
 - d. Type of material.
 - e. Gross weight.
 - f. Tare weight.
 - g. Net weight.
 - h. Job total.
 5. Written concrete cylinder compression test results. Submit to Owner.
 6. Provide Quality Management Program following State Specifications 460.2.8.1 General and 460.2.8.2 Contractor Testing control plan including:
 - a. Do not use 460.2.8.3 Department Testing.
 7. Documentation showing permits have been obtained from Owner and from Regulatory Agencies for excess material disposal sites.

1.04 REFERENCES

- A. ASTM D698 - Standard Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
- B. American Association of State Highway and Transportation Officials (AASHTO):
 1. AASHTO T22 - Standard Method for Compressive Strength of Cylindrical Concrete Specimens.

2. AASHTO T23 - Standard Method of Test for Making and Curing Concrete Test Specimens in the Field.
3. AASHTO T52 - Standard method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method.

1.05 REGULATORY REQUIREMENTS

- A. Pay for local, county or state permits for Work on right-of-ways. Damage to pavements and to all property, public and private, due to this Work shall be repaired to same condition before construction by Contractor.

1.06 UNIT PRICES

- A. Follow 01 22 00.

1.07 QUALITY MANAGEMENT PROGRAM

- A. As a condition of acceptance, arrange, conduct, and pay for tests necessary to demonstrate satisfactory compliance with Contract Documents. Make adjustments at the plant necessary to meet requirements of Specifications including the instructions.
- B. Lab testing:
 1. Test material from the plant at least once a day.
 2. Meet the following parameters:
 - a. Air voids (Va): Follow State Specifications 460.2.8.3.1.6 and follow State Specification - Additional Special Provision 460.2.1 issued under ASP-6.
 - b. Voids in the mineral aggregate (VMA): Follow State Specifications Table 460-1.
 - c. Gradations: Job mix formula (JMF): Follow Paragraph 1 of State Specification - Additional Special Provision 460.2.8.2.1.5 issued under ASP-6.
- C. Results and reports:
 1. Make field adjustments to keep material within specified tolerances. If test results fall out of tolerance, increase testing frequency until material is within specification.
 2. Submit test reports within 48 hours to Engineer and Owner.

PART 2 - PRODUCTS

2.01 EMBANKMENTS

- A. Follow 31 22 00.

2.02 EXCAVATION BELOW SUBGRADE (EBS) BACKFILL

- A. Follow State Specifications 305. Use new 1-1/4 inch or 3-inch crushed limestone as requested by Engineer.
- B. Crushed recycled concrete is not acceptable and will be rejected if delivered to Site. Crushed recycled concrete incorporated in Work will be Contractor's responsibility to replace with approved materials at Contractor's expense for removal.
- C. Geogrid material: Follow 31 32 19.

2.03 BASE COURSE

- A. Follow State Specifications 305. Use 1-1/4-inch and 3/4-inch crushed limestone as shown on Drawings.

2.04 ASPHALTIC CONCRETE (HMA) PAVEMENT

- A. Binder course (Lower and Intermediate Layers): Follow State Specification 460.2 and:
 - 1. 3LT58-28S.
 - 2. Maximum recycled content: Follow State Specifications 460.2.5.
- B. Surface course (Upper Layer): Follow State Specification 460.2 and:
 - 1. 5LT58-28S.
 - 2. Maximum recycled material content: Follow State Specifications 460.2.5.
- C. Tack coat: Follow State Specification 455.2.5 asphaltic material CSS-1h.

2.05 INCIDENTAL CONSTRUCTION

- A. Concrete curb and gutter:
 - 1. Follow State Specifications 601.
 - 2. Do not add calcium chloride.
- B. Concrete sidewalks, ramps:
 - 1. Follow State Specifications 602.2.
 - 2. Do not add calcium chloride.
- C. Curb ramps.
 - 1. Detectable warning field color: Natural.
 - 2. Follow State Specifications 602.2. Furnish detectable warning field from the DOT approved products list for the color defined above.
- D. Drive approaches, and driveways.
 - 1. Asphaltic concrete (HMA): Follow specifications for surface course under ASPHALTIC CONCRETE PAVEMENT in this Section.
- E. Pavement marking: Follow State Specifications 646 and:
 - 1. Paint.
 - 2. Glass beads: Follow State Specifications 646.2.3.
 - 3. Removals: Sand Blasting.
- F. Drainage facilities: Follow 33 40 00.
- G. Signs: Follow State Specifications 637.
 - 1. Posts: Follow State Specifications 634.
 - a. Wood for railroad signage.
- H. Traffic Control: Follow State Specifications 643.
- I. Restoration: Follow 32 90 00.

2.07 SOURCE QUALITY CONTROL

- A. Asphaltic paving materials scale: Follow State Specification 450.3.1.1.1.
- B. Base course materials scale: Follow State Specifications 109.1.4.

PART 3 - EXECUTION

3.01 EARTHWORK

- A. Follow 31 22 00.

3.02 BASE COURSE

- A. Crushed aggregate base course: Follow State Specifications 301 and 305.
 - 1. Compaction: Standard compaction.
 - a. 95 percent of maximum density determined by Modified Proctor.
 - b. Allow Engineer to inspect prepared base course and to witness proof roll test by a loaded rubber tired skid loader for pathway. Reconstruct where deflection is greater than 1/2 inch.
 - 2. Allowable deviation from design grade: 1/2 inch.

3.03 EXCAVATED MATERIAL

- A. Surplus excavated material for which Owner does not designate a disposal site shall be disposed at Contractor's cost.
- B. Excavate and dispose of existing pavement and unsuitable base in driveways within removal limits.

3.04 PAVEMENT AND SURFACE COURSES

- A. Tack coat: Follow State Specification 455.3.2.
 - 1. Apply between each layer of asphaltic concrete for driveways.
 - 2. Allow to cure before paving.
- B. Asphaltic concrete pavement: Follow State Specifications 450 and 460.
 - 1. Do not use 460.2.8.3 Department Testing.
 - 2. Maximum variations:
 - a. 1/8 inch across a 5-foot straight edge.
 - b. Thickness: Within 1/4-inch of design.
 - c. Finish elevation: Within 1/4-inch of design.
 - 3. Temperatures:
 - a. Asphaltic concrete at placement: Between 250 and 300 degrees Fahrenheit.
 - b. Subgrade: Above 32 degrees Fahrenheit.
 - c. Air temperature: Follow State Specifications 450.3.2.1.2.3.
 - 1) Contractor may submit cold weather paving plan for review if air temperature falls below specified limits. Engineer reserves the right to reject plan without cause. If implemented, plan shall be at no additional cost to Owner.
 - 4. Layer thickness: Shown on Drawings.
 - 5. Compaction: Follow State Specifications 460.3.3 Maximum Density Method and follow Paragraph 1 of State Specification - Additional Special Provision 460.3.3.1 issued under ASP-6, except minimum density shall not be less than:
 - a. 93 percent for binder courses.
 - b. 93 percent for surface courses.

6. Saw cut, excavate and remove unstable binder course, base course and subgrade materials. Replace removed materials. Clean binder pavement by sweeping or flushing before applying surface pavement.
7. Allow Engineer to inspect binder course before applying surface course.

3.05. INCIDENTAL CONSTRUCTION

- A. Concrete curb and gutter: Follow State Specification 601.3.
 1. Joints.
 - a. Construct expansion joints at:
 - 1) 3 feet from inlets or catch basins.
 - 2) End of curves.
 - 3) 150 feet maximum intervals.
 - b. Construct contraction joints at 10 feet spacing.
 - 1) Minimum spacing: 6 feet.
 - 2) Maximum spacing: 20 feet.
 - 3) Match abutting concrete joints.
 - 4) Depth: Minimum 2 inches.
 2. Curing:
 - a. Apply impervious coating within one hour of placement.
 - b. Coat all sides of curb including exposed surface after forms removed.
 - c. Apply two coats in perpendicular directions.
 3. Consolidation.
 - a. Use mechanical vibration.
- B. Concrete ramps and landings: Follow State Specifications 602.3.
 1. Joints.
 - a. Provide expansion joints abutting existing construction and structures with 1/2 inch expansion joint filler.
 - b. Provide contraction joints at spacing equal to width of walk and:
 - 1) Minimum 3 feet.
 - 2) Maximum 12 feet.
 - 3) Depth: Minimum 1 inch.
 - 4) Width: Approximately 1/8 inch.
 2. Curb ramps: Follow State Specifications 602.3.
 3. Consolidation.
 - a. Use mechanical vibration.
 4. Curing:
 - a. Follow State Specifications 415.3.12.
 - b. Apply impervious coating within one hour of placement.
 - c. Coat all sides of sidewalk including exposed surface after forms removed.
 - d. Apply two coats in perpendicular directions.
- C. Asphaltic concrete drive approaches. Follow PAVEMENT AND SURFACE COURSES in this Section.
- D. Pavement sawing. Follow State Specifications 690.3. Cut depth: Full pavement thickness.
- E. Pavement marking: Follow State Specifications 646.3.
 1. Apply same day on pavements open to traffic: State Specifications 646.3.1.
 2. Ambient and pavement surface temperature:
 - a. Painted: Above 50 degrees Fahrenheit.
 3. Provide clean pavement to ensure proper bonding.

- F. Drainage facilities: Follow 33 40 00.
- G. Signs: Follow State Specifications 637.3.
- H. Traffic control: Follow State Specification 643.3.
 - 1. Warning lights: Type A or C.
- I. Restoration: Follow 32 90 00.

END OF SECTION

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