PROJECT MANUAL

NORTH SHORE WATER RECLAMATION DISTRICT

HEIDEN GARDENS SANITARY SEWER REPLACEMENT
MH D2D-33-15 TO MH D2D-33-12

NORTH CHICAGO, ILLINOIS

DECEMBER 2018
# PROJECT MANUAL

NORTH SHORE WATER RECLAMATION DISTRICT

HEIDEN GARDENS SANITARY SEWER REPLACEMENT
MH D2D-33-12 TO MH D2D-33-15

NORTH CHICAGO, ILLINOIS

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OFFICIAL NOTICE TO BIDDERS

NORTH SHORE WATER RECLAMATION DISTRICT

HEIDEN GARDENS SANITARY SEWER REPLACEMENT
MH D2D-33-12 TO MH D2D-33-15

NORTH CHICAGO, ILLINOIS

OWNER AND WORK: The North Shore Water Reclamation District hereby gives notice that sealed Bids will be received for the Heiden Gardens Sanitary Sewer Replacement. The work generally consists of the installation of 917 feet of ductile iron pipe to replace an existing 12-inch clay sewer. A portion of the replacement will take place within a designated wetland requiring minimal disturbance and additional restoration requirements. Additional work includes removal and replacement of 4 manholes, tree removal, clearing and grubbing, fill and grading, erosion control, dewatering, bypass pumping, testing, restoration, and permitting.

TIME AND PLACE OF BID OPENING: Sealed Bids will be received until 10:00 a.m., Local Time on the 30th day of January 2019, in the office of the North Shore Water Reclamation District, P.O. Box 750, 14770 W. Wm. Koepsel Drive, Gurnee, Illinois 60031. After the official Bid closing time, the Bids will be publicly opened and read aloud.

BIDDING DOCUMENTS: The Bidding Documents are on file for inspection at the office of the North Shore Water Reclamation District, Gurnee, Illinois. Complete digital Bidding Documents are available at http://www.questcdn.com, and may be downloaded for a nonrefundable $15.00 fee by inputting QuestCDN project number 6028079 on the website’s Project Search page. Contact QuestCDN at 952-233-1632 or info@questcdn.com for assistance in free membership, registration, downloading, and working with the digital Bidding Documents. Paper sets of Bidding Documents will not be made available.

All questions about the meaning or intent of the Bidding Documents are to be directed to the OWNER/ENGINEER: North Shore Water Reclamation District, P.O. Box 750, 14770 W. Wm. Koepsel Drive, Gurnee, Illinois 60031. (847-623-6060).

DRAWINGS OF EXISTING STRUCTURES: Drawings of physical conditions in or relating to existing surface and subsurface structures used in preparing the Bidding Documents are on file at the North Shore Water Reclamation District, P.O. Box 750, 14770 W. Wm. Koepsel Drive, Gurnee, Illinois 60031, and may be examined by contacting The Director of Engineering Services at 847-623-6060.

LEGAL PROVISIONS: CONTRACTORS and Subcontractors shall conform to the “Substance Abuse Prevention on Public Works Projects Act”, (820 ILCS 265/1 et seq.); and with the provisions of 29 CFR Part 470.

WAGE RATES: This Contract calls for the construction of “public work,” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq. (“the Act”). The Act requires CONTRACTORS and Subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. The prevailing rate of wages are revised by the Illinois Department of Labor and are available on their official website at https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx.

If the Illinois Department of Labor revises the prevailing rate of hourly wages to be paid, the revised rate shall apply to this Contract. All CONTRACTORS and Subcontractors rendering services under this Contract must comply with all requirements of the Act, including but not limited to, all wage, notice and record keeping duties.
PRE-BID CONFERENCE: A pre-bid conference will be held prior to the Bid opening on the 11th day of January 2019, at 10:00 a.m. on site, to clarify any questions from the potential bidders. The meeting will start at the Eastern end of the project off of Brompton Avenue. It is highly encouraged that all potential bidders attend the meeting.

BID SECURITY: Bid Security in the amount of not less than 5% of the Bid shall accompany each Bid in accordance with the Instructions to Bidders.

CONTRACT SECURITY: The Bidder to whom a Contract is awarded shall furnish a Performance Bond and a Payment Bond each in an amount equal to the Contract Price.

BID REJECTION/ACCEPTANCE: The OWNER reserves the right to reject any and all Bids, waive informalities in bidding, or to accept the Bid or Bids, which best serves the interests of the OWNER.

BID WITHDRAWAL: No Bid shall be withdrawn for a period of 60 days after the scheduled opening of the bids without the consent of OWNER.

Published by authority of the North Shore Water Reclamation District.

By:

BRIAN DORN, P.E., Executive Director

MARY JO BRYANT, Secretary

Dated: December 21, 2018
INSTRUCTIONS TO BIDDERS
# INSTRUCTIONS TO BIDDERS
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INSTRUCTIONS TO BIDDERS

ARTICLE 1 – GENERAL

The work for which Bids are being requested is summarized as follows: Heiden Gardens Sanitary Sewer Replacement in North Chicago, IL. The work generally consists of the installation of 917 feet of ductile iron pipe to replace an existing 12-inch clay sewer. A portion of the replacement will take place within a designated wetland requiring minimal disturbance and additional restoration requirements. Additional work includes removal and replacement of 4 manholes, tree removal, clearing and grubbing, fill and grading, erosion control, dewatering, bypass pumping, testing, and restoration.

1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

   A. Bidder – The individual or entity who submits a Bid directly to OWNER.

   B. Issuing Office – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

   C. Successful Bidder – The lowest responsive and responsible Bidder to whom OWNER (on the basis of OWNER’S evaluation as hereinafter provided) makes an award.

1.02 A properly signed bid shall commit the Bidder to comply with all provisions of the INSTRUCTIONS TO BIDDERS in pursuance of the work as described in the Contract Documents.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents shall be used in preparing Bids; OWNER does not assume any responsibility for errors, omissions, or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.02 OWNER 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 confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 Each Bid must contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.

3.02 Before a contract is awarded, the Bidder to whom an award is contemplated may be required to submit the following information to OWNER for consideration:

   A. The address, telephone number, and description of the Bidder’s place of business.

   B. The number of years engaged in the contracting business under the present firm name, and the name of the state where incorporated.

   C. A list of the property and equipment available to the Bidder to evaluate if the Bidder can complete the Work in accordance with the Bidding Documents.

   D. A financial statement of the Bidder showing that the Bidder has the financial resources to meet all obligations incidental to the Work.
E. The Bidder’s performance record giving the description, location, and telephone numbers of similar projects constructed by the Bidder.

F. A list of projects presently under contract, the approximate contract amount, and percent of completion of each.

G. A list of contracts, which resulted in lawsuits.

H. A list of contracts defaulted.

I. A statement of the Bidder indicating whether or not the Bidder has ever filed bankruptcy while performing work of like nature or magnitude.

J. A list of officers of the firm who, while in the employ of the firm or the employ of previous firms, were associated with contracts which resulted in lawsuits, contracts defaulted or filed for bankruptcy.

K. The technical experience of personnel guaranteed to be employed in the responsible charge of the Work stating whether the personnel have or have not performed satisfactorily on other contracts of like nature and magnitude or comparable difficulty at similar rate of progress.

L. Such additional information as will assist OWNER in determining whether the Bidder is adequately prepared to fulfill the contract.

3.03 The object of the request for the qualification of Bidder is not to discourage bidding or make it difficult for qualified Bidders to file Bids. Neither is it intended to discourage beginning contractors. It is intended to make it possible for OWNER to have more exact information on financial ability, equipment, and experience in order to reduce the hazards involved in awarding contracts to parties who may not be qualified to perform the Work as specified.

3.04 OWNER’S decision as to qualification of the Bidders shall be final.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that OWNER has used in preparing the Bidding Documents.

2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that OWNER has used in preparing the Bidding Documents.

B. Copies of subsurface condition reports and drawings of physical conditions will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Bidding Documents, but the “technical data” contained therein upon which bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities
A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to OWNER by owners of such Underground Facilities, including OWNER, or others. OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.03 Provisions concerning responsibilities for the adequacy of data, if any, 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 conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data, if any, furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Bidding 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 Bidding Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

4.04 On request, OWNER will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as Bidder deems necessary for submission of a Bid. 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.

4.05 Reference is made to the General Requirements for the identification of the general nature of other work that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, OWNER will provide to each Bidder for examination access to or copies of Bidding Documents (other than portions thereof related to price) for such other work.

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

A. Examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents (including “technical data” referred to below);

B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. Carefully study all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions.

D. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

E. Agree at the time of submitting its Bid that 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 and in accordance with the other terms and conditions of the Bidding Documents;

F. Obtain and carefully study (or assume responsibility for doing so) supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions, (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of
construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

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. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

I. Promptly give OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by OWNER is acceptable to Bidder; and

J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.07 All such investigations and tests as the Bidder may deem necessary to determine his bid for performance of the Work in accordance with the time, price and other terms and conditions of the Bidding Documents will be at his own expense.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given OWNER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions therefor by OWNER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A pre-Bid Conference will be held for the Project. The Conference will take place on site on the 11th day of January 2019, at 10:00 a.m. Potential bidders are highly encouraged to attend.

ARTICLE 6 – SITE AND OTHER AREAS

6.01 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 to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to OWNER in writing not less than 7 days prior to the date for opening of Bids. Interpretations or clarifications considered necessary by OWNER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by OWNER as having received the Bidding Documents. Questions received less than 7 days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. No response will be provided to a Bidder’s oral question if the question involves an interpretation of the intent or meaning of the Bidding Documents, or the equality or use of products or methods other than those designated or described on the Drawings or in the Specifications. Any information provided to Bidders other
than by means of the Bidding Documents, including Addenda as described below, is given informally for information and the convenience of the Bidder only and is not guaranteed. The Bidder agrees that such information shall not be used as the basis of nor shall the giving of any such information entitle the Bidder to assert any claim or demand against OWNER on account thereof. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER.

7.03 OWNER will neither approve nor disapprove materials or equipment prior to the opening of Bids.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of not less than 5% of Bidder's Total Price and in the form of a certified or bank check or a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01.B., 5.01.C, and 5.02 of the General Conditions. Any bid submitted without a Bid Security will not be read after it is publicly opened and will not be considered further.

8.02 The Bid security of the Successful Bidder will be retained until 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 returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom 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 Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security of the other Bidders who furnished certified checks will have checks returned within 7 days after the Bid opening. Bond forms will be returned upon request.

8.03 Bid security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) Substantially Completed and (b) also completed and ready for final payment are set forth in the Agreement.

9.02 Attention is directed to the requirements of the General and Supplemental Conditions regarding delays and extension of time.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE ITEMS

11.01 Materials and equipment described in the Bidding Documents by using the name of a proprietary item or name of a particular Supplier is intended to establish type, function, and quality required. Where the specification or description contains or is followed by words reading that no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may not be submitted to ENGINEER for review. Where the specification or description contains or is followed by words reading “or equal”, other items of material or equipment or material or equipment of other suppliers may be submitted to ENGINEER for review under the
circumstances set forth in Paragraph 6.05 of the General Conditions and as may be supplemented in the Supplementary Conditions or General Requirements for "or equal" items. Where the specification or description does not contain or is not followed by words reading "or equal" or no substitution permitted, other items of material or equipment or material or equipment of other suppliers may be submitted to ENGINEER for review under the circumstances set forth in Paragraph 6.05 of the General Conditions and as may be supplemented in the Supplementary Conditions or General Requirements for "substitute" items. Application for acceptance of substitutes and "or equal" items will not be considered by OWNER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by OWNER is set forth in Paragraph 6.05 of the General Conditions and may be supplemented in the Supplementary Conditions or General Requirements.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 The apparent Successful Bidder, or any other Bidder so requested, shall submit to the office of OWNER by the end of the next business day after the receipt of Bids, the following information:

A. The designation of the Work to be performed by CONTRACTOR with their own forces.

B. A list of the names of CONTRACTOR'S proposed Subcontractors having a direct contract with CONTRACTOR and whose portion of the Work exceeds $5,000, along with the Work to be performed by each.

12.02 CONTRACTOR will be required to perform with his own forces at least 50% of the Work, unless written consent to subcontract a greater percentage of Work is obtained from OWNER.

ARTICLE 13 – BID FORM AND PREPARATION OF BID

13.01 Only the Bid form included with the Bidding Documents shall be used. Additional copies of the Bid form may be obtained from the OWNER (or Issuing Office). Only Bids which are made out on regular Bid Forms attached hereto will be considered. Bidder shall not add any conditions or qualifying statements to the Bid.

13.02 Types of Bids for the work specified in these Contract Documents will be a unit price bid as set forth on the Bid Form.

13.03 The Bid price shall be in writing and in figures and in case of conflict, the former shall apply.

13.04 When the Bid for all or part of the work is to be submitted on a lump sum basis, a lump sum price shall be inserted in the appropriate place. The total amount to be paid the Contractor shall be the amount of the lump sum Bid as adjusted for additions or deletions resulting from approved changes in the work.

13.05 When the Bid for all or part of the work is to be submitted on a unit price basis, unit prices shall be inserted in the appropriate places. The estimate of quantities of unit price work to be done as tabulated on the Bid Form is approximate and is for the basis of calculation upon which the award of Contract may be made. Payment to the Contractor will be made on the measurement of the work actually performed by the Contractor. The Owner reserves the right to increase or diminish the amount of any class of work as may be deemed necessary.

13.06 Bidders shall provide a detailed schedule of values in accordance with the General Conditions and Specifications.

13.07 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed. A Bid price shall be indicated for each item listed therein.
13.08 A Bid by a corporation shall be executed in the corporate name by the president or a vice-

president or other corporate officer accompanied by evidence of authority to sign. The corporate

seal shall be affixed and attested by the secretary or an assistant secretary. The corporate

address and state of incorporation shall be shown below the signature.

13.09 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 shall be shown below the signature.

13.10 A Bid by a limited liability company shall be executed in the name of the firm by a member and

accompanied by evidence of authority to sign. The state of formation of the firm and the official

address of the firm must be shown below the signature.

13.11 A Bid by an individual shall show the Bidder’s name and official address.

13.12 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the

Bid form. The official address of the joint venture must be shown below the signature.

13.13 Bids that are signed by an attorney-in-fact for corporations, partnerships, limited liability

companies, individuals, or joint ventures shall have attached thereto a power-of-attorney
evidencing authority to sign the Bid.

13.14 All names shall be typed or printed in ink below the signatures.

13.15 The Bid shall contain an acknowledgment of receipt of all Addenda; the numbers of which shall

be filled in on the Bid form.

13.16 The Bid shall contain the full name, address, and telephone number for communications

regarding the Bid.

13.17 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state

where the Project is located or covenant to obtain such qualification prior to award of the

Contract. Bidder’s state contractor license number for the state of the Project, if any, shall also

be shown on the Bid form.

ARTICLE 14 – BASIS OF BID

14.01 Basis of Design:

A. Unless otherwise indicated, design of this Project is based upon the material and equipment

named first in the list of Suppliers in a Specification section. Engineer has performed an

evaluation of other listed Suppliers’ material and equipment and has determined it to be equal

in quality, function, and performance to that of the Supplier named first. When other

Suppliers are listed, Contractor may be required to make modifications or adjustments, at

Contractor’s expense, to coordinate the installation of the furnished material and equipment

with associated elements of the Work, such as, but not limited to, piping and electrical

connections, or support and mounting provisions.

14.02 Lump Sum

A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid form.

B. The total amount to be paid the CONTRACTOR shall be the amount of the lump sum Bid as

adjusted for additions or deletions resulting from approved changes of work.

14.03 Unit Prices or Partial Unit Prices
A. Bidder shall submit a bid on a unit price or partial unit price basis and shall insert unit prices in appropriate places, as set forth in the Bid form.

B. The estimate of quantities of unit price work to be done as tabulated on the Bid form is approximate and is for the basis of calculation upon which the award of the Contract may be made. Payment to the CONTRACTOR will be made on the measurement of the work actually performed by the CONTRACTOR.

C. The OWNER reserves the right to increase or diminish the amount of any class of work as may be deemed necessary.

14.04 Bidder is required to fill in supplemental unit prices, if any, for each item as called for on the Bid form.

ARTICLE 15 – SUBMITTAL OF BID

15.01 Each prospective Bidder is furnished copies of the Bidding Documents as were requested. The Bidding Documents may be retained by the Bidder.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Official Notice to Bidders and shall be enclosed in an opaque sealed envelope plainly marked 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 envelope plainly marked on the outside with the notation "BID ENCLOSED".

15.03 Bids shall be delivered by the time and to the place stipulated in the Official Notice to Bidders. It is the sole responsibility of the Bidder to see that his Bid is received in proper time. Any Bid received after the scheduled closing time for receipt of Bids will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may not be modified, withdrawn or cancelled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting his Bid.

16.02 Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by telegram; if by telegram, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids, and it shall be worded as not to reveal the amount of the original bid.

16.03 Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

16.04 Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Official Notice to Bidders 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 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 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 19 – RIGHT TO ACCEPT OR REJECT BIDS

19.01 OWNER reserves the unqualified right, in its sole and absolute discretion, to reject all Bids, or any nonresponsive, nonresponsible Bid or to waive any informalities in any Bid, or to accept any Bid which will best serve the interests of OWNER. OWNER also reserves the unrestricted privilege to reject any supplemental unit prices for additions to or deductions from the scheduled amount of work as given in the Bid, if the same are considered excessive or unreasonable, or to accept any or all such supplemental unit prices which may be considered fair and reasonable.

19.02 A Bid which has not been prepared according to the instructions contained herein may be considered irregular and subject to rejection.

19.03 It is the responsibility of the Bidder to submit a neat, accurate and complete Bid.

19.04 A bid may be subject to rejection because of gross errors in computation which cannot be resolved by mathematical correction without resorting to information not contained in the Bid.

19.05 OWNER will consider nonconforming or conditional Bids nonresponsive.

19.06 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

ARTICLE 20 – AWARD OF CONTRACT

20.01 OWNER reserves the right to reject any and all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids and to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER.

20.02 OWNER reserves the right to waive all informalities not involving price, time or changes in the Work. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. An extension may not be divided by the number of units specified to determine a unit cost, if such is omitted by the Bidder. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

20.03 In evaluating Bids, OWNER will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, supplemental prices and other data as may be requested in the Bid Form or prior to the Notice of Award. In evaluating Bids for lowest Bid price, OWNER will consider the Lump Sum Bid Price without regard to supplemental unit prices. OWNER shall have the right to accept alternatives in any order or combination, unless specifically otherwise provided, and to determine the low Bidder on the basis of the sum of the base BID and the alternates accepted.

20.04 OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of
Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

20.05 OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Bidding Documents to OWNER’S satisfaction within the prescribed time. OWNER reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to OWNER’S satisfaction.

20.06 OWNER shall have the right to reject any supplemental unit prices for additions to or deductions from the Work as given in the Bid, if the prices are considered excessive or unreasonable, or to accept any supplemental unit prices which may be considered fair and reasonable.

20.07 A Bid which does not contain a supplemental unit price which is both adequate and reasonable for each item named in the Bid may be considered irregular and subject to rejection.

20.08 If the contract is to be awarded, it will be awarded to the lowest responsive, responsible Bidder(s).

20.09 If the contract is to be awarded, OWNER will give Successful Bidder notification within a reasonable time.

ARTICLE 21 – CONTRACT SECURITY AND INSURANCE

21.01 Article 5 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 must be accompanied by such Contract security.

ARTICLE 22 – SIGNING OF AGREEMENT

22.01 When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 10 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required bonds and certificates or policies of insurance as required by the Supplementary Conditions. Within 15 days thereafter, OWNER will deliver one fully signed counterpart to CONTRACTOR.

ARTICLE 23 – SALES AND USE TAXES

23.01 OWNER is exempt from the Illinois State and municipal or county Retailers Occupation Tax, Service Occupation Tax, Use Tax, Service Use Tax, as described in Illinois revised Statute Chapter 120. Base prices shall not include the cost of such taxes.

23.02 Federal excise tax does not apply to materials or services purchased by OWNER. Should the federal excise tax be applicable to this transaction, OWNER will furnish a federal exemption certificate. The Bid prices quoted herein by Bidder shall include all other direct or indirect federal, state, and local taxes which apply.

23.03 CONTRACTOR(S) shall forward this information to their Suppliers in order that the sale of such materials and equipment be properly recorded as a tax-exempt sale.
ARTICLE 24 – WAGE RATES

24.01 This Contract calls for the construction of a “public work,” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq. (“the Act”). The Act requires CONTRACTORS and Subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. The prevailing rate of wages are revised by the Illinois Department of Labor and are available on their official website at https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx. If the Illinois Department of Labor revises the prevailing rate of hourly wages to be paid, the revised rate shall apply to this Contract. All CONTRACTORS and Subcontractors rendering services under this Contract must comply with all requirements of the Act, including but not limited to, all wage, notice and record keeping duties.

ARTICLE 25 – EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

25.01 In connection with performance of Work under this Contract, CONTRACTOR agrees, and shall require his subcontractors to agree, not to discriminate against or intimidate any employee for employment because of race, color, creed, sex, religion, physical or mental handicap unrelated to ability.

25.02 In connection with performance of Work under this Contract, CONTRACTOR agrees, and shall require his subcontractors to agree, to conform to Rules and Regulations of Illinois Fair Employment Practices Commission in effect on date of Bid submission.

ARTICLE 26 – ELECTRONIC FORMATTED OPERATION & MAINTENANCE DATA AND INSTRUCTIONAL SERVICES.

26.01 Where operations & maintenance (O&M) data is required, the CONTRACTOR shall provide an electronic version of the O&M data.

26.02 Where instructional services are required, the CONTRACTOR shall provide vendor-training activities.

END OF INSTRUCTIONS TO BIDDERS
WAGE RATES
WAGE RATE REQUIREMENTS

1. GENERAL

A. This Contract calls for the construction of a “public work,” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq. (“the Act”). The Act requires CONTRACTORS and Subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. The prevailing rate of wages are revised by the Illinois Department of Labor and are available on their official website at https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx. All CONTRACTORS and Subcontractors rendering services under this Contract must comply with all requirements of the Act, including but not limited to, all wage, notice and record keeping duties.

B. All certified payroll reports submitted by CONTRACTORS in accordance with the Illinois Prevailing Wage Act shall be sent directly to OWNER’s Human Resources Department to the attention of HR Generalist.

2. WAGE DETERMINATIONS

A. The following wage rate schedule(s) are the prevailing rate(s) of hourly wage applicable to this Contract.

B. If the Illinois Department of Labor revises the prevailing rate of hourly wages to be paid, the revised rate shall apply to this Contract.
BID FORM

PROJECT IDENTIFICATION:

North Shore Water Reclamation District
Heiden Gardens Sanitary Sewer Replacement
MH D2D-33-12 to MH D2D-33-15
North Chicago, Illinois

PROJECT NUMBER: 15R05

THIS BID IS SUBMITTED TO:

North Shore Water Reclamation District
P.O. Box 750
14770 W. Wm. Koepsel Drive
Gurnee, Illinois 60031

(hereinafter called OWNER)

1.01 This Bid Form shall be used to submit a Bid for the Heiden Gardens Sanitary Sewer Replacement located in North Chicago, IL.

2.01 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 and furnish all Work as specified or indicated in the Bidding Documents for the Bid Price and within the Bid Time indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

3.01 Bidder accepts all of the terms and conditions of the Official Notice to Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. Bidder has not added any conditions or qualifying statements to the Bid. This Bid will remain subject to acceptance for the Bid withdrawal time period specified in the Official Notice to Bidders after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds, evidence of insurance coverage, and other documents required by the Bidding Requirements within 10 days after the date of OWNER’S Notice of Award.

4.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

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B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance, and furnishing of the Work.
C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has carefully studied all reports of explorations and test of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder acknowledges that OWNER does not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site.  Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such examinations, investigation, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect costs, progress, performance or furnishing of the Work or which related to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto.  Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the time, price, and other items and conditions of the Bidding Documents.

H. 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.

I. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

J. Bidder has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by OWNER is acceptable to Bidder, and the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

K. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

L. Bidder is not barred from bidding on this contract as a result of a conviction for either bid-rigging or bid-rotating under the provision contained in Chapter 38, Paragraphs 33E-3 and 33E-4 of the Illinois Revised Statutes.
5.01 The following schedule of Contract Lump Sum prices has been completed with a full and complete knowledge of the Plans and Specifications for the Work and it is understood that each item, when completed and in place, will be ready for use.

Bidder will complete the Work in accordance with the Contract Documents for the following price:

LUMP SUM BID PRICE ____________________________________________________________

________________________________________________________ ($ __________________)

(use words) (figures)

6.01 Bidder agrees that the Work will be substantially completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

7.01 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

8.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of _____________________________________________

                                                                                     (Certified Check or Bid Bond)

                                                                                     in the amount of ____________________________________________________________.

                                                                                     (Dollars or Percent of Lump Sum Bid Price)

9.01 The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Bidding Documents have the meanings assigned to them in the General Conditions and terms defined in the Instructions to Bidders are used with the same meaning in this Bid.

The remainder of this page intentionally left blank
I hereby certify that as Bidder I/we have examined and carefully prepared this Bid from the Bidding Documents and have checked the same in detail before submitting this Bid, and that all statements herein are made on behalf of:

**An Individual**

By (Written) ________________________________ (Individual’s Name)

(Typed) ________________________________

doing business as ________________________________ (Firm Name)

Business address: ________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Phone No.: ________________________________

**A Partnership**

By ________________________________ (Firm Name)

By (Written) ________________________________

(Typed) ________________________________ (General Partner)

Business address: ________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Phone No.: ________________________________

**A Corporation**

By ________________________________ (Corporation Name)

(State of Incorporation)

By (Written) ________________________________

(Typed) ________________________________ (Name of Person Authorized to Sign)

(Title) ________________________________ (Corporate Seal)

Attest (Written) ________________________________

(Typed) ________________________________ (Secretary)

Business address: ________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Phone No.: ________________________________
A Joint Venture

By ________________________________ (Joint Venture Name)
__________________________________ (State of Incorporation if Appropriate)
By (Written)
(Typed) (Name of Person Authorized to Sign)
Title: ________________________________

Business Address: ________________________________

__________________________________

Phone No.: ________________________________

By ________________________________ (Joint Venture Name)
__________________________________ (State of Incorporation if Appropriate)
By (Written)
(Typed) (Name of Person Authorized to Sign)
Title: ________________________________

Business Address: ________________________________

__________________________________

Phone No.: ________________________________

(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).

Sworn and subscribed to before me this
_____ day of ________________, 20___

__________________________________
Notary or other office authorized to administer oaths
My commission expires: ______________________

(Bidders shall not add any conditions or qualifying statements to this Bid as otherwise the Bid may be declared irregular as being not responsive to the advertisement. BIDDERS SHALL USE THIS BID FORM IN SUBMITTING THEIR BIDS.)
BID BOND
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:
Project (Brief Description Including Location):

BOND
Bond Number:
Date (Not later than Bid due date):
Penal sum

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

BIDDER

SURETY

Bidder’s Name and Corporate Seal
Surety’s Name and Corporate Seal

By:  ____________________________
Signature and Title

(Seal)

By:  ____________________________
Signature and Title
(Attach Power of Attorney)

Attest:  ____________________________
Signature and Title

Note: Above addresses are to be used for giving required notice.
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 Surety’s liability.

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 by 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
AGREEMENT

THIS AGREEMENT is by and between ____________________________________________________

____________________________________________________________________________________ (hereinafter called OWNER)

and ________________________________________________________________________________

____________________________________________________________________________________ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, 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:

The installation of 917 feet of ductile iron pipe to replace an existing 12-inch clay sewer. A portion of the replacement will take place within a designated wetland requiring minimal disturbance and additional restoration requirements. Additional work includes removal and replacement of 4 manholes, tree removal, clearing and grubbing, fill and grading, erosion control, dewatering, bypass pumping, testing, and restoration.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

North Shore Water Reclamation District
Heiden Gardens Sanitary Sewer Replacement
MH D2D-33-12 to MH D2D-33-15
North Chicago, Illinois

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by North Shore Water Reclamation District who is hereinafter called OWNER and who will 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 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 Days to Achieve Substantial Completion and Final Payment
A. All of the Work shall be substantially completed within 90 days after the date when the Contract Times commence to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions within 120 days after the date when the Contract Times commence to run.

4.03 Liquidated Damages

A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER $100.00 for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER $50.00 for each day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

4.04 Permitting CONTRACTOR or Surety to continue and finish the Work or any part of the Work after the times specified for completion, or after the date to which the times for completion may have been extended, shall in no way operate as a waiver on the part of OWNER of its rights under the Contract.

ARTICLE 5 – CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds as follows:

LUMP SUM BID PRICE  __________________________________________________________

________________________________________________________ ($ __________________)

(use words) __________________________________________________________ 

(figures)

ARTICLE 6 – PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

6.02 Progress Payments; Retainage

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR’S Applications for Payment as recommended by OWNER each month during performance of the Work as provided below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions or, in the event there is no schedule of values, as provided in the General Requirements.
B. 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, in accordance with paragraph 14.02 of the General Conditions:

1. 90% of Work completed (with the balance being retainage). If the Work has been 50% completed as determined by OWNER, and if the character and progress of the Work have been satisfactory to OWNER, OWNER may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no retainage on account of Work subsequently completed, in which case the remaining progress payments will be in an amount equal to 100% of the Work completed less the aggregate of previous retainage and payments previously made. At 50% completion, or any time thereafter, when the character and progress of the Work is not satisfactory, additional amounts may be retained, but in no event shall the total retainage be more than 10% of the value of the Work completed.

6.03 Final Payment

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as provided in said paragraph 14.07.

ARTICLE 7 – CONTRACTOR’S REPRESENTATIONS

7.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in Article 8) and the other related data identified in the Bidding Documents including “technical data”.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance, and furnishing of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. CONTRACTOR has carefully studied all reports of explorations and test of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions.

E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at the contract price and
within the contract times and in accordance with the other terms and conditions of the Contract Documents.

G. CONTRACTOR acknowledges that OWNER does not assume responsibility for the accuracy or completeness of information and data shown or indicted in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such examinations, investigation, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect costs, progress, performance or furnishing of the Work or which related to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work in accordance with the time, price, and other items and conditions of the Contract Documents.

H. 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.

I. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

J. CONTRACTOR has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by OWNER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

K. CONTRACTOR certifies that CONTRACTOR was not barred from bidding on this contract as a result of a conviction for either bid-rigging or bid-rotating under the provision contained in 720 ILCS 5/33 E-11 of the Illinois Revised Statutes.

ARTICLE 8 – CONTRACT DOCUMENTS

8.01 Contents

A. The Contract Documents consist of the following:

1. Instructions to Bidders (pages 00200-1 to 00200-11, inclusive);
2. Contractor’s Bid Form (pages 00400-1 to 00400-5, inclusive);
3. This Agreement (pages 00500-1 to 00500-8, inclusive);
4. Performance Bond (pages 00610-1 to 00610-2, inclusive);
5. Payment Bond (pages 00615-1 to 00615-2, inclusive);
6. General Conditions (pages 00700-1 to 00700-41, inclusive);
7. Supplementary Conditions (pages 00800-1 to 00800-15, inclusive);
8. Specifications as listed in the table of contents of the Project Manual;
9. Drawings, not attached hereto, consisting of a cover sheet and sheets numbered 1 through 6, inclusive, with each sheet bearing the following general title: HEIDEN GARDENS SANITARY SEWER REPLACEMENT, North Chicago, Illinois;

10. Addenda (numbers [__] to [__], inclusive);

11. Wage Rates;

12. Documents in the Appendix;

13. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
   a. Notice to Proceed;
   b. Written Amendments;
   c. Work Change Directives;
   d. Change Order(s);
   e. Field Order(s);
   f. OWNER’S Written Interpretations and Clarifications

B. The documents listed in Paragraph 8.01.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 8.

D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

ARTICLE 9 – MISCELLANEOUS

9.01 Terms

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

9.02 Assignment of Contract

A. 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, moneys that may become due and moneys that are 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 Documents.

9.03 Successors and Assigns

A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.
9.04 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.

9.05 Other Provisions

Equal Employment Opportunity Clause:

A. In the event of CONTRACTOR’S and/or vendor’s noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Fair Employment Practices Act or the Fair Employment Practices Commission’s Rules and Regulations for Public Contracts, the CONTRACTOR and/or vendor may be declared nonresponsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the Contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulations.

During the performance of this Contract, CONTRACTOR and/or vendor agrees as follows:

1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

2) That, if it hires additional employees in order to perform this Contract, or any portion hereof, it will determine the availability (in accordance with the Commission’s Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin, ancestry, age, marital status, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the CONTRACTOR’S obligations under the Illinois Fair Employment Practices Act and the Commission’s Rules and Regulations for Public Contracts. If any such labor organization or representative fails or refuses to cooperate with CONTRACTOR in its efforts to comply with such Act and Rules and Regulations, CONTRACTOR will promptly so notify the Illinois Fair Employment Practices Commission and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

5) That it will submit reports as required by the Illinois Fair Employment Practices Commission’s Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Commission or the contracting agency, and
in all respects comply with the Illinois Fair Employment Practices Act and the Commission’s Rules and Regulations for Public Contracts.

6) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Illinois Fair Employment Practices Commission for purposes of investigation to ascertain compliance with the Illinois Fair Employment Practices Act and the Commission’s Rules and Regulations for Public Contracts.

7) That it will include verbatim or by reference the provisions of Paragraphs 1 through 7 of this clause in every performance subcontract as defined in Section 2.10(b) of the Commission’s Rules and Regulations for Public Contracts so that such provisions will be binding upon every such subcontract, and that it will also so include the provisions of Paragraphs 1, 5, 6, and 7 in every supply subcontract as defined in Section 2.10(a) of the Commission’s Rules and Regulations for Public Contracts so that such provisions will be binding upon every such subcontract. In the same manner as with other provisions of this Contract, CONTRACTOR will be liable for compliance with applicable provisions of this clause by all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Fair Employment Practices Commission in the event any subcontractor fails or refuses to comply therewith. In addition, no CONTRACTOR will utilize any subcontractor declared by the Commission to be nonresponsible and therefore ineligible for Contracts or subcontracts with the State of Illinois or any of its political subdivision or municipal corporations.

Substance Abuse Prevention on Public Works Projects Act:

A. CONTRACTOR shall comply with the provisions of the Substance Abuse Prevention on Public Works Projects Act, 820 ILCS 265 et seq. CONTRACTOR hereby certifies that it has in place a written Substance Abuse Prevention Program that meets or exceeds the requirements of the Act, or has a collective bargaining agreement in effect dealing with the subject matter of the Act. CONTRACTOR and subcontractors shall file a copy of the Substance Abuse Prevention Program, or collective bargaining agreement, with OWNER prior to the commencement of work on the Contract.

Executive Order 13201 Compliance:

A. CONTRACTOR agrees to comply with the provisions of 29 CFR Part 470 – Obligations of Federal Contractors and Subcontractors; Notice of Employee Rights Concerning Payment of Union Dues or Fees.

Remainder of this page intentionally left blank
IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR, and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR.

This Agreement will be effective on ___________, ______(which is the Effective Date of the Agreement).

Attest: 

_______________________________________  (CONTRACTOR)

_______________________________________  (Signature)

_______________________________________  (Signature)

Address for giving notices: 

_______________________________________  (Typed Name and Title)

_______________________________________  (If CONTRACTOR is a corporation, attach evidence of authority to sign.)

CONTRACTOR’S License No. ______________  (If required by state or municipal law)

Attest: 

_______________________________________  (OWNER)

_______________________________________  (Signature)

_______________________________________  (Signature)

Address for giving notices: 

_______________________________________  (Typed Name and Title)

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

Approved as to form and execution this ________ day of _________________, 20____.

_______________________________________  (Attorney for OWNER)

AGREEMENT
00500-8

North Shore Water Reclamation District
Capital Project – 15R05
NOTICE OF AWARD
NOTICE OF AWARD

TO:

CONTRACT:

North Shore Water Reclamation District
Heiden Gardens Sanitary Sewer Replacement
MH D2D-33-12 TO MH D2D-33-15
North Chicago, Illinois

You are notified that Bids for the above Contract were publically opened on _________________. You are the apparent Successful Bidder and have been awarded a Contract for providing the total Work of the Contract.

The Contract Price of your Contract is ___________________________ Dollars ($______________).

Three copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award. Additional sets of Contract Documents and Drawings will be delivered separately at a later date.

You must comply with the following conditions precedent within 10 days of the date of this Notice of Award, that is by ____________________________________________________________________________.

1. Deliver to the OWNER three fully executed counterparts of the Contract Documents. Each of the Contract Documents must bear your signature on page 00500-8 of the Agreement.

2. Deliver with the executed Contract Documents the Contract security (Bonds) as specified in the Instructions to Bidders (Article 21) and General Conditions (paragraph 5.01).

3. Deliver with the executed Contract Documents the certificates of insurance (with a copy to each additional insured) which you are required to purchase and maintain in accordance with the Contract Documents as specified in the Supplementary Conditions (paragraph SC-2.01).
Failure to comply with these conditions within the time specified will entitle OWNER to consider your Bid in default, to annul this Notice of Award, and to declare your Bid security forfeited.

Within 15 days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

North Shore Water Reclamation District  
(OWNER)  

(AUTHORIZED SIGNATURE)  

(TITLE)  

(DATE OF NOTICE OF AWARD)
NOTICE TO PROCEED
NOTICE TO PROCEED

DATED: ___________________________

TO: _____________________________________________

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PERFORMANCE BOND

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

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

OWNER (Name and Address):

CONTRACT
Date:
Amount:
Description (Name and Location):

BOND
Bond Number:
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL
Company:

Signature: ___________________________ (Seal)
Name and Title: ________________________

SURETY
Company:

Signature: ___________________________ (Seal)
Surety’s Name and Corporate Seal
By: _________________________________
Signature and Title
(Attach Power of Attorney)

Attest: ______________________________
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:

Signature: ___________________________ (Seal)
Name and Title: ________________________

SURETY
Company:

Signature: ___________________________ (Seal)
Surety’s Name and Corporate Seal
By: _________________________________
Signature and Title
(Attach Power of Attorney)

Attest: ______________________________
Signature and Title:

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.
1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.

3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:

   3.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and

   3.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 3.1; and

   3.3. Owner has agreed to pay the Balance of the Contract Price to:

      1. Surety in accordance with the terms of the Contract;
      2. Another contractor selected pursuant to Paragraph 4.3 to perform the Contract.

4. When Owner has satisfied the conditions of Paragraph 3, Surety shall promptly and at Surety's expense take one of the following actions:

   4.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
   4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
   4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and Contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
   4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

      1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
      2. Deny liability in whole or in part and notify Owner citing reasons therefor.

5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

   6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;
   6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and
   6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the 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 Owner or its heirs, executors, administrators, or successors.

8. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

9. 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 Contractor Default or within two years after Contractor ceased working or within two years after 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 period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

   12.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
   12.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
   12.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
   12.4. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.
PAYMENT BOND
PAYMENT BOND

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

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

OWNER (Name and Address):

CONTRACT
Date:  
Amount:  
Description (Name and Location):

BOND
Bond Number:  
Date (Not earlier than Contract Date):  
Amount:  
Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL
Company:  
Signature: __________________________ (Seal)  
Name and Title: __________________________

(Space is provided below for signatures of additional parties, if required.)

SURETY
Company:  
Signature: __________________________ (Seal)  
Surety’s Name and Corporate Seal
By: __________________________
Signature and Title
(Attach Power of Attorney)

Attest: __________________________
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:  
Signature: __________________________ (Seal)  
Name and Title: __________________________

SURETY
Company:  
Signature: __________________________ (Seal)  
Surety’s Name and Corporate Seal
By: __________________________
Signature and Title
(Attach Power of Attorney)

Attest: __________________________
Signature and Title:

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.
1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:
   2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
   2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:
   4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
   4.2. Claimants who do not have a direct contract with Contractor:
      1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
      2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
      3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:
   6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
   6.2. Pay or arrange for payment of any undisputed amounts.
   6.3. The failure of Surety to timely discharge its obligations under this Paragraph or to dispute or identify any specific defense to all or any part of a claim shall not be deemed to be an admission of liability by the Surety as to such claim or otherwise constitute a waiver of the Contractor's or Surety's defenses to, or right to dispute, such claim. (1)

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, 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.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and 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.

15.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

---

FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker:
Owner’s Representative (engineer or other party):
GENERAL CONDITIONS
STANDARD
GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT

Prepared by
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

___________________
AMERICAN COUNCIL OF ENGINEERING COMPANIES

___________________
AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General Contractors of America

Construction Specifications Institute

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 Law.
These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).
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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.

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. **Asbestos**--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. **Bid**--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. **Bidder**--The individual or entity who submits a Bid directly to Owner.

7. **Bidding Documents**--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. **Bidding Requirements**--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. **Change Order**--A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.

10. **Claim**--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. **Contract**--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. **Contract Documents**-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor’s submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. **Contract Price**--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. **Contract Times**--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer’s written recommendation of final payment.

15. **Contractor**--The individual or entity with whom Owner has entered into the Agreement.

16. **Cost of the Work**--See Paragraph 11.01.A for definition.

17. **Drawings**--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. **Effective Date of the Agreement**--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. **Engineer**--The individual or entity named as such in the Agreement.
20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.


22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given 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 under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *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.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

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

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity*--An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *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.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain
44. 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 at the Site.

45. 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.

46. Successful Bidder--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. Supplementary Conditions--That part of the Contract Documents which amends or supplements these General Conditions.

48. 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 any Subcontractor.

49. 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 those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. Unit Price Work--Work to be paid for on the basis of unit prices.

51. 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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. Work Change Directive--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed 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 Paragraph 9.09 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 14.04 or 14.05).
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. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which 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. 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 Insurance: Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

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

2.04 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 the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. Preliminary Schedules: Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), 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 Documents;

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.

2.06 Preconstruction Conference

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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 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 2.05.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 component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, 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. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, 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, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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 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 Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, 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 Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. Contractor’s Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. Contractor’s Review of Contract Documents During Performance of Work: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

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 knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

   a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); 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 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer’s approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer’s written interpretation or clarification.

3.05 Reuse of Documents

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 Engineer’s consultants, including electronic media editions; or

2. reuse any of 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 adaption by Engineer.

B. The prohibition 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.

3.06 Electronic Data

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user’s sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data’s creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data’s creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner’s furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

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 the Work is to be performed 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.
4.02 **Subsurface and Physical Conditions**

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

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. **Limited Reliance by Contractor on Technical Data Authorized:** Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities 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 or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 **Differing Subsurface or Physical Conditions**

A. **Notice:** If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed 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 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. **Engineer’s Review:** After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. **Possible Price and Times Adjustments**

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.A; and

   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 Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

   a. Contractor knew of the existence of such conditions at the time Contractor made a final 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

   b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous 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 shall not be responsible for the accuracy or completeness of any such information or data; 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 such information and data,
   b. locating all Underground Facilities shown or indicated in the Contract Documents,
   c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
   d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 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.

4.06 Hazardous Environmental Condition at Site

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities 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 any Hazardous Environmental Condition discovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner’s own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, 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: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish performance and payment bonds, 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 Documents. 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 therefor as provided in Paragraph 10.05.
in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent’s authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, 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 requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 Certificates of Insurance

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 Contractor’s Liability Insurance

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which 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:

1. claims under workers’ compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor’s employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor’s employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
   b. by any other person for any other reason;

5. 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; and

6. 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.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, 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;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include completed operations insurance;

4. include contractual liability insurance covering Contractor’s indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 Owner’s Liability Insurance

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, 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.

5.06 Property Insurance

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full 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 interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder’s Risk “all-risk” or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any
deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser’s own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies 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 of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them in such policies and will provide primary coverage 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 Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, 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 as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, 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 utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.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, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner’s exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract
Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR’S RESPONSIBILITIES

6.01 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. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

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. The superintendent will be Contractor’s representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 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. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 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.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, 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.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and “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 specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. “Or-Equal” Items: If in Engineer’s sole discretion 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, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, 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
   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.

2. Substitute Items

   a. If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

   b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

   c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

   d. 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:

      1) shall certify that the proposed substitute item will:
         a) perform adequately the functions and achieve the results called for by the general design,
         b) be similar in substance to that specified, and
         c) be suited to the same use as that specified;
      2) will state:
         a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor’s achievement of Substantial Completion on time;
         b) whether or not 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
c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:
   a) all variations of the proposed substitute item from that specified, and
   b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer’s sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer’s Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No “or equal” or substitute will be ordered, installed or utilized until Engineer’s review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an “or equal.” Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor’s expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer’s Cost Reimbursement: Engineer will record Engineer’s costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the 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.

F. Contractor’s Expense: Contractor shall provide all data in support of any proposed substitute or “or-equal” at Contractor’s expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner’s acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. 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 any right of Owner or Engineer to reject defective Work.

C. 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. 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 anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual
or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. 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.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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 such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 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, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 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 knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor’s primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor’s obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.
6.10 Taxes

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

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 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 by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other 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 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 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 property to stresses or pressures that will endanger it.

6.12 Record Documents

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 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, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. 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, 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 owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.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 (except damage or loss attributable to the fault of Draw-
ings or Specifications or to the acts or omissions of Owner or Engineer or, 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).

D. Contractor’s duties and responsibilities for safety and for protection of the Work 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 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 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.

6.15 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.

6.16 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.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

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 6.17.D.

2. Samples: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. 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 6.17.D.

B. 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. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor’s responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

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 and approval of that 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 both a written communication separate from the Shop Drawing’s or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer’s review and approval 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 6.17.C.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’s review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

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.

6.18 Continuing the Work

A. 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, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 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 Related Entities shall be entitled to rely on representation of 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 or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 respective consultants, agents, officers, directors, partners, or employees 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 6.20.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 6.20.A shall not extend to the liability of Engineer and Engineer’s officers, directors, 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.

6.21 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 law.

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, Shop Drawings 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 6.21, 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 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 Related Work at Site

A. Owner may perform other work related to the Project at the Site with Owner’s employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner’s employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. 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 their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor’s Work depends upon work performed by others under this Article 7, 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.

### 7.02 Coordination

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

### 7.03 Legal Relationships

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor’s actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor’s action or inactions.

### ARTICLE 8 - OWNER’S RESPONSIBILITIES

#### 8.01 Communications to Contractor

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

#### 8.02 Replacement of Engineer

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

#### 8.03 Furnish Data

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

#### 8.04 Pay When Due

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

#### 8.05 Lands and Easements; Reports and Tests

A. Owner’s duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

#### 8.06 Insurance

A. Owner’s responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

#### 8.07 Change Orders

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

#### 8.08 Inspections, Tests, and Approvals

A. Owner’s responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.
8.09 **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.

8.10 **Undisclosed Hazardous Environmental Condition**

A. Owner’s responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 **Evidence of Financial Arrangements**

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner’s obligations under the Contract Documents, Owner’s responsibility in respect thereof will be as set forth in the Supplementary Conditions.

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**ARTICLE 9 - ENGINEER’S STATUS DURING CONSTRUCTION**

9.01 **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 Documents and will not be changed without written consent of Owner and Engineer.

9.02 **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 9.09. 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.

9.03 **Project Representative**

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. 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.

9.04 **Authorized Variations in Work**

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 **Rejecting Defective Work**

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.
9.06 Shop Drawings, Change Orders and Payments

A. In connection with Engineer’s authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with 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, see Paragraph 6.21.

C. In connection with Engineer’s authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer’s authority as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work

A. 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 Paragraph 10.05.

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer’s decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer’s written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Engineer’s Authority and Responsibilities

A. Neither Engineer’s authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall
promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 Execution of Change Orders

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner’s correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. 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; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 Notification to Surety

A. If notice 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) is required by the provisions of any bond to be given to a surety, 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.

10.05 Claims

A. Engineer’s Decision Required: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. Notice: Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant’s last submittal (unless Engineer allows additional time).

C. Engineer’s Action: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer’s sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer’s written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

A. Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. Payroll costs for employees not employed full time on the Work 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. 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, 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 11.01.

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. 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, 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 5.06.D), 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 telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

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

B. 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, expediters, 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which 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 Paragraphs 11.01.A and 11.01.B.

C. Contractor’s Fee: When all the Work 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 or when a Claim for an 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 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, 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.

11.02 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

1. Contractor agrees that:

   a. 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;

   b. 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

1. 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.

11.03 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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 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; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor 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 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor’s fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. Contractor’s Fee: 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 11.01.A.1 and 11.01.A.2, the Contractor’s fee shall be 15 percent;

   b. for costs incurred under Paragraph 11.01.A.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 Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

   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 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted
by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 Price or the Contract Times, or both. 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.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is 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 described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor’s Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner’s and Engineer’s acceptance of materials or equipment to
be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor’s purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. 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, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor’s expense unless Contractor has given Engineer timely notice of Contractor’s intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer’s observation and replaced at Contractor’s expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 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, 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.

13.06 Correction or Removal of Defective Work

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. 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 removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner’s special warranty and guarantee, if any, on said Work.

13.07 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 land or areas made available for Contractor’s use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner’s written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
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 other land or areas resulting therefrom.
13.09 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 in accordance with Paragraph 13.06.A, 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, 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 13.09, 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, take possession of Contractor’s tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress
A. 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 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.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to 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 Documents; or

   b. that 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 moneys 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent
inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer’s opinion to protect Owner from loss because:

1. Ten days after presentation of the Application for Payment to Owner with Engineer’s recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

C. Payment Becomes Due

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor’s performance or furnishing of the Work;

b. 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;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor corrects to Owner’s satisfaction the reasons for such action.

3. If it is subsequently determined that Owner’s refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor’s Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner’s objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer’s issuing the definitive certificate of Substantial Completion, Owner shall 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, when Contractor corrects to Owner’s satisfaction the reasons for such action.

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.
Completion, Engineer’s aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 thereof. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 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 5.10 regarding property insurance.

14.06 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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
   b. consent of the surety, if any, to final payment;
   c. a list of all Claims against Owner that Contractor believes are unsettled; and
   d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible 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.

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 are met, Engineer will advise Contractor in writing of his intent to issue a certificate of completion for that part of the Work.
under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer’s recommendation of payment and present the Application for Payment to Owner for payment. 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 14.09. 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. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer’s recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor’s final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainerage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor’s continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor’s disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor’s disregard of the authority of Engineer; or


B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor’s tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. 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
3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor’s services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 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;

3. 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) 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 15.03.

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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be
governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. 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 application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer’s action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 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 to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

A. When any period of time is referred to in the Contract Documents 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.

17.03 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 Documents. 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.

17.04 Survival of Obligations

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

17.05 Controlling Law

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

17.06 Headings

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

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SUPPLEMENTARY CONDITIONS

GENERAL

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2002 Edition) and other provisions of the Contract Documents as indicated below. 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 indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC - 1.01

Add the following language at the end of Paragraph 1.01.A.19:.

Whenever the word ARCHITECT is used in the Specifications, it shall have the same meaning as the work ENGINEER as defined.

Amend the definition entitled “Engineer” in Paragraph 1.01.A.19 to read:

North Shore Water Reclamation District shall be the ENGINEER.

ARTICLE 2 – PRELIMINARY MATTERS

SC - 2.01

Delete Paragraph 2.01.B. in its entirety and insert the following in its place:

B. Evidence of Insurance: When CONTRACTOR delivers the executed Agreement to OWNER, CONTRACTOR shall also deliver to OWNER, with a copy to each additional insured, identified certificates of insurance (and other evidence of insurance which OWNER or any additional insured may reasonably request) which CONTRACTOR is required to purchase and maintain in accordance with Article 5.

SC - 2.02

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

A. OWNER shall furnish to CONTRACTOR 5 copies of the Contract Documents with Half-Scale Drawings. Additional copies will be furnished upon request at the cost of reproduction.

SC - 2.03

Delete Paragraph 2.03.A. in its entirety and insert the following in its place:

The Contract Times will commence to run on the forty-fifth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 45 days after the Effective Date of the Agreement upon Contractor’s delivery of executed counterparts of the Agreement to Owner, along with such bonds as Contractor may be required to furnish and evidence of insurance, with a copy to each additional insured, which Contractor is required to purchase and maintain in accordance with Article 5.
Amend the first sentence of Paragraph 2.05.A. by striking out the words “Effective Date of Agreement” and inserting the words “date of commencement of Contract Times as specified in Article 2.03” in their place.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Add the following language at the end of Paragraph 3.03.A.1.:

A request for written interpretation or clarification of the Contract Documents shall be submitted on the Clarification/Interpretation Request form provided in the Appendix of this Project Manual.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

Add the following Paragraphs immediately after paragraph 4.02.B.:

C. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER’S Consultants have relied upon the following reports of explorations and tests of subsurface conditions at the Site:

1. None.

D. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER’S Consultants have relied upon the following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the Site:

1. None.

Add the following paragraphs immediately after Paragraph 4.06.I.:

J. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER’S Consultants have relied upon the following reports relating to a Hazardous Environmental Condition at the Site, if any:

1. None.

K. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER’S Consultants have relied upon the following drawings relating to a Hazardous Environmental Condition at the Site, if any:

1. None.

ARTICLE 5 – BONDS AND INSURANCE

Add the following language at the end of Paragraph 5.01.C.:
In addition, OWNER will make no further progress payments under the Agreement until CONTRACTOR complies with the provisions of this paragraph.

**SC - 5.02**

Add the following language at the end of Paragraph 5.02.A.:

Surety or insurance companies shall have an A.M. Best rating of A- or better.

**SC - 5.03**

Delete Paragraph 5.03.B. in its entirety.

**SC - 5.04 through SC - 5.05**

Delete Paragraphs 5.04 through 5.06 inclusive and replace with the following:

**SC - 5.04**

A. CONTRACTOR shall not commence Work under Contract until CONTRACTOR has obtained all insurances required under this Article. CONTRACTOR shall purchase and maintain throughout the duration of the Contract insurance as is appropriate for the Work being performed and furnished and will provide protection from claims which may arise out of or result from CONTRACTOR'S performance and furnishing of the Work and CONTRACTOR’S other obligations. Under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by them or by anyone for whose acts any of them may be liable.

1. Comprehensive General Liability Insurance

    Comprehensive General Liability Insurance covering claims for damages for bodily injury, including accidental death, as well as from claims, for property damage which may arise out of all premises-operations, subcontracted operations, and products-completed operations under the Contract, whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by either of them, including coverage under the Illinois Structural Work Act and including coverage "X", "C", and "U" for explosion, collapse or other structures and underground utilities, and Contractual Liability Insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20, and shall not be less than the following:

    1) Combined single limit for both bodily injury liability and property damage liability: $1,000,000 each occurrence, $2,000,000 per project annual aggregate.

    CONTRACTOR shall require each Subcontractor to produce and maintain during the life of Subcontract, Subcontractor's Comprehensive General Liability Insurance of the type specified herein in the amounts equal to that required by CONTRACTOR.

2. OWNER’S and CONTRACTOR’S Protective Liability Insurance

    CONTRACTOR may opt to provide as an alternative to the Comprehensive General Liability Insurance limits specified in Paragraph SC 5.04.A.1. of the Supplementary Conditions, OWNER’S and CONTRACTOR’S Protective Liability Insurance, in the minimum amounts listed below, to protect the OWNER or any of its employees, officers or agents against claims arising from the operations of CONTRACTOR or
Subcontractors. Separate policies providing such protection shall be furnished by the CONTRACTOR.

1) Combined single limit for both bodily injury liability and property damage liability: $2,000,000 each occurrence, $2,000,000 annual aggregate.

3. Worker's Compensation and Employer's Liability Insurance

Worker's Compensation and Employer's Liability Insurance for all CONTRACTOR's employees engaged in the work under this Contract, in accordance with the laws of the State of Illinois. CONTRACTOR shall require each Subcontractor to provide Worker's Compensation and Employer's Liability Insurance for all of the latter's employees engaged on subcontracts. If any class of employees engaged on Work under the Contract is not protected under the Worker's Compensation statute, CONTRACTOR shall provide similar protection for these employees in amounts not less than the legal requirements. The amount of Employer's Liability Insurance for CONTRACTOR and each Subcontractor shall not be less than the following:

1) Worker's Compensation:
   - Bodily Injury by Accident: $500,000 each accident
   - Bodily Injury by Disease: $500,000 each employee
   - Bodily Injury by Disease: $500,000 policy limit

4. Automobile Liability Insurance

Automobile Liability Insurance, including employees' non-ownership liability and hired automobile insurance in the minimum amounts specified below:

1) Bodily Injury Liability: $500,000 each person
   - $1,000,000 each occurrence, and
   - Property Damage Liability: $500,000 each occurrence, or
2) Combined Single Limit: $500,000 each occurrence

5. Umbrella or Excess Insurance

CONTRACTOR shall provide an umbrella or excess liability policy that follows the form of and provides additional limits to the Comprehensive General Liability, Employer's Liability and Automobile Liability policies listed above. The amount of the umbrella or excess liability policy shall not be less than the following:

$5,000,000 each occurrence; $5,000,000 annual aggregate

6. Property Insurance

Property insurance upon the work at the site to the full insurable value thereof (subject to such deductible amounts required by law). This insurance shall include the interests of OWNER, CONTRACTOR, and Subcontractors in the Work, shall insure against the perils of fire and extend coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism, and malicious mischief, collapse and water damage, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys, and other professionals). If not
covered under the "all risk" insurance, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The policy shall be payable to the OWNER and the proceeds thereof, when paid, shall be retained by the OWNER as provided for in Paragraph 5.08. The policy shall be in such amount as to represent the full value of work, susceptible to damage, loss or injury, by the perils listed above.

7. Additional Insured

In addition to those identified in the General Conditions, the following persons or entities shall be listed as additional insured:

1) OWNER

8. Two-year Insurance Continuation

The policies of insurance required by Article SC 5.04 of the Supplementary Conditions shall, with respect to completed operations insurance and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment. CONTRACTOR shall furnish OWNER and each other additional insured identified in Article SC 5.04 of the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter.

SC - 5.05  Insurance Submittal Requirements

A. All the aforesaid insurance policies shall be endorsed to provide that the insurance company will give 30 days notice to OWNER if the policies are to be terminated or if any changes are made during the life of the Contract which will affect, in any way, the insurance requirements. Before commencing work, CONTRACTOR shall furnish OWNER with a copy of a Certificate of Insurance, which he and each of his subcontractors shall carry in accordance herewith, together with receipted bills evidencing proof of premium payment.

SC - 5.07

Amend the first sentence of Paragraph 5.07.A. by striking out the word, "5.06", and inserting the words, "SC 5.04.A.6. of the Supplementary Conditions," in its place.

And as so amended, Paragraph 5.07 remains in effect.

SC - 5.08

Amend the first sentence of Paragraph 5.08.A. by striking out the word, "5.06", and inserting the words, "SC 5.04.A.6. of the Supplementary Conditions," in its place.

And as so amended, Paragraph 5.08 remains in effect.

SC - 5.10

Amend the first sentence of Paragraph 5.10.A. by striking out the word “5.06” and inserting the words “SC 5.04.A.6. of the Supplementary Conditions” in its place.

And, as so amended, Paragraph 5.10 remains in effect.
1. “Or Equal” Items: If in ENGINEER’S sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named, equal in material and constructed quality, and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an “or equal” item, in which case review and approval of the proposed item may, in ENGINEER’S sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items.

Add the following paragraph immediately after Paragraph 5.10:

SC - 5.11

A. The OWNER shall be endorsed as an additional insured on a primary, non-contributory basis on the CONTRACTOR’S and all his subcontractors’ comprehensive general and umbrella/excess liability insurance policies. The additional insured clause shall be endorsed on form CG2010 (11/85) or a substitute form providing equivalent coverage, such as either of the following coverage combinations:

1. ISO On Going Operations CG2010 (07/04) & Completed Operations CG2037 (10/01); or

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

Delete the second sentence of Paragraph 6.05.A. in its entirety and insert the following in its place:

Where the specification or description contains or is followed by words reading that no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may not be submitted to ENGINEER for review. Where the specification or description contains or is followed by words reading “or equal”, other items of material or equipment or material or equipment of other suppliers may be submitted to ENGINEER for review under the circumstances described below for “or equal” items. Where the specification or description does not contain or is not followed by words reading “or equal” or no substitution permitted, other items of material or equipment or material or equipment of other suppliers may be submitted to ENGINEER for review under the circumstances described for “substitute” items below.

Delete Subparagraph 6.05.A.1. in its entirety and insert the following in its place:

1. “Or Equal” Items: If in ENGINEER’S sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named, equal in material and constructed quality, and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an “or equal” item, in which case review and approval of the proposed item may, in ENGINEER’S sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items.

Delete Subparagraphs 6.05.A.1.a. and 6.05.A.1.b. in their entirety.

Delete Subparagraph 6.05.A.2.a. in its entirety and insert the following in its place:

a. If in ENGINEER’S sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item provided that one or more of the following conditions are satisfied:

1) Required equipment or material cannot be provided within Contract Time, but not as a result of CONTRACTOR’S failure to pursue Work promptly or coordinate various activities properly, or
2) Packaging of several items of equipment from single source will provide maintenance and coordination advantages to OWNER, or
3) CONTRACTOR proposes to provide one of the other items of material or equipment with cost savings to OWNER.

Add the following subparagraph immediately after Paragraph 6.05.A.2.d.:

e. The application for review of a substitute shall be on the CONTRACTOR'S Request For Substitution form provided in the Appendix of the Contract Documents and included with the submittal. The Installation List included with the Request shall include only installations of the proposed substitute in applications of approximately the same size and complexity, and the same design as those to be furnished for this Project. Include in the Installation List, as a minimum, the owner's name, address, and telephone number; engineer's name, address and telephone number; location and name of project; installation date, startup date, and date of final acceptance by owner; and application of material or equipment. If the experience indicated by the Installation List does not demonstrate at least 5 years of successful operation of the proposed substitute item, OWNER may require CONTRACTOR and Supplier to furnish, at CONTRACTOR'S expense, a special performance guarantee with surety bond as required by Paragraph 6.05.D of the General Conditions with respect to the substitute. Only the time period between final approval of the proposed material or equipment on the referenced project and the Bid date for this Project will count towards the required satisfactory experience of the proposed substitute item. ENGINEER will be the sole judge of acceptability of experience, time credited, and whether the special performance guarantee will be required for a substitute item. ENGINEER will notify CONTRACTOR which proposed substitute(s) will require a special performance guarantee with surety bond.

Add the following words at the end of the first sentence of Paragraph 6.05.D. which are to read as follows:

...in the form of a Special Performance Guarantee provided in the Appendix of the Project Manual.

Add the following subparagraph immediately after Paragraph 6.05.E.:

1. If a substitute item of material or equipment proposed by CONTRACTOR is approved by ENGINEER, and the substitution requires a change in any of the Contract Documents to adapt the design to the proposed substitute, CONTRACTOR shall notify ENGINEER of the changes and be responsible for the costs involved to revise the design and to make modifications or changes to the construction, including the costs associated with the Work of other contractors due to such variance in design or space requirements. OWNER AND OWNER’S Consultants will prepare redesign and drawing revisions. CONTRACTOR shall reimburse OWNER for charges of OWNER and OWNER’S Consultants for redesign and drawing preparation. Reimbursement of OWNER shall be based on OWNER and OWNER’S Consultants direct labor costs, indirect labor costs, profit on total labor, and any direct non-labor expenses such as travel and per diem.

SC - 6.06

In Paragraph 6.06.B. delete the words “Supplementary Conditions” in two places and insert the words “Instructions to Bidders” in their place.

Add the following paragraph immediately after Paragraph 6.06.G.:

H. All construction subcontracts shall be between CONTRACTOR and his subcontractor. Nothing contained in this Article or any other part of this Project Manual shall be construed or interpreted to create a contractual relationship between, or make the OWNER a party to subcontracts between CONTRACTOR and his subcontractor. This paragraph shall be included in all subcontracts between CONTRACTOR and his subcontractors.
SC – 6.08

Add the following paragraph at the end of Paragraph 6.08.: 

B. Copies of all permits and licenses prepared or obtained by CONTRACTOR shall be submitted to OWNER prior to the commencement of construction. Copies of all permits and licenses obtained by OWNER shall be made available to CONTRACTOR and maintained by CONTRACTOR at the Project Site.

C. USACOE Permit, SMC Permit, and WDO Permit has been obtained by Owner.

SC - 6.09

Add the following language at the end of Paragraph 6.09.A.: 

The CONTRACTOR at all times during the life of this Contract shall observe and abide by all Federal, State and local laws which in any way affect the conduct of the work and with all decrees and orders of courts of competent jurisdiction.

Add the following to language at the end of Paragraph 6.09.B.: 

The CONTRACTOR shall be governed by all municipal ordinances and regulations which in any way affect the conduct of the work. The CONTRACTOR shall indemnify and save harmless the OWNER, its officers, agents and employees against any claim or liability arising from or based on CONTRACTOR’S violation of any law, ordinance, decree or order.

Add the following paragraph immediately after Paragraph 6.09.C.: 

D. Particular attention is called to the Williams-Steiger Occupational Safety and Health Act of 1970 as administered by the Department of Labor of the United States. The CONTRACTOR shall meet all record-keeping requirements of said Act and shall comply with all Federal and State health and safety regulations for the construction industry applicable to the work on this project.

SC - 6.14

Add the following paragraph immediately after Paragraph 6.14.A.: 

B. A Permit-Required Confined Space Notice is included in the Appendix. This Notice shall be read, signed and returned to the OWNER if the CONTRACTOR’S work involves Permit Required Confined Space Entry. The OWNER has a confined space entry procedure that is in accordance with CFR 1910.146, OSHA (Permit Required Confined Spaces). A copy of the OWNER’S procedure and maps that identify locations of confined spaces at OWNER’S facilities are available for review.

SC - 6.16

Add the following paragraph immediately after Paragraph 6.16.A.: 

B. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, and CONTRACTOR cannot be reached, OWNER may act to attempt to prevent threatened damage, injury, or loss. OWNER will give CONTRACTOR prompt written notice of such action and the cost of the correction or remedy shall be charged against CONTRACTOR. A Change Order will be issued to document the change in Contract Price.
SC - 6.17

Add the following subparagraph immediately after Subparagraph 6.17.D.3.:

4. After ENGINEER has reviewed and approved a Shop Drawing or Sample, CONTRACTOR shall provide the material or equipment approved. ENGINEER will not review subsequent submittals of a different manufacturer or Supplier unless CONTRACTOR provides sufficient information to ENGINEER that the approved material or equipment is unavailable, time of delivery will delay the construction progress, or OWNER requests a different manufacturer or Supplier.

SC - 6.20

Delete Paragraph 6.20.C. in its entirety. Add two paragraphs immediately after Paragraph 6.20.B. which are to read as follows:

C. The obligations of CONTRACTOR under Paragraphs 6.20.A. and 6.20.B. shall be construed to include, injury or damage resulting from any failure to use or misuse by CONTRACTOR, CONTRACTOR'S agents and employees of any scaffold, hoist, crane, stay, ladder, support or other mechanical contrivance erected or constructed by any person or any or all other kinds of equipment whether or not owned or furnished by OWNER. It is understood that this excludes use by OWNER or OWNER'S employees of scaffolding owned and furnished by OWNER.

D. In the event that CONTRACTOR is requested but refuses to honor the indemnity obligations of Paragraphs 6.20.A., 6.20.B., and 6.20.C., CONTRACTOR shall, in addition to all other obligations, pay the cost of bringing any such action, including attorney fees, to the party requesting indemnity.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

SC - 9.03

Delete Paragraph 9.03 in its entirety and insert the following in its place:

SC - 9.03 Project Representative

A. ENGINEER will furnish a Resident Project Representative (RPR), assistants and other field staff to assist ENGINEER in observing the performance of the Work of CONTRACTOR.

B. Through more extensive on-site observations of the Work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the Work; but, the furnishing of such services will not make ENGINEER responsible for or give ENGINEER control over construction means, methods, techniques, sequences or procedures or for safety precautions or programs, or responsibility for CONTRACTOR'S failure to perform the Work in accordance with the Contract Documents.

C. The responsibilities, authority, and limitations of the RPR are limited to those of ENGINEER in Paragraph 9.09 of the General Conditions, and the Contract Documents, and are further limited and described as follows:

1. RPR is ENGINEER'S agent 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 on-site work shall in general be with ENGINEER and
CONTRACTOR keeping OWNER advised as necessary. RPR’s dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of the ENGINEER.

2. Duties and responsibilities of the RPR:

   a. Conduct a preconstruction conference with OWNER, CONTRACTOR, Utilities, and other appropriate parties affected by the Project. This meeting will allow all parties to the Project the opportunity to develop specific guidelines of involvement, establish timetables of events, and define Project requirements.

   b. Review Applications for Payment submitted by CONTRACTOR. Evaluate applications against work observed as being completed. Forward applications to OWNER for approval and payment after revision, when necessary.

   c. Provide direction for the assistants and coordinate observation activities.

   d. Direct visiting inspectors representing public or other agencies having jurisdiction over the Project to OWNER or CONTRACTOR as appropriate.

   e. Administer all required Written Amendments and other documents amending, modifying, or supplementing the Contract Documents as the Project proceeds.

   f. Disapprove or reject Work which is observed to be “defective”. Require inspection or testing of Work as provided in Article 13 of the General Conditions when it is deemed necessary.

   g. Review the testing of equipment and systems provided by CONTRACTOR and assess its compliance with the Contract Documents.

   h. Determine final quantities for Work installed which will serve as the basis for the final payment to CONTRACTOR.

   i. Coordinate efforts required to prepare record drawings showing those changes made during construction, based on the marked-up prints, drawings and other data furnished by CONTRACTOR to ENGINEER and which ENGINEER considers significant.

3. The assistant(s) is to function under the direction and supervision of the RPR. The assistant(s) will:

   a. Observe Work activities, as directed, and report their observations to the RPR. Any observed variance in Work activities from the intent of the Contract Documents will be reported to the RPR.

   b. Inform the RPR when situations develop such that a change in the Contract Documents would serve to improve the Project.

   c. Gather and maintain information required for pay estimate review by the RPR.

   d. Perform other duties as directed by the RPR.

4. The assistant(s) will have limitations on their responsibilities and authority. The assistant(s) will not:
a. Be authorized to modify or otherwise change the Contract Documents.

b. Have the authorization necessary to accept any work on behalf of OWNER.

c. Be authorized to delete or to order any additional Work.

d. Through their efforts, relieve CONTRACTOR of CONTRACTOR'S ultimate responsibility for the quality of Work.

SC - 9.07

Delete Paragraph 9.07 in its entirety and insert the following in its place:

SC - 9.07 Determinations for Unit Price Work

A. ENGINEER will have authority to determine the actual quantities and classifications of items of Unit Price Work performed by CONTRACTOR, and the written decisions of ENGINEER on such matters will be final, binding on OWNER and CONTRACTOR, and not subject to appeal (except as modified by ENGINEER to reflect changed factual conditions.)

SC - 9.09

Add the following paragraph immediately after Paragraph 9.09.E.:

F. When ENGINEER is on the Project site to perform the duties and responsibilities as set forth in the Contract Documents, ENGINEER will comply with CONTRACTOR'S safety plans, programs, and procedures. In the event ENGINEER determines that CONTRACTOR'S safety plans, programs, and procedures do not provide adequate protection for ENGINEER, ENGINEER may direct its employees to leave the Project site or implement additional safeguards for ENGINEER'S protection. If taken, these actions will be in furtherance of ENGINEER'S responsibility to its own employees only, and ENGINEER will not assume any responsibility for protection of any other persons affected by the Work. In the event ENGINEER observes situations which appear to have potential for immediate and serious injury to persons, ENGINEER may warn the persons who appear to be affected by such situations. Such warnings, if issued, shall be given based on general humanitarian concerns, and ENGINEER will not, by the issuance of any such warning, assume any responsibility to issue future warnings or any general responsibility for protection of persons affected by the Work.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

SC - 10.03

Add the following paragraph immediately after Subparagraph 10.03.A.3.:

B. Change Orders will be prepared on the form included in the Appendix of this Project Manual.

SC - 10.05

Amend Paragraph 10.05.B. by deleting the words “thirty days” in the 4th line and inserting the words “ten days” in their place, deleting the words “sixty days” in the 9th line and inserting the words “thirty days” in their place, and deleting the words “believes it” from the 5th sentence.

Add the following subparagraph immediately after Paragraph 10.05.B.:

1. Notice of the amount or extent of the claim shall include the following certification:
CONTRACTOR certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of CONTRACTOR’S knowledge and belief, and that the amount or time requested accurately reflects the Contract adjustment for which CONTRACTOR believes OWNER is liable.

ARTICLE 11 – COST OF WORK; CASH ALLOWANCES; UNIT PRICE WORK

SC - 11.03

Delete Paragraph 11.03.D. in its entirety and insert the following in its place:

D. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. if the total cost of a particular item of Unit Price Work amounts to 5% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by CONTRACTOR differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and

2. if there is no corresponding adjustment with respect to any other item of Work; and

3. if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or if OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price, either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

SC - 12.01

Delete Paragraph 12.01.B.2. in its entirety and insert the following in its place:

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum which includes an allowance for overhead and profit in accordance with Paragraph 12.01.C.2., or

SC - 12.02

Add the following paragraph immediately after Paragraph 12.02.B.:

C. Time extensions provided under Paragraph 12.03 of the General Conditions will only be allowed for controlling items of Work (critical path).

SC - 12.03

Delete Paragraph 12.03.B. in its entirety and insert the following in its place:

B. CONTRACTOR shall make no claim for damages for delay in the performance of the Work occasioned by acts or neglect by OWNER or any of its representatives, or because of any injunction which may be brought against OWNER or its representative, and agrees that any such claim shall be fully compensated for by an extension of time in an amount equal to the time lost due to such delay, and that such time extension shall be CONTRACTOR’s sole and exclusive remedy for such delay.
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC - 13.03

Add the following language at the end of Paragraph 13.03.C.:

It is not the intent of this paragraph to require CONTRACTOR to be responsible for the cost of OWNER to witness inspections or tests unless otherwise set forth in the Specifications.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

SC - 14.02

Amend the first sentence of Subparagraph 14.02.A.1. by striking out the words “20 days” and inserting the words “45 days” in their place.

Amend the first sentence of Paragraph 14.02.C. by striking out the words “Ten days” and inserting the words “Thirty-five days” in their place.

SC - 14.04

Add the following subparagraph immediately after Paragraph 14.04.D.:

1. CONTRACTOR’S request for issuance of a Certificate of Substantial Completion shall occur after CONTRACTOR has, in the opinion of the ENGINEER, satisfactorily delivered all schedules, guarantees, maintenance and operations instructions, Bonds, certificates or other evidence of insurance required by ARTICLE 5, certificates of inspection, affidavit of wage rate compliance, marked-up record documents (as provided in Paragraph 6.12) and other documents.

SC - 14.05

Delete Paragraph 14.05.A. in its entirety and insert the following in its place:

A. OWNER reserves right to partially occupy and to place and install equipment in completed areas of facilities, prior to Substantial Completion, provided that such occupancy does not interfere with completion of Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the Work unless specifically identified in the Contract Documents. OWNER’S acceptance of such Work shall be subject to the following conditions.

SC - 14.07

Amend the first sentence of Subparagraph 14.07.A.1. by striking out the following words: “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, marked up record documents (as provided in Paragraph 6.12), and other documents”

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

SC - 15.01

Delete the third sentence of Paragraph 15.01.A. in its entirety and insert the following in its place:

CONTRACTOR shall make no claim for damages for delay in the performance of the Work occasioned by acts or neglect by OWNER or any of its representatives, or because of any
injunction which may be brought against OWNER or its representative, and agrees that any such claim shall be fully compensated for by an extension of time in an amount equal to the time lost due to such delay, and that such time extension shall be CONTRACTOR’s sole and exclusive remedy for such delay.

**SC - 15.04**

Amend Paragraphs 15.04.A and 15.04.B by striking out the words “30 days” in four places and inserting the words “60 days” in their place and by striking out the words “seven days” in two places and inserting the words “ten days” in their place.

**ARTICLE 16 – DISPUTE RESOLUTION**

Delete Article 16 in its entirety and insert the following in its place:

Subject to the provisions of General Conditions Paragraph 10.05, OWNER and CONTRACTOR may exercise such rights and remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

**ARTICLE 17 – MISCELLANEOUS**

**SC - 17.01**

Delete Paragraph 17.01.A in its entirety and insert the following in its place:

A. Whenever any provision of the Contract Documents requires the giving of a written notice or the delivery of any Bond, Agreement, Certificate of Insurance or any other item, it will be deemed to have been validly given if delivered in person to the individual, to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail (return receipt), postage prepaid, to the last business address known to the giver of the article.

**SC - 17.07**

Add the following paragraph immediately after Paragraph 17.06:

SC - 17.07 Lien Waivers

A. OWNER may at any time require CONTRACTOR to furnish lien waivers for labor and materials covered by specified Applications for Payment.

**SC - 17.08**

Add the following new paragraph immediately after Paragraph 17.07:

A. In case any action at law or suit in equity may or shall be brought against OWNER, or any of its officers, agents or employees for or on account of the failure, omission, or neglect of CONTRACTOR or his Subcontractors, employees, or agents, to do or perform any of the covenants, acts, matters, or things by this Contract undertaken to be done or performed by CONTRACTOR or his Subcontractors, employees, or agents, or from any injuries done to property or persons and caused by the negligence or alleged negligence of CONTRACTOR or his Subcontractors, employees, or agents, then CONTRACTOR shall immediately assume and take charge of the defense of such actions or suits in like manner and to all intents and purposes as if said actions or suits had been brought directly against CONTRACTOR, and CONTRACTOR shall also indemnify and save harmless OWNER, its officers, agents, and employees from any and all loss, cost or damage whatever arising out of such actions or
suits, in like manner and to all intents and purposes as if said actions or suits had been brought directly against CONTRACTOR, and CONTRACTOR shall also indemnify and save harmless OWNER, its officers, agents and employees from any and all loss, cost or damage whatever brought as aforesaid.

END OF SUPPLEMENTARY CONDITIONS
SPECIFICATIONS
PART 1 – GENERAL

1.01 SUMMARY

A. The work generally consists of the installation of 917 feet of ductile iron pipe to replace an existing 12-inch clay sewer. A portion of the replacement will take place within a designated wetland requiring minimal disturbance and additional restoration requirements. Additional work includes removal and replacement of 4 manholes, tree removal, clearing and grubbing, fill and grading, erosion control, dewatering, bypass pumping, testing, and restoration.

1.02 FORM OF SPECIFICATIONS

A. Some Work described in these Specifications use systems approach to identify systems of structure or facility.

B. System components are either specified in system specification or by reference to another section.

C. Term “provide” or “provided” shall mean “furnish and install in-place”.

1.03 CONTRACTS

A. Perform Work under Lump Sum price Contract with OWNER.

1.04 WORK BY OTHERS

A. On-going and concurrent Work by Others

1. Not applicable.

1.05 WORK SEQUENCE AND CONSTRAINTS

A. Means and Methods: CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. These shall be performed in conformance with the sequence and constraints specified herein. See Paragraph 6.01 and other supervision and superintendence requirements specified in Article 6 of the General Conditions.

B. Safety and Protection: CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. See Paragraph 6. 13 and other safety and protection requirements specified in Article 6 of the General Conditions.

C. Construct Work in accordance with the following requirements and to accommodate operation of existing facilities during construction period. Coordinate construction progress schedule and operations with OWNER. CONTRACTOR shall provide OWNER written notice 14 days prior to time when existing facilities must be taken out of service to perform Work. Not later than 14 days when OWNER receives written notice, OWNER will take existing facilities out of service and make them available to CONTRACTOR to perform Work. OWNER reserves right to place facilities taken out of service back into service on emergency basis upon notification to CONTRACTOR.
D. CONTRACTOR shall coordinate its Work with concurrent work by others and shall be responsible for overall Project schedule to include on-site storage, installation, testing, and startup of Work.

E. CONTRACTOR shall discuss and coordinate with OWNER prior to removing existing facilities from service in order to complete Work of this Contract. OWNER will at OWNER’S discretion, request equipment to be placed back into service if out of service equipment will cause adverse effects on facility operation.

F. Due to potential health hazards and requirements of the State of Illinois EPA and U.S. EPA, existing facilities must be maintained in operation during construction.

G. Project Constraints:

1. Notify the District 24 hours prior to commencing Work.

2. Notify the City of North Chicago a minimum of 24 hours prior to commencing Work.

3. Coordinate with SMC inspector prior to start of dewatering options.

4. Contractor is responsible for providing a DECI inspector on the project. DECI shall provide weekly reports to SMC Inspector meeting SMC’s requirements.

5. The site is currently under a wetland mitigation plan. Contractor shall minimize impact on the site from equipment and stored material.

6. Contractor shall comply with all permitting requirements from USACOE, Lake County SMC, IDOT, and the City of North Chicago.

7. Contractor shall provide bypass pumping, or other means of flow control, for the duration of the work until acceptance by Owner. Contractor is responsible for the means and methods of flow control and shall provide a plan for approval by Owner.

8. Contractor shall be responsible for dewatering/pumping throughout construction. See plans for additional requirements.

9. Contractor to remove debris offsite to an approved disposal location.

10. Refer to Drawings for additional constraints and requirements.

1.06 CONTRACTOR’S USE OF PREMISES

A. Conduct operations to ensure least inconvenience to OWNER and operation of existing facility. Cooperate with OWNER during construction operations to minimize conflict and to facilitate OWNER’S operations.

B. When CONTRACTOR removes a portion of the fence to complete Work, the fence shall be restored at all times when no work is being done in the area; and existing fence shall be restored at completion of the work in accordance with the requirements of the Contract Documents.

C. When keys to locked areas are needed to provide access to perform Work, obtain from OWNER. Return keys at end of days Work.
D. Employees of CONTRACTOR and Subcontractors involved in Work shall carry a federally or state issued photo ID at all times when working in OWNER’S facilities. Any of CONTRACTOR and Subcontractor’s employees found on site without a proper photo ID shall be immediately removed by CONTRACTOR from the site.

E. Conduct staging and parking areas as designated on Drawings and by OWNER. CONTRACTOR shall be responsible to coordinate staging and parking areas for its subcontractors and vendors.

F. Obtain and pay for use of additional storage or Work areas needed for operations at no additional cost to OWNER.

1.07 WORKING HOURS

A. Comply with requirements of General Conditions.

B. No Work shall be done between 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays or legal holidays without written permission of OWNER. Emergency work may be done without prior permission.

C. Such permission may be revoked at any time by OWNER if CONTRACTOR fails to maintain adequate equipment and supervision for proper prosecution and control of Work. Revocation shall not entitle CONTRACTOR to change in Contract Price or Contract Time.

1.08 OWNER OCCUPANCY OF PREMISES

A. OWNER will occupy site and existing facilities during entire construction period for conduct of normal operations.

B. OWNER reserves right to partially occupy and to place and install equipment in completed areas of facilities, prior to Substantial Completion, provided that such occupancy does not interfere with completion of Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the Work unless specifically identified below.

   1. OWNER will accept the following part[s] of the Work in accordance with requirements of the General Conditions:  
      a. Not applicable.

C. Prior to partial OWNER occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon partial occupancy. OWNER will provide operation and maintenance of mechanical and electrical systems in occupied portions of the facility.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)
PART 1 - GENERAL

1.01 SUMMARY

A. ENGINEER will conduct preconstruction conference in accordance with the General Conditions and this Section.

B. To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the CONTRACTOR shall conduct progress meetings, construction foreman’s meetings, and specially called meetings throughout the construction period. OWNER and ENGINEER may attend meetings. CONTRACTOR shall:

1. Prepare agenda.
2. Distribute written notice of specially called meetings a minimum of 1 working day in advance of the meeting date.
3. Make physical arrangements for meetings.
4. Preside at meetings.
5. Record meeting minutes.
6. Prepare formal minutes within 3 working days after meeting and distribute:
   a. To meeting participants.
   b. To affected parties.
   c. To ENGINEER and OWNER (3 copies).

1.02 QUALIFICATIONS

A. Representatives of CONTRACTOR, Subcontractors, and Suppliers attending the meetings shall be authorized to act on behalf of entity each represents.

B. Revisions to Minutes:

1. Challenge to the minutes shall be settled at the regularly scheduled meeting.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.01 PRECONSTRUCTION CONFERENCE

A. Location: To be selected by OWNER.

B. Attendance:

1. CONTRACTOR’S Project Manager.
2. CONTRACTOR’S Resident Superintendent.
3. Subcontractors’ or Suppliers’ representatives CONTRACTOR may desire to invite or ENGINEER may request.
4. OWNER’S representatives.
5. ENGINEER’S representatives.
6. Local utility representatives, if applicable.
C. Agenda:

1. Organizational arrangement of OWNER’S and ENGINEER’S forces.
2. Organizational arrangement of CONTRACTOR’S, Subcontractors’, and material and equipment Suppliers’ forces.
3. Contract Documents, including distribution of required copies.
4. Project safety.
5. Preliminary Construction Progress Schedule.
6. Check of required bonds and insurance.
7. Liquidated damages.
8. Preliminary schedule of Shop Drawing submissions.
10. O & M submittals.
11. Channels and procedures for communications, correspondence, and project coordination.
12. Weekly and monthly meetings.
13. Laboratory and field testing requirements.
14. Provisions for inventory of material stored on-site or off-site.
15. Schedule of values.
17. Field Order and Change Order procedures.
18. Posting of project signs.
19. Other business.

3.02 MONTHLY PROGRESS MEETINGS

A. Schedule monthly meetings.

B. Location: CONTRACTOR’S field office.

C. Attendance:

1. CONTRACTOR’S Project Manager.
2. CONTRACTOR’S Resident Superintendent.
3. Affected Subcontractors.

D. Suggested Agenda:

1. Review of minutes of previous meeting.
2. Review of Work progress since previous meeting.
3. Project safety concerns.
4. Field observations, problems, conflicts.
5. Problems impeding Construction Progress Schedule.
6. Review of off-site fabrication, delivery schedules.
7. Corrective measures and procedures to regain conformance with Construction Progress Schedule.
8. Revisions to Construction Progress Schedule.
9. Issues raised by OWNER and ENGINEER.
11. Coordination of schedules.
12. Review and update of submittal schedule.
14. Pending changes and Substitutions.
15. Effect of proposed changes on Construction Progress schedule.
16. Other business.
E. Agenda containing specific subjects to be discussed shall be provided to each attendee and to the OWNER and ENGINEER at least 5 working days before the meeting.

3.03 CONSTRUCTION FOREMAN’S MEETING

A. Schedule as required.

B. Location: CONTRACTOR’S field office.

C. Attendance:
   1. Resident Superintendent.
   2. Subcontractors’ foremen.

D. Suggested Agenda:
   1. Review of Work progress since previous meeting.
   2. Proposed progress and schedule for succeeding Work period.
   3. Field observations, problems, conflicts.
   4. Problems that affect Construction Progress Schedule.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Provide digital-format photographs taken at the specified stages during construction, and in accordance with provisions of this Section.

B. Provide color video of existing facilities taken before commencement of construction.

1.02 SUBMITTALS

A. Submit Compact Disc (CD) containing digital photographs and one (1) print of each photograph. Digital photographs shall be common retrievable format as specified by ENGINEER during Preconstruction Conference. Submit with each application for payment.

B. Submit color video of existing facilities using digital format. Submit prior to commencement of construction.

PART 2 - PRODUCTS

2.01 PHOTOGRAPHS

A. Provide color digital prints.

B. On the cover of the CD print:
   1. Project name.
   2. ENGINEER’S project number.
   3. Date and time of photographs.
   4. CONTRACTOR’S name and address.

C. Submit photographs on a CD, DVD, or Flash Drive.

PART 3 - EXECUTION

3.01 PHOTOGRAPHIC REQUIREMENTS

A. Take photographs at each major stage of construction.
   1. Before commencement of construction.
   2. At monthly intervals during construction of facilities. Photographs need show only new Work for that month.

B. Make each photograph clear, in focus, with high resolution and sharpness, and with minimum distortion.

3.02 VIEWS

A. Make photographs from three separate locations around Work and for each major structure.
B. Select locations to provide diversified overall views of Work, from positions that are expected to remain accessible throughout progress of Work. Locations shall adequately illustrate condition of construction and state of Project.

C. When directed by ENGINEER, because of stage of construction, change one or more locations to new locations inside or outside structure.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Submit preliminary Construction Progress Schedule in accordance with General Conditions.

1.02 SUBMITTALS

A. Three days before the meetings to discuss schedules, furnish 4 copies of preliminary schedule or CPM schedule, and subsequent revisions thereof, to ENGINEER and OWNER for review.

B. Within 3 days after monthly progress meetings, furnish 4 copies of revised schedule to OWNER and ENGINEER. Furnish revised schedule to Subcontractors as appropriate.

C. Failure to submit schedules on a timely basis shall be considered cause for withholding progress payments.

1.03 WORKING HOURS

A. Comply with requirements of General Conditions.

B. No Work shall be done between 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays or legal holidays without written permission of OWNER. Emergency work may be done without prior permission.

C. Such permission may be revoked at any time by OWNER if CONTRACTOR fails to maintain adequate equipment and supervision for proper prosecution and control of Work. Revocation shall not entitle CONTRACTOR to change in Contract Price or Contract Time.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.01 FORM OF SCHEDULE

A. Prepare schedule in form of horizontal bar chart for each site.

   1. Provide separate horizontal bar for each trade, activity or operation.
   2. Provide continuous vertical line to identify first working day of each week.
   3. Scale and space to allow for notations and future revisions.

B. Format of Listings: Chronological order of start of each activity or operation.

3.02 CONTENT OF SCHEDULE

A. Show complete sequence of construction by activity or operation for each site.
B. Show dates for beginning and completion of each major element of construction and installation dates for major equipment items. Include:

a. Each individual task of construction.
b. Procurement of equipment and systems including Shop Drawing submittals, ENGINEER’S review of submittals, shop tests, and delivery dates.
c. Identification of Work that will affect existing plant operations.
d. Identification of Work that will affect concurrent work provided by Others as identified in Section 01110.
e. Coordination of concurrent work provided by Others as identified in Section 01110.
f. Services of manufacturers’ representatives.
g. Testing and startup dates for major equipment.
h. Field tests.
i. Dates of Substantial and Final completion.
j. Subcontractor Work items.
k. Allowance for inclement weather.
l. O&M data activities.
m. CONTRACTOR-provided training.

C. Show projected percentage of completion for each activity as of first day of each month for each site.

3.03 REVISIONS TO SCHEDULE

A. Each month CONTRACTOR shall receive update information from Subcontractors and Suppliers which shall be included in current schedule. Revised schedule shall indicate changes such as:

1. Major changes in scope.
2. Activities modified since previous submittal.
3. Revised projections of progress and completion.
4. Other identifiable changes.

B. Provide narrative report to define following:

1. Problem area and anticipated delays and their impact on schedule.
2. Corrective action recommended and its effect.

3.04 MONTHLY PROGRESS MEETINGS

A. Once each month, in accordance with Section 01315, Construction Progress Schedule will be reviewed. Progress will be reviewed:

1. To identify those activities started and completed during previous period.
2. For remaining duration required to complete each activity started, but not completed.
3. For durations of selected activities not yet started.
4. For effect of Change Orders and proposed sequencing.

B. Update schedule accordingly.

3.05 DELAYS AND RECOVERY

A. If, at any time during the Project, CONTRACTOR fails to complete activity by its latest scheduled completion date, CONTRACTOR shall, within 5 working days, submit to ENGINEER written statement as to how and when work force will be reorganized to return to current construction schedule.
B. If, during schedule review meetings, it becomes apparent that milestone completion dates or times established in Section 01110 or Contract completion dates will not be met, CONTRACTOR shall take some or all of the following actions:

1. Increase construction staffing in such quantities and crafts as shall eliminate backlog of Work.
2. Increase number of working hours per shift, shifts per day, Work days per week, amount of construction equipment or combination of foregoing sufficient to substantially eliminate backlog of Work.
3. Reschedule Work actives to achieve concurrency of accomplishment.

C. Under no circumstances will addition of equipment or construction forces, increasing working hours or other method, manner or procedure to return to current Construction progress Schedule be considered justification for Contract modification or treated as acceleration.

D. CONTRACTOR shall accept risk for delays caused by rate of progress of Work to be performed under other Contracts. If CONTRACTOR is delayed in prosecution and completion of work because of such conditions, CONTRACTOR shall have no claim for damages to Contract adjustment other than extension of time and waiving of liquidated damages during period of time occasioned by delay.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Requirements for Work-related (non-administrative) submittals including Substitutes and “Or-Equal” items, Shop Drawings, product data, Samples, test results, operating and maintenance data, and other miscellaneous Work-related submittals.

1. Submittals for certification of installation, instructional, and post-startup services are specified in Section 01615.
2. Submittals for operation and maintenance data are specified in Section 01785.
3. Submittals for record drawings are specified in Section 01789.

B. Administrative Submittals: Procedures concerning items such as listing of manufacturers, Suppliers, Subcontractors, Construction Progress Schedule, bonds, payment applications, insurance certificates, schedule of values, and photographs are specified elsewhere.

C. Work–Related Submittals:

1. Substitute and “Or-Equal” Items:

   a. Includes material or equipment described in Paragraph 6.05 of General Conditions, Article 6 of the Supplementary Conditions, and Section 01615 which CONTRACTOR requests ENGINEER to accept, after Effective Date of the Agreement.

2. Shop Drawings:

   a. As defined in Paragraph 1.01.A.39 of the General Conditions, and in particular includes technical data and drawings specifically prepared for this Project, including fabrication and installation drawings, diagrams, data sheets, schedules, templates, patterns, reports, instructions, design mix formulas, measurements, and similar information not in standard printed form.

3. Product Data:

   a. Includes standard catalog type printed information on manufactured materials, equipment and systems that has not been specifically prepared for this Project, including manufacturers’ product specifications, catalog cut sheets, standard wiring diagrams, printed performance curves, mill reports, and standard color charts.

4. Samples:

   a. As defined in Paragraph 1.01.A.38 of the General Conditions, and in particular includes fabricated and manufactured physical examples of materials, products, and units of Work, including complete units, partial cuts of manufactured or fabricated Work, swatches showing color, texture, and pattern, and units of Work to be used for independent inspection and testing.

   b. Mock-ups are special forms of Samples too large or otherwise inconvenient for handling in manner specified for transmittal of Sample submittals.
5. Test Results:
   a. Includes source and field quality inspection and test reports, actual performance curves, and certifications of results prepared specifically for equipment, material, and systems provided for this Project.

6. Miscellaneous Submittals:
   a. Work-related submittals that do not fit in previous categories, including schedules, guarantees, warranties, certifications, maintenance agreements, workmanship bonds, survey data and reports, physical work records, copies of industry standards, field measurements, extra materials, keys, and similar information, devices, and materials applicable to Work.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.01 SUBMITTAL PROCEDURES

A. Scheduling:
   1. Provide preliminary and final submittal schedule in accordance with the General Conditions indicating time requirements for coordination of submittals with performance of Work.
   2. Times scheduled shall indicate completion of submittal approval process for Substitute and “Or-Equal” items, Shop Drawings, product data, and Samples not later than 60 days prior to beginning systems demonstrations. Completion of submittal process for above submittals will have been achieved when submittals have been returned to CONTRACTOR with submittal action of either “Approved” or “Approved As Noted”. Adjust submittal schedule to reflect revisions to Construction Progress Schedule.

B. Coordination:
   1. Coordinate preparation and processing of submittals with performance of Work. Coordinate each submittal with other submittals and related activities such as substitution requests, testing, purchasing, fabrication, delivery, and similar activities.
   2. Coordinate submission of different units of interrelated Work so submittal will not be delayed by ENGINEER’S need to review related submittal. ENGINEER may withhold action on submittal requiring coordination with other submittals until related submittals are provided.
   3. Prepare and transmit each submittal sufficiently in advance of scheduled performance of related Work and other applicable activities.

C. Submittal Preparation:
   1. Stamp and sign each submittal certifying to review and approval of submittal, verification of material and equipment, field measurements, field construction criteria, and coordination of information with Contract Documents in accordance with paragraph 6.17 of the General Conditions.
   2. Transmittal Form: Use CONTRACTOR’S SUBMITTAL TRANSMITTAL form included in Appendix. Identify following:
      a. Date
      b. Transmittal and Submittal number
c. Project

d. Name and signature of CONTRACTOR:

e. If submittal is for substitute, identify as “Substitute” on transmittal.

f. Specification section and/or Drawing numbers.

g. Description of submittal (i.e. equipment identification numbers, motor numbers, etc.)

h. Variations from Contract Documents

D. Resubmittal Preparation:

1. Comply with requirements for Submittal Preparation above, and in addition:

   a. Identify on transmittal form submittal is a resubmission.
   b. Make corrections or changes in submittal required by ENGINEER’S notations on returned submittal.
   c. On transmittal or separate page, answer or acknowledge in writing notations or questions indicated on ENGINEER’S transmittal form of returned submittal.

      1) Identify each response by question or notation number established by ENGINEER.
      2) If CONTRACTOR does not respond to each notation or question, resubmission will be returned without action by ENGINEER until CONTRACTOR provides written response.

   d. CONTRACTOR-initiated revisions or variations:

      1) On transmittal form, identify variations or revisions from previously reviewed submittal.

3.02 SPECIFIC SUBMITTAL REQUIREMENTS

A. General:

   1. Comply with requirements specified below for each indicated type of submittal. Specific submittal requirements for individual units of work are specified in applicable Specification section.
   2. If ENGINEER has responded to Written Clarification/Interpretation/Request submitted by CONTRACTOR, include ENGINEER’S response with submittal.

B. Requests for Substitutes:

   1. Collect data for items to be submitted for review as Substitute into one submittal for each item of material or equipment in accordance with Article 6.05 of General Conditions.
   2. Include completed CONTRACTOR’S REQUEST FOR SUBSTITUTION form as required by Supplementary Conditions.
   3. Submit with other scheduled submittals for material and equipment allowing time for ENGINEER to evaluate additional information required to be submitted.
   4. If CONTRACTOR requests to substitute for materials or equipment specified, but not identified in Specification as requiring submittal, CONTRACTOR shall indicate substitution in Submittal Schedule.

C. Shop Drawings:

   1. Maximum size 22 in. by 34 in.
   2. Submit graphic information at accurate scale with name of preparer indicated.
   3. Show dimensions and note which are based on field measurements.
   4. Indicate compliance with standards and notation of coordination requirements.
5. Highlight, encircle or otherwise indicate variation from Contract documents or previous submittals and revisions on resubmittals.

6. Do not use ENGINEER’S Drawings as Shop Drawings.

7. Provide blank space for CONTRACTOR stamps.

8. Provide 4-in. by 8-in. blank space for ENGINEER stamps.

9. Submit I sepia reproducible (or vellum reproducible) and I print for drawings larger than 11-in. by 17-in. Submit 7 copies for other drawings.

D. Product Data:

1. Collect required data into single submittal for each unit of Work or system. Where product data includes information on several similar materials or equipment, some of which are not require for use in Project, mark copies to show which items are not applicable to Project.

2. Submit 6 copies.

E. Samples:

1. Provide Samples physically identical with proposed materials and equipment to be incorporated into work. Where variations in color, pattern, and texture are inherent in product, submit multiple units (not less than 3) showing approximate limit of variations.

2. Provide full set of option Samples where selection by OWNER or ENGINEER is required.

3. Include information with Sample to show generic description, source, product name, manufacturer, limitations, and compliance with standards.

4. Submit Samples with other related elements of work.

5. Submit 3 sets of Samples where Specifications indicate ENGINEER’S selection of color, pattern, texture or similar characteristics from manufacturer’s range of standard choices is necessary. For other submittals, submit a single set of Samples. One set of Samples will be returned with ENGINEER’S action noted.

6. Maintain returned set of Samples at Project site, in suitable condition and available for quality control comparisons throughout course of Work.

F. Test Results:

1. Identify each test by Specification section and type of test.

2. Submittal is to confirm that results of tests verify materials, products, and systems comply with Contract Documents and are not for approval.

3. Unless otherwise required in Specifications, test results shall be submitted to ENGINEER’S field office.

4. Submit 3 copies.

G. Miscellaneous:

1. Guarantees, Warranties, Maintenance Agreements, and Workmanship Bonds:

   a. Refer to Specification sections for requirements.

   b. Provide 2 executed copies. Provide 2 additional copies where required for operation and maintenance data.

2. Survey Data:

   a. Refer to Specification sections for requirements of property surveys, building or structure condition surveys, field measurements, quantitative records of actual work, damage surveys, and similar data.

   b. Submit 10 copies of property surveys. Submit 2 copies of other surveys.
3. Certifications:
   a. Refer to Specification sections for requirements.
   b. Submit 6 copies.

4. Closeout Submittals;
   a. Refer to Specification sections for requirements of spare parts, extra and overrun stock, maintenance tools and devices, keys, and similar units to be submitted.

3.03 ACTION ON SUBMITTALS

A. General:
   1. Except for submittals for record and similar purposes, where action and return is not required or requested, ENGINEER will review each submittal, mark the appropriate action, and return.
   2. Where submittal must be held for coordination, ENGINEER will so advise CONTRACTOR without delay.
   3. ENGINEER will stamp each submittal with uniform, self-explanatory action stamp, appropriately marked with submittal action.

B. Notification of Insufficient Information:
   1. If information submitted is not sufficient to complete review of submittal, ENGINEER will send transmittal to CONTRACTOR notifying CONTRACTOR that additional information is required.
   2. Submittal will be placed “on hold” and not returned until CONTRACTOR provides the additional information.

C. Unsolicited Submittals:
   1. ENGINEER will return unsolicited submittals without reviewing.

D. Action Stamp:
   1. Marking: “Approved”
      a. Work covered by submittal may proceed provided it complies with Contract Documents. Acceptance of Work depends on that compliance.
   2. Marking: “Approved As Noted”
      a. Work covered by submittal may proceed provided it complies with ENGINEER’S notations or corrections on submittal and with Contract Documents. Acceptance of work depends on that compliance. Resubmittal not required.
   3. Marking: “Revise and Resubmit”
      a. Do not proceed with Work covered by submittal.
      b. Revise submittal or prepare new submittal in accordance with ENGINEER’S notations.
   4. Marking: “Not Approved”
a. Work covered by submittal does not comply with Contract Documents. Do not proceed with Work covered by submittal.
b. Prepare new submittal complying with Contract Documents.

E. General Distribution:

1. Unless required elsewhere, provide distribution of submittals to Subcontractors, Suppliers, governing authorities, and others as necessary for performance of Work.
2. Provide copies of submittals bearing ENGINEER’S action stamp to:
   b. Record documents file.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Testing and inspecting to be provided by the CONTRACTOR.

B. Provide the services of a testing laboratory approved by OWNER.

C. Provide all tests and inspections required by governmental agencies having jurisdiction, and required by provisions of the Contract Documents.

D. Perform additional tests as required by ENGINEER.

E. Perform additional inspections, sampling, and testing required when initial tests indicate Work does not comply with Contract Documents.

F. Specified inspections and/or tests may be waived only by the specific approval of ENGINEER, and such waivers will result in credit to the OWNER equal to normal cost of such inspection and/or test.

G. Employment of laboratory shall, in no way, relieve CONTRACTOR'S obligation to perform the Work of the Contract.

1.02 PAYMENT

A. Include within the Contract Price an amount sufficient to cover all testing and inspecting required under this Section, and to cover all testing and inspecting required by governmental agencies.

B. The OWNER will pay for additional testing and inspecting specifically requested by the ENGINEER when such tests indicate conformance with Contract Documents.

C. When additional tests requested by ENGINEER, or initial tests, indicate noncompliance with the Contract Documents, all inspection, sampling, and testing and subsequent retesting occasioned by the noncompliance shall be performed by the testing laboratory and the costs thereof shall be paid by the CONTRACTOR.

1.03 SUBMITTALS

A. Upon completion of each test and/or inspection, promptly submit written report of each test and inspection; one copy each to ENGINEER, OWNER, material supplier, and CONTRACTOR, and one copy to record documents file. Each report shall include following:

1. Date issued.
2. Project title and number.
3. Testing laboratory name, address, and telephone number.
4. Name and signature of laboratory inspector.
5. Date and time of sampling or inspection.
6. Temperature and weather conditions if test performed in field.
7. Date of test.
8. Identification of product and Specification section.
9. Location of sample or test in Project.
10. Type of inspection or test.
11. Results of tests and compliance with Contract Documents.
12. Interpretation of test results, when requested by ENGINEER.

1.04 QUALIFICATIONS OF LABORATORY

A. Meet requirements of ASTM E329.
B. Authorized to operate in state where Project located.
C. Testing equipment calibrated at reasonable intervals by devices of accuracy traceable to either the National Bureau of Standards or other accepted values of natural physical constants.

PART 2 – PRODUCTS

(NOT USED)

PART 3 - EXECUTION

3.01 TAKING SPECIMENS AND TESTING

A. Except as may be specifically otherwise approved by ENGINEER, testing laboratory shall secure and handle all samples and specimens for testing and conduct testing.
B. Comply with specified standards.

3.02 COOPERATION WITH TESTING LABORATORY

A. Provide access to the Work at all times and at all locations where the Work is in progress. Provide facilities for such access to enable the laboratory to perform its functions properly.
B. Notify laboratory sufficiently in advance of operations to allow laboratory assignment of personnel and scheduling of tests.

1. When tests or inspections cannot be performed due to lack of such notice, reimburse OWNER for laboratory personnel, travel expenses, and cost of test normally incurred.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Temporary construction facilities required for the Work, including, but not limited to:

1. Utilities including heat, water, electricity, lighting, and telephone.
2. Sanitary facilities.
3. Fire protection.
4. Roads and parking.
5. Staging and work areas.
7. Enclosures.
8. Project signs.
10. Field office equipment for ENGINEER’S personnel.

B. Maintain temporary facilities in proper and safe condition throughout progress of Work.

C. Comply with federal, state, and local codes and regulations, and utility company requirements.

1.02 LAYOUT OF TEMPORARY FACILITIES

A. Before starting Work, submit to ENGINEER, for approval, proposed layout of temporary facilities.

B. Should CONTRACTOR require space in addition to that shown on Drawings, CONTRACTOR shall make arrangements for storage of materials and equipment in locations off Site.

PART 2 - PRODUCTS

2.01 TEMPORARY LIGHTING AND ELECTRICITY

A. General:

1. Temporary lighting shall be sufficient to enable CONTRACTOR and Subcontractors to complete Work and enable ENGINEER to observe Work. Illumination shall meet or exceed state code requirements.

B. Temporary electricity is not available from OWNER.

1. Arrange with local utility for temporary electric service.
2. Pay for installation of temporary electric service including poles, transformers, and metering.
3. Register temporary meter in CONTRACTOR’S name.
4. Pay for electricity consumed for construction purposes until Final Completion or until occupancy by OWNER.

C. CONTRACTOR’S responsibilities:

1. Provide, maintain, and remove temporary electric service facilities.
2. Provide temporary electric systems and components in conformance with requirements of National Electric Code and local authorities.
3. Facilities exposed to weather shall be weatherproof type.
4. Enclosures shall be locked to prevent unauthorized access.
5. Provide lamps, wiring, switches, sockets, and similar equipment required for temporary lighting and power tools.
6. Pay for installation of temporary services including poles, transformer charges, and metering.
7. If adequate OWNER power is not available, arrange with local electric utility for temporary electric services subject to utility’s requirements and approval. Register temporary meter in CONTRACTOR’S name.
8. Pay for electrical energy consumed for construction purposes including operation of ventilating equipment, heating of buildings, testing and operation of equipment after permanent wiring has been installed until entire Project is Substantially Complete.
9. Provide electric service to temporary offices.

2.02 TEMPORARY HEAT

A. General:
1. Provide heating required for cold weather protection until structure is enclosed.
2. Provide heating required after enclosure of structure.
3. Except as otherwise called for, temperature shall be kept between 50°F and 75°F.
4. Heat shall be warm air from oil or gas-fired portable heaters suitably vented to outside.
5. Open salamander type heaters are not permitted.

B. CONTRACTOR’S responsibilities:
1. Provide temporary heat, pay fuel costs and maintain heating units.
2. Provide adequate heat to all parts of structure.
3. Repair or replace materials damaged because of lack of heat.
4. Provide throwaway filters if permanent system used for temporary heat.

2.03 TEMPORARY TELEPHONE SERVICE

A. Provide temporary telephone service for CONTRACTOR’S use. CONTRACTOR may not use OWNER’S system for telephone service.

2.04 WATER FOR CONSTRUCTION

A. Except as noted herein, water is not available at Site. CONTRACTOR shall make arrangements and shall pay all costs to obtain suitable water for construction.

B. CONTRACTOR shall supply any water required for construction. Water may be available from hydrants within Heiden Gardens.

1. Secure permission from appropriate agency, obtain necessary permits, and notify ENGINEER and Fire Department before obtaining water from fire hydrants. Make arrangements and pay costs for water, for connecting to hydrants, and for temporary piping required to transport water to point of use.
2. Connection to hydrants shall prevent backflow to system. Use only special hydrant operating wrenches to open hydrants. Make certain hydrant valves are open full. If hydrants are damaged, CONTRACTOR shall be responsible and shall notify appropriate agency so damage can be repaired as quickly as possible. Fire hydrants shall be completely accessible to Fire Department at all times.
2.05 WATER FOR TESTING
A. Unless specifically stated otherwise in Specifications, CONTRACTOR shall provide water necessary for testing. Comply with requirements specified under WATER FOR CONSTRUCTION in this Section.

2.06 SANITARY FACILITIES
A. Do not use existing sanitary facilities.
B. Provide temporary sanitary facilities conforming to state and local regulations, in sufficient numbers for use of CONTRACTOR’S and Subcontractor’s employees.
C. Maintain in sanitary condition and properly supply with toilet paper.

2.07 TEMPORARY FIRE PROTECTION
A. Provide and maintain minimum of one fire extinguisher on each floor of each building, and other fire protection equipment and devices as would be reasonably effective in extinguishing fires during early stages by personnel at Site.

2.08 TEMPORARY SITE AND OTHER ROADS
A. Construct and maintain temporary roadways in snow free, ice free, driveable condition.
B. Maintain existing roads used during construction free from accumulation of dirt, mud and construction debris. Roads shall be considered “maintained” when material has been removed by a sweeper.
C. CONTRACTOR shall repair or replace existing roads to original or better condition prior to Final Completion. Survey and record condition of existing roads prior to construction.

2.09 CONTRACTOR’S STAGING AND WORK AREA
A. Construct and maintain staging area at location shown on Drawings.
B. Prepare staging area as specified in Section 02200. Provide minimum of 4-inches crushed stone surface.
C. Work Area:
   1. Limit construction operations and storage of equipment and materials to areas shown on Drawings and as determined by ENGINEER.
   2. Except as provided herein, no sidewalk, private property, or other area adjacent to Site shall be used for storage of CONTRACTOR’S equipment and materials unless prior written approval is obtained from legal owner of the respective locations.
   3. Contractor shall maintain staging areas during construction in a manner that will not obstruct operations on any road areas. Work shall proceed in an orderly manner, maintaining construction Site and staging area free of debris and unnecessary equipment or materials.

2.10 SECURITY AND TEMPORARY FENCING
A. Security will not be provided by OWNER.
B. CONTRACTOR shall comply with OWNER’S site security requirements.
C. CONTRACTOR shall be responsible for loss or injury to persons or property where Work is involved, and shall provide security and take precautionary measures to protect CONTRACTOR’S and OWNER’S interests.

D. Provide and maintain temporary fencing of design and type needed to prevent entry onto Site by public.

2.11 ENCLOSURES

A. Provide and maintain all enclosures, scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, and other temporary construction necessary for proper completion of Work.

2.12 PARKING

A. Staging area and designated areas within construction limits may be used for parking of construction personnel’s private vehicles and CONTRACTOR’S lightweight vehicles.

B. Do not allow heavy vehicles or construction equipment in parking areas.

C. Make arrangements for additional parking off site as required.

2.13 PROJECT SIGNS

A. Provide signs suitably supported and erected on Site.

1. One 8-ft long by 4-ft high sign with name of CONTRACTOR lettered thereon, in manner approved by ENGINEER.

2. One sign, no larger than 3-ft by 4-ft, lettered as required by ENGINEER, to identify ENGINEER’S field office.

3. Provide sign indicating construction entrance.

B. Locate signs where designated by ENGINEER.

C. Do not place other signs on Site except name of respective Subcontractors on their field offices.

2.14 CONTRACTOR’S FIELD OFFICES AND BUILDINGS

A. If required by CONTRACTOR, erect where designated by ENGINEER, and maintain temporary field office and tool and storage buildings for CONTRACTOR’S use.

B. Buildings shall be neat and well constructed, surfaced with plywood, siding, masonite, or other similar material, well painted and void of advertisements.

2.15 ENGINEER’S FIELD OFFICE AND EQUIPMENT

A. Not Applicable

2.16 CONTRACTOR’S USE OF PREMISES

A. CONTRACTOR shall restrict his operations to the work areas required by the Contract Documents. The non-work areas of the OWNER’S premises are off-limits to CONTRACTOR’S personnel. There will be no storage of equipment or supplies in non-work areas.
PART 3 – EXECUTION

3.01 GENERAL

A. Maintain and operate systems to ensure continuous service for duration of construction.

B. Modify and extend systems, as Work progress requires.

3.02 REMOVAL

A. Completely remove temporary materials, equipment, signs, and structures when no longer required.

B. In unfinished areas, clean and repair damaged caused by temporary installations or use of temporary facilities, restore drainage, and evenly grade, seed or plant as necessary to provide appearance equal to or better than original.

C. In finished areas, restore existing or permanent facilities used for temporary services to specified, or original condition.

3.03 DAMAGE TO EXISTING PROPERTY

A. CONTRACTOR is responsible for replacing or repairing damage to existing buildings, structures, sidewalks, roads, parking areas, and other existing assets.

B. CONTRACTOR shall have option of having OWNER contract for such Work and have cost deducted from Contract Price.

3.04 OWNER’S USE

A. Upon acceptance of Entire Work and OWNER commences full-time successful operation of facility, OWNER will pay cost for utilities used for OWNER’S operation. CONTRACTOR shall continue to pay for utilities used until final acceptance of Work, except as provided herein. However, heat for building as required for construction purposes shall still be paid by CONTRACTOR unless, due to occupancy by OWNER, more heat shall be required due to increased temperature or lengthened duration, in which case OWNER will bear difference in cost.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. General requirements pertaining to abatement and control of environmental pollution arising from activities of Contractor and Subcontractors in performance of the Work of the Contract.

B. CONTRACTOR, in executing Work, shall maintain work areas free from environmental pollution that would be in violation of federal, state or local regulations.

C. Applicable Permits. CONTRACTOR shall comply with the terms and conditions included in the USACOE Permit, Lake County SMC approval of stormwater drainage and erosion control, WDO Permit, and IDOT permit. USACOE and Lake County SMC approvals have been completed and can be found in the appendix. WDO and IDOT permits are currently being processed and will be provided for Contractor once issued.

PART 2 – PRODUCTS

(NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

A. The land resources within boundaries of the Project, but outside the limits of permanent Work performed under this Contract, shall be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the Project.

B. Confine activities to pertinent areas defined on the Drawings or elsewhere in the Contract Documents.

1. Return construction areas to their preconstruction elevations except where surface elevations are otherwise noted to be changed.
3. Conduct construction activities in such a manner that ponding of stagnant water conducive to mosquito breeding habitat will not occur at any time.

C. Land resources:

1. Do not remove, cut, deface, injure, or destroy trees or other vegetation outside the Work area limits.
2. Do not remove, cut, deface, injure, or destroy trees or other vegetation inside the Work area limits, designated to be preserved, except as permitted by ENGINEER.
3. Land resources damaged by CONTRACTOR shall be promptly replaced or repaired to the approval of ENGINEER at CONTRACTOR’S expense.

3.02 PROTECTION OF STORM SEWERS

A. Prevent construction materials, concrete, earth or other debris from entering existing storm sewers or sewer construction.
3.03 PROTECTION OF WATERWAYS

A. Observe rules and regulations of State of Illinois and agencies of U.S. government prohibiting pollution of lakes, streams, rivers or wetlands by dumping of refuse, rubbish, dredge material or debris.

B. Disposal of materials into waters of state must conform to requirements of Illinois.

1. Permits shall be obtained by CONTRACTOR.


3.04 DISPOSAL OF EXCESS EXCAVATED AND OTHER WASTE MATERIALS

A. Excess excavated material not required or suitable for backfill and other waste material shall be disposed of off-site in accordance with federal, state, and local regulations.

B. CONTRACTOR shall obtain all certifications required by federal, state, and local regulation and by owner/operator of off-site disposal sites certifying that excess excavated and other waste materials are uncontaminated. Certifications shall be made by a licensed professional engineer in accordance with federal, state, and local regulations. CONTRACTOR shall conduct all tests and analyses required in order to certify that excess excavated and other waste materials are uncontaminated.

C. Provide watertight conveyance of liquid, semi-liquid or saturated materials which tend to bleed during transport. Liquid loss from transported materials is not permitted, whether being delivered to construction site or hauled away for disposal.

3.05 PROTECTION OF AIR QUALITY

A. Minimize air pollution by requiring use of properly operating combustion emission control devices on construction vehicles and equipment and encourage shutdown of motorized equipment not in use

B. Do not burn trash on Site.

C. If temporary heating devices are necessary for protection of Work, they shall not cause air pollution.

3.06 THAWING OF FROZEN GROUND

A. Obtain permit from appropriate authority before building fire to thaw frozen ground, and comply with conditions of permit.

B. Use fuel which does not create air pollution or inconvenience public

C. ENGINEER reserves right to prohibit fires for thawing frozen ground whenever deemed undesirable.

3.07 USE OF CHEMICALS

A. Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall be
approved by U.S. EPA, U.S. Department of Agriculture, or any other applicable regulatory agency.

B. Use and disposal of chemicals and residues shall comply with manufacture’s instructions.

3.08 NOISE CONTROL

A. Conduct operations to cause least annoyance to residents in vicinity of Work, and comply with applicable local ordinances.

B. Equip construction equipment and other apparatus with mechanical devices necessary to minimize noise.

C. Equip compressors with silencers on intake lines.

D. Equip gasoline or oil-powered equipment with silencers or mufflers on exhaust lines.

E. Line storage bins and hoppers with material that will deaden sounds.

F. Route vehicles carrying rock, concrete, or other material over such streets as will cause least annoyance to public and do not operate on public streets between hours of 6:00pm and 7:00 am, nor on Saturdays, Sundays or legal holidays, unless approved by OWNER.

3.09 DUST CONTROL

A. Take special care in providing and maintaining OWNER’S existing roads, and public roads used during construction operations in clean, dust free condition.

B. Comply with local regulations for dust control. If CONTRACTOR’S dust control measures are considered inadequate by ENGINEER, ENGINEER may require CONTRACTOR to take additional dust control measures.

3.10 FUELS AND LUBRICANTS

A. Comply with local, state, and federal regulations concerning transportation and storage of fuels and lubricants.

B. Fuel storage area location shall be approved by OWNER prior to installation.

C. Report spills or leaks from fueling equipment or construction equipment to OWNER and cleanup as required.

D. OWNER may require CONTRACTOR to remove damaged or leaking equipment from Site.

END OF SECTION
PART 1 – GENERAL

1.01 SUBSTITUTE AND "OR EQUAL" ITEMS

A. When equipment or material is specified by naming one or more manufacturers or suppliers followed by words "No Substitute Permitted", CONTRACTOR shall provide one of the named manufacturers or suppliers.

B. "Or Equal" Items: For material or equipment specified by naming one or more suppliers or manufacturers followed by the words "Or Equal", CONTRACTOR shall make submittal in accordance with Section 01330. ENGINEER will review submittal in accordance with Supplementary Conditions.

C. Substitute Items:

1. For material or equipment specified by naming one or more suppliers or manufactures and not followed by the words "Or equal" or "No Substitute Permitted", CONTRACTOR shall submit "Request for Substitution" in accordance with General Conditions for material or equipment not specifically named.

2. Requests for Substitution will be considered by ENGINEER, subject to CONTRACTOR’S representations and review provisions of Contract Documents, when one or more of the following conditions are satisfied.

   a. Where required equipment or material cannot be provided within Contract Time, but not as result of CONTRACTOR’S failure to pursue Work promptly or coordinate various activities properly.

   b. Where packaging of several items of equipment from single source will provide maintenance and coordination advantages to OWNER.

   c. When CONTRACTOR proposes to provide OWNER with cost savings.

3. If ENGINEER approves CONTRACTOR’S Request for Substitution, Contractor shall make submittal in accordance with Section 01330.

D. Conditions Which Are Not Substitutions:

1. CONTRACTOR options provided for in Specifications.

2. Revisions to Contract requested by OWNER or ENGINEER.

3. CONTRACTOR’S determination of and compliance with governing regulations, except as provided for in Contract Documents.

1.02 REUSE OF EXISTING MATERIAL

A. Except as specifically indicated or specified, do not use removed materials and equipment in new Work. All material and equipment incorporated into the Work shall be new, and as specified, except as otherwise provided in the Contract Documents.

B. For material and equipment specifically indicated or specified to be reused in new Work:

1. Use special care in removal, handling, storage, and reinstallation to ensure proper function in completed Work.

2. Provide for transportation, storage, and handling of products which require off-site storage, restoration, or renovation.
1.03 MANUFACTURER’S INSTRUCTIONS

A. Installation of equipment and materials shall comply with manufacturer’s written instructions. Maintain one set of complete instructions at job site. Distribute printed copies of instructions to parties involved in installation, including 2 copies to ENGINEER.

B. Handle, store, install, connect, clean, condition, and adjust materials and equipment in accordance with manufacturer’s written instructions and in conformance with Specifications.

C. If job conditions or specified requirements conflict with manufacturer’s written instructions, consult ENGINEER for further direction. Do not proceed with Work without written instruction of ENGINEER.

1.04 TRANSPORTATION AND HANDLING

A. Arrange deliveries of material and equipment in accordance with Construction Progress Schedule.

B. Deliver materials and equipment in undamaged condition, in manufacturer’s original containers or packaging, with identifying labels intact and legible.

C. Protect bright-machined surfaces, such as shafts and valve faces, with heavy coat of grease prior to shipment.

D. Immediately upon delivery, inspect shipments to ensure compliance with Contract Documents and approved submittals, and products have been protected and are undamaged.

E. Provide equipment and personnel to handle materials and equipment by methods recommended by manufacturer to prevent soiling or damage to materials or equipment, or packaging.

1.05 STORAGE, PROTECTION, AND MAINTENANCE

A. Store, protect, and maintain material and equipment in accordance with manufacturer’s written instructions.

B. Temporary storage areas and buildings shall conform to Section 01520.

C. OWNER assumes no responsibility for damage or loss due to storage of materials and equipment.

D. Interior Storage:
   1. Store with seals and labels intact and legible.
   2. Store materials and equipment subject to damage by elements in weather tight enclosures.
   3. Maintain temperature and humidity within ranges required by manufacturer.

E. Exterior Storage:
   1. Store fabricated materials and equipment above ground, on blocking or skids, to prevent soiling or staining. Cover materials and equipment subject to deterioration with impervious sheet coverings. Provide ventilation to avoid condensation.
   2. Store loose granular materials in well-drained area on solid surfaces to prevent mixing with foreign matter.
3. Store materials such as pipe, reinforcing steel, structural steel, and equipment on pallets or racks, off ground.

F. Inspection and Maintenance:

1. Arrange storage to provide easy access for inspection, maintenance, and inventory.
2. Make periodic inspections of stored materials and equipment to ensure materials and equipment maintained under specified conditions are free from damage or deterioration, and coverings are in place and in condition to provide required protection.
3. Perform maintenance on stored material and equipment in accordance with manufacturer’s written instructions and in presence of OWNER and ENGINEER.
   a. Notify ENGINEER 24 hrs before performing maintenance.
   b. Submit report of completed maintenance to ENGINEER with each Application for Payment.
   c. Failure to perform maintenance, to notify ENGINEER, or to submit report may result in rejection of material or equipment.

G. Assume responsibility for protection of completed construction and repair and restore damage to completed Work.

H. Wheeling of loads over finished floors, with or without plank protection, not permitted in anything except rubber tired wheelbarrows, buggies, trucks or dollies. This applies to finished floors and exposed concrete floors, as well as those covered with other applied surfacing.

I. Where structural concrete is also finished surface, avoid marking or damaging surface.

1.06 SPECIAL TOOLS AND LUBRICATING EQUIPMENT

A. Furnish, in accordance with manufacturer’s recommendations, special tools and lubricating equipment required for checking, testing, parts replacement, and maintenance.

B. Instruct OWNER’S operating personnel in operation, repair, and maintenance of equipment and use of special tools.

1.07 LUBRICATION

A. Where lubrication is required for proper operation of equipment, incorporate necessary and proper provisions in equipment in accordance with manufacturer’s requirements. Where possible, lubrication shall be automated and positive.

B. Where oil is used, reservoir shall be of sufficient capacity to supply unit for 24-hr period.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Conform to applicable Specifications and standards. Comply with size, make, type, and quality specified or as approved on submittals.

B. Design, fabricate, and assemble in accordance with engineering and shop practices standard with industry.

C. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable. Two or more items of same kind shall be identical, by same manufacturer.
D. Material and equipment shall be suitable for service conditions. Design so working parts are readily accessible for inspection and repair, and easily duplicated and replaced.

E. Equipment capabilities, sizes, and dimensions shown or specified shall be adhered to, unless specifically approved in accordance with General Conditions.

F. Equipment shall be adapted to best economy in power consumption and maintenance. Parts and components shall be portioned for stresses occurring during continuous or intermittent operation, and for additional stresses occurring during fabrication or installation.

G. Do not use material or equipment for purpose other than for which it is designed or specified.

PART 3 – EXECUTION

3.01 GENERAL

A. Include and pay for Supplier’s services, including, but not limited to, those specified.

B. Workday is defined as an 8-hr period during a calendar day. Workday for purposes of this section does not include travel to and from the Project Site.

3.02 INSTALLATION SERVICES

A. Where installation services are called for in Specifications, provide competent and experienced technical representatives of manufacturer’s equipment and systems to resolve assembly or installation procedures attributable to, or associated with, equipment furnished.

B. After equipment installation, representatives shall perform initial equipment and system adjustment and calibration to conform to Specifications and manufacturer’s requirements and instructions.

C. Provide “Certificate of Installation Services” stating proper adjustments have been made to equipment or system and equipment or system is ready for startup and system demonstration. Use form in Appendix and furnish 2 copies to ENGINEER.

3.03 INSTRUCTIONAL SERVICES

A. Where training is called for in Specifications, provide in accordance with Section 01810 - Instructional Services.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Cutting and patching.
   2. Alterations to existing buildings or structures.
   3. Demolition, removal, and abandonment of existing facilities.

B. Work Includes
   1. Cutting, moving or removal of items as shown on Drawings.
   2. Cutting, moving or removal of items as necessary to provide access to allow alterations and new Work to proceed.
   3. Cutting, moving or removal of items not shown to be cut, moved or removed, but which must be cut, moved or removed to allow new Work to proceed.
   4. Removal of abandoned items.
   5. Salvage of material and equipment as noted.
   6. Removal of unsuitable or extraneous materials not marked for salvage.
   7. Removal of portions of structures or utilities.
   8. Making several parts fit properly.

1.02 SUBMITTALS

A. Test Results:
   1. Facility condition surveys.

B. Miscellaneous Submittals:
   1. Alteration and demolition schedule and operational sequence.

C. Submit in accordance with Section 01330.

1.03 QUALITY ASSURANCE

A. Conform to requirements of regulatory agencies and utility companies.

1.04 PROTECTION AND CONTINUITY OF OPERATIONS AND UTILITIES

A. Perform Work with trades qualified to perform Work in manner causing least damage to each type of Work.

B. Protect existing finishes, equipment, and adjacent Work which is to remain, from damage.

C. Protect existing and new Work from weather and extremes of temperature.

D. Do not pile material to endanger building or structure.
E. Structural stability of structures adjacent to or affected by Work shall be CONTRACTOR’S responsibility. Provide shoring, needling, and bracing to keep buildings or structures structurally secure and free of damaging deflection or settlement.

F. Do not close or obstruct streets, walks, or other facilities occupied and used by OWNER and public without prior written permission from OWNER and others having jurisdiction.

G. Notify utilities prior to raising operations to permit them to disconnect, remove, or relocate equipment serving existing facilities.

H. Protect existing utilities so they will continue to function during and after construction. Where interference with facilities occurs, cooperate with owner of utility and, if necessary, alter utility or facility to eliminate interference.

I. Service Continuity:
   1. Perform Work so as not to interfere with OWNER’S operations.
   2. Provide and maintain continuous electrical, plumbing, and HVAC services to functioning portions of facilities during hours normally in use.
   3. Temporary outages are permitted during cut-over work at such times and places as can be pre-arranged with ENGINEER and OWNER. Keep such outages to minimum number and length. Make no outages without prior approval.
   4. Remove temporary equipment and materials when no longer required.

PART 2 – PRODUCTS

2.01 SALVAGED MATERIALS
   A. Salvage sufficient quantities of cut or removed material to replace damaged Work of existing construction or patch new Work when material not readily obtainable on current market.
   B. Salvage all material and equipment to be retained by OWNER or to be reused in Work.
   C. Salvaged materials and equipment shall be located on-site where indicated by ENGINEER.

2.02 PRODUCTS FOR PATCHING, EXTENDING, AND MATCHING
   A. Provide same products, salvaged materials, types of construction or finish as that in existing structure, as needed to patch, extend or match existing Work.

PART 3 – EXECUTION

3.01 PREPARATION
   A. Prior to alteration or demolition of facilities, accomplish following:
      1. OWNER release of facility.
      2. Salvage items scheduled for reuse in new Work or scheduled to be delivered to OWNER.
      3. Survey and record condition of existing facilities to remain in-place that may be affected by Work. After Work complete, survey conditions again and restore facilities to original condition at no additional cost to OWNER. Conduct surveys in presence of ENGINEER.
   B. Where new Work is to be installed or suspended concealing existing surfaces or spaces, CONTRACTOR shall remove foreign substances such as grease, sludge, and odoriferous material before starting Work.
C. Where surfaces are to remain exposed, CONTRACTOR shall remove foreign substances such as grease, sludge, and odoriferous material.

D. Coordinate alteration and demolition Work so new construction installed before, during, and after Work may commence without undue delay.

3.02 TEMPORARY ENCLOSURES

A. Provide temporary weather tight enclosure for successive areas of buildings as Work progresses. To provide:
   1. Acceptable working conditions.
   2. Weather protection for materials.
   3. Allow for effective temporary heating.
   4. Prevent entry of unauthorized persons.

B. Provide temporary enclosures to separate Work areas from areas of existing buildings occupied by OWNER to prevent penetration of dust or moisture into occupied areas, to prevent damage to existing equipment, and to protect OWNER’S employees and operations.

C. Use framing and sheet materials complying with structural and fire rating requirements of applicable codes and standards.

D. Relocate as required by progress of construction, by storage or work requirements, and to accommodate requirements of OWNER.

E. Remove temporary enclosures when no longer required.

3.03 CUTTING AND PATCHING

A. Cut finish surfaces such as masonry, tile, plaster or metals, by methods to terminate surfaces in smooth, straight line at natural point of division. Make cuts parallel with walls and/or floors.

B. Make joints and finishes match adjacent or similar work.

C. Do not cut or notch structural members without specific written approval of ENGINEER.

3.04 REMOVAL OPERATIONS

A. Remove concrete, steel and masonry to extent indicated on Drawings.

B. Remove utilities and piping to elevations and locations shown on Drawings and plug and seal permanently with steel cap, concrete plug or other approved method in accordance with specified abandonment procedures.

C. Remove abandoned utilities and underground piping within influence zone of proposed structures or piping.

D. Where existing materials and equipment are removed or relocated, remove materials no longer used such as studs, straps, conduits, ducts, wires, anchors, and supports. Remove or cut off concealed or embedded materials and equipment to at least ¾ in. below final finished surface.

E. Repair affected surfaces to conform to type, quality, and finish of adjacent surfaces.

3.05 ABANDONMENT OPERATIONS
A. Abandon utilities and underground piping within limits noted. Fully disconnect from portions of utility remaining in service.

B. Remove portions of utility being abandoned within influence zone of proposed structures or piping.

C. Provide compatible cap for pressurized piping. Provide thrust blocks for caps unless piping has fully restrained joints.

D. Provide concrete plugs for gravity piping. Plug shall be Class A concrete in accordance with Section 03300.

3.06 RESTORATION

A. Where existing partitions are removed, patch floors, walls, and ceilings with finish materials matching existing to provide smooth planes without breaks, steps, or bulkheads. Trim and refinish doors as necessary to clear new floors or flooring material.

1. Where change of plane of 2 in. or more occurs, notify ENGINEER and request direction.

B. Patch and replace portions of existing finished surface damaged by CONTRACTOR’S operations.

1. Provide adequate support of substrate prior to patching finish.
2. Refinish patched portions of painted or coated surfaces to produce uniform color and texture over entire surface.
3. When existing surface finish cannot be matched, refinish entire surface to nearest intersection.

C. When new Work abuts or finishes flush with existing Work, transition shall match existing adjacent Work in texture and appearance so patch or transition is not visible at a distance of 6 feet.

D. When smooth transition is not possible, terminate existing surface along straight line at natural division, and provide appropriate trim.

E. Clean and repair damage caused by installation or by use of temporary facilities.

1. Remove foundations and underground installations used for construction aids.
2. Grade areas affected by temporary installations to required elevations and slopes.

F. Restore existing facilities used for temporary purposes to specified, or original, condition.

3.07 CLEANING

A. Perform periodic cleaning and final cleaning as specified in Section 01740.

1. Clean OWNER occupied areas daily.
2. Clean spillage, overspray, and heavy collection of dust in OWNER occupied areas immediately.

B. At completion of alteration and demolition Work in each area, provide final cleaning and return space to condition suitable for use by OWNER.

3.08 DISPOSAL
A. Remove debris from site each day.

B. Equipment and materials not scheduled to be salvaged or reused in new Work shall become property of CONTRACTOR.

C. Debris and other undesirable and unsalvageable material resulting from alteration and demolition operations shall be legally disposed offsite.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Perform cleaning throughout construction period and at completion of Work.

B. Refer to Specification sections for specific cleaning products or Work.

C. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 CLEANING MATERIALS AND EQUIPMENT

A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

B. Use only those cleaning materials which will not create hazards to property and persons.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

A. Comply with General Conditions.

B. Provide on-site containers for collection and removal of waste materials, debris, and rubbish in accordance with applicable regulations.

C. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

D. Following the installation of finish floor materials, clean the finish floor daily (and more often if necessary) at all times while work is being performed in the space in which finish materials are installed.

3.02 FINAL CLEANING

A. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from exposed interior and exterior surfaces.

B. Wash and shine glazing and mirrors.

C. Polish glossy surfaces to clear shine.

D. Ventilating Systems:

1. Clean permanent filters and replace disposable filters if units were operating during construction.

2. Clean ducts, blowers, and coils if units were operated without filters during construction.
E. Electrical Systems:

1. Leave electrical equipment rooms broom clean.
2. Clean interior of panel cabinets, pull boxes, and other equipment enclosures.
3. Clean lighting fixtures, lamps, and other electrical equipment soiled during installation.
4. Touch-up paint or repaint finishes on electrical items delivered to Project with finished coat of paint. ENGINEER will make final determination of items to be repainted or touched-up.

F. Broom clean interior hard surface floors and exterior paved surfaces. Rake clean other surfaces of grounds.

G. Clean out existing or new sewers to remove sediment and other materials that have entered during construction.

H. Clean roads and streets used as haul roads during construction of accumulated material. Clean paved streets with water.

I. Prior to Final Completion or OWNER occupancy, CONTRACTOR, with ENGINEER and OWNER, shall conduct inspection of exposed interior and exterior surfaces and work areas to verify Work and Site is clean.

3.02 CLEANING DURING OWNER'S OCCUPANCY

A. Should the OWNER occupy the Work or any portion thereof prior to its completion by the CONTRACTOR and acceptance by the OWNER, responsibilities for interim and final cleaning shall be as determined by ENGINEER in accordance with the General Conditions.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents.

B. Maintain at Site one record copy of:
   1. Drawings.
   3. Addenda.
   4. Change Orders and other modifications to Contract.
   5. ENGINEER Field Orders, written instructions, or clarifications.
   6. Approved Submittals.
   7. Field test records.
   8. Construction photographs.
   10. Certificates of inspection and approvals.

1.02 SUBMITTALS

A. At Substantial Completion deliver one marked up set of Drawings to ENGINEER for use in preparation of record drawings.

B. Prior to submitting request for final payment, submit the final Project Record Documents to ENGINEER for OWNER.

C. Accompany submittals with transmittal letter containing following:
   1. Date.
   2. Project title and number.
   3. CONTRACTOR’S name and address.
   4. Title of record document.
   5. Signature of CONTRACTOR or authorized representative.

PART 2 – PRODUCTS

(NOT USED)

PART 3 - EXECUTION

3.01 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and Samples in CONTRACTOR’S field office apart from documents used for construction.
   1. Provide files and racks for storage of documents.
   2. Provide secure storage space for storage of Samples.

B. Maintain documents in clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
C. Label each document “PROJECT RECORD” in neat, large letters.

D. Make documents and samples available for inspection by ENGINEER and OWNER.

E. Failure to properly maintain record documents may be reason to delay a portion of progress payments until records comply with Contract Documents.

3.02 RECORD DOCUMENTS

A. Maintain record set of Drawings and Specifications legibly annotated to show all changes made during construction.

B. Record information concurrently with construction progress.

C. Drawings:
   1. Graphically depict changes by modifying or adding to plans, details, sections, elevations, or schedules.
   2. Using a colored pencil or pen, clearly describe the changes by graphic line and note as required.
   3. Note the following:
      a. Depths of various elements of foundation in relation to finished first floor elevation.
      b. Horizontal and vertical locations of underground utilities and appurtenances, referenced to visible and accessible features.
      c. Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features.
      d. Field changes.
      e. Details not on original Drawings.
      f. Location and identification of exposed interior piping, including those shown schematically on Drawings.
      g. Size of equipment and location including connections.
      h. Horizontal and vertical locations and size of underground cable, conduit, and duct runs dimensioned from established and visible features.
      i. Plan location and size of interior concealed and exposed electrical feeders.
      j. Size and location of electrical access panels.
      k. Departures from original Drawings.

D. Specifications:
   1. Mark Specification sections to show substantial variations in actual Work performed from that indicated in Specifications and modifications to Specifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
   2. Note related record drawing information and product data.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Hydrostatic pressure testing, and high pressure air testing of piping systems.

B. Alignment, deflection, and low pressure air testing of piping systems.

C. Systems to be tested, type of test to be performed, and test pressure shall be as specified in other sections of Specifications.

1.02 SUBMITTALS

A. Test report for each piping system tested. Include following:

1. Date of test.
2. Description and identification of piping system tested.
3. Type of test performed.
4. Test fluid.
5. Test pressure.
6. Type and location of leaks detected.
7. Corrective action taken to repair leaks.
8. Results of retesting.

B. Submit in accordance with Section 01330.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

3.01 GENERAL

A. Test in presence of ENGINEER.

B. CONTRACTOR shall provide water for testing all pipelines specified herein.

C. Provide pumps and piping required to bring water to point of use.

D. Provide air supply.

E. Provide test pressure equipment, meters, pressure gauges, and other equipment, materials, and facilities necessary to perform specified tests.

F. Provide bulkheads, flanges, valves, bracing, blocking, or other temporary sectionalizing devices that may be required.

G. Remove temporary devices after tests complete.

H. Perform tests on piping that is clean and free of dirt, sand or other foreign material.
I. Plug pipe outlets with test plugs. Brace each plug securely to prevent blowouts.

J. Add test fluid slowly.

K. Include regulator set to avoid overpressurizing and damaging piping.

L. Perform pressure testing in accordance with local, state, and federal requirements.

M. Correct leaks or defects and retest at no additional cost to OWNER.

3.02 LOW PRESSURE AIR TESTING

A. General:

1. Perform low pressure air testing for gravity sewer and drainage piping systems identified in other sections.

2. Test pipes between adjacent manholes. Test time for air pressure to drop 1.0 psi.
   a. For pipes 4 in. through 36 in. dia comply with Table 01815.
   b. Pipe over 36 in. dia shall not be tested by the low pressure air method.
   c. Ignore length of laterals.

B. Preparation:

1. Isolate pipe section to be tested by plugging each end with air tight plugs. Plug ends of branches, laterals and wyes which are to be included in test section.
2. Brace plugs to prevent slippage and blowout due to internal pressure.
3. One plug shall have inlet tap or other provision for connecting air supply.
4. Air control equipment shall consist of valves and pressure gauges to control rate at which air flows into test section and gauges to monitor air pressure inside pipe.

C. Testing:

1. If pipe to be tested is submerged in water, determine height of water above spring line of pipe at each end of test section and compute average. For each foot of water above pipe’s spring line, increase test pressure by 0.43 psi.
2. Add air slowly to test section until pressure inside pipe is raised to 4.0 psi greater than average back pressure of water that may be over pipe.
3. After pressure of 4.0 psi obtained, control supply of air so internal pressure maintained between 3.5 and 4.0 psi (above average water back pressure) for minimum of 2 minutes to allow temperature of air to come into equilibrium with temperature of pipe.
4. Determine rate of air lost by time pressure drop method.
   a. After temperature stabilized for 2 minute period, disconnect air supply. Allow pressure to decrease to 3.6 psi. At this pressure, start stopwatch to determine time required for pressure to drop 1.0 psi. Time required for loss of 1.0 psi is then compared to Table 01815.
   b. If time is equal to or greater than time indicated in table, test shall be acceptable.
   c. If time is less than time indicated in table, make appropriate repairs and retest.
### TABLE 01815
LOW PRESSURE AIR TEST

Test time required for loss of air pressure of 1.0 psi for size and length of pipe indicated.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Dia (in.)</td>
<td>Time/Ft Up To Length In Column C (sec)</td>
<td>Length Time In Column B Applies (ft)</td>
<td>Test Time For Length Between Columns C &amp; E (min:sec)</td>
<td>Length Time In Column F Applies (ft)</td>
<td>Time/Ft Over Length In Column E (sec)</td>
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<tr>
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<td>0.18</td>
<td>636</td>
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<td>1,432</td>
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<td>716</td>
<td>0.32</td>
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<td>573</td>
<td>0.49</td>
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<tr>
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<td>212</td>
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<td>477</td>
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<td>170</td>
<td>7:05</td>
<td>382</td>
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<td>1.61</td>
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</tr>
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<td>14.37</td>
<td>71</td>
<td>17:00</td>
<td>159</td>
<td>6.39</td>
</tr>
</tbody>
</table>

### 3.03 ALIGNMENT and GRADE

A. Gravity Sanitary Sewers.

1. Alignment and grade shall be checked by lamping method to detect poor alignment, offset joints, sags, kinks, or open joints; defects shall be corrected by the Contractor before final acceptance. If defects are found which the Owner’s Representative attributes to the failure of proper installation or sound materials, defects shall be promptly corrected.

2. Paragraph applies to straight sections of sanitary sewer between manhole and other structures.

### 3.05 CLOSED CIRCUIT TELEVISION INSPECTION (CCTV)

A. After installation and all other testing is complete and satisfactory the sewer shall be televised in the presence of the Owner. The Owner shall be notified 24 hours prior to televising.

B. Documentation of Television Results:

1. Television Inspection Logs
2. Digital Photographs
3. Electronic Media Recordings

C. A copy of the televised sewer shall be submitted to Owner for approval in electronic format.

END OF SECTION
DIVISION 2

SITE CONSTRUCTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Precast reinforced concrete manholes and risers.

1.02 DEFINITIONS


1.03 SUBMITTALS

A. Product data:
   1. Manufacturer’s specifications and other data needed to prove compliance with the specified requirements.
   2. Manufacturer’s recommended installation procedures.

B. Provide certification reports attesting that the materials supplied meet the referenced specifications.

C. The Contractor shall provide shop drawings for all manhole and appurtenant structures.

D. Submit in accordance with Section 01330.

1.04 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.01 PRECAST CONCRETE SECTIONS

A. Precast sections:
   2. Manholes shall be precast 48, 60 or 72 inch inside diameter, or as noted on the Plans.
      a. Install eccentric cone type precast or flat top slabs as required.
      b. Flat top slabs with offset openings may be used for shallow manholes where there is not sufficient depth to install eccentric cones, on manholes greater than 48”, or on deeper manholes with the approval of the Engineer.
   3. Lift Holes
a. No “see through” lift holes shall be allowed on precast concrete manholes and risers 48 inches in diameter or less.

b. All lift holes on structures greater than 48 inches in diameter shall be thoroughly wetted and completely filled with non-shrink mortar or epoxy grout; then smoothed and covered on the outside, with a trowelable grade butyl rubber base backplaster material to minimize leakage.

4. Adjustment. Adjust castings to grade with reinforced concrete rings. Rings shall be a minimum of 2” and the total height of adjusting rings shall not exceed 8”. A maximum of two (2) adjusting rings shall be used.

5. Barrel Section Wall Thickness:

<table>
<thead>
<tr>
<th>Structure/Riser Diameter</th>
<th>Minimum Wall Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 ft 0 in.</td>
<td>5 in.</td>
</tr>
<tr>
<td>5 ft 0 in.</td>
<td>6 in.</td>
</tr>
<tr>
<td>6 ft 0 in.</td>
<td>7 in.</td>
</tr>
<tr>
<td>7 ft 0 in.</td>
<td>8 in.</td>
</tr>
<tr>
<td>8 ft 0 in.</td>
<td>9 in.</td>
</tr>
<tr>
<td>10 ft 0 in.</td>
<td>11 in.</td>
</tr>
</tbody>
</table>

B. Standard Manhole

1. Poured Manhole Base (not applicable).
2. Manholes shall otherwise be pre-cast 48 inch inside diameter with eccentric cones (as shown on the plans).

C. Joints:

1. Sanitary Structures shall be sealed and watertight. Provide joints with rubber gaskets meeting requirements of ASTM C923.
2. Joints for precast manhole riser sections shall be designed for preformed flexible gaskets, rubber gaskets, or a continuous ring of butyl rubber sealant (EZ-Stik or Kent Seal in rope form or approved equal).
3. Adjusting rings and manhole frames shall be set with butyl rubber sealant (EZ-Stik or Kent Seal in rope form or approved equal). The butyl sealant (rope form) shall be 1 inch diameter equivalent or as recommended by the manhole manufacturer. Trowelable grade shall be placed into a ¼ inch thick layer over the entire exterior surface area as specified in Part 3.

D. Eccentric Cone / Adjusting Ring Dimensions

1. Manhole Eccentric Cone Sections.
   a. The top dimensions of cone sections shall be 24 inches inside diameter by 36 inches outside diameter.

2. Adjusting Rings.
a. Adjusting ring dimensions shall match the dimensions of the top of the cone section.
b. Adjusting rings shall have flat or even bearing surfaces providing bearing contact over the entire contact surface.
c. A maximum of 8 inches shall be furnished for each manhole, unless shown otherwise on the Plans.

E. Sewer Pipe to Manhole Connections: All connections shall provide for a watertight seal between the pipe and manhole. Incorporate cast-in adapters, boots, to accommodate connection of pipe, provide for sewer grade differential between center of manhole and manhole wall for each sewer pipe entering manhole.

1. To connect a sanitary sewer to a manhole, a flexible boot, flexible connector, or a cast-in-place gasket shall be used. Flexible connectors, including inflatable gaskets, shall be in accordance with ASTM C923.
   a. KOR-N-SEAL flexible boot.
   b. Dura-seal gaskets.
   c. "A"-Lock gasket.
   d. Or pre-approved equal.

F. Source Quality Control:

1. Test risers and tops in accordance with ASTM C497 for compressive strength compliance by compression tests on cores drilled from 5% of lot.
2. Number of compression tests may be reduced to 1% of lot, with minimum of two cores per lot, for manhole sections fabricated on sewer pipe machine.
3. Manufacturer's core drilling machine shall conform to ASTM C497. Operator shall take test cores as directed by testing laboratory.
4. Stamp base sections, risers and tops, meeting strength requirements, with appropriate monogram.

2.02 MORTAR

A. Comply with ASTM C270, type M.

2.03 FRAMES AND COVERS

A. ASTM A48, Class 30-B minimum.

B. Provide all frames, gratings and covers from the same manufacturer unless approved by ENGINEER.

C. Provide standard finish, supplied as a total unit, sized in accordance with the information below, with the wording "SANITARY" in 2 inch high letters cast into the cover.

1. Sanitary manhole, type "A" and type "C" with sealed pick holes and gasket seal lid:
   a. Standard casting: Neenah R-1916-F
   b. Other castings: Note the plan drawings for other casting and frame requirements. Select Neenah casting meeting "standard casting" requirements, and opening / height requirements as identified on the plan drawings.
   c. East Jordan Iron Works (equal to Neenah).
   d. Or equal

D. Castings shall be free from cracks, holes, swells, and cold shuts.
2.04 SEALING CHIMNEYS

A. Internal Chimney Seal:
   1. Manhole joints shall be provided with an internal manhole chimney seal as manufactured by Cretex Specialty Products, Waukesha, Wisconsin, or pre-approved equal.
   2. Furnish manholes to minimize the chimney height required, so that chimney seal extensions will not be required. Note that a standard 9 inch seal covers a 6-1/2 inch chimney height.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 FIELD MEASUREMENTS

A. Make necessary measurements in the field to assure precise fit of items in accordance with the approved design.

3.03 INSTALLATION

A. Trench, backfill, and compact for the work of this Section in strict accordance with pertinent provisions of Specification Section 02316.

B. Standard Precast Manhole with Integral Base:
   1. Excavate deep enough so bottom manhole barrel section with integral base rests on 6 in. minimum of bedding material.

3.04 MANHOLE to PIPE CONNECTIONS

A. All field tapped holes for connecting sewer pipe to manholes shall be made by coring.
   1. Rigid Pipe.
      a. Sanitary Sewer. Rigid pipes (less than 18” interior diameter) shall be connected using cored in place boots. Exterior surfaces shall be sealed with bituminous waterproofing.

B. Manhole bench and flow lines shall be neatly finished smooth with hydraulic cementious concrete / mortar.

3.05 FRAME / CHIMNEY JOINTS

A. Exterior Sealing.
   1. The entire exterior surface of the manhole chimney, including all adjusting rings and overlapping both the manhole cone or flat-top slab (a minimum of 4 inches) and the manhole frame, shall be covered with a minimum 1/4 inch thick coating of butyl rubber sealant (trowelable grade).

B. Internal Chimney Seal:
1. All new manholes shall be provided with an internal manhole chimney seal shall be installed in accordance with the manufacturer’s instructions.

   a. The standard sleeve shall be furnished with a 9-inch vertical height except that 6-inch sleeves shall be installed when the total adjusting ring height is less than 4-1/2 inches.
   b. Seal shall span the entire chimney height.
   c. The seal shall be water tested for leaks after the bottom compression band is installed. After the seal has successfully passed the leakage test, drain the water and install the top band.
   d. Chimney seals shall be as manufactured by Cretex Specialty Products, Waukesha, Wisconsin, or equal.

C. All manholes as shown on the Plans shall be constructed with joints consisting of the following:

   1. The manhole frame shall be set with butyl rubber sealant. The butyl sealant (rope form) shall be 1 inch diameter equivalent or as recommended by the manhole manufacturer. Place two continuous rows of butyl rubber sealant (rope form).

   2. Adjusting rings shall be set with butyl rubber sealant, as specified, at the top of cone and between all adjusting rings. The butyl sealant (rope form) shall be 1 inch diameter equivalent or as recommended by the manhole manufacturer. Place two continuous rows of butyl rubber sealant (rope form).

D. Do not place polyethylene wrap around manholes.

3.06 BACKFILL

   A. Backfill with pipe bedding and cover material to spring line of incoming pipe in accordance with Section 02316.

   B. Remainder of open excavations around manholes shall be backfilled with granular materials.

3.07 MANHOLE BENCH

   A. Shape the invert channels to be smooth and semicircular, conforming to the inside of the adjacent sewer sections.

   B. Make changes in direction of flow with a smooth curve of as large a radius as the size of the manhole will permit.

   C. Make changes in size and grade of channels smoothly and evenly.

   D. Form the invert channels directly in the concrete of the manhole base, with mortar. On manholes with straight through pipe the invert may be formed by laying full section sewer pipe through the manhole and cleanly breaking out the top half after surrounding concrete has hardened.

   E. Smooth the floor of the manhole outside the channels, and slope toward the channels at not less than 1 inch per foot nor more than 2 inches per foot.

   F. On sanitary manholes prevent free drop inside the manholes exceeding 24 inches measured from the invert of the inlet pipe to the top of the floor of the manhole outside the channels.

   G. Construct sanitary drop manholes whenever the free drop otherwise would be greater than 24 inches.
3.08 SETTING FRAMES and CASTINGS

A. Manhole frames shall be centered on the top of the cone or flat top sections.

B. Manhole covers shall be placed to match the existing grade or at the elevation shown on the Plans.

C. Contractor shall adjust all manholes to final grade as shown on the plans.

D. Adjustment Rings.
   1. A maximum of 8 inches of adjusting rings shall be furnished for each manhole.
   2. Center adjusting rings on manhole cones and center manhole castings on adjusting rings so that their surfaces will be flush whenever possible.

E. Sealing: Seal interior and exterior of adjusting rings and castings in accordance with other sections of this Specification.

3.09 TESTING AND INSPECTING

A. Do not allow or cause any of the work of this Section to be backfilled, covered or otherwise enclosed until after it has been inspected.

B. Manhole Infiltration Inspection. The Contractor, accompanied by the Engineer, shall re-inspect all manholes before the dates of substantial and final completion, to check for manhole infiltration and to observe the general condition of the manhole. All active or flowing leaks and any other necessary repairs shall be corrected prior to final acceptance of the work.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Clearing and grubbing of site.
   2. Stripping topsoil.

1.02 DEFINITIONS


PART 2 – PRODUCTS

(Not applicable)

PART 3 – EXECUTION

3.01 PROTECTION

A. Provide a minimum of 3 working days notice to owners of existing utilities and surface features prior to starting construction.

B. Protect existing utilities and surface features identified in the construction documents and located in the field.

C. Restore damaged existing utilities and surface features to condition equal to, or better than, prior to construction.

D. Protect trees, shrubs, and other land resources, where indicated to remain. Provide fencing no closer than the “dripline” of the trees and shrubs and of sufficient height so features will not be damaged. Comply with requirements of Section 01575.

E. Do not remove or cut down trees unless located within limits of excavation as identified on the Drawings.

F. Do not trim trees unless located within easements, rights-of-way, or work limits shown on the Drawings and identified in the Contract Documents.

G. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

H. Maintain access to the site.
3.02 REMOVALS

A. Remove obstructions such as mounds of dirt, stones, or debris located within construction limits.

B. Remove surface features including pavements, curb and gutter, signs, posts, fences, trees, shrubs, landscaping features, and other miscellaneous items. Street signs, culverts, advertising signs, mail boxes, etc. shall be replaced when need for removal is completed. Replace to original condition.

C. Conform to requirements of Section 01735.

3.03 CLEARING AND GRUBBING

A. Clearing and grubbing shall include cutting and disposal of trees, brush, windfalls, logs, and other vegetation, and removal and disposal of roots, stumps, stubs, grubs, logs and other timber, and other perishable or objectionable matter.

B. Clear and grub area within limits to be covered with tanks, buildings, walks, parking areas, drives, and where grade is to be adjusted. Clearing and grubbing limits shall be 20 ft from building or tank lines.

C. Grub stumps and roots to a depth of at least 12 in. below the existing ground surface or subgrade, whichever is lower.

D. Cut interfering tree roots and branches 1 in. or greater in diameter perpendicular to direction of growth on tree side of trench.

3.04 STRIPPING TOPSOIL

A. Topsoil shall be stripped from construction limits, rights of way and spoil disposal sites to a minimum depth of 6 inches, or as otherwise indicated in all areas of cut or fill and stockpiled on the site at a location approved by the ENGINEER.

B. Work shall be performed in accordance with the IDOT Specifications. Topsoil shall be stockpiled at a location as designated by the ENGINEER.

C. The CONTRACTOR shall remove and stockpile all satisfactory topsoil for spreading over excavated lawn areas.

D. Refer to Specification Section 02920 and Drawings for additional topsoil requirements.

E. After the area has been cleared of vegetation, strip the existing topsoil to entire depth in areas where grade is to be adjusted and in areas to be covered by structures or paving.

F. Stripped topsoil shall be free of clay lumps, sand and gravel, stones, vegetation, and debris.

G. Stockpile on site in an area clear of new construction and free of vegetation and debris. Transport materials to off-site location if adequate areas are not available within Project Site.

H. Maintain the stockpile in a manner which will not obstruct the natural flow of drainage.
   1. Protect from erosion per Section 02370.
   2. Maintain stockpile free from debris and trash.
I. OWNER has first right to excess topsoil not used in Work. Obtain OWNERS approval before removing any topsoil not required for the work. Remove excess topsoil not required by OWNER from site.

3.05 DISPOSAL

A. Remove brush, grass, roots, trash, and other material from site preparation operations from site.

B. Do not store or permit debris to accumulate on the job site.

C. Do not burn debris at the site.

D. Dispose of cleared and grubbed materials at an off-site location as provided by Contractor. Dispose of materials removed by clearing and grubbing in accordance with applicable regulations.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY of WORK
   A. Grading and Fill as shown on the Drawings and as needed to meet the requirements of the Contract Documents.

1.02 REFERENCES
   A. Illinois Department of Transportation Standard Specifications Current Edition (IDOT) including all addenda.

1.03 DEFINITIONS
   A. Influence Zone Under Foundations, Pavements, or Sidewalks: Area below foundation or pavement or sidewalk subbase bounded by 1 horizontal to 2 vertical slope extending outward from 1-ft beyond outer edge of foundation or pavement or sidewalk subbase.
   B. Influence Zone Under Piping or Electrical Ducts: Area below limits bounded by line 6 in. below pipe or electrical duct and by 1 horizontal to 2 vertical slope extending outward from that line 1-ft beyond outer edge of pipe or duct.
   C. Unsuitable Material: Topsoil, peat, organic soils, and materials containing slag, cinders, foundry sand, debris, and rubble or soil with less than required bearing capacity as determined by ENGINEER.

1.04 SUBMITTALS
   A. Miscellaneous Submittals.
      1. Test results to verify fill materials meet Specifications.
   B. Submit in accordance with Section 01330.

1.05 QUALITY ASSURANCE
   A. Testing shall be provided by CONTRACTOR in accordance with Section 01455 and this section.

1.06 PROJECT / SITE CONDITIONS
   A. Notify OWNER of above or below ground utilities encountered during grading operations.
   B. Cap and remove or relocate services in accordance with instructions of OWNER of such utilities.
   C. Protect, support, and maintain conduits, wires, pipes or other utilities that are to remain in accordance with requirements of OWNER of such utilities.
   D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.
E. Maintain access to adjacent areas at all times.

PART 2 – PRODUCTS

2.01 EXCAVATION BELOW SUBGRADE

A. Excavated Material for Excavation Below Subgrade.
   1. Excavation below subgrade shall be filled with satisfactory materials, excavated from other sections of the project, if such materials are available.

2.02 FILL MATERIALS

A. Controlled Fill:
   1. Silt, clay, clayey sand, clayey gravel or other approved material free from organic matter and deleterious substances, containing no rocks or lumps over 6 in., and with not more than 15% of the rocks larger than 2 in.
   2. Liquid Limit, ASTM D423: 50 max.
   3. Unified Soil Classification: CL, ML, SC, or GC.

B. Earth Fill: Natural soils free of topsoil, wood, peat, cinders, organic and deleterious matter or other rubbish.

2.03 TOPSOIL

A. At the Contractor's option and expense, the existing topsoil may be salvaged to supplement the total amount required. All salvaged topsoil shall be removed beyond the limits of excavation or required backfill and used for final site grading.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work such as areas loosened by frost action or softened by flooding or weather, or existence of unsuitable material. Do not proceed until unsatisfactory conditions are corrected.

3.02 PROTECT EXISTING FEATURES

A. Any curb, pavement, or lawn areas that are damaged outside of those areas marked for removal shall be restored at no additional cost to OWNER.

3.03 PREPARATION

A. Fill settled areas where excavations or trenches were backfilled and holes made by demolition, tree removal, and site preparation.

B. Natural soils or fill softened by frost, flooding or weather shall be removed and replaced.

C. Remove unsuitable material within influence zone under foundations, pavements, sidewalks, piping or electrical ducts.

D. Keep construction site free draining.
E. Plow, step, or bench slopes steeper than 1 vertical to 4 horizontal. Disc level surfaces.

3.04 SITE GRADING

A. Removals:

1. Topsoil. The CONTRACTOR shall remove all topsoil from within the work limits. Remove all topsoil within 1:1 slopes extending downward and out from the edges of the roadway, gravel base or subbase material.

2. Driveway and Pavement Removals. All existing paved driveway and roadway removals shall be sawcut to the limits designated as pavement removal on the plans. CONTRACTOR shall remove and dispose of related materials.

B. Drainage During Construction:

1. Drainage shall be provided throughout construction.

2. CONTRACTOR shall grade to positively drain all areas adjacent to project limits, including areas behind the back of curb, as shown on the Plans and as directed by the ENGINEER.

3. During construction, ditches and channels shall be drained at all times by keeping the excavation areas and embankments sloped to the approximate section of the final earth grade. If existing surface drainage must be interrupted, temporary drainage shall be provided; no special payment will be allowed unless indicated in the Specifications.

4. Construction in and adjacent to flowing streams shall be performed to avoid washing, sloughing or deposition of materials into the channel which may obstruct or impair stream flow, or which may result in contamination and / or silting of the stream.

5. Take precautions to preserve, protect, and continue service of all existing tile drains, sewers, and other subsurface utilities; repair any damage to drains, sewers, and utilities.

C. Topsoil Stripping and Stockpiling.

1. Reference Specification Section 02200.

D. Consolidation.

1. All granular, excavated and fill materials shall be consolidated through mechanical compaction by means of mechanical equipment.

   a. Granular backfill shall be compacted to a minimum of 95% Standard Proctor Density.

   b. Excavated material backfill shall be compacted to a density equal to 100% of the density of the undisturbed adjacent material.

   c. Topsoil shall not be compacted.

   d. Roadways and other paved areas. Fill placed within roadways or other paved areas shall be compacted in 12” maximum lifts, except that the first lift shall be two (2) feet in depth.

2. CONTRACTOR is responsible for all testing costs.

3. If there is a question as to whether or not the specified density has been achieved, a soil testing firm selected by the ENGINEER will be brought in to determine the backfill density. The cost of this testing will be paid for by the OWNER if the test results are satisfactory, however, if the backfill is found to be inadequately compacted, the CONTRACTOR shall pay all testing costs.
E. Site Grading and Disposal of Surplus Materials:

1. Surplus excavated materials may be disposed of by the CONTRACTOR at off site locations provided by him. All work shall conform with local codes, ordinances, and regulations. CONTRACTOR is responsible for obtaining the use of all "off-site" disposal sites and necessary permits.

2. Pavement materials shall be segregated and disposed of at a separate location from earthen materials.

3. All materials shall be disposed of in a manner that will create a neat and trim appearance, and in a manner to neither create a nuisance nor cause pollution nor siltation of watercourses, streams, lakes and reservoirs. Disposal areas shall be leveled by the CONTRACTOR and graded to drain.

4. Disposal sites designated by the OWNER shall be kept neat, leveled, and graded to drain. Material lost from trucks during transit shall be immediately cleaned up. OWNER will remove and dispose of material not properly disposed of and deduct payment from Contract.

F. Dust Control.

1. The CONTRACTOR shall minimize the dispersion of dust from the subgrade during grading operations, including maintenance operations until acceptance of the work, by the application of water or other approved dust control materials.

G. Excavation Below Subgrade (EBS)

1. Deposits of frost-heave material, unstable silty soils, water-bearing soil, topsoil, peat, loamy, or other undesirable foundation materials shall be removed from the area within the work limits to such depths as directed by the ENGINEER.

3.04 FILL USAGE

A. Controlled: Within influence zone under pavements, sidewalks, piping, or electrical ducts.

B. Earth: Other areas not previously specified.

3.05 PLACING FILL

A. Notify ENGINEER before placing fill material.

B. Do not use frozen material or place fill on frozen subgrade.

C. Do not operate power-operated earth moving equipment closer to foundation walls or other structures than distance equal to ½ height of fill above footing.

D. Place and compact fill materials in lift thickness and to densities listed.

1. Degree of compaction: ASTM D1557, Modified Proctor.

2. Moisture Content: Within 3% of optimum.

<table>
<thead>
<tr>
<th>Location</th>
<th>Maximum Lift Thickness (in.)</th>
<th>Modified Proctor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footing, Foundation Slab, or Floor Slab Influence Zone</td>
<td>8</td>
<td>95 min</td>
</tr>
<tr>
<td>Sidewalk, Pavement, Piping, or Electrical Duct Influence Zone</td>
<td>12</td>
<td>90 min</td>
</tr>
</tbody>
</table>
3.06 ROUGH GRADING

A. Grade to 4 inches below finished grade in areas to receive topsoil.

B. Grade to bottom of base course in areas to receive sidewalk or paving.

C. Rough grading, including excavated or filled sections and adjacent transition areas, shall be reasonably smooth, compacted, and free from irregular surface changes.

3.07 FINISH GRADING

A. Uniformly grade the areas within limits of grading, including adjacent transition areas, with uniform levels or slopes between points where elevations are shown on the Drawings, or between such points and existing grades.

B. Where a change of slope is indicated on the Drawings, construct a rolled transition section having a minimum radius of approximately 8 ft, unless adjacent construction will not permit such a transition, or if such a transition defeats positive control of drainage.

C. Grade areas adjacent to buildings or structures to achieve drainage away from the structures, and to prevent ponding.

D. Maximum allowable variation from design elevation is 1 in. in 10 ft.

3.08 FIELD QUALITY CONTROL

A. Testing:

1. One field density test for each 200 cubic yds of structural fill, minimum one each lift.
2. One field density test for each 400 cubic yds of controlled fill, minimum one each lift.
3. One field density test for each 1000 cubic yds of earth fill.
4. Determine in-place density of fill at maximum intervals specified in accordance with ASTM D1556, D2167, D2922 or D2937.

3.09 ADJUSTMENT AND CLEANING

A. Dispose of excess excavated and unsuitable materials per Section 01575.

3.10 MAINTENANCE

A. Protection of Newly Graded Areas:

1. Protect newly graded areas from traffic and erosion, and keep free from trash and weeds.
2. Repair and reestablish grades in settled, eroded, and rutted areas to the specified tolerances.

B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Trenching and backfilling to the elevations shown on the Drawings and as needed for installation of underground piping and utilities associated with the Work and to meet the requirements of the Contract Documents.

1.02 REFERENCES

A. Illinois Department of Transportation Standard Specifications Current Edition (IDOT) including all addenda.


1.03 DEFINITIONS

A. Influence Zone Under Foundations, Pavements, or Sidewalks: Area below foundation or pavement or sidewalk subbase bounded by 1 horizontal to 2 vertical slope extending outward from 1-ft beyond outer edge of foundation or pavement or sidewalk subbase.

B. Influence Zone Under Piping or Electrical Ducts: Area below limits bounded by line 6 in. below pipe or electrical duct and by 1 horizontal to 2 vertical slope extending outward from that line 1-ft beyond outer edge of pipe or duct.

C. Unsuitable Material: Topsoil, peat, organic soils, and materials containing slag, cinders, foundry sand, debris, and rubble or soil with less than required bearing capacity as determined by ENGINEER.

1.04 BACKFILL REQUIREMENTS:

A. Granular Backfill: The following categories of trenches shall be backfilled with granular material.

1. All utilities and removals within, and 5' beyond, driveways, parking areas, and streets
2. All utilities within 10 feet of existing underground utilities.
3. Manholes

B. Native Excavated Backfill: The following categories of trenches may be backfilled with native excavated material.

1. All other utilities.
2. Utilities and excavation within turf or non-paved areas

1.05 SUBMITTALS

A. Test Results.

1. Compaction test results.

B. Miscellaneous Submittals.

1. Test results to verify fill materials and bedding and cover materials meet Specifications.
C. Submit in accordance with Section 01330.

1.06 QUALITY ASSURANCE

A. CONTRACTOR shall provide testing in accordance with Section 01455 and this Section.

B. Sheeting, shoring, and bracing shall conform to safety requirements of federal, state, and local agencies.

1.07 PROJECT / SITE CONDITIONS

A. Notify OWNERS of above or below ground utilities both 1) before beginning Work and 2) encountered during trenching operations.

B. Cap and remove or relocate services in accordance with instructions of OWNERS of such utilities.

C. Protect, support, and maintain conduits, wires, pipes or other utilities that are to remain in accordance with requirements of OWNERS of such utilities.

D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

E. Maintain access to adjacent areas at all times.

PART 2 – PRODUCTS

2.01 GRANULAR BACKFILL

A. Granular backfill shall be used to backfill trenches as specified.

   1. Granular backfill may be granular, grade 1 granular, “pit run” sand, or sand (class I) materials. Granular, “pit run” sand, or sand (class I) shall have the following properties:

      | Sieve size    | percentage passing by weight |
      |--------------|-------------------------------|
      | 2 inch       | 95 – 100                      |
      | finer than no. 200 | 6 (maximum)                |

   2. If native excavated material is suitable for use as granular backfill, trenches may be backfilled with suitable excavated granular material.

2.02 BEDDING AND COVER MATERIALS FOR SANITARY SEWERS

A. Ductile Iron:

   1. Bedding and cover material used shall be crushed stone of CA-6 gradation in accordance with IDOT Specifications. CA-7 may be used upon written approval of OWNER.

2.03 BACKFILL MATERIALS

A. Conform to requirements of Specification Sections.

   1. Native Excavated Materials.
   2. Granular Materials
2.04 POLYETHYLENE WRAPPING
A. Polyethylene wrap, if required, shall meet the requirements of AWWA Standard C-105 (ANSI A21.5) using Class C (black) polyethylene material (8 mils minimum thickness).

2.05 SHEETING, SHORING, AND BRACING
A. Type, design, detail, and installation of sheeting, shoring, and bracing shall be determined by and sole responsibility of CONTRACTOR.

2.06 INSULATION
A. Insulation shall be rigid polystyrene boards minimum 4' wide to the required thickness.
B. Polystyrene insulation board shall conform to the requirements for Extruded Insulation Board, AASHTO Designation M230, except as hereinafter revised. The flammability requirement is deleted.
C. CONTRACTOR shall provide certification and sample of insulation to ENGINEER for acceptance prior to installation.

2.07 CLAY DAM
A. Materials
   1. Clay soil materials with a very low relative permeability with a permeability coefficient equal to or less than approximately 0.00001 (10-5) centimeter/second.
   2. Native clay material acceptable to permitting agency and with OWNER approval.
   3. Bentonite admixture with OWNER approval.

2.08 SOURCE QUALITY CONTROL
A. Testing:
   1. One sieve analysis for each source of bedding material and cover material.

PART 3 – EXECUTION

3.01 EXAMINATION
A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work such as areas loosened by frost action or softened by flooding or weather, or existence of unsuitable material. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION
A. Natural soils or fill softened by frost, flooding or weather shall be removed and replaced.
B. Remove unsuitable material from within trenches.
C. Stabilize trench bottom and replace unsuitable materials with aggregate.

3.03 SHEETING, SHORING, AND BRACING
A. Whenever necessary to prevent caving during excavation and to protect adjacent, piping, structures, property, workers, and public; trenches shall be sheeted, shored, and braced.

B. When sheeting, shoring, and bracing is required, install to prevent soil from entering excavation below or through sheeting.

C. Remove sheeting, shoring, and bracing after backfilling, or when approved by ENGINEER as backfill is being placed.

D. Remove sheeting, shoring, and bracing in manner not damaging to facility.

E. Fill settled areas after sheeting, shoring, and bracing has been removed.

F. Portable Trench Box: CONTRACTOR may use portable trench boxes to install utilities. CONTRACTOR is responsible for the use of boxes and installation of utilities.
   a. Current OSHA standards allow placing trench boxes or shields on a shelf located no more than 24 inches above the bottom of the trench if the following conditions are met:
      1) The trench walls consist of reasonably stable soils.
      2) The trench bottom is not wet. (Note that all standing water shall be pumped or removed from the trench in order to meet this condition.)

3.04 DEWATERING

A. Prevention of Pipe Flotation: The CONTRACTOR shall at all times prevent the possibility of pipe flotation, i.e.: the lifting of pipes by buoyancy as water rises in the trench by proper bracing or by loading to overcome buoyancy. All pipe damaged by flotation shall be removed and relaid at the CONTRACTOR’S expense.

B. CONTRACTOR shall dewater excavation site prior to starting trenching and shall maintain groundwater minimum of 12 in. below bottom of trench.

C. CONTRACTOR is responsible for choosing method of groundwater control.

D. If CONTRACTOR chooses to use deep wells or well points, wells and well points shall be designed, installed, and operated to prevent removal of in-situ materials.

E. Keep construction site free-draining. Keep trenches free of water.

F. Remove soil disturbed by pressure or flow of groundwater.

G. Maintain dewatering system to prevent uplifting of or damage to facilities.

H. Protect adjacent utilities, structures, and properties from damage resulting from dewatering operations.

I. Drill, maintain, and abandon dewatering wells in accordance with federal, state, and local ordinances.

3.05 SEPARATION BETWEEN UTILITIES

A. Horizontal and vertical separation between sanitary sewers and watermains shall comply with Illinois Recommended Standards for Sewage Works Section 370.350.

B. Forcemains and gravity sewer mains shall be a minimum 10 feet horizontal from watermains.
3.06 EXCAVATION

A. Excavate to the lines, grades, and elevations indicated and necessary to complete construction.

B. Method of excavation shall be consistent with soil types encountered and result in undisturbed subgrade. Loosened soils shall be recompacted or removed and replaced.

C. Trench Tolerances:
   1. Maximum width of trench at top of pipe shall be outside dia of pipe plus 24 in. When sheeting, shoring, and bracing required, width of trench may be increased to allow for their use, provided provisions for excess width of trench are met.
   2. Where trench width below top of pipe exceeds specified limit, CONTRACTOR shall furnish pipe with strength adequate for actual trench width.
   3. Minimum trench width shall be outside dia of pipe plus 18 in.
   4. Top of concrete encasement for electrical duct or top of conduit shall be minimum of 24-in. below final grade or as shown on Drawings.

D. Do not advance excavation of trenches more than 300 ft ahead of completed pipe installation.

E. Do not excavate within influence zone of existing footings or foundations without prior approval of ENGINEER.

F. Excavation through Rigid Pavement:
   1. Remove pavement min 1 ft beyond anticipated edge of excavation.
   2. Saw cut pavement to ensure straight joint.
   3. Pavement replacement shall match existing.

G. Excavation through Roadways: Excavation, backfill, and pavement replacement of roadways shall conform to requirements of local highway authority. In no case shall the replacement pavement edges bear on less than 12 in. of undisturbed soil.

3.07 POLYETHYLENE WRAPPING

A. Polyethylene wrapping shall be provided as specified.

B. Install per manufacturers instructions.

3.08 INSULATION

A. Utilities shall be insulated where noted on the Plans and wherever the depth of cover is less than five (5) feet.

B. Insulation shall be installed centered, and a maximum of 6 inches, over the pipe.

C. Insulation shall be installed to the required thickness. Boards shall be overlapped to provide the required thickness. A minimum of 2-inch thick boards are the standard. 1-inch boards shall only be used to provide the required thickness other than 2".

D. Existing Utilities:
   1. CONTRACTOR shall insulate existing utilities at all locations where the utilities will have less than 5 feet of bury below the proposed finish grade or as directed by the ENGINEER.
2. CONTRACTOR shall excavate and backfill test holes to expose existing top of main at locations as directed by ENGINEER to confirm water main elevation.
3. The CONTRACTOR will be required to install rigid styrofoam insulation as detailed.
4. Insulation Board shall be installed centered lengthwise over the proposed utility. Insulation shall be placed a minimum of 6" and maximum of 12" above the installed utility. Butt joints shall have a minimum 6" overlap each direction with similar type materials.

3.09 FILL USAGE

A. Bedding Material Limits:
   1. Minimum of 6 in. below, to spring line and entire trench width.

B. Cover Material Limits:
   1. Minimum of 12 in. above and the width of excavation.

C. Earth Fill: Other areas not previously specified.

3.10 Consolidation

A. "All granular and excavated material fill shall be consolidated through mechanical compaction by means of a backhoe boom-mounted compactor. Either a vibratory compactor or compaction wheel is acceptable if it can meet the densities specified below. The backhoe used for compaction shall be equal in reach to the backhoe used for excavating the trench; i.e., capable of reaching the bottom of the trench with no additional shelf excavation. Backfill shall be compacted in eighteen (18) inch maximum lifts, before compaction, unless noted otherwise below, except that the first lift shall be two (2) feet in depth. The CONTRACTOR shall take all precautions necessary to protect utilities from being damaged during backfilling and compaction operations.

   1. Granular backfill shall be compacted to a minimum of 95% Standard Proctor Density.
   2. Excavated material backfill shall be compacted to a density equal to 100% of the density of the undisturbed adjacent material.
   3. Topsoil shall not be compacted.
   4. Roadways, Access Drives, Parking Lots and other paved areas.

   a. Fill placed within designated areas shall be compacted in 12" maximum lifts, except that the first lift shall be two (2) feet in depth.

A. Density Testing Required. If there is a question as to whether or not the specified density has been achieved, a soil testing firm selected by the Engineer will be brought in to determine the backfill density. The cost of this testing will be paid for by the OWNER if the test results are satisfactory, however, if the backfill is found to be inadequately compacted, the CONTRACTOR shall pay all testing costs.

B. Testing Required for Alternate Compaction Methods. If the CONTRACTOR desires to use alternate compaction equipment or backfill depths greater than those specified, documentation must be submitted to the Engineer substantiating the adequacy of the proposed compaction method. Alternate compaction methods shall not be used unless approved by the Engineer. The Engineer may require density testing by an approved soil testing firm to field verify backfill densities. All compaction testing costs for field verifying alternate compaction methods shall be paid for by the CONTRACTOR.

3.11 PLACING BACKFILL
A. Notify ENGINEER before placing fill material.
B. Do not use frozen material or place fill on frozen subgrade.
C. Place fill simultaneously on both sides of freestanding structures.
D. Where pipes or electrical ducts cross, protect piping or ducts at higher elevation by backfilling trench within influence zone of higher pipe or duct with structural fill.
E. Where pipes or electrical ducts leave structures, protect by backfilling within influence zone of pipe or duct with structural fill.
F. Provide mechanical compaction.
G. Place and compact bedding material and cover material in lift thickness and to densities specified.
   1. Degree of compaction: ASTM D1557, Modified Proctor or ASTM D4253 (Relative Density).
   2. Moisture Content: Within 3% of optimum.
H. Place and compact fill materials to conform to requirements of Section 02315.

3.11 CLAY DAM
A. Provide and place compacted clay materials as bedding, side pipe support and cover to a depth 12 inches below the final ground surface elevation as shown on Drawings.
   1. Add bentonite to the imported clay materials, if required, to decrease the permeability of the soil used to construct the clay dam. Written approval by OWNER is required.
      a. Thoroughly mix the soil and bentonite by tilling, discing, or otherwise combining the two materials to produce a homogenous soil mixture.
B. Construct clay dam to provide an impermeable barrier to water or groundwater transport along the sewer trench. Construct in accordance with details shown on Drawings.
C. Compact clay dam materials in maximum 6-inch lifts.

3.12 DISPOSAL OF SURPLUS MATERIALS:
A. Conform to requirements of Section 02310 and applicable sections of Division 1
B. Off-site Disposal:
   1. Site Designated by CONTRACTOR: CONTRACTOR shall dispose of surplus materials at off-site locations. CONTRACTOR is responsible for both 1) completing all Work according to applicable regulations and 2) securing necessary approvals. CONTRACTOR is responsible for satisfying the Property OWNER'S requirements.
   2. All work shall conform with local codes, ordinances, and regulations. CONTRACTOR is responsible for obtaining the use of all “off-site” disposal sites and necessary permits.
   3. Surplus excavated materials from Utilities shall not be stockpiled on site.

3.13 ADJUSTMENT AND CLEANING
A. Conform to requirements of Section 02310.

END OF SECTION
PART 1 – GENERAL

1.01 SUMMARY

A. Section describes the requirements for control of erosion on construction sites. The CONTRACTOR shall provide the necessary materials, equipment, and labor to control erosion by the methods specified herein. If no specific quantities are shown on the Plans, the CONTRACTOR shall use whatever quantities are necessary to prevent sediment transport into adjacent storm water conveyances or streams.

B. The CONTRACTOR shall submit for approval by the ENGINEER an Erosion Control Plan as required in this Section for accomplishing temporary and permanent erosion control, prior to beginning any construction on the Project.

C. The CONTRACTOR shall not begin work until after initial erosion and sediment control devices are in place and approved by the ENGINEER.

1.02 REFERENCES

A. IDOT: Illinois Department of Transportation Standard Specifications Current Edition including all addenda

PART 2 – PRODUCTS

2.01 TOPSOIL

A. Topsoil shall be fertile, friable, natural loam surface soil, reasonable free of subsoil, clay lumps, brush, weeds, and free of roots, stumps, stones larger than two inches in any dimension, and other matter harmful to plant growth. Topsoil to supplement insufficient topsoil on the site shall originate from local sources, but not from bogs or marshes.

B. Reference Sections 02200 and 02920.

2.02 LIME

A. Lime used for soil amendment shall be agricultural grade limestone, ground sufficiently fine so that 80% passes a No. 8 sieve. Lime shall contain 80% calcium carbonate equivalent. Moisture shall not exceed 10%.

2.03 FERTILIZER

A. Fertilizer used in conjunction with seeding shall be dry, free-flowing granular fertilizer suitable for application by agricultural fertilizer spreaders or blower equipment, or non-volatile liquid commercial fertilizer, having a ratio of 1:1:1 (Nitrogen-Phosphoric Acid-Potash), or approved equal. Fertilizer shall be applied at a rate of 270 lb/acre.

2.04 GRASS SEED

A. Grass seed shall be delivered to the site in bags, tagged, or labeled to show the percentage of purity and germination. The seed shall have been tested by a recognized seed-testing laboratory within one year prior to the date of seeding and shall conform to the latest laws of the U.S. and the State of Illinois.
B. Refer to Drawings for additional notes and seed mixtures.

2.05 STRAW OR HAY MULCH

A. Unless otherwise specified mulch shall be straw or hay, reasonably free of grain, weed seed, and mold. Mulch materials shall not contain excessive moisture that might prevent feeding through a mulch blower machine. Wood cellulose fiber may be used only upon approval by the ENGINEER.

2.06 JUTE NETTING

A. Jute netting shall be uniform, open, plain weave of undyed and unbleached single jute yarn. The yarn shall be of a loosely twisted construction, and shall not vary in thickness by more than one-half of its normal diameter. Jute netting shall be furnished in rolled strips, approximately 50 yards in length. Netting width per strip shall be 48 inches. The strip shall weigh 0.92 pounds per square yard.

2.07 TURF REINFORCEMENT MATTING

A. Nylon soil reinforcement matting for use under seeded surfaces shall be Colbond "Enkamat", or approved equal.

2.08 STRAW BALE EROSION BARRIERS

A. Bales used for erosion control shall be either hay or straw, shall have rectangular surfaces, and shall be tightly bound with twine, not wire. The material in the bales shall be reasonably free of grain, weed seed, and mold, and shall be dry and suitable for the purpose intended.

2.09 FILTER FABRIC

A. Filter fabric shall be ultraviolet stabilized.

B. Manufacturers shall be Mirafi 140N (manufactured by Dominion Textile Company), Supac 5NP, or pre-approved equal.

2.10 SEDIMENT CONTROL FENCE

A. Reference IDOT Specification Article 1080.02 and Drawings.

2.11 RIPRAP

A. Riprap shall comply with Section 02721.

PART 3 – EXECUTION

3.01 Erosion Control Requirements

A. Water pumped from the site shall be treated by temporary sedimentation basins, grit chambers, sand filters, upslope chambers, hydro-cyclones, swirl concentrators, or other appropriate controls designed and used to remove particles of 100 microns or greater for the highest dewatering pumping rate. If the water is demonstrated to have no particles greater than 100 microns during dewatering operations, then no control is needed before discharge. Water may not be discharged in a manner that causes erosion of the site or receiving channels.
B. The CONTRACTOR shall take all possible precautions to prevent sediment from being tracked onto public or private roadways. Any sediment reaching a public or private road shall be removed by street cleaning (not flushing) before the end of each workday.

C. All storm drain or culvert inlets shall be protected with hay bale enclosures, sediment control fence or equivalent barrier approved by the ENGINEER. Channelized runoff from adjacent areas passing through the site shall be diverted around disturbed areas, if practical. Otherwise, the channel shall be protected. Street flow runoff from adjacent areas greater than 10,000 square feet in area shall also be diverted around disturbed areas, unless shown to have resultant runoff velocities of less than 0.5 ft / sec across the disturbed area for one year design storms having a duration of from 0.5 to 24 hours. Diverted runoff shall be conveyed in a manner that will not erode the conveyance and receiving channels. (Note: Soil and Conservation Service Guidelines for allowable velocities in different types of channels should be followed).

D. All activities on the site shall be conducted in a logical sequence to minimize the area of bare soil exposed at any one time.

E. All disturbed ground left inactive for forty-five (45) or more days shall be stabilized by seeding (only prior to October 15) or by mulching or covering.

F. For sites with more than 10 acres disturbed at one time, or if a channel originates in the disturbed area, one or more sedimentation basins shall be constructed. Each sedimentation basin shall have a surface area of at least 1% of the area draining to the basin and at least three feet of depth and shall be constructed in accordance with accepted design specifications. Sediment shall be removed to maintain a depth of three feet. The basin shall be designed to have a surface overflow rate of 1,500 gal / day / sq. ft. for a two-year design storm having a duration of 24 hours. The basin discharge rate shall also be sufficiently low as to not cause erosion along the discharge channel or the receiving water.

G. For sites with less than 10 acres disturbed at one time, sediment control fences, hay bales, or equivalent control measures shall be placed along all sideslope and downslope sides of the site. If a channel or area of concentrated runoff passes through the site, sediment control fences shall be placed along the channel edges to reduce sediment reaching the channel.

H. Any soil or dirt storage piles containing more than 10 cubic yards of material should not be located with a downslope drainage length of less than 25 feet to a roadway or drainage channel. If remaining for more than seven days, they shall be stabilized by mulching, vegetative cover, tarps, or other means. Erosion from piles which will be in existence for less than seven days shall be controlled by placing hay bales or sediment control fence barriers around the pile. In-street utility repair or construction soil; or dirt storage piles located closer than 25 feet to a roadway or drainage channel must be covered with tarps or a suitable alternative control must be used if exposed for more than seven days. Storm drain culvert inlets must be protected with straw bales or other appropriate filtering barriers.

3.02 SEEDING

A. Seeding, where used for erosion control, shall be of the mixture required for the nearest permanent grass. Seed types, which would be considered weeds in such finished nearby areas, shall not be used.

B. If the CONTRACTOR intends to seed for both erosion control and restoration, he shall follow the instructions in “Section 02920 – Lawn Restoration” of these specifications, in other applicable sections, or in the Special Conditions.
C. Fertilizer shall be applied with a hydroseeder, power-drawn drill or spreader, or blower equipment either separately from, or concurrently with, the grass seed. Fertilizing shall not be done with "broadcast"-type equipment during windy weather, not at all when the ground is frozen or excessively moist. Fertilizer shall be applied at the rates specified in Part 2 of this Section of the Specifications.

D. The CONTRACTOR shall apply the seed using a hydroseeder, a power-drawn drill or spreader, or approved blower equipment with an adjustable disseminating device capable of maintaining a constant measurement rate of material discharge that will ensure an even distribution of seed and fertilizer. Seed mixture shall be as specified on Drawings.

E. Seedbeds shall be maintained in a moist growing condition. When necessary, the CONTRACTOR shall soak the seedbed by sprinkling with water.

3.03 APPLICATION OF STRAW OR HAY MULCH

A. The CONTRACTOR shall furnish, haul, and evenly apply straw or hay mulch at a rate not less than 1½ tons per acre to a loose depth of one or two inches. The mulch spreading equipment shall utilize forced air to blow mulch material onto the seeded area, unless otherwise approved by the ENGINEER.

B. Unless otherwise designated, the CONTRACTOR shall anchor the straw or hay mulch by the following method:

1. Disk Crimped. Cutting into the soil with notched edges of a weighted disc so that the mulch is partially embedded in the soil.

3.04 INSTALLING TURF REINFORCEMENT MATTING

A. Soil reinforcement matting shall be installed according to the manufacturer’s recommendations. If this method of erosion control is to be used in conjunction with fertilizing and seeding done for surface restoration in the same area, the matting shall be placed prior to fertilizing and seeding operations. The matting shall be unrolled and draped loosely, without stretching, so that continuous ground contact is maintained. The peaked side of the matting shall be placed down, against the soil. On slopes, the matting shall be applied parallel to the slope direction. Where multiple strips of widths are used, the matting shall be lapped and stapled, as specified in Subsection 3.03 above except that the overlap width shall not be less than three inches.

B. If any staples become loosened or raised, or if any matting comes loose, is torn, or is undermined, satisfactory repairs shall be made immediately without any additional compensation.

3.05 PLACING HAY BALE BARRIERS

A. Sufficient bales shall be on the site to create the necessary barriers prior to the start of groundbreaking operations. The bales shall be stacked and covered with plastic sheeting until required for use.

B. The CONTRACTOR shall place erosion bales of straw, hay, or other suitable baled material to form checks or dikes as required to control erosion, including at locations shown on the Plans and / or as directed by the ENGINEER. Placement of erosion bales, including excavation of upstream sumps, shall be in accordance with the Detail Drawings and IDOT Standards.

C. If a bale in a barrier is wholly or partially destroyed during the course of the project the CONTRACTOR shall, at his own expense, replace that bale with a fresh, unused bale.
drainage erodes a path underneath the bale barrier, the CONTRACTOR shall utilize a four-foot wide strip of filter fabric on the upstream side of the bales to prevent the undercutting. Eighteen inches of the fabric shall be fastened to the bales and 30 inches shall be placed on the ground and weighted down with stones. The bales shall be in place at the end of the first day’s construction and shall be placed immediately if heavy rainfall begins during the first day’s construction.

3.06 CONSTRUCTION OF SEDIMENT CONTROL FENCE

A. Reference IDOT Specification Article 280 and Drawings.
B. Install and maintain silt fence at the perimeter of all disturbed areas that materials do not contaminate areas outside of the work limits.

3.07 PLACING RIPRAP

A. Reference Specification Section 02721.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Provide sewer pipe materials and installation as shown on the Drawings, specified herein, and as needed for a complete and proper installation of Sanitary systems.

1.02 DEFINITIONS


1.03 SUBMITTALS

A. Ductile Iron:
   1. Calculations verifying pipe class, installation conditions, and floatation (for depths less than 6 feet).

B. Lining certification and installation guide.

C. Pipe layout/installation guide from manhole to manhole by pipe diameter and pipe class or D-Load, or pipe stiffness rating.

D. Pipe joint certification indicating compliance with 50 ft hydrostatic head rating.

E. Submit in accordance with Section 01330.

F. Results of plant tests shall be included with shipment of materials, with two additional copies of each test results to be furnished to ENGINEER.

1.04 QUALITY ASSURANCE

A. The pipe manufacturer shall have minimum of five (5) years experience manufacturing pipe in accordance with ASTM and AWWA.

B. Plant Testing:
   1. Ductile Iron Pipe:
      a. All plant testing shall be in accordance with AWWA C151 for tensile and impact tests. Hydrostatic testing is not required for gravity applications. Testing shall be performed on pipe manufactured for this project.
      b. Compressive strength shall be tested with test apparatus in accordance with ASTM D2412 or ASTM C497. Pipe shall be tested to determine if the design load (as identified in the design calculations) results in more than the allowable 3% deflection. Testing shall continue up to 5% deflection at which time inspection of the pipe surfaces will occur. Delamination, cracking, crazing, or other signs of pipe interior or exterior coating failure will be cause for failure. Cost of testing shall be borne by CONTRACTOR. Pipe which is tested which fails to return to normal cross section or shows other signs of damage may not be used.
2. For pipe testing frequency, pipe lot shall be defined as pipe of same diameter and class or D-Load manufactured by same process in one plant, over period not to exceed approximately 2 weeks.

3. ENGINEER or his representative will Randomly select test pipe from each lot as follows:
   a. For lots of 100 or more pipe, 1% of number of pipe in lot with a minimum of 2 pipe selected.
   b. For lots less than 100 pipe, 1 pipe will be selected.
   c. For lots less than 10 pipe, testing may be waived by ENGINEER if manufacturing plant has satisfactory specification compliance on other pipe lots.

PART 2 - PRODUCTS

2.01 GRAVITY SEWER PIPE STRENGTH DESIGN

A. All sewer pipe materials provided shall be designed in accordance with the following criteria:
   1. Traffic Loading = HS-20 / E-80 per AASHTO, Traffic impact = 30% for depths less than 5 ft
   2. Soil loading based upon depth and unit weight of 125 pcf.
   3. Trenching and Bedding as per details shown in the plans for pipe types and per Section 02316.
   4. Ground water table assumed to be at the surface.
   5. Saturated soil weight for buoyancy calculations = 62.5 lb/cf.
   6. Safety factor for pipe buoyancy calculations = 1.3.

B. Ductile iron pipe shall also comply with the following design criteria:
   1. Allowable Deflection < 3%
   2. Deflection Lag Factor = 1.0 for design condition (1.5 for 1 year post construction monitoring.
   3. Maximum E=1000 for depths less than 25 feet to the top of pipe, maximum E=1500 for depths from 25 to 35 feet to the top of pipe. (Lessor values may be used at the manufacturers option.)
   4. Safety factor for buckling = 2.5
   5. Safety factor for wall crush = 2.0

2.02 DUCTILE IRON PIPE

A. Pipe: Ductile Iron Pipe: in accordance with AWWA C151 and AWWA C150, meeting final design strength requirements.

B. Lining: Ceramic Epoxy such as, PROTECTO 401 by US Pipe, or pre-approved equal.

C. Joints: Watertight push-on type, with circular rubber gasket, Tyton Joint by US Pipe, or pre-approved equal.

D. All joints shall be certified by the pipe manufacturer to perform at fifty (50) feet of hydrostatic head at 5% deflection.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
3.02 FIELD MEASUREMENTS

A. Make necessary measurements in the field to assure precise fit of items in accordance with the approved design.

3.03 INSTALLATION

A. Trenching and backfill for the work of this Section shall conform to the requirements of Section 02316 and the pipe manufacturers recommendations.

B. Conflicts with water mains:
   1. Sewer shall not be located:
      a. Closer than ten feet horizontally from a water supply main or service line as measured from outside edges of pipe.
      b. Within 18 inches of the bottom of the water main when sewer crosses under watermain.
      c. Above the watermain when crossing the watermain.
   2. When these conditions exist the contractor shall:
      a. Fully encase the sewer pipe for a distance of ten feet on each side of the crossing; or whenever the sewer and water main are within 10 feet horizontally.
      b. Use acceptable pressure rated pipe for the sewer with no joint closer horizontally than eight feet from the crossing.
      c. Where concrete encasement is used, provide not less than 4” thickness around pipe and 6 inches at pipe joints.

C. Pipe laying:
   1. Protect pipe during handling against shocks and free fall. Remove extraneous material from the pipe interior.
   2. Between manholes all gravity pipe shall be of the same strength class as shown on the layout / installation guide.
   3. Lay pipe by proceeding upgrade with the spigot ends of bell-and-spigot pipe pointing in direction of flow.
   4. Lay each pipe accurately to the indicated line and grade, aligning so the sewer has a uniform invert. Noticeable variations from true alignment and grade shall be considered sufficient cause for rejection of Work.
   5. Continually clear interior of the pipe free from foreign material. Provide watertight plugs for open ends of pipe when laying not in progress.
   6. Before making pipe joints, clean and dry all surfaces of the pipe to be joined.
   7. Use lubricants recommended for the purpose by the pipe manufacturer.
   8. Place, fit, join, and adjust the joints to obtain water tight seal.
   9. Laying of Pipe in Cold Weather:
      a. Heat pipe and jointing material to prevent freezing of joints, as recommended by the manufacturer.
      b. Do not lay pipe on frozen ground.
      c. Pipes with rubber gaskets or resilient type joints: Warm gasket or joint material to facilitate making proper joint.

3.04 TESTING AND INSPECTING

A. Test and inspect sewer installation in accordance with Section 01815.

END OF SECTION
SECTION 02721
RIPRAP

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Stone riprap.

1.02 DEFINITIONS

A. Illinois Department of Transportation Standard Specifications Current Edition (IDOT) including all addenda.

1.03 SUBMITTALS

A. Results of stone testing.
B. Manufacturer literature for geotextile filter fabric.
C. Submit in accordance with Section 01330.

1.04 QUALITY ASSURANCE

A. Testing shall be provided by CONTRACTOR or material supplier. Testing shall have been completed within 6 months of submittal date and be from same lift of material as stone was obtained from.

B. Required Tests:

   1. One sieve analysis for each source of riprap material.
   2. One test on riprap for soundness.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Riprap:

   1. Sound, hard stone or masonry, resistant to action of air and water, and free from seams, cracks or other structural defects. Stone containing shale, unsound sandstone or other material which will disintegrate readily shall not be used.
   2. Weight loss shall not be more than 20% after 5 cycles when tested by sodium sulfate test methods, ASTM C88.
   3. Riprap shall be irregularly shaped, generally spherical or rectangular, free from flat or elongated pieces or other shapes which would be detrimental to the stability of the riprap. ENGINEER shall have authority to reject stones which are considered detrimental or inappropriate to stability.
4. Riprap size:
   a. Riprap shall range in size of 6” to 9”.

B. Grout: (not applicable).

C. Grout Sand: (not applicable).

   1. Manufacturers:
      a. Mirafi 140N by Mirafi, Inc.
      b. Typar 340I by DuPont.
      c. Supac 5P by Phillips Fibers Corporation.
      d. Propex 4545 by Amoco Fabrics Company.
      e. Or equal.

PART 3 - EXECUTION

3.01 PREPARATION

A. Areas on which bedding material and riprap are to be placed shall be graded to lines and grades shown on Drawings and as required by ENGINEER in accordance with Section 02310. Eroded or damaged areas shall be repaired prior to placement of material.

3.02 INSTALLATION

A. Place filter fabric in accordance with manufacturer's recommendations.

B. Riprap shall be placed in accordance with the following:
   1. Place stone riprap to produce reasonably well graded mass of stone with no segregation of various sizes of stone.
   2. Shape material to required section after placement as necessary.
   3. Unless otherwise specified, riprap shall be at least 15 inches thick.

C. Remove, salvage and replace. Contractor may remove, salvage and replace existing riprap materials. Contractor shall supplement existing with new to provide the required thickness.

3.03 GROUTING

(Not Applicable)

END OF SECTION
SECTION 02920
LAWN RESTORATION

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Preparing ground surface.
   2. Topsoil.
   3. Seed.
   4. Fertilizer.
   5. Mulch and Ground Stabilization.

B. All areas of the site which are disturbed and areas noted on Drawings shall be seeded, except for paved, riprapped, or built-up areas.

1.02 REFERENCES

A. Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction" (IDOT) Current Edition including all addenda.


C. American Association of State Highway Transportation Officials (AASHTO).

D. Sections 02200 and 02370.

1.03 SUBMITTALS

A. Test Results:
   1. Topsoil test results including fertilizer and lime requirements.

B. Submit in accordance with Section 01330.

1.04 QUALITY ASSURANCE

A. Meet or exceed the specifications of Federal, State, and local laws requiring inspection for plant disease and insect control.

B. Seed shall conform to U.S. Department of Agriculture Rules and Regulations under Federal Seed Act and requirements of state seed laws.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Provide seed mixture in sealed containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.

B. Deliver fertilizer to site in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.06 WARRANTY
A. Warranty shall be as specified in the Contract Documents.

B. Warranty lawn areas for period of 1 yr after acceptance of seeding and sodding to be alive and in satisfactory growth at end of warranty period.

   1. Uniform "catch" of grass required: For purpose of establishing acceptable standard, scattered bare spots, none larger than 1 square foot, will be allowed up to a max of 3% of lawn area.

PART 2 – PRODUCTS

2.01 TOPSOIL

A. Topsoil and salvaged topsoil shall comply with IDOT Section 211.

   1. Topsoil and salvaged topsoil shall consist of materials as specified in Section 211 and as identified in the specifications.

   2. At the Contractor’s option and expense, the existing topsoil may be salvaged to supplement the total amount required. All salvaged topsoil shall be removed beyond the limits of excavation or required backfill and used for final site grading.

   3. Salvaged topsoil shall be free from gravel, rocks, roots, branches and other organic debris.

2.02 SEED

A. Refer to Drawings for seed mixes and additional seeding notes.

B. The seed mix shall be supplied in pounds of Pure Live Seed. Only local genotypes shall be used; that is, seed shall be harvested from plants whose origin is within 200 miles of the site. The seed mix shall be supplied with appropriate inoculants. Fertilizer is not required.

2.03 PLANTINGS

A. Refer to Drawings for type and quantity of plugs.

B. Vegetative plugs will be propagated and grown in cells and not as bedded plants.

C. The size and dimension of the plugs will measure one and one-half (1.5) inch top diameter by two and one-half (2.5) inches deep, or greater. The bottom of the plug will be open to the air to prevent roots from becoming pot-bound and the extracted root system of the stock will conform to the shape and dimensions of the growing cells without sloughing soil or growth media.

D. Materials not conforming to the dimensions of the cell, as stated above, may be rejected by the Owner without compensation.

E. The use of Styrofoam blocks or cells will be prohibited when culturing stock because of problems associated with fine root penetration into the Styrofoam walls and torn roots following extraction.

2.04 FERTILIZER

A. Commercial balanced, uniform in composition, free flowing, conforming to state and federal laws.

B. Contain percentage by weight of 1:1:1 ratio, or as modified by topsoil test recommendations.

C. 50% of elements shall be derived from organic sources.
2.05 ACCESSORIES

A. Mulch: Dry oat or wheat straw or wood cellulose fiber free of weeds and foreign matter detrimental to plant life. Hay or chopped corn stacks are not acceptable.

B. Water: Contractor shall arrange for water as specified in Section 01520. Provide pumps, tankage, hose, piping, and attachments as required to bring water to point of use. Provide water until grass has reached uniform "catch".

C. Turf Reinforcement Mat (TRM): Refer to Section 02370.

D. Erosion Control Blanket: Open weave jute matting or synthetic netting interwoven with wood excelsior fiber.
   1. Roll type, consistent thickness with even fiber distribution over entire area.
   2. Approximately 1 inch square mesh, nominal weight 1 pound / square yard.
   3. Manufacturer:
      a. American Excelsior
      b. North American Green

E. Landscape Mat: Porous non-woven fabric with multiple layers of randomly arranged fibers, minimum 4.0 ounce / square yard (typical).
   1. Manufacturers:
      a. Mirafi 140N by Mirafi, Inc.
      b. Typar 340I by DuPont.
      c. Supac 5P by Phillips Fibers Corp.
      d. Propex 4545 by Amoco Fabrics Co.
      e. Or equal.

F. Steel Edging: 3/16 inch thick by 4 inch deep.
   1. Manufacturers:
      a. General Edging by J. T. Ryerson & Son.
      b. General Edging by Brighton By-Products.

G. Crushed Stone: Washed, light colored crushed granite or other approved locally available stone conforming to ASTM C33, Size 4.

PART 3 – EXECUTION

3.01 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 PLANTING SEASONS

A. Weather permitting, lawn restoration shall be completed within seven (7) calendar days after topsoil has been placed.
B. Spring Planting Season: From time soil can be satisfactorily worked until following dates.
   1. Seed: June 1.
   2. Sod: June 15.

C. Fall Planting Season:
   1. Seed: August 15 to October 1.
   2. Sod: August 10 to November 1.

D. Perform planting of seed only when weather conditions and soil conditions are acceptable.

E. Planting season limits may be changed when approved by ENGINEER.

3.03 TOPSOIL STRIPPING AND STOCKPILING.
   A. Reference Sections 02200.

3.04 PREPARATION
   A. Finish grading shall be performed to elevations as indicated on Drawings.
   B. Do not plant seed until trees, shrubs, and other landscaping completed.
   C. Scarify existing topsoil where grade is not being raised, or where topsoil is over compacted, to
depth of 2 in.
   D. For topsoil with high acidity, add lime as recommended in topsoil test report.
   E. Grade, rake, and roll with roller weighing not more than 100 pounds / square foot or less than
25 pounds / square foot.
   F. Maximum variation from correct elevation is 1/2 inch in 10 feet.

3.05 PLACING TOPSOIL and SALVAGED TOPSOIL.
   A. Place and blend with existing lawns four (4) inches minimum of satisfactory salvaged topsoil
or topsoil over all disturbed areas.
   B. Excess salvaged topsoil shall be stockpiled on-site at OWNER’S designated location.
   C. Place unsatisfactory salvaged topsoil (containing stones or clay soils) over fill areas and cover
with 4 inches minimum of suitable salvaged topsoil.

3.06 FERTILIZING
   A. Before seeding or sodding, apply fertilizer at a 1:1:1 uniform rate of 90 lb/acre. Make 2
passes at right angles. Incorporate fertilizer into soil to depth of at least 2 inches by discing,
harrowing, or other approved method.
   B. After completion of required interim mowings, apply 18-5-9 fertilizer at rate of 15 pounds /
1000 square feet. Make 2 passes at right angles.
   C. Adjust rate of application and type of fertilizer as recommended in topsoil test report.
   D. Lightly water to aid dissipation of fertilizer.
3.07 SEEDING

A. Apply seed at a total rate as specified in Drawings.
B. Seeding method shall establish smooth, uniform turf.
C. Cover seed with 1/8 inch of soil by light racking.
D. Furnish all empty seed bags to the ENGINEER.
E. Do not seed following rain, if soil has been compacted by rain, or if ground is too dry.
F. Do not seed when wind velocity exceeds 6 miles per hour (mph).
G. Do not seed areas in excess of that which can be mulched on same day.
H. Immediately after seeding, apply mulch to flat areas and erosion control blanket or turf reinforcement mat as specified.
I. Place mulch loose to allow some sunlight to penetrate and air to circulate, but thick enough to shade ground, conserve soil moisture, and prevent erosion.
J. Butt ends and edges of erosion control blanket snugly and staple to ground surface with 6 in. staples.
K. Apply water with fine spray immediately after area has been mulched or application of erosion control blanket. Leave area thoroughly soaked at close of each working day.

3.08 MULCHING

A. Mulching shall comply with IDOT Section 250. All seeded areas shall be mulched with straw.
   1. Mulch shall be disk-crimped in-place.
   2. Hydro-mulching is not acceptable.

3.09 PROTECTION

A. Protect turf areas by erecting temporary fences, barriers, signs, and similar protection as necessary to prevent trampling until acceptance by OWNER.
B. Replace, repair, re stake, or replant damaged seeding or sod.
C. Protect slopes and embankments against erosion until Work is accepted. Repair eroded areas by refilling, reseeding, and remulching as required.

3.10 FIELD QUALITY CONTROL

A. Acceptance:
   1. Notify ENGINEER when lawn areas are ready for final inspection.
   2. Work will be considered "substantially complete" upon conformance with the following;
      a. Turf reasonable free from weeds, diseases or other visible imperfections.
      b. Turf displays uniform color, quality and coverage.
c. Minimum 3 mowings performed.
d. Fertilizer application performed after mowing.

3. After "substantial completion", OWNER will be responsible for maintenance.

3.11 MAINTENANCE

A. Maintenance shall begin immediately following installation of each portion of lawn. Continue until substantial completion.

B. Maintain lawns by watering, mowing, and repairing or replanting as may be necessary to produce uniform stand of grass until Work accepted.

C. Perform first mowing when average height of grass reaches 3 inches. Perform interim mowings, 2 minimum, as needed to maintain grass height at 2 to 2-1/2 inches. Do not remove more than 1/3 of leaf blade by mowing.

D. After completion of required interim mowings, apply fertilizer as specified herein.

E. Control weed growth. Apply herbicide in accordance with manufacturer’s instructions.

F. Top dress excessive cracks appearing upon soil shrinkage.

END OF SECTION
PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Work in this section consists of furnishing all labor, material, equipment, power, and maintenance necessary to perform bypass pumping when the flow of sewage must be stopped while rehabilitation work is being completed. At no time shall sewage be diverted from the sanitary sewer system because of rehabilitation or construction activities.

1.02 SUBMITTALS

A. Submittals shall be in accordance with Section 01300.

B. Submittals shall include:

1. Contractor shall submit to Engineer detailed plans and descriptions outlining all provisions and precautions to be taken by Contractor regarding the handling of existing sewage flows. This plan must be specific and complete, including such items as schedules, locations, elevations, capacities of equipment, materials, and all other incidental items necessary and/or required to ensure proper protection of the facilities, including protection of the access and bypass pumping locations from damage because of the discharge flows and compliance with the requirements specified in these Contract Documents. No televising or rehabilitation shall begin until all provisions and requirements have been reviewed by Engineer.

2. The Bypass Pumping plan shall include but not be limited to details of the following:
   a. Staging areas for pumps.
   b. Sewer plugging method and types of plugs.
   c. Number, size, material, location, and method of installation of suction piping.
   d. Number, size, material, method of installation, and location of installation of discharge piping.
   e. Bypass pump sizes, capacity, number of each size to be onsite, and power requirements.
   f. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range shall be submitted).
   g. Standby power generator size and location.
   h. Downstream discharge plan.
   i. Method of protecting discharge manholes or structures from erosion and damage.
   j. Thrust and restraint block sizes and locations.
   k. Sections showing suction and discharge pipe depth, embedment, select fill, and special backfill.
   l. Method of noise control for each pump and/or generator.
   m. Any temporary pipe supports and anchoring required.
   n. Design plans for access to bypass pumping locations.
   o. Calculations for selection of bypass pumping pipe size.
   p. Schedule for installation and maintenance of bypass pumping lines.
   q. Plan indicating location of bypass pumping lines.

C. Any proposed method of other flow controls shall be submitted for review by Engineer.

1.03 SEWER SERVICE

A. It shall be CONTRACTOR’s responsibility to maintain sewer service throughout the duration of this Contract. When sewer and manhole rehabilitation is being conducted, CONTRACTOR
shall maintain sewer service by use of bypass pumping or other means of flow control if necessary. Sewer service shall be maintained to each home or business that is connected to the sewer or manhole where rehabilitation is being conducted, except those affected by sewer lining or during installation of a lateral insert. All sewers shall be kept in service when rehabilitation is not being performed.

B. Sewage or jetting water shall not be backed up into basements. CONTRACTOR shall be responsible for preventing any sewage backups into basements.

PART 2 - PRODUCTS

NOT APPLICABLE

PART 3 - EXECUTION

3.01 SEWER BYPASS PUMPING

A. Where required by sewage flows, Contractor shall bypass the sewage around the sewer sections or manhole to manhole reach that are to be televisied and as required to complete sewer rehabilitation.

B. Bypass pumping will be required when rehabilitation operations necessitate the flow of sewage to be stopped while repairs are being made. Bypass pumping shall mean the use of pumps, tanks, hoses, and other necessary equipment to cause uninterrupted flow of sewage around the manhole section or reach being repaired. Precautions shall be taken when bypass pumping is required to prevent flooding of nearby property. Bypass pumping shall be provided by Contractor.

C. All bypass pumping operations must be attended by personnel to prevent flooding in case of pump failure. Under no conditions shall a bypass pumping operation be left unattended. All personnel for setup, operation, and supervision of the bypass pumping equipment shall be provided as necessary.

D. All hoses and pumps shall be sized by Contractor to be of sufficient capacity to handle the existing sewage flow, plus additional flow that may occur during wet weather periods and during periods of high runoff. All equipment used in bypass pumping shall be operated and maintained in proper running condition at all times.

E. All hose connections shall be watertight and no leakage shall be allowed to the surface. Pumping system hoses and appurtenances shall be tested prior to use in the sewer system to ensure water tightness.

F. Under no circumstances will the dumping of raw sewage be allowed on the streets or in storm sewers. The bypass shall be made by plugging an existing upstream manhole and pumping the sewage into a downstream manhole or adjacent system.

G. At the end of each working day, the pumped sewer reach shall be placed in service and the bypass plug removed.

H. The pump and bypass lines shall be of adequate capacity and size to handle all sewage flows. The pump shall be one specifically designed for sewage, capable of passing 3-inch solids.

END OF SECTION
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11. SPECIAL PERFORMANCE GUARANTEE ...................................................... SPG-1 to SPG-2
12. CONTRACTOR'S SUBMITTAL TRANSMITTAL ............................................... TR-1 to TR-2
13. SPARE PARTS FORM .................................................................................. 1
14. PERMIT-REQUIRED CONFINED SPACE NOTICE .......................................... 1
15. HOIST EQUIPMENT INDEMNIFICATION AND WAIVER ................................... 1
16. USACOE PERMIT .......................................................................................... 1 to 5
17. USACOE GENERAL CONDITIONS .................................................................. 1 to 8
18. LAKE COUNTY SMC SE/SC APPROVAL ..................................................... 1 to 2
19. IDOT LETTER OF APPROVAL AND UTILITY BOND FORM ............................ 1 to 2
**Contractor's Application For Payment No. ________**

<table>
<thead>
<tr>
<th>Application Period:</th>
<th>Application Date:</th>
</tr>
</thead>
</table>

To (Owner):

From (Contractor):

Via (Engineer)

Project:

Contract:

Owner's Contract No.:

Contractor's Project No.:

Engineer's Project No.:

### APPLICATION FOR PAYMENT

**Change Order Summary**

<table>
<thead>
<tr>
<th>Approved Change Orders</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Additions</td>
<td>Deductions</td>
</tr>
</tbody>
</table>

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

### CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments
received from Owner on account of Work done under the Contract have been applied
on account to discharge Contractor's legitimate obligations incurred in connection with
Work covered by prior Applications for Payment; (2) title of all Work, materials and
equipment incorporated in said Work or otherwise listed in or covered by this
Application for Payment will pass to Owner at time of payment free and clear of all
Liens, security interests and encumbrances (except such as are covered by a Bond
acceptable to Owner indemnifying Owner against any such Liens, security interest or
encumbrances); and (3) all Work covered by this Application for Payment is in
accordance with the Contract Documents and is not defective.

Payment of: $_______________________________________
   (Line 8 or other - attach explanation of other amount)
   is recommended by: _________________________________________
   (Engineer) (Date)

Payment of: $________________________________
   (Line 8 or other - attach explanation of other amount)
   is approved by: _________________________________________
   (Owner) (Date)

Approved by: ________________________________
   Funding Agency (if applicable) (Date)

By: ___________________________ Date: ____________
## Progress Estimate

### Contractor’s Application

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item</strong></td>
<td><strong>Specification Section No.</strong></td>
<td><strong>Description</strong></td>
<td><strong>Scheduled Value</strong></td>
<td><strong>From Previous Application (C + D)</strong></td>
<td><strong>This Period</strong></td>
<td><strong>Materials Presently Stored (not in C or D)</strong></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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Prepared by the Engineers’ Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.
## Progress Estimate

### Contractor’s Application

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid Item No.</td>
<td>Description</td>
<td>Bid Quantity</td>
<td>Unit Price</td>
<td>Bid Value</td>
<td>Estimated Quantity Installed</td>
<td>Value</td>
</tr>
<tr>
<td>Bid Item No.</td>
<td>Description</td>
<td>Bid Quantity</td>
<td>Unit Price</td>
<td>Bid Value</td>
<td>Estimated Quantity Installed</td>
<td>Value</td>
</tr>
<tr>
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<td>Unit Price</td>
<td>Bid Value</td>
<td>Estimated Quantity Installed</td>
<td>Value</td>
</tr>
</tbody>
</table>

### Totals

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Prepared by the Engineers’ Joint Contract Documents Committee and endorsed by the Associated General Contractors of America and the Construction Specifications Institute.
### Stored Material Summary

#### Contractor's Application

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice No.</td>
<td>Shop Drawing Transmittal No.</td>
<td>Materials Description</td>
<td>Stored Previously</td>
<td>Stored this Month</td>
<td>Incorporated in Work</td>
<td>Materials Remaining in Storage ($) (D + E - F)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Date (Month/Year)</td>
<td>Amount ($)</td>
<td>Amount ($)</td>
<td>Subtotal</td>
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**Totals**
CERTIFICATE OF SUBSTANTIAL COMPLETION

DATE OF ISSUANCE _______________________

OWNER  North Shore Water Reclamation District _______________________
CONTRACTOR _______________________
Contract: _______________________
Project: _______________________

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

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To _______________________
North Shore Water Reclamation District
OWNER

And To _______________________
CONTRACTOR

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

DATE OF SUBSTANTIAL COMPLETION ________________

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within ________ days of the above date of Substantial Completion.

EJCDC No. 1910-8-D (1996 Edition)
Prepared by the Engineers' Joint Contract Documents Committee and endorsed by The Associated General Contractors of America and the Construction Specifications Institute.
The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees shall be as follows:

OWNER:  

CONTRACTOR:  

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

[For items to be attached see definition of Substantial Completion as supplemented and other specifically noted conditions precedent to achieving Substantial Completion as required by Contract Documents.]

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

Executed by ENGINEER on __________________________  

Date  

______________________________________________  

ENGINEER  

By: ____________________________________________  

(Authorized Signature)  

CONTRACTOR accepts this Certificate of Substantial Completion on __________________________  

Date  

______________________________________________  

CONTRACTOR  

By: ____________________________________________  

(Authorized Signature)  

OWNER accepts this Certificate of Substantial Completion on __________________________  

Date  

______________________________________________  

OWNER  

By: ____________________________________________  

(Authorized Signature)  

CERTIFICATE OF SUBSTANTIAL COMPLETION  
CSC-2
Purpose for Work Change Directive:
Authorization for Work described herein to proceed on the basis of Cost of the Work due to:

- Nonagreement on pricing of proposed change.
- Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

Estimated change in Contract Price and Contract Times:

- Contract Price $ _____________ (increase/decrease)
- Contract Time ________________ (increase/decrease) days

If the change involves an increase, the estimated amounts are not to be exceeded without further authorization.

Recommended for Approval by Engineer: ___________________________  Date: ___________________________

Authorized for Owner by: ___________________________  Date: ___________________________

Accepted for Contractor by: ___________________________  Date: ___________________________

Approved by Funding Agency (if applicable): ___________________________  Date: ___________________________
Field Order
No. _____

<table>
<thead>
<tr>
<th>Date of Issuance:</th>
<th>Effective Date:</th>
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<tr>
<th>Project:</th>
<th>Owner:</th>
<th>Owner's Contract No.:</th>
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<tr>
<th>Contract:</th>
<th>Date of Contract:</th>
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<tr>
<th>Contractor:</th>
<th>Engineer's Project No.:</th>
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</table>

Attention:
You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 9.05A., for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference:

<table>
<thead>
<tr>
<th>Specification Section(s)</th>
<th>Drawing(s) / Detail(s)</th>
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Description:

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Attachments:

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Engineer:

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<tr>
<th>Engineer:</th>
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Receipt Acknowledged by (Contractor):

<table>
<thead>
<tr>
<th>Receipt Acknowledged by (Contractor):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Copy to Owner
## CERTIFICATE OF INSTALLATION SERVICES

<table>
<thead>
<tr>
<th>Project</th>
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<tbody>
<tr>
<td>Equipment</td>
</tr>
<tr>
<td>Specification Section</td>
</tr>
<tr>
<td>Contract</td>
</tr>
</tbody>
</table>

I hereby certify the equipment supplier/manufacturer has inspected this equipment and that it has been properly installed, adjusted, and calibrated. I further certify this equipment may now be operated for test purposes and/or normal use.

### MANUFACTURER’S REPRESENTATIVE

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (print)</td>
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<tr>
<td>Title</td>
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</table>

Representing

### CONTRACTOR

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (print)</td>
<td></td>
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<tr>
<td>Title</td>
<td></td>
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</tbody>
</table>

Comments:

This form shall be completed and submitted to ENGINEER prior to training of OWNER’S personnel in accordance with Section 01615.
CERTIFICATE OF INSTRUCTIONAL SERVICES

<table>
<thead>
<tr>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
</tr>
<tr>
<td>Specification Section</td>
</tr>
<tr>
<td>Contract</td>
</tr>
</tbody>
</table>

I hereby certify the equipment supplier/manufacturer has instructed OWNER’S personnel in the startup, operation, and maintenance of this equipment as required in the Specifications.

CONTRACTOR

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (print)</td>
<td></td>
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<tr>
<td>Title</td>
<td></td>
</tr>
</tbody>
</table>

I hereby certify that my operating personnel received _____ days instruction from

for startup, operation, and maintenance of this equipment.

OWNER

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (print)</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

This form shall be completed and submitted to ENGINEER after training of OWNER’S personnel in accordance with Section 01615.
CERTIFICATE OF POST STARTUP SERVICES

| Project |  |
|---------|  |
| Equipment |  |
| Specification Section |  |
| Contract |  |

I hereby certify the equipment supplier/manufacturer has inspected this equipment, made adjustments and calibrations, and that it is operating in conformance with the design, Specification, and manufacturer’s requirements. Notation of improper operation shall be detailed and recommendations made and attached to this form.

MANUFACTURER’S REPRESENTATIVE

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (print)</td>
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<td>Title</td>
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</table>

Representing

CONTRACTOR

<table>
<thead>
<tr>
<th>Signature</th>
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<td>Name (print)</td>
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<tr>
<td>Title</td>
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</table>

OWNER

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
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<tr>
<td>Name (print)</td>
<td></td>
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<tr>
<td>Title</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

This form shall be completed and submitted to OWNER upon completion of the 1-year reinspection as required by the Specifications.
YOU ARE DIRECTED TO MAKE THE FOLLOWING CHANGES IN THE CONTRACT DOCUMENTS:

DESCRIPTION:

REASON FOR CHANGE ORDER:

ATTACHMENTS:

<table>
<thead>
<tr>
<th>CHANGE IN CONTRACT PRICE</th>
<th>CHANGE IN CONTRACT TIMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Contract Price:</td>
<td>Original Contract Times:</td>
</tr>
<tr>
<td>$ ______________________</td>
<td>(days or dates)</td>
</tr>
<tr>
<td>Net Change in Contract Price from previous Change Orders:</td>
<td>Ready for Final Payment:</td>
</tr>
<tr>
<td>$ ___________ or $ (__________)</td>
<td>______________________</td>
</tr>
<tr>
<td>increase (decrease)</td>
<td>or (__________)</td>
</tr>
<tr>
<td>Net Change in Contract Price of this Change Order:</td>
<td>Ready for Final Payment:</td>
</tr>
<tr>
<td>$ ___________ or $ (__________)</td>
<td>______________________</td>
</tr>
<tr>
<td>increase (decrease)</td>
<td>or (__________)</td>
</tr>
<tr>
<td>Revised Contract Price:</td>
<td>Revised Contract Times:</td>
</tr>
<tr>
<td>$ ______________________</td>
<td>(days or dates)</td>
</tr>
</tbody>
</table>

CONTRACTOR agrees that this Change Order includes any and all costs associated with or resulting from the change ordered herein, including all impacts, delays, and accelerated costs. Other than the dollar amount and time allowance listed above, there shall be no other dollar or time compensation as a result of this Change Order.

THIS DOCUMENT SHALL BECOME AN AMENDMENT TO THE CONTRACT AND ALL STIPULATIONS AND COVENANTS OF THE CONTRACT SHALL APPLY HERETO.

RECOMMENDED:                  APPROVED:                      ACCEPTED:
By: __________________________ By: __________________________ By: __________________________
    ENGINEER (signature)       OWNER (signature)                 CONTRACTOR (signature)
Date: _________________       Date: _________________       Date: _________________

Note: OWNER is required to complete the Change Order Authorization form on the back if change increase or decrease is for $10,000 or more, or time of completion is 30 days or more.
CHANGE ORDER AUTHORIZATION

for

Illinois Public Projects

Name of Project: ________________________________

Change Order No.: ____________

Date: ____________

This Change Order authorizes: (check applicable boxes)

☐ (a) an increase in Contract Price by $10,000 or more
☐ (b) a decrease in Contract Price by $10,000 or more
☐ (c) an increase in Contract Times by 30 days or more:
   Substantial Completion: (days)
   Ready for Final Payment: (days)

☐ (d) a decrease in Contract Times by 30 days or more:
   Substantial Completion: (days)
   Ready for Final Payment: (days)

☐ (e) other (please describe below)

__________________________________

OWNER (or its designee ____________) has determined that the circumstances said to
necessitate the change in performance, which are: (give circumstances requiring change)

__________________________________

(check one)

☐ (a) were not reasonably foreseeable at the time the Contract was signed.
☐ (b) were germane to the original Contract as signed.
☐ (c) are in the best interest of the District and authorized by law.

Prepared by ENGINEER ________________________________ Date ________________________________

Authorized by OWNER ________________________________ Date ________________________________

OWNER shall preserve a copy of this Authorization in a permanent Contract file that is open to the public
in accordance with 720 ILCS 5/33 E-9.
<table>
<thead>
<tr>
<th>Clarification Request No.</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor:</td>
<td>Specification Section / Drawing No.:</td>
</tr>
<tr>
<td>Project:</td>
<td></td>
</tr>
<tr>
<td>Contract:</td>
<td></td>
</tr>
</tbody>
</table>

This is a request for a clarification / interpretation on the following:

---

Prepared By: Date Response Needed:

Response:

---

Prepared By: Date:

Response Returned to Contractor On:

cc: Owner:  
Resident Project Representative:  

---
CONTRACTOR’S REQUEST FOR SUBSTITUTION
(Include With Submittal)

Provisions requiring submittal of this form are described in Specification Section 01615 and paragraph 6.05 of the General and Supplementary Conditions.

Substitution Request No.: ____________________________________________________________

Project: __________________________________________________________________________

Contract: __________________________________________________________________________

We hereby apply for consideration of ________________________________________________

______ The specified equipment or material is unavailable or the time of delivery will substantially delay the construction of the project, but not as result of CONTRACTOR’S failure to pursue Work promptly or coordinate various activities. (Provide supporting information.)

______ The proposed equipment or material will provide for packaging and coordination with other equipment from a single source supplier. (Submit name of source supplier and other equipment to be packaged.)

______ The proposed equipment or material is a “Substitute Item” to that specified and the CONTRACTOR will provide the OWNER with a credit of $______________ if the equipment or material is accepted.

We certify that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to the specified, be suited to the same use as that specified, and will not prejudice CONTRACTOR’S achievement of Substantial Completion on time.

Contractor: __________________________________________________________________________

Signature: ___________________________ Date: ________________

Name (print): _______________________________________________________________________

Title: ____________________________________________________________________________

NOTE: ENGINEER may require CONTRACTOR to furnish, at CONTRACTOR’S expense, additional data about the proposed substitute including but not limited to, an analysis by CONTRACTOR of the equivalency of the proposed substitute to the named item.
A. Physical Characteristics of Proposed Substitute (if applicable).

Operating Weight:__________  Height:__________  Width:__________  Depth:__________
Voltage:__________  Hertz:__________  KW or HP:__________

B. Will acceptance of the proposed substitute by the OWNER:

1. Require a change in the Drawings or Specifications: Yes____  No____
   If yes, attach an explanation and detailed drawings or specifications.

2. Require payment of any license fee or royalty: Yes____  No____
   If yes, attach an explanation.

3. Result in a change of contract time: Yes____  No____
   If yes, attach an explanation.

C. Variations of proposed substitute from specified material, equipment, methods or procedures include: (If none, state none. Attach separate listing if more space is needed.)

1. __________________________________________________________________________
2. __________________________________________________________________________
3. __________________________________________________________________________
4. __________________________________________________________________________

D. Service Source (Maintenance, Repair, and Replacement) Availability:

1. Name of Business:____________________________________________________________
Address:____________________________________________________________________
Years in Business:_______  Factory Authorized: Yes____  No____
Parts Stocked: Major: Yes____  No____  Minor: Yes____  No____
Field Service Staff Available: Yes____  No____

2. Name of Business:____________________________________________________________
Address:____________________________________________________________________
Years in Business:_______  Factory Authorized: Yes____  No____
Parts Stocked: Major: Yes____  No____  Minor: Yes____  No____
Field Service Staff Available: Yes____  No____

E. Identify costs, direct or indirect, if any, associated with acceptance of this proposed substitute.
(If none, state none.)
____________________________________________________________________________
____________________________________________________________________________

CONTRACTOR’S REQUEST FOR SUBSTITUTION
RFS-2
INSTALLATION LIST

Location: ___________________________________________________  Telephone No.: __________________________

Date Installed: ___________________________  Date Started Up: ___________________________

Owner’s Representative to be Contacted: ____________________________________________________________

Engineer’s Representative to be Contacted: __________________________________________________________

Firm’s Name: __________________________________________________  Telephone No.: __________________________

*****

Location: ___________________________________________________  Telephone No.: __________________________

Date Installed: ___________________________  Date Started Up: ___________________________

Owner’s Representative to be Contacted: ____________________________________________________________

Engineer’s Representative to be Contacted: __________________________________________________________

Firm’s Name: __________________________________________________  Telephone No.: __________________________

*****

Location: ___________________________________________________  Telephone No.: __________________________

Date Installed: ___________________________  Date Started Up: ___________________________

Owner’s Representative to be Contacted: ____________________________________________________________

Engineer’s Representative to be Contacted: __________________________________________________________

Firm’s Name: __________________________________________________  Telephone No.: __________________________

*****

Location: ___________________________________________________  Telephone No.: __________________________

Date Installed: ___________________________  Date Started Up: ___________________________

Owner’s Representative to be Contacted: ____________________________________________________________

Engineer’s Representative to be Contacted: __________________________________________________________

Firm’s Name: __________________________________________________  Telephone No.: __________________________
1. DEFINITIONS

For purposes of this guarantee, the following definitions shall apply:

A. Project
B. Guarantor
C. Owner
D. Engineer
E. Equipment

2. GRANT OF GUARANTEE

In consideration of Owner's acceptance of the Equipment as a substitute for the equipment specified in section __________ of the Contract Documents, Guarantor hereby grants to Owner, for a period of _____ years commencing on the date of Substantial Completion of ________ an unconditional Guarantee that the Equipment shall perform as required under specification ________________ for the Project.

3. GUARANTOR'S OBLIGATIONS UPON EQUIPMENT FAILURE

In the event that, during the Guarantee period, the Equipment fails to perform as required above, Guarantor shall, upon reasonable notice, promptly make all reasonable attempts to repair/modify the Equipment. If, after reasonable opportunity to cure, it is finally determined that the Equipment cannot be repaired/modified such that it will perform as required above, and that such failure to perform is not attributable to improper maintenance or misuse, Guarantor shall, promptly after such final determination, remove the Equipment and install equipment that will perform as required, all at no cost to Owner or Engineer.

As security for Guarantor's performance under this paragraph, Guarantor hereby binds itself to pay promptly to Owner, in the event of Guarantor's failure to perform, the penal sum of __________ Dollars ($_____________), being 200% of the installed cost of the Equipment, which Guarantor acknowledges is a reasonable estimate of the damages which Owner will incur in the Equipment fails during the guarantee period. In addition, at Owner's request, Guarantor also agrees to secure its obligations hereunder by providing Owner with a Surety Bond in the penal sum of ______________________________________ Dollars ($_______________) in a format and from an entity acceptable to Owner.

4. FINAL DETERMINATION OF EQUIPMENT FAILURE

All final determinations of equipment failure required under paragraph 2 above shall be made by Engineer.

Guarantor shall be notified as promptly as possible of any performance problems with the Equipment during the Guarantee period. Consistent with operating needs of the Project, Guarantor shall be afforded reasonable opportunity to repair/modify the Equipment in place, provided that Guarantor compensates Owner for any losses resulting from faulty performance of the Equipment during such repair period. If such repairs are unsuccessful, Engineer shall issue a written determination of equipment failure citing evidence of failure, a copy of which shall be provided to Guarantor.
5. **OWNER’S RIGHT TO PERFORM**

If Guarantor fails, within a reasonable time as determined by Engineer, to repair or replace the Equipment as required above, Owner may have the Equipment removed and replaced at Guarantor’s expense, and Guarantor agrees, to the extent of the penal sum provided above, to promptly reimburse Owner for all costs incurred by Owner in so removing and replacing Equipment.

6. **MODIFICATIONS OF CONTRACT PROVISIONS**

If any guarantees relating to the Equipment contained in other Contract Documents for the Project contain guarantee periods of shorter duration than that of this Guarantee, such other guarantees shall be modified to extend the duration to equal the Guarantee period granted hereunder.
**CONTRACTOR’S SUBMITTAL TRANSMITTAL**

Date: ___________________________ | Transmittal No.: ___________________________ | Submittal No.: ___________________________

To: ___________________________ | Urgency: Extreme ______ Normal ______

Substitute: Yes ______ No ______

Project: ___________________________

Attention: ___________________________

Specification Section No.: ___________________________ | Paragraph No.: ___________________________ | Drawing No.: ___________________________

Submittal Includes: ___Shop Drawings ___Product Data ___Samples ___Test Results ___O&M Data ___Misc

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**THESE ARE TRANSMITTED:**

For Approval | As Requested | For Your Use

Remarks: ___________________________

♦ The information included in this submittal has been reviewed by the undersigned, before submitting to the ENGINEER, for compliance with paragraph 6.17 of the General Conditions.

♦ Identified in this submittal, in accordance with paragraph 6.17 of the General Conditions, are __________ variations from the Contract Documents and indicated on the following pages:

  __________________________________________________
  __________________________________________________
  __________________________________________________

♦ Contract Clarification / Interpretation Request form(s) were submitted and response(s) received:

  _____Yes  _____No  (If yes, attach form(s) to this transmittal)

Contractor:

Signature: ___________________________ | Date: ___________________________

Name (print): ___________________________

Title: ___________________________
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Contractor: 

NSWRD Representative: 

(signature) 

(written) 

(signature) 

(written)
North Shore Water Reclamation District
Post Office Box 750, 14770 W. Wm. Koepsel Drive
Gurnee, Illinois 60031
www.northshorewrd.org
847/623-6060  Fax 847/623-3205

Permit-Required Confined Space Notice

Project Name

This Notice is provided in accordance with **CFR 1910.146, OSHA: Permit-Required Confined Spaces**. The North Shore Water Reclamation District intends to comply with the requirements of this regulation.

Note that permit-required confined spaces exist within the District, including all sanitary manholes. The District maintains a listing of these confined spaces. OSHA requires that an employer implement an appropriate confined space entry procedure before employees enter any permit-required confined space.

1. A Confined Space is large enough and so configured that an employee can bodily enter to perform work; and has limited or restricted means of entry or exit; and is not designed for continuous employee occupancy.

2. A Non-Permit Confined Space is a confined space which has no hazards.

3. A Permit Required Confined Space contains or has the potential to contain a hazardous atmosphere; or has the potential for engulfment; or has a sloped configuration which may trap or asphyxiate; or has any other safety or health hazard.

OSHA requires you to notify the District immediately following entry if you or your employees encounter or create any hazards during the entry of the permit-space. Such notification must be followed up in writing, to document the nature and circumstances of the hazard.

Please acknowledge receipt of this notice below and return it to the District.

---

Contractor

Signature

Date

Title

Protecting Lake Michigan & Our Waterways
Hoist Equipment Indemnification and Waiver

Project Name

Upon execution of this Hoist Equipment Indemnification and Waiver CONTRACTOR is allowed to use OWNER’S designated hoist equipment and appurtenances ("Equipment"). In the event CONTRACTOR uses the Equipment, CONTRACTOR shall have the duty to provide a qualified operator, and such other qualified personnel that may be required, to operate Equipment at all times. OWNER shall have no duty to train CONTRACTOR or CONTRACTOR’S employees in the operation of the Equipment nor will OWNER have a duty to supervise CONTRACTOR or CONTRACTOR’S employees in the operation or use of the Equipment. CONTRACTOR hereby agrees to indemnify and save harmless OWNER from and against any all actions, causes of action, claims, demands, costs, liabilities, expenses (including reasonable attorneys' fees and court costs) and damages arising, in whole or in part, from CONTRACTOR’S use of the Equipment, including claims or damages arising, in whole or in part, from the negligence of the OWNER. CONTRACTOR shall be solely responsible for any and all loss, liability and damages that may occur due, in whole or in part, from CONTRACTOR’S use of Equipment. Upon completion of CONTRACTOR’S use of the Equipment, CONTRACTOR shall arrange for the inspection of Equipment by OWNER’S designated vendor. CONTRACTOR shall bear all costs associated with Equipment inspection, as well as any repairs that are required as result of CONTRACTOR’S use of the Equipment.

This Hoist Equipment Indemnification and Waiver is hereby incorporated into the Contract Documents and the Parties expressly acknowledges that the obligations of this Hoist Equipment Indemnification and Waiver are supported by good and adequate consideration. In case of conflict with the Contract Documents, this Hoist Equipment Indemnification and Waiver shall govern.

Accepted by CONTRACTOR:

______________________________   _________________________________
Contractor           Signature

______________________________   _________________________________
Date           Title
REPLY TO
ATTENTION OF:

Sept 7, 2018

Technical Services Division
Regulatory Branch
LRC-2015-00937

SUBJECT: Request Authorization for the Heiden Gardens Sanitary Sewer Replacement Project
Located in North Chicago (within the North Chicago Wetland Mitigation Bank Site), Lake County, Illinois

Jai Gupta
North Shore Water Reclamation District
P.O. Box 750
14770 W. Wm Koepsel Drive
Gurnee, IL 60031

Dear Mr. Gupta:

This office has verified that your proposed activity complies with the terms and conditions of Regional Permit 7 & 8 and the General Conditions for all activities authorized under the Regional Permit Program.

This verification expires three (3) years from the date of this letter and covers only your activity as described in your notification and as shown on the plans entitled, “North Shore Water Reclamation District Heiden Gardens Sanitary Sewer Replacement, North Chicago, Illinois, July 2016, Sheets 2-6, Project # S-15-3” dated July 12, 2016 prepared by North Shore Water Reclamation District. Caution must be taken to prevent construction materials and activities from impacting waters of the United States beyond the scope of this authorization. If you anticipate changing the design or location of the activity, you should contact this office to determine the need for further authorization.

The activity may be completed without further authorization from this office provided the activity is conducted in compliance with the terms and conditions of the RPP, including conditions of water quality certification issued under Section 401 of the Clean Water Act by the Illinois Environmental Protection Agency (IEPA). If the design, location, or purpose of the project is changed, you should contact this office to determine the need for further authorization.

1. This authorization is contingent upon implementing and maintaining soil erosion and sediment controls in a serviceable condition throughout the duration of the project. You shall comply with the Lake County Stormwater Management Commission (LCSMC)'s written and verbal recommendations regarding the soil erosion and sediment control (SESC) plan and the installation and maintenance requirements of the SESC practices on-
a. You shall schedule a preconstruction meeting with LCSMC to discuss the SESC plan and the installation and maintenance requirements of the SESC practices on the site. You shall contact the LCSMC at least 10 calendar days prior to the preconstruction meeting so that a representative may attend.

b. You shall notify the LCSMC or the LCSMC’s designated agent of any changes or modifications to the approved plan set. Field conditions during project construction may require the implementation of additional SESC measures. If you fail to implement corrective measures, this office may require more frequent site inspections to ensure the installed SESC measures are acceptable.

c. Prior to commencement of any in-stream work, you shall submit constructions plans and a detailed narrative disclosing the contractor's preferred method of cofferdam and dewatering method to the LCSMC or the LCSMC’s designated agent. Work in the waterway shall NOT commence until the LCSMC notifies you, in writing, that the plans have been approved.

2. You shall fully implement the practices identified in the Best Management Practices (BMP) Maintenance and Monitoring (M&M) Plan titled, "Wetland Maintenance and Monitoring Plan – North Chicago Wetland Mitigation Site – Heiden Gardens Sanitary Sewer Replacement Project", dated November 2017, prepared by Baxter & Woodman, within the first year of project construction. All BMP's shall meet performance criteria in accordance with the approved document. Your responsibility to complete the plan will not be considered fulfilled until you have demonstrated BMP success and have received written verification of that success from the U.S. Army Corps of Engineers.

3. Please note that this site is within the aboriginal homelands of several American Indian Tribes. If any cultural, archaeological or historical resources are unearthed during activities authorized by this permit, work in that area must be stopped immediately and the Corps, State Historic Preservation Office and/or Tribal Historic Preservation Office must be contacted for further instruction. The Corps will initiate the coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing on the National Register of Historic Places.

4. You are responsible for all work authorized herein and for ensuring that all contractors are aware of the terms and conditions of this authorization.

5. A copy of this authorization must be present at the project site during all phases of construction.

6. You shall notify this office of any proposed modifications to the project, including revisions to any of the plans or documents cited in this authorization. You must receive approval from this office before work affected by the proposed modification is performed.

7. You shall notify this office prior to the transfer of this authorization and liabilities
associated with compliance with its terms and conditions.

8. Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.

9. The plan will be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.

10. Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.

11. The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.

12. If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.

13. During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.

14. The portion of the side slope that is above the observed water elevation shall be stabilized as specified in the plans prior to accepting flows. The substrate and toe of slope that has been disturbed due to construction activities shall be restored to proposed or pre-construction conditions and fully stabilized prior to accepting flows.

This verification does not obviate the need to obtain all other required Federal, state, or local approvals before starting work. Please note that Section 401 Water Quality Certification has been issued by IEPA for this RP. If you have any questions regarding Section 401 certification, please contact Mr. Darin LeCrone at IEPA Division of Water Pollution Control, Permit Section #15, by telephone at (217) 782-0610.

Once you have completed the authorized activity, please sign and return the enclosed
compliance certification. If you have any questions, please contact Melyssa R. Navis of my staff by telephone at (312) 846-5533, or email at melyssa.r.navis@usace.army.mil.

Sincerely,

Kathleen G. Chernich  
Chief, East Section  
Regulatory Branch

Enclosures

Copy Furnished:

Lake County Stormwater Management Commission (Kurt Woolford)  
Lake County Planning, Building and Development Department (Matthew Meyers)  
Baxter & Woodman (Tom Ganfield)
PERMIT COMPLIANCE

CERTIFICATION

Permit Number: LRC-2015-00937
Permittee: North Shore Water Reclamation District
Date: August 30, 2018

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of said permit and if applicable, compensatory wetland mitigation was completed in accordance with the approved mitigation plan.¹

______________________________ _____________________________
PERMITTEE     DATE

Upon completion of the activity authorized by this permit and any mitigation required by the permit, this certification must be signed and returned to the following address:

   U.S. Army Corps of Engineers
   Chicago District, Regulatory Branch
   231 South LaSalle Street, Suite 1500
   Chicago, Illinois  60604-1437

Please note that your permitted activity is subject to compliance inspections by Corps of Engineers representatives. If you fail to comply with this permit, you may be subject to permit suspension, modification, or revocation.

¹ If compensatory mitigation was required as part of your authorization, you are certifying that the mitigation area has been graded and planted in accordance with the approved plan. You are acknowledging that the maintenance and monitoring period will begin after a site inspection by a Corps of Engineers representative or after thirty days of the Corps' receipt of this certification. You agree to comply with all permit terms and conditions, including additional reporting requirements, for the duration of the maintenance and monitoring period.
The permittee must comply with the terms and conditions of the Regional Permits and the following general conditions for all activities authorized under the RPP:

1. **State 401 Water Quality Certification** - Water quality certification under Section 401 of the Clean Water Act may be required from the Illinois Environmental Protection Agency (IEPA). The District may consider water quality, among other factors, in determining whether to exercise discretionary authority and require an Individual Permit. Please note that Section 401 Water Quality Certification is a requirement for projects carried out in accordance with Section 404 of the Clean Water Act. Projects carried out in accordance with Section 10 of the Rivers and Harbors Act of 1899 do not require Section 401 Water Quality Certification.

On February 16, 2017, the IEPA granted Section 401 certification, with conditions, for all Regional Permits, except for activities in certain waterways noted under RPs 4 and 8. The following conditions of the certification are hereby made conditions of the RPP:

1. The applicant must not cause:
   a) a violation of applicable water quality standards of the Illinois Pollution Control Board Title 35, Subtitle C: Water Pollution Rules and Regulations;
   b) water pollution defined and prohibited by the Illinois Environmental Protection Act;
   c) interference with water use practices near public recreation areas or water supply intakes;
   d) a violation of applicable provisions of the Illinois Environmental Protection Act.

2. The applicant must provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.

3. Except as allowed under condition 7, 9 and 10, any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by the Illinois EPA. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

4. All areas affected by construction must be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be constructed during zero or low flow conditions. The applicant shall be responsible for obtaining a NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of (1) one or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Illinois EPA’s Division of Water Pollution Control, Permit Section.

5. The applicant shall implement erosion control measures consistent with the “Illinois Urban Manual” (IEPA/USDA, NRCS; 2016).

6. The applicant is advised that the following permits(s) must be obtained from the Illinois EPA: The applicant must obtain permits to construct sanitary sewers, water mains and related facilities prior to construction.

7. Backfill used in stream crossing trenches shall be predominantly sand or larger size material, with less than 20% passing a #230 U.S. sieve.

8. Any channel relocation shall be constructed under dry conditions and stabilized to prevent erosion prior to the diversion of flow.

9. Backfill used within trenches passing through surface waters of the State, except wetland areas, shall be clean course aggregate, gravel or other material which will not cause siltation, pipe damage during placement, or chemical corrosion in place. Excavated material may be used only if:
   a) particle size analysis is conducted and demonstrates the material to be at least 80% sand or larger size material, using #230 U.S. sieve; or
b) excavation and backfilling are done under dry conditions.

10. Backfill used within trenches passing through wetland areas shall consist of clean material which will not cause siltation, pipe damage during placement, or chemical corrosion in place. Excavated material shall be used to the extent practicable, with the upper six (6) to twelve (12) inches backfilled with the topsoil obtained during trench excavation.

11. Any applicant proposing activities in a mined area or previously mined area shall provide to the IEPA a written determination regarding the sediment and materials used which are considered “acid-producing material” as defined in 35 I1. Adm. Code, Subtitle D. If considered “acid-producing material,” the applicant shall obtain a permit to construct pursuant to 35 Ill. Adm. Code 404.101.

12. Asphalt, bituminous material and concrete with protruding material such as reinforcing bar or mesh shall not be 1) used for backfill, 2) placed on shorelines/stream banks, or 3) placed in waters of the State.

13. Applicants that use site dewatering techniques in order to perform work in waterways for construction activities approved under Regional Permits 1 (Residential, Commercial and Institutional Developments), 2 (Recreation Projects), 3 (Transportation Projects), 7 (Temporary Construction Activities), 9 (Maintenance), or 12 (Bridge Scour Protection) shall maintain flow in the stream during such construction activity by utilizing dam and pumping, fluming, culverts or other such techniques.

14. In addition to any action required of the Regional Permit 13 (Cleanup of Toxic and Hazardous Materials Projects) with respect to the “Notification” General Condition 23, the applicant shall notify the Illinois EPA Bureau of Water, of the specific activity. This notification must include information concerning the orders and approvals that have been or will be obtained from the Illinois EPA Bureau of Land (BOL) for all cleanup activities under BOL jurisdiction, or for which authorization or approval is sought from BOL for no further remediation. This Regional Permit is not valid for activities that do not require or will not receive authorization or approval from the BOL.

15. The applicant shall implement Best Management Practices (BMPs) to protect water quality, preserve natural hydrology and minimize the overall impacts to aquatic resources during and after construction. If the project involves a water with an approved Total Maximum Daily Load (TMDL) allocation for any parameter, measures which ensure consistency with the assumption and requirements of the TMDL shall be included. TMDL program information and water listings are available at http://www.epa.illinois.gov/topics/water-quality/watershed-management/tmdls/index. If the project involves and impaired water listed on the Illinois Environmental Protection Agency’s Section 303(d) list for suspended solids, turbidity, or siltation, measures designed for at least a 25-year, 24-hour rainfall event shall be incorporated. Impaired waters are identified at http://www.epa.illinois.gov/topics/water-quality/watershed-management/tmdls/303d-list/index.

16. Earthen granular fill used for construction of temporary structures in waters of the State shall have less than 20% passing a #230 U.S. sieve.

17. The use of directional drilling to install utility pipelines below surface waters of the State is hereby certified provided that:

a) All pits and other construction necessary for the directional drilling process are located outside of surface waters of the State;

b) All drilling fluids shall be adequately contained such that they cannot cause a discharge to surface waters of the State. Such fluids shall be managed such that they are not discharged to waters of the State and disposed of appropriately in accordance with the regulations at 35 Ill. Adm. Code Subtitle G.

c) Erosion and sediment control is provided with Conditions 2, 4, and 5.

2. Illinois Coastal Management Program - Any non-federal entity applying to the Corps for an Individual Permit or a Letter of Permission for a project located within the boundary of the Illinois Coastal Management Program (ICMP), including waters of Lake Michigan, is required to submit a Federal Consistency Determination confirmation from the Illinois Coastal Management Program as part of the permit review process.

On February 18, 2017, the Illinois Department of Natural Resources, Coastal Management Program granted the Federal Consistent Determination for the Regional Permit Program. This determination is confirmation that the activities covered under the Regional Permit Program are consistent with the policies of the ICMP.

PDF maps of the Illinois Coastal Management Program’s Zone Boundaries can be found at the bottom of the page at www.dnr.illinois.gov/cmp/Pages/boundaries.aspx and instructions on requesting an ICMP Federal Consistency Determination can be found at www.dnr.illinois.gov/cmp/Documents/ICMPFederalConsistencyReviewProcedures.pdf.
3. Threatened and Endangered Species –

a) For applications where a Federal agency other than the District is designated as the lead agency, the designated lead agency shall follow agency specific procedures for complying with the requirements of Section 7 of the Endangered Species Act of 1973 (Act). Federal permittees must provide the District with the following documentation to demonstrate compliance with those requirements: the species list, your effects determination for each species, and the rationale for your effects determination for each species.

b) For non-Federal permittees, if the District determines that the activity may affect Federally listed species or critical habitat, the District must initiate section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) in accordance with the Endangered Species Act of 1973, as amended (Act). Applicants must provide additional information that would enable the District to conclude that the proposed action will have no effect on Federally listed species.

The application packet must indicate whether resources (species, their suitable habitats, or critical habitat) listed or designated under the Act, may be present within areas affected (directly or indirectly) by the proposed project. Applicants must provide a section 7 species list for the action area using the on-line process at the USFWS website. You can access "U.S. Fish and Wildlife Service Endangered Species Program of the Upper Midwest" website at www.fws.gov/midwest/Endangered. Click on the section 7 Technical Assistance green shaded box in the lower right portion of the screen and follow the instructions to completion. Review all documentation pertaining to the species list and provide your effects determination for each species along with the rationale for your effects determination for each species to this office for review.

If no species, their suitable habitats, or critical habitats are listed, then a “no effect” determination can be made, and section 7 consultation is not warranted. If species or critical habitat appear on the list or suitable habitat is present within the action area, then a biological assessment or biological evaluation will need to be completed to determine if the proposed action will have “no effect” or “may affect” the species or suitable habitat. The District must request initiation of section 7 consultation with the USFWS upon agreement with the applicant on the effect determinations in the biological assessment or biological evaluation.

If the issues are not resolved, the analysis of the situation is complicated, or impacts to listed species or critical habitat are found to be greater than minimal, the District will consider reviewing the project under the Individual Permit process.

Projects in Will, DuPage, or Cook Counties that are located in the recharge zones for Hine’s emerald dragonfly critical habitat units may be reviewed under the RPP, with careful consideration due to the potential impacts to the species. All projects reviewed that are located within 3.25 miles of a critical habitat unit will be reviewed under Category II of the RPP. Please visit the following website for the locations of the Hine’s emerald dragonfly critical habitat units in Illinois. www.fws.gov/midwest/endangered/insects/hed/FRHinesFinalRevisedCH.html

4. Historic Properties – In cases where the District determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity may require an Individual Permit. A determination of whether the activity may be authorized under the RPP instead of an Individual Permit will not be made until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

Federal permittees designated as the lead agency shall follow agency specific procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the District with the appropriate documentation to demonstrate compliance with those requirements.

Non-Federal permittees must include notification to the District if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the permit application must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)).

When reviewing permit submittals, the District will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. Based on the information submitted and these efforts, the District will determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the District,
the non-Federal applicant must not begin the activity until notified by the District either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

The District must take into account the effects on such properties in accordance with 33 CFR Part 325, Appendix C, and 36 CFR 800. If all issues pertaining to historic properties have been resolved through the consultation process to the satisfaction of the District, Illinois Historic Preservation Agency (IHPA) and Advisory Council on Historic Preservation, the District may, at its discretion, authorize the activity under the RPP.

Applicants are encouraged to obtain information on historic properties from the IHPA and the National Register of Historic Places at the earliest stages of project planning. For information, contact:

Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, IL 62701-1507
(217) 782-4836
www.illinois.gov/ihpa/

If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity, you must immediately notify this office of what you have found, and to the maximum extent practicable, stop activities that would adversely affect those remains and artifacts until the required coordination has been completed. The District will initiate the Federal, Tribal and State coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

5. Soil Erosion and Sediment Control - Measures must be taken to control soil erosion and sedimentation at the project site to ensure that sediment is not transported to waters of the U.S. during construction. Soil erosion and sediment control measures must be implemented before initiating any clearing, grading, excavating or filling activities. All temporary and permanent soil erosion and sediment control measures must be maintained throughout the construction period and until the site is stabilized. All exposed soil and other fills, and any work below the ordinary high water mark must be permanently stabilized at the earliest practicable date.

Applicants are required to prepare a soil erosion and sediment control (SESC) plan including temporary best management practices (BMPs) to be implemented during construction. It is recommended that the plan be designed in accordance with the Illinois Urban Manual, current edition (www.aiswcd.org/illinois-urban-manual). Practice standards and specifications for measures outlined in the soil erosion and sediment control plans should follow the latest edition of the “Illinois Urban Manual: A Technical Manual Designed for Urban Ecosystem Protection and Enhancement.” Additional SESC measures not identified in the Illinois Urban Manual may also be utilized upon District approval.

At the District’s discretion, an applicant may be required to submit the SESC plan to the local Soil and Water Conservation District (SWCD) or the Lake County Stormwater Management Commission (SMC) for review. When the District requires submission of an SESC plan, the following applies: An activity may not commence until the SESC plan for the project site has been approved; The SWCD/SMC will review the plan and provide a written evaluation of its adequacy; A SESC plan is considered acceptable when the SWCD/SMC has determined that it meets technical standards. Once a determination has been made, the authorized work may commence unless the SWCD/SMC has requested that they be notified prior to commencement of the approved plans. The SWCD/SMC may elect to attend pre-construction meetings with the permittee and conduct inspections during construction to determine compliance with the plans. Applicants are encouraged to begin coordinating with the appropriate SWCD/SMC office at the earliest stages of project planning. For information, contact:

Kane-DuPage SWCD
2315 Dean Street, Suite 100
St. Charles, IL 60174
(630) 584-7960 ext.3
www.kanedupageswcd.org

Lake County SMC
500 W. Winchester Rd, Suite 201
Libertyville, IL 60048
(847) 377-7700
www.lakecountyil.gov/stormwater

McHenry-Lake County SWCD
1648 South Eastwood Dr.
Woodstock, IL 60098
(815) 338-0099 ext.3
www.mchenryswcd.org

North Cook SWCD
640 Cosman Rd
Elk Grove Village, IL 60007
(847) 885-8830
www.northcookswcd.org

Will/South Cook SWCD
1201 S. Gougar Rd
New Lenox, IL 60451
(815) 462-3106
www.will-scookswcd.org
6. **Total Maximum Daily Load** - For projects that include a discharge of pollutant(s) to waters for which there is an approved Total Maximum Daily Load (TMDL) allocation for any parameter, the applicant must develop plans and BMPs that are consistent with the assumptions and requirements in the approved TMDL. The applicant must incorporate into their plans and BMPs any conditions applicable to their discharges necessary for consistency with the assumptions and requirements of the TMDL within any timeframes established in the TMDL. The applicant must carefully document the justifications for all BMPs and plans, and install, implement and maintain practices and BMPs that are consistent with all relevant TMDL allocations and with all relevant conditions in an implementation plan. Information regarding the TMDL program, including approved TMDL allocations, can be found at the following website:  [www.epa.state.il.us/water/tmdl/](http://www.epa.state.il.us/water/tmdl/)

7. **Floodplain** - Discharges of dredged or fill material into waters of the United States within the 100-year floodplain (as defined by the Federal Emergency Management Agency) resulting in permanent above-grade fills must be avoided and minimized to the maximum extent practicable. When such an above-grade fill would occur, the applicant may need to obtain approval from the Illinois Department of Natural Resources, Office of Water Resources, (IDNR-OWR) which regulates activities affecting the floodway and the local governing agency (e.g., Village or County) with jurisdiction over activities in the floodplain. Compensatory storage may be required for fill within the floodplain. Applicants are encouraged to obtain information from the IDNR-OWR and the local governing agency with jurisdiction at the earliest stages of project planning. For information on floodway construction, contact:

   IDNR/OWR  
   2050 Stearns Road  
   Bartlett, IL  60103  
   (847) 608-3100  
   [www.dnr.illinois.gov/WaterResources/](http://www.dnr.illinois.gov/WaterResources/)

   For information on floodplain construction, please contact the local government and/or the Federal Emergency Management Agency. Pursuant to 33 CFR 320.4(j), the District will consider the likelihood of the applicant obtaining approval for above-ground permanent fills in floodplains in determining whether to issue authorization under the RPP.

8. **Navigation** - Regulated activities may not cause more than a minimal adverse effect on navigation. Safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee’s expense on authorized facilities within navigable waters of the United States. The permittee understands and agrees that if future operations by the United States require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work will cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim will be made against the United States on account of any such removal or alteration.

9. **Proper Maintenance** - Authorized structures or fill must be properly maintained, including that necessary to ensure public safety.

10. **Aquatic Life Movements** - Regulated activities may not substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including species that normally migrate through the area, unless the activity’s primary purpose is to impound water.

11. **Equipment** - Soil disturbance and compaction in regulated areas must be minimized through the use of low ground pressure equipment, matting for heavy equipment, or other measures as approved by the District.

12. **Wild and Scenic Rivers** - Regulated activities may not occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system, while the river is in an official study status. Information on Wild and Scenic Rivers may be obtained from the appropriate land management agency in the area, such as the National Park Service and the U.S. Forest Service.

13. **Tribal Rights** - Regulated activities or their operation may not impair reserved Tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

14. **Water Supply Intakes** - Discharges of dredged or fill material may not occur in the proximity of a public water supply intake except where the discharge is for repair of the public water supply intake structures or adjacent bank stabilization.

15. **Shellfish Production** - Discharges of dredged or fill material may not occur in areas of concentrated shellfish production.
For all activities, notification must include:

A detailed narrative of the proposed activity describing all work to be performed, a clear project purpose and need statement, the Regional Permit(s) to be used for the activity, the area (in acres) of permanent and temporary fills proposed in each water of the U.S., and a statement that the terms and conditions of the RPP will be followed. For projects with impacts to multiple aquatic resources, provide a table identifying impact types and amounts.

b. A completed joint application form for Illinois signed by the applicant or agent. The application form is available at www.lrc.usace.army.mil/Portals/36/docs/regulatory/forms/appform.pdf. If the applicant does not sign the joint application form, notification must include a signed, written statement from the applicant designating the agent as their representative.
c. A delineation of waters of the U.S., including wetlands, for the project area, and for areas adjacent to the project site (off-site wetlands must be identified through the use of reference materials including review of local wetland inventories, soil surveys, and the most recent available aerial photography), must be prepared in accordance with the current U.S. Army Corps of Engineers methodology (www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/reg_supp.aspx) and generally conducted during the growing season.* The District’s wetland delineation standards are available at www.lrc.usace.army.mil/Portals/36/docs/regulatory/pdf/Delineations.pdf. For sites supporting wetlands, the delineation must include a Floristic Quality Assessment (Swink and Wilhelm. 1994, latest edition, Plants of the Chicago Region). The delineation must also include information on the occurrence of any high-quality aquatic resources (see Appendix A), and a listing of waterfowl, reptile and amphibian species observed while at the project area. The District reserves the right to exercise judgment when reviewing submitted wetland delineations. Flexibility of these requirements may be allowed by the District on a case-by-case basis only.

d. A street map showing the location of the project area.

e. Latitude and longitude for the project in decimal degrees format (for example 41.878639N, -87.631212W).

f. Preliminary engineering drawings sized 11” by 17” (full-sized may be requested by the project manager) showing all aspects of the proposed activity and the location of waters of the U.S. to be impacted and not impacted. The plans must include grading contours, proposed and existing structures such as buildings footprints, roadways, road crossings, stormwater management facilities, utilities, construction access areas and details of water conveyance structures. The plans must also depict buffer areas, outlots or open space designations, best management practices, deed restricted areas and restoration areas, if required under the specific RP.

g. Submittal of soil erosion and sediment control (SESC) plans that identify all SESC measures to be utilized during construction of the project.

h. A determination whether resources (species, their suitable habitats, or critical habitat) listed or designated under the Endangered Species Act of 1973, as amended, may be present within areas affected (directly or indirectly) by the proposed project. Applicants must provide a section 7 species list for the action area using the on-line process at the USFWS website. You can access “U.S. Fish and Wildlife Service Endangered Species Program of the Upper Midwest” website at www.fws.gov/midwest/Endangered. Click on the section 7 Technical Assistance green shaded box in the lower right portion of the screen and follow the instructions to completion. Review all documentation pertaining to the species list and provide your effects determination for each species along with the rationale for your effects determination for each species to this office for review.

In the event there are no species, their suitable habitats, or critical habitats within areas affected (directly or indirectly) by the proposed project, then a “no effect” determination can be made and section 7 consultation is not warranted. If species or critical habitat appear on the list, or suitable habitat is present within the action area, then a biological assessment or biological evaluation will need to be completed to determine if the proposed action will have a “no effect” or a “may affect” determination on the species or suitable habitat. The District will request initiation of section 7 consultation with the USFWS upon agreement with the applicant on the effects determinations in the biological assessment or biological evaluation. If the issues are not resolved, the analysis of the situation is complicated, or impacts to listed species or critical habitat are found to be greater than minimal, the District will consider reviewing the project under the Individual Permit process.

i. A determination of the presence or absence of any State threatened or endangered species. Please contact the Illinois Department of Natural Resources (IDNR) to determine if any State threatened and endangered species could be in the project area. You can access the IDNR’s Ecological Compliance Assessment Tool (EcoCAT) at the following website: dnr.illinois.gov/EcoPublic/. For the first general information question, select “To obtain information on Illinois T&E species or INAI sites for federal agency actions” and select “U.S. Army Corps of Engineers” from the drop down menu. Once the EcoCAT and consultation process is complete, forward all resulting information to this office for consideration. The report must also include recommended methods as required by the IDNR for minimizing potential adverse effects of the project.

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* If a wetland delineation is conducted outside of the growing season, the District will determine on a case-by-case basis whether sufficient evidence is available to make an accurate determination. If the District finds that the delineation lacks sufficient evidence, the application will not be considered complete until the information is provided. This may involve re-delineating the project site during the growing season.
j. A statement about the knowledge of the presence or absence of historic properties, which includes properties listed, or properties eligible to be listed in the National Register of Historic Places. A letter from the Illinois Historic Preservation Agency (IHPA) may be obtained indicating whether your project is in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. The permittee must provide all pertinent correspondence with the IHPA documenting compliance. The IHPA has a checklist of documentation required for their review located here: www.illinois.gov/ihpa/Pchip/Preserve/Pages/Resource-Protection.aspx.

k. Where an appropriate watershed plan is available, the applicant must address in writing how the proposed activity is aligned with the relevant water quality, hydrologic, and aquatic resource protection recommendations in the watershed plan. A list of watershed plans is available at www.lrc.usace.army.mil/Missions/Regulatory/Illinois/WatershedPlans.aspx.

l. A discussion of measures taken to avoid and/or minimize impacts to aquatic resources on the project site.

m. A compensatory mitigation plan for all impacts to waters of the U.S. (if compensatory mitigation is required under the specific RP) in compliance with 33 CFR 332.

n. A written narrative individually addressing each of the items listed under the specific RP(s) being requested.

For Category II activities, the District will provide an Agency Request for Comments (ARC) which describes the proposed activity. The ARC will be sent to interested Federal, state and local agencies, and appropriate Indian Tribes for review and comment. Additional entities may also be notified as needed. Agencies have ten (10) calendar days from the date of the ARC to contact the District and either provide comments or request an extension, not to exceed fifteen (15) calendar days. The Illinois Historic Preservation Agency and Indian Tribes have thirty (30) calendar days from the date of the ARC to provide comments. The District will fully consider agency comments received within the specified time frame. If the District determines that the activity complies with the terms and conditions of the RPP and impacts on aquatic resources are minimal, the District will notify the applicant in writing and include special conditions if deemed necessary. If the District determines the impacts of the proposed activity are more than minimal, the District will notify the applicant that the project does not qualify for authorization under the RPP and instruct the applicant on the procedures to seek authorization under an Individual Permit.

24. **Compliance Certification** - Any permittee who has received authorization under the RPP from the District must submit a signed certification stating that the authorized work has been completed. The certification will be forwarded by the District with the authorization letter and will include: a) a statement that the authorized work was done in accordance with the District’s authorization, including any general or specific conditions; b) a statement that any required mitigation was completed in accordance with the permit conditions, and; c) the signature of the permittee certifying the completion of the work and mitigation.

25. **Multiple use of Regional Permits** - In any case where a Regional Permit is combined with any other Regional Permit to cover a single and complete project (except where prohibited under specific Regional Permits), the applicant must notify the District in accordance with General Condition 23. If multiple Regional Permits are used, the total impact may not exceed the maximum allowed by the Regional Permit with the greatest impact threshold.

26. **Other Restrictions** - Authorization under the RPP does not obviate the need to obtain other Federal, State or local permits, approvals, or authorizations required by law nor does it grant any property rights or exclusive privileges, authorize any injury to the property or rights of others or authorize interference with any existing or proposed Federal project.

Approved by:

//ORIGINAL SIGNED/                               March 23, 2017
Christopher T. Drew                                Date
Colonel, U.S. Army
District Commander
October 12, 2018

Jai Gupta
North Shore Water Reclamation District
P.O. Box 750
14770 W. Wm. Koepsel Dr.
Gurnee, IL 60031
JaGupta@northshorewrd.org

Subject: SMC Approval #WDP-18-235
Heiden Gardens Sanitary Sewer Replacement
City of North Chicago, Lake County, Illinois
U.S. Army Corps LRC-2015-00937

SMC SE/SC APPROVAL

Dear Mr. Gupta:

The Lake County Stormwater Management Commission approves the proposed soil erosion and sediment control (SE/SC) measures for the proposed sanitary sewer replacement at Heiden Gardens in North Chicago (42.3015, -87.8835). This approval is conditional upon the following:

- Provide prior notification to Tim Cook of the SMC (847-377-7703) of the pre-construction meeting at least 5 calendar days in advance to enable SMC attendance. The $240 pre-construction deposit will be refunded after the meeting. The $720 deposit, minus any and all assessed fees, will be refunded after permanent site stabilization has been achieved.

- Installing and maintaining sedimentation and erosion control methods.

- Discussion at the pre-construction meeting will include:
  - Enhanced SE/SC for the work in an ADID wetland.
  - Designated Erosion Control Inspector (DECI) contact information.
  - Proposed method for dewatering.
  - Installation and maintenance of the SE/SC measures near limits of the wetland.

- Coordination with the SMC Inspector prior to the start of dewatering operations.
The DECI shall provide weekly reports to the SMC Inspector. At a minimum, the reports shall include photographs and evaluation of critical areas, as directed by the SMC Inspector, including:

- Dewatering activities

This approval is based on the plans entitled:

NORTH SHORE WATER RECLAMATION DISTRICT, HEIDEN GARDENS SANITARY SEWER REPLACEMENT. NORTH CHICAGO, ILLINOIS, SEPTEMBER 2018, prepared by the north shore water reclamation district. dated July 12, 2016, last revised November 4, 2016, received by SMC October 12, 2018. 6-sheets

A Watershed Development Permit issued by the City of North Chicago is required prior to construction.

We would like to be of assistance. If you have any questions, or would like to set up a meeting, please call our office at (847) 377-7711 or e-mail me at rgardiner@lakecountyil.gov. If you have any additional concerns that have not been addressed by the regulatory, you may contact Chief Engineer Kurt Woolford kwoolford@lakecountyil.gov or Executive Director Michael Warner mwarner@lakecountyil.gov at (847) 377-7700.

Sincerely,

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Robert D. Gardiner, P.E., CFM
Permit Engineer

Kurt Woolford, P.E., CFM
Chief Engineer

C: Kaitlyn Pascus – USACE (LRC-2015-937)
Tom Ganfield – Baxter & Woodman, Inc.
Steve Cieslica – City of North Chicago/Trotter & Associates
Juli Crane/Tim Cook – LCSMC
Nick Wolf -- NSWRD
December 1, 2018

Mr. Jai Gupta  
North Shore Water Reclamation District  
P.O. Box 750  
14770 W. Wm. Koepsel Drive  
Gurnee, IL 60031

Dear Mr. Gupta:

The permit request Ref # 049-82503 has been reviewed and is hereby tentatively accepted. In accordance with Department policy, a utility permit bond was required and must be submitted prior to permit issuance.

The following item(s) must be completed and returned to our office before the referenced permit request can be processed.

- Revised Utility Permit Forms (Pages 1&2 printed on one sheet front and back) require execution [four (4) copies].
- Individual Utility Permit Bond Forms [ four (4) copies] require execution by the contractor. Amount of Bond $20,000. Note, please leave the space after “Utility Permit number” blank, our department will fill this in once the permit is issued.

If you have any questions or need additional information, please contact our Area Utility Coordinator, Paul L. Pence, at (847) 705-4436.

Very truly yours,

Anthony J. Quigley, P.E.  
Region One Engineer

By:  
Jose A. Dominguez, P.E.  
Project Support Engineer

Enclosure
We ________________________________, (Mailing Address) as Permittee, and ________________________________, as Surety, do hereby guarantee performance of the work described in the Illinois Department of Transportation Utility Permit number __________________________ which grants permission and authority to perform that work upon Illinois Department of Transportation property between IL 43 and US 41 At Brompton Avenue, in Lake County in accordance with the terms and description in the permit and sketch and with Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois State Highway System.

If the Permittee performs the work in accordance with the terms and conditions of and description in the permit and sketch and with Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois State Highway System, no claim or demand will be made against this bond's monetary obligation. Otherwise, the Surety is liable to the Department for all expenses incurred in any action in which it prevails against the Permittee or Surety.

Surety's monetary responsibility under this bond is limited to $20,000 and shall also be the responsibility of its successors and assigns for five years.

Surety shall provide written notice to the Illinois Secretary of Transportation at least 30 days prior to the inability (due to dissolution or otherwise) of Surety to fulfill its commitments under this bond. Permittee and Surety have a joint and severable responsibility to replace Surety within the 30 day period with another Surety acceptable to the department.

By our signatures below, we commit ourselves to the terms and the conditions of this bond:

___________________________________________  __________________________________________
Signature of Agent for Surety                  Signature of Agent for Permittee

___________________________________________  __________________________________________
Name of Surety (Print or Type)                 Name of Permittee (Print or Type)

___________________________________________  __________________________________________
Mailing Address                                 Mailing Address

________________________  ________________  ____________
City                        State                      Zip

(____) ___________________    __________________    __________________
Telephone Number                  Date                       Date
DRAWINGS