

**CITY OF MCHENRY, ILLINOIS  
BROAD STREET, RICHMOND ROAD,  
AND MILL STREET WATER MAIN  
REPLACEMENT**

**PROJECT MANUAL**

Baxter & Woodman, Inc.

Illinois  
815.459.1260

Wisconsin  
262.763.7834

Florida  
561.655.6175

Texas  
281.350.7027

PROJECT TITLE PAGE  
00 01 01 (221284.41)



00 01 07

SEALS PAGE

May 6, 2025

1. Specifications of materials and labor required for the construction work shown on the Drawings are prepared by Baxter & Woodman, Inc., Consulting Engineers.
2. The Drawing which accompanies these Specifications is titled: City of McHenry, Illinois, Broad Street, Richmond Road, and Mill Street Water Main Replacement.
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Project Manager  
License Expires 11/30/25

BAXTER & WOODMAN, INC.  
STATE OF ILLINOIS – PROFESSIONAL DESIGN FIRM  
LICENSE NO. 184.001121-0014 - EXPIRES 4/30/2027



**CITY OF MCHENRY, ILLINOIS  
BROAD STREET, RICHMOND ROAD, AND MILL STREET WATER MAIN REPLACEMENT  
PROJECT MANUAL**

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00 11 13

ADVERTISEMENT FOR BIDS

CITY OF MCHENRY, ILLINOIS

1. Time and Place of Opening Bids. Sealed proposals for the construction of the Broad Street, Richmond Road, and Mill Street Water Main Replacement for the City of McHenry, McHenry County, Illinois, will be received at the City of McHenry Public Works Department at 1415 Industrial Drive, McHenry, IL 60050 until 10:00 A.M. on June 3, 2025, and at that time will be publicly opened and unit price total read aloud.

2. Description of Work. The proposed construction consists of installing approximately 980 lineal feet of 8-inch and 1,290 lineal feet of 12-inch water main via directional drilling and open cut methods, including new hydrants, valves and other miscellaneous items of work. The contract will include all work necessary to install the water main, install water service lines via directional drilling or open cut methods, completely replace lead service lines, reconnect existing water service lines, restore the roadway, and perform all restoration to return the area to its original condition.

3. Information for Bidders. All pertinent documents may be **examined** at the City of McHenry Public Works Department at 1415 Industrial Drive, McHenry, IL 60050 or on the internet at [www.bhfxplanroom.com](http://www.bhfxplanroom.com).

Copies of the Bidding Documents may be **obtained** from BHFX Digital Imaging, [www.bhfxplanroom.com](http://www.bhfxplanroom.com) upon a non-refundable payment of \$45.00 per set. **Documents can be purchased only through BHFX Digital Imaging.**

Not less than the prevailing rate of wages as determined by the Department of Labor or determined by the court on review shall be paid to all laborers, workmen and mechanics performing work under this contract.

The City of McHenry is exempt from the Illinois State, municipal or county Retailers Occupation Tax, Service Occupation Tax, Use Tax, and Service Use Tax as described in Illinois Compiled Statute Chapter 35. Bid prices shall not include the cost of such taxes.

All Bids must be accompanied by a Bidder's bond, certified check, bank cashier's check or bank draft payable to the City of McHenry for ten percent 10% of the total amount of the Bid as provided in the Bidder Instructions. **Bidders must submit the attached Notification of Intent to Bid to the City no less than three calendar days prior to the bid opening.**

4. Rejection of Bids. The City Council reserves the right to reject any or all Bids and to waive technicalities. Unless the Bids are rejected for good cause, award of contract shall be made to the lowest responsible and responsive Bidder.

Dated at the City of McHenry, Illinois this 6th day of May 2025.

Wayne Jett, Mayor

Trisha Ramel, City Clerk

END OF ADVERTISEMENT FOR BIDS

ADVERTISEMENT FOR BIDS

00 11 13-1 (221284.41)





City of McHenry  
Department of Public Works  
1415 Industrial Drive  
McHenry, Illinois 60050  
Phone: (815) 363-2186

## **NOTIFICATION OF INTENT TO BID**

Prior to submitting a bid, a firm interested in submitting a bid as a Prime Contractor must complete and return this *Notification of Intent to Bid* form no less than three calendar days prior to the bid opening. *Notification of Intent to Bid* submittals will not be processed by the City after 3:30 PM three (3) calendar days preceding the published letting date. Submittal of the *Notification of Intent to Bid* shall confirm a Contractor's intention to submit a bid and shall serve as the Contractor's request for the City's *Authorization to Bid*. **NO BIDS SHALL BE ACCEPTED UNLESS THE CONTRACTOR HAS SUBMITTED THE NOTIFICATION OF INTENT TO BID FORM.**

For bids requiring IDOT Prequalification, firms shall submit their IDOT Certification of Prequalification along with their Notification of Intent to Bid form.

The contractor shall complete and return this form to the following email address: [radams@cityofmchenry.org](mailto:radams@cityofmchenry.org). This form shall also be utilized to designate a point of contact for issuing addenda. Upon receipt of the *Notification of Intent to Bid* form, the City will acknowledge its receipt and provide the City's *Authorization to Bid* via e-mail.

Project \_\_\_\_\_

Contractor \_\_\_\_\_

Contact Name & Title \_\_\_\_\_

Signature \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Date \_\_\_\_\_



00 21 00.13

## BIDDER INSTRUCTIONS

### 1. DEFINED TERMS

1.01 Terms used in these Bidder Instructions which are defined in the "Standard General Conditions of the Construction Contract" (EJCDC No. C-700, 2007 edition) have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement for Bids, Bidder Instructions, the Bid Form, all submittals listed in 00 43 93 Bid Submittal Checklist and the proposed Contract Documents, including all Addenda issued prior to receipt of Bids.

### 2. COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents stated in the Bidder Instructions may be obtained from the Engineer or the Engineer's designated independent distributor.

2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer in making copies of Bidding Documents available do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

### 3. QUALIFICATIONS OF BIDDERS

3.01 To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five (5) business days of Owner's request written evidence, such as evidence of Bidder's qualification to do business in the state where the Project is located, financial data, previous experience, present commitments and other such data as may be called for below (or in the Supplementary Conditions).

### 4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.01 It is the responsibility of each Bidder before submitting a Bid to: (a) examine the Contract Documents thoroughly; (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work; (c) consider federal, state and local Laws and Regulations that may affect cost, progress, performance of furnishing of the Work; (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

BIDDER INSTRUCTIONS  
00 21 00.13-1 (221284.41)

4.02 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Facilities, and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.02, 4.03 and 4.04 of the General Conditions.

4.03 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work, and which Bidder deems necessary to determine his Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

4.04 On request in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.

4.05 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the Successful Bidder. Easements for structures or changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

4.06 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 Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## 5. INTERPRETATIONS AND ADDENDA

5.01 Direct all questions about the meaning or intent of the Contract Documents to Engineer (Telephone 815.444.3371 or email [mkenny@baxterwoodman.com](mailto:mkenny@baxterwoodman.com)). Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addendum emailed by the Engineer or the Engineer's designated independent distributor to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five (5) business days prior to the Bid Opening might not be answered. Only questions answered by formal written Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect.

5.02 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

## 6. BID SECURITY

6.01 Each Bid must be accompanied by Bid security made payable to Owner in an amount and in the form stated in the Advertisement for Bids.

6.02 The Bid securities of all except the two lowest responsive, responsible Bidders will be returned promptly after the Bids have been tabulated and checked. The Bid securities of the two lowest responsive, responsible Bidders will be returned as soon as the contract and bonds of the successful Bidder have been properly executed and approved.

## 7. CONTRACT TIMES

7.01 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 on the Bid Form.

## 8. LIQUIDATED DAMAGES

8.01 Provisions for liquidated damages, if any, are set forth in the Supplementary Conditions, Article 12.

## 9. SUBSTITUTE OR "OR EQUAL" ITEMS

9.01 The Contract, if awarded, will be based solely on the materials and equipment described in the Drawings and Specifications without consideration of possible substitute or "or equal" items.

## 10. SUBCONTRACTORS, SUPPLIERS, AND OTHERS

10.01 The apparent low Bidder, or any other Bidder so requested, shall submit to the office of Engineer within five (5) business days after the receipt of Bids, the following information on 00 43 36 Proposed Subcontractors Form:

A. A list of the names of Bidder's proposed Subcontractors whose portion of the Work exceeds \$10,000, along with a description of the Work to be performed by each.

10.02 Bidder shall be required to perform with his own Work forces at least 30% of the Work, unless written consent to subcontract a greater percentage of the Work is obtained from Owner.

## 11. BID FORM

11.01 Only the Bid Forms attached hereto shall be used. Where required, the Bid price of each item shall be in writing and in figures; in case of conflict, the former shall apply.

11.02 Bidder, when signing the Bid, shall meet the following requirements:

A. The full name, telephone number, and business address of each Bidder must be entered on the Bid submitted. The Bid shall be signed in the space provided therefore by written signature of the person or persons properly authorized to sign it. All names must be typed or printed below the signature.

B. A Bid submitted by an individual shall be signed by Bidder or by an authorized agent.

C. Bids by partnerships must be executed in the partnership names and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

D. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The state of incorporation shall be shown below the signature. Such corporation must be licensed to do business in the state in which the Project is located before a Contract to do the Work embraced in the Bid can be signed. If a foreign corporation, the state under which it is incorporated must be named.

E. Bids which are signed by an attorney-in-fact for individuals, firms, partnerships or joint ventures shall have attached thereto a power-of-attorney evidencing authority to sign the Bid.

11.03 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid Form.

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

## 12. BASIS OF BID; EVALUATION OF BIDS

12.01 Unit price:

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

12.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in Paragraph 11.02 of the General Conditions.

### 13. SUBMISSION OF BIDS

13.01 Bids shall be submitted at the time and place indicated in the Advertisement for Bids and shall be sealed in an opaque envelope, marked with the Project title (and if applicable, the designated portion of the Project for which the Bid is submitted), name and address of the Bidder, and accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face thereof. Any Bids received after the official Bid closure time will be returned to the Bidder unopened.

### 14. MODIFICATION AND WITHDRAWAL OF BID

14.01 Bids may be modified or withdrawn by notice to Owner at the place designated for receipt of Bids any time prior to opening of Bids. Such notice shall be in writing and signed by Bidder.

14.02 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 Bidder Instructions.

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

14.04 After the Bid opening, no Bid may be modified, withdrawn or canceled by Bidder without consent of Owner.

### 15. OPENING OF BIDS

15.01 Bids will be publicly opened and read aloud. An abstract of the amounts of the base Bids and major alternates (if any) will be made available by Owner to Bidders after opening of Bids.

### 16. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

16.01 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.

### 17. AWARD OF CONTRACT

17.01 Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work, and the right to disregard all nonconforming, nonresponsive, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of

any Bidder if Owner believes that it would not be in Owner's best interest 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 criteria established by Owner.

17.02 In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, supplemental prices, and other data as may be requested in the Bid Form or prior to the Notice of Award.

17.03 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 the Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

17.04 After determination of the apparent Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of alternates for which Owner determines funds will be available at the time of award.

17.05 A Bid which has not been prepared according to the instructions contained herein or which does not contain a unit price which is both adequate and reasonable for each and every item named in the Bid may be considered irregular and subject to rejection. Unbalanced Bids which cannot be resolved by mathematical correction without resorting to information not contained in the Bid, are subject to rejection.

17.06 If the Contract is to be awarded, it will be awarded to the lowest responsive, responsible Bidder.

17.07 If the Contract is awarded, Owner will give Successful Bidder notification in writing at the earliest possible date.

## 18. CONTRACT SECURITY AND INSURANCE

18.01 Article 5 of the General Conditions and the Supplementary Conditions set forth Owner's requirements as to Performance, Payment and other bonds, and insurance requirements. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Performance Bond, Payment Bond, and Certificate of Insurance.

## 19. SIGNING OF AGREEMENT

19.01 When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the appropriate number of unsigned counterparts of the Agreement with all other Contract Documents attached. Within fifteen (15) days after the date of the Notice of Award, the Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner or Engineer, as so directed, with the required bonds and insurance

certificate(s). Within fifteen (15) days thereafter, Owner will deliver fully signed counterparts to Engineer for further distribution to Contractor.

19.02 Failure on the part of the Successful Bidder to execute the Agreement and provide acceptable bonds and insurance certificate(s) within fifteen (15) days after the date the contract was mailed or otherwise delivered to him, will be just cause for the annulment of the award and the forfeiture of the Bid security to Owner, not as a penalty but in payment of liquidated damages sustained as a result of such failure. If Owner fails to execute the Agreement within a reasonable time, not to exceed ninety (90) days after receiving the executed Agreement and acceptable bonds from the Successful Bidder, the Successful Bidder shall have the right to withdraw his proposal without forfeiture of his Bid security.

## 20. SALES AND USE TAXES

20.01 Owner is exempt from Illinois State sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid.

## 21. WAGE RATE REQUIREMENTS

21.01 This Project is subject to the Prevailing Wage Act, 820 ILCS 130/.01 et seq., except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. All Bidders rendering service related to this bid must comply with the Act.

21.02 No less than the prevailing rate of wages as determined by the Illinois Department of Labor or determined by the court on review shall be paid to all laborers, workmen and mechanics performing work under this contract. Contractor and all Subcontractors engaged in any part of the Project will be required to comply with the prevailing wage rate requirements and the cost of doing so must be included in the Bid as no extra payment on account of this provision of law will be allowed. The Department of Labor publishes the prevailing wage rates on its website (<https://www2.illinois.gov/idol/Pages/default.aspx>).

21.03 If the Department of Labor revises prevailing wage rates, the revised prevailing wage rates on the Department of Labor's website shall apply to this contract and the Contractor will not be allowed additional compensation on account of said revisions. The Contractor shall review the wage rates applicable to the work of the contract at regular intervals to ensure timely payment of current wage rates. The Contractor agrees no additional notice is required. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto.

21.04 Provide certified payrolls to the Department of Labor and to the Owner if requested, each month to demonstrate compliance.

## 22. STEEL PRODUCTS PROCUREMENT

22.01 Comply with the provisions of the Illinois Steel Products Procurement Act (30 ILCS 565/).

## 23. SUBSTANCE ABUSE PREVENTION PROGRAM

23.01 Illinois P. A. 095-0635, Substance Abuse Prevention on Public Works Projects Act requires that all Contractors and Subcontractors have a written Substance Abuse Prevention Program, or collective bargaining agreement, in effect that includes a Substance Abuse Prevention Program. Submit a copy of the Substance Abuse Prevention Program or collective bargaining agreement with the governing body, along with a cover letter certifying that their program meets the requirements of the Act, or, as an alternative, use Certificate 00 62 07 from these Specifications. This requirement applies to Contractors and Subcontractors.

23.02 Provide all necessary documentation at the time of the preconstruction meeting.

## 24. EMPLOYMENT OF ILLINOIS WORKERS

24.01 Comply with the provisions of the Employment of Illinois Workers on Public Works Act (30 ILCS 570/) as they may apply to this project.

24.02 Provide signed certification of compliance (Certificate 00 62 08) with the bid.

## 25. UNCONTAMINATED SOIL CERTIFICATION AND DISPOSAL

25.01 Comply with the requirements of Sections 22.51(f)(2)(B) and 22.51a(d)(2)(B) of the Illinois Environmental Protection Act ([415 ILCS5/22.51(f)26(B)] and [415 ILCS5/22.51a(d)(2)(B)]) for the disposal of uncontaminated soils including uncontaminated soil mixed with other clean construction or demolition debris (CCDD) materials. Provide soil testing and professional engineering services needed to certify the uncontaminated soils (LPC-663) unless the Bidding Documents state that the Owner will provide the uncontaminated soil certification.

25.02 Soils which cannot be certified as uncontaminated or soils that are found to be contaminated during the course of the Work shall be tested and disposed as required for Contaminated Waste Disposal.

END OF BIDDER INSTRUCTIONS

00 31 24.53

CLEAN CONSTRUCTION OR DEMOLITION DEBRIS (CCDD) - LPC 663

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section provides verification from a professional engineer that the soils within the work area do not contain contaminants in concentrations that pose a threat to human safety and the environment.

1.2 CERTIFICATION

- A. Attached to this specification is a copy of IEPA form LPC-663, signed by the registered engineer for use by the contractor.

END OF SECTION





# Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Two Water Main Replacement Projects Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

North Mill Street, east of Crystal Lake Road

City: McHenry State: IL Zip Code: 60050

County: McHenry Township: McHenry

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.3425 Longitude: - 88.27807  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

EDR First Report

IEPA Site Number(s), if assigned: \_\_\_\_\_ BOL: None BOW: None BOA: None

Approximate Start Date (mm/dd/yyyy): Oct 12, 2022 Approximate End Date (mm/dd/yyyy): Oct 12, 2023

Estimated Volume of debris (cu. Yd.): 5,000

### II. Owner/Operator Information for Source Site

Site Owner

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Contact: \_\_\_\_\_

Email, if available: \_\_\_\_\_

Site Operator

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Contact: \_\_\_\_\_

Email, if available: \_\_\_\_\_

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

See Attached Report. Site is Mill St. Two nearby facilities identified on AST, UST, & LUST databases. NFR letter issued for identified LUST incident. PID readings of Background. B3/S1 sample represents northwest half of Site, B4/S1 sample represents southeast half of Site. Both samples analyzed for VOCs, PNAs, RCRA metals & pH.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

Soil sample, B3/S1 meets MACs, pH is 7.62, therefore soils from northwest half represented by B3/S1 are uncontaminated. Soil sample, B4/S1 fails MACs for PNAs, therefore soils from southeast half represented by B4/S1 excluded from disposal using LPC-663.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Brian K. Walker (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

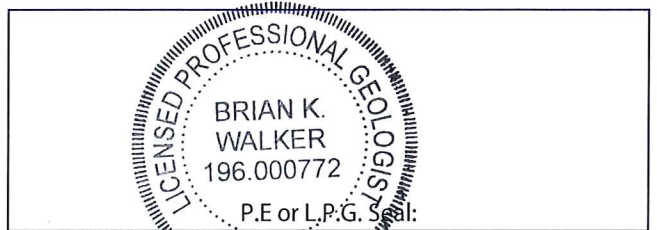
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Testing Service Corporation  
Street Address: 360 S. Main Place  
City: Carol Stream State: IL Zip Code: 60188  
Phone: (630) 462-2600

Brian K. Walker  
Printed Name:

  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

Oct 12, 2022  
Date:



*Exp 3/31/23*



# Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Two Water Main Replacement Projects Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

North Richmond Road, Washington Street to Broad Street

City: McHenry State: IL Zip Code: 60050

County: McHenry Township: McHenry

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.3488 Longitude: - 88.26693  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

#### EDR First Report

IEPA Site Number(s), if assigned: \_\_\_\_\_ BOL: None BOW: None BOA: None

Approximate Start Date (mm/dd/yyyy): Oct 12, 2022 Approximate End Date (mm/dd/yyyy): Oct 12, 2023

Estimated Volume of debris (cu. Yd.): 10,000

### II. Owner/Operator Information for Source Site

#### Site Owner

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Contact: \_\_\_\_\_

Email, if available: \_\_\_\_\_

#### Site Operator

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Contact: \_\_\_\_\_

Email, if available: \_\_\_\_\_

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

See Attached Report. Site is Richmond St. Two nearby facilities identified on the UST database. PID readings of Background. B1/S1 sample represents soil along Broad Street, B2/S1 sample represents soil along Richmond Road. Both samples analyzed for VOCs, PNAs, RCRA metals & pH.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

Soil sample, B2/S1 meets MACs, pH is 7.92, therefore soils from the vicinity of B2/S1 are uncontaminated. Soil sample, B1/S1 does fails MACs for PNAs, therefore soils from Broad Street in vicinity of B1/S1 excluded from disposal using LPC-663.


**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Brian K. Walker (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

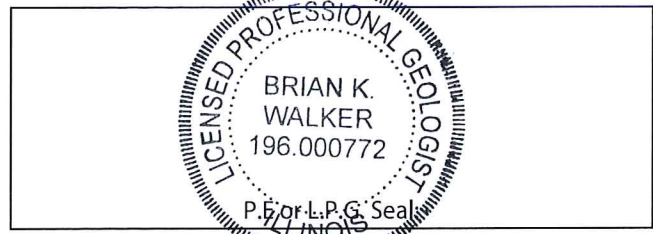
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Testing Service Corporation  
Street Address: 360 S. Main Place  
City: Carol Stream State: IL Zip Code: 60188  
Phone: (630) 462-2600

Brian K. Walker  
Printed Name:

  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

Oct 12, 2022  
Date:



*Exp 3/31/23*

00 31 32.11

## SUBSURFACE DRILLING INFORMATION

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section describes soils investigation at the site, and use of data resulting from that investigation.

#### 1.2 SOILS INVESTIGATION REPORT

- A. General:
  - 1. A soils investigation report has not been prepared for the site of this Work.
  - 2. Bidders should visit the site and acquaint themselves with existing conditions.
  - 3. Prior to bidding, Bidders may make their own subsurface investigations to satisfy themselves as to site and subsurface conditions, but such investigations may be performed only under time schedules and arrangements approved in advance by the Engineer.

END OF SUBSURFACE DRILLING INFORMATION



00 41 00.13

BID FORM

ONE ORIGINAL BID SHALL BE SUBMITTED

To: Mayor and City Council  
City of McHenry, Illinois  
333 S. Green Street  
McHenry, Illinois 60050  
(hereinafter called Owner)

From: \_\_\_\_\_  
Company

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip Code

( ) \_\_\_\_\_  
Telephone

\_\_\_\_\_  
E-MAIL

(hereinafter called Bidder)

1. 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 furnish all labor, materials, tools, and services required for the construction of the Broad Street, Richmond Road, and Mill Street Water Main Replacement for the City of McHenry, McHenry County, Illinois [Engineers' Job No. 221284.41], all in accordance with the Bidding Documents prepared by Baxter & Woodman, Inc., Consulting Engineers.
2. Bidder accepts all of the terms and conditions of the Advertisement for Bids and Bidder Instructions, including without limitation those dealing with the disposition of Bid Security. This Bid will remain open for 60 days after the date of Bid opening or for such longer period of time that Bidder may agree to in writing upon request of Owner. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Documents within 15 days after the date of Owner's Notice of Award.
3. In submitting this Bid, Bidder represents, as set forth in the Agreement, that:
  - a. Bidder has examined copies of all the Bidding Documents.
  - b. Bidder is familiar with the nature and extent of the Bidding Documents, Work, site, locality, and all local conditions and legal and regulatory requirements that in any

manner may affect cost, progress, performance, or furnishing of the Work, and has made such independent investigations as Bidder deems necessary.

- c. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all 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.
- d. 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.
- e. 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.
- f. 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.
- g. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- h. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the Work for which this Bid is submitted.
- i. This Bid is genuine and not made in the interest 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 a 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.
- j. By submission of the Bid, Bidder certifies, and in the case of a Joint Bid each party thereto certifies as to his own organization, that in connection with the Bid:

- (1) The prices in the Bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor.
  - (2) Unless otherwise required by law, the prices which have been quoted in the Bid have not knowingly been disclosed by the Bidder, prior to opening, directly, or indirectly to any other Bidder or to any competitor.
  - (3) No attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.
  - (4) Bidder is not barred from contracting with the Owner as a result of a violation 720 ILCS 5/33 et seq.
- k. Bidder agrees that no less than the prevailing rate of wages as determined by the Department of Labor or determined by the court on review, shall be paid to all laborers, workmen, and mechanics performing work under this contract.
- l. Bidder complies with the provisions of the Employment of Illinois Workers on Public Works Act (30 ILCS 570/) as they may apply to this Project.
- m. Bidder will comply with the requirements of Sections 22.51(f)(2)(B) and 22.51a(d)(2)(B) of the Illinois Environmental Protection Act ([415 ILCS5/22.51(f)(2)(B)] and [415 ILCS5/22.51a(d)(2)(B)]) for the disposal of uncontaminated soils including uncontaminated soil mixed with other clean construction or demolition debris (CCDD) materials and has included any costs associated with compliance in the Bid.
4. Bidder submits the following Schedule of Unit Prices for the Work to be performed in accordance with the Bidding Documents and agrees that items of work not specifically mentioned in the Schedule which are necessary and required to complete the Work intended shall be done incidental to and as part of the items of work for which a unit price is given, and understands that no additional payment will be made for such incidental work.

## SCHEDULE OF UNIT PRICES

No.	Pay Item	Unit	Approximate Quantity	Unit Price	Amount
1	PRECONSTRUCTION VIDEO RECORDING	LSUM	1	\$	\$
2	TRAFFIC CONTROL AND PROTECTION	LSUM	1	\$	\$
3	GRANULAR TRENCH BACKFILL	CUYD	1,700	\$	\$
4	REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL	CUYD	30	\$	\$
5	SOIL TESTS FOR CONTAMINANTS	EACH	5	\$	\$
6	CONTAMINATED WASTE DISPOSAL	TON	44	\$	\$
7	WATER MAIN (OPEN CUT), 6-INCH	FOOT	59	\$	\$
8	6-INCH HYDRANT LEADER (OPEN CUT)	FOOT	63	\$	\$
9	WATER MAIN (OPEN CUT), 8-INCH	FOOT	937	\$	\$
10	WATER MAIN (OPEN CUT), 12-INCH	FOOT	910	\$	\$
11	WATER MAIN (DIRECTIONALLY DRILLED), 8-INCH	FOOT	68	\$	\$
12	WATER MAIN (DIRECTIONALLY DRILLED), 12-INCH	FOOT	380	\$	\$
13	MISCELLANEOUS FITTINGS	POUND	3,000	\$	\$
14	CONNECT TO WATER MAIN (NON-PRESSURE), 4-INCH	EACH	2	\$	\$
15	CONNECT TO WATER MAIN (NON-PRESSURE), 6-INCH	EACH	3	\$	\$
16	CONNECT TO WATER MAIN (NON-PRESSURE), 8-INCH	EACH	1	\$	\$
17	CONNECT TO WATER MAIN (NON-PRESSURE), 12-INCH	EACH	3	\$	\$
18	GATE VALVE, 6-INCH	EACH	1	\$	\$
19	GATE VALVE, 8-INCH	EACH	5	\$	\$
20	GATE VALVE, 12-INCH	EACH	5	\$	\$
21	VALVE BOX	EACH	1	\$	\$
22	VALVE VAULT, 4-FOOT DIAMETER	EACH	6	\$	\$
23	VALVE VAULT, 5-FOOT DIAMETER	EACH	5	\$	\$
24	FIRE HYDRANT	EACH	9	\$	\$
25	ABANDONMENT OF EXISTING WATER MAINS AND APPURTENANCES	LSUM	1	\$	\$
26	FILLING OF EXISTING PIPE FOR ABANDONMENT	CUYD	5	\$	\$

## SCHEDULE OF UNIT PRICES

No.	Pay Item	Unit	Approximate Quantity	Unit Price	Amount
27	WATER SERVICE CONNECTION, 1-INCH	EACH	29	\$	\$
28	WATER SERVICE CONNECTION, 1.5-INCH	EACH	3	\$	\$
29	WATER SERVICE LINE TYPE K - OPEN CUT, 1-INCH	FOOT	260	\$	\$
30	WATER SERVICE LINE TYPE K - OPEN CUT, 1.5-INCH	FOOT	30	\$	\$
31	WATER SERVICE LINE TYPE K - DIRECTIONAL DRILLING, 1-INCH	FOOT	835	\$	\$
32	WATER SERVICE LINE TYPE K - DIRECTIONAL DRILLING, 1.5-INCH	FOOT	30	\$	\$
33	PRIVATE LEAD WATER SERVICE REPLACEMENT - CURB STOP TO WATER METER	EACH	15	\$	\$
34	STORM SEWER REMOVAL AND REPLACEMENT, 12-INCH	FOOT	14	\$	\$
35	STORM SEWER REMOVAL AND REPLACEMENT, 15-INCH	FOOT	17	\$	\$
36	REMOVE AND REPLACE 2' DIAMETER INLET	EACH	2	\$	\$
37	INLET PROTECTION FILTER	EACH	15	\$	\$
38	TEMPORARY HMA PAVEMENT	SQYD	300	\$	\$
39	PORTLAND CEMENT CONCRETE REMOVAL AND REPLACEMENT, 12-INCH	SQYD	50	\$	\$
40	CLASS D PATCH	SQYD	200	\$	\$
41	HOT-MIX ASPHALT REMOVAL AND REPLACEMENT, 2.5-INCH BINDER 1.5-INCH SURFACE	SQYD	1,200	\$	\$
42	HOT-MIX ASPHALT REMOVAL AND REPLACEMENT, 2-INCH SURFACE	SQYD	900	\$	\$
43	HOT-MIX ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT, 2-INCH BINDER 2-INCH SURFACE	SQYD	500	\$	\$
44	PCC DRIVEWAY REMOVAL AND REPLACEMENT, 6-INCH	SQYD	60	\$	\$
45	CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	400	\$	\$
46	PCC SIDEWALK REMOVAL AND REPLACEMENT	SQFT	1,900	\$	\$
47	DETECTABLE WARNINGS	SQFT	50	\$	\$

## SCHEDULE OF UNIT PRICES

No.	Pay Item	Unit	Approximate Quantity	Unit Price	Amount
48	PAVEMENT MARKING - LINE, 4-INCH (THERMOPLASTIC)	FOOT	40	\$	\$
49	PAVEMENT MARKING - LINE, 6-INCH (THERMOPLASTIC)	FOOT	360	\$	\$
50	PAVEMENT MARKING - LINE, 12-INCH (THERMOPLASTIC)	FOOT	400	\$	\$
51	PAVEMENT MARKING - LINE, 24-INCH (THERMOPLASTIC)	FOOT	50	\$	\$
52	RESTORATION OF LAWNS AND PARKWAYS	SQYD	1,100	\$	\$
53	EXPLORATORY EXCAVATION	EACH	4	\$	\$
54	TREE ROOT PRUNING	EACH	3	\$	\$
<b>TOTAL AMOUNT OF BID</b>				<b>\$</b>	

5. Bidder agrees the Work will be substantially completed within 90 calendar days after the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 1.11 of the Supplementary Conditions within 120 calendar days after the Contract Time commences to run.
6. Bidder submits the required Bid Security in the form of (Certified Check or Bid Bond) in the amount of \_\_\_\_\_ or \_\_\_\_\_ Percent of the Bid Amount.
7. Bidder will be obtaining Performance and Payment Bonds through the following local agent or broker:
- Name: \_\_\_\_\_
- Address: \_\_\_\_\_
- Telephone: \_\_\_\_\_ email: \_\_\_\_\_
8. Bidder submits all items listed in Section 00 43 93 – Bid Submittal Checklist.
9. Terms used in this Bid which are defined in the Standard General Conditions of the Construction Contract included as part of the Bidding Documents have the meanings assigned to them in the General Conditions.

10. Bidder acknowledges receipt of the following Addenda:

<u>Addendum Number</u>	<u>Date Received</u>
_____	_____
_____	_____
_____	_____

11. The person signing this Bid certifies that: (Check applicable box.)

- ( ) He/She is the person in the Bidder's organization responsible within that organization for the decision as to the prices being bid and that he/she has not participated, and will not participate, in any action contrary to that above; or
- ( ) He/She is not the person in the Bidder's organization responsible within that organization for the decision as to the prices being bid but that he/she has been authorized to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to the above, and as their agent shall so certify; and shall also certify that he/she has not participated, and will not participate, in any action contrary to that above.

Respectfully submitted, signed, and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Bidder

By \_\_\_\_\_

\_\_\_\_\_  
Name - Title

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_  
Name – Title

END OF BID FORM



00 43 13  
BID SECURITY FORM  
(SAMPLE FORM)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, \_\_\_\_\_  
\_\_\_\_\_ as Principal, and  
\_\_\_\_\_ as Surety, are hereby  
held and firmly bound unto \_\_\_\_\_ as  
Owner in the penal sum of \_\_\_\_\_ for the  
payment of which, well and truly to be made, we hereby jointly and severally bind ourselves,  
successors and assigns.

Signed, this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

The Condition of the above obligation is such that whereas the Principal has submitted to  
\_\_\_\_\_ a certain BID,  
attached hereto and hereby made a part hereof to enter into a contract in writing, for the  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the Owner may accept such bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_  
Principal (L.S.)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

IMPORTANT-Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

00 43 36

PROPOSED SUBCONTRACTORS FORM

TO: Mayor and City Council  
City of McHenry  
333 S. Green Street  
McHenry, Illinois 60050  
(hereinafter called Owner)

1. Pursuant to bidding requirements for the Work titled:

CITY OF MCHENRY, ILLINOIS  
BROAD STREET, RICHMOND ROAD, AND MILL STREET WATER MAIN  
REPLACEMENT

for portions of the Work equaling or exceeding \$10,000, Bidder proposes to use the following Subcontractors. Except as otherwise approved by Owner, Bidder proposes to perform all other portions of the Work with his own forces:

2. Portion of the Work: Subcontractor name and address:




00 43 93

BID SUBMITTAL CHECKLIST

BIDDER submits the following documents with this Bid:

- a. Form 00 41 00.13 "BID FORM".
- b. Required Bid Security (Certified Check or Bid Bond).
- c. CERTIFICATE 00 62 07 SUBSTANCE ABUSE PREVENTION PROGRAM.
- d. CERTIFICATE 00 62 08 EMPLOYMENT OF ILLINOIS WORKERS ON PUBLIC WORKS ACT.

END OF BID SUBMITTAL CHECKLIST



00 52 00.13

AGREEMENT

THIS AGREEMENT is dated as of the \_\_\_\_ day of \_\_\_\_\_ in the year 20  
by

and between \_\_\_\_\_ (hereinafter called Owner) and  
\_\_\_\_\_ (hereinafter called Contractor).

Owner and Contractor, for and in consideration of the mutual promises and covenants contained herein, the sufficiency of which is hereby acknowledged, the parties hereto 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:

\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_

ARTICLE 2. ENGINEER

2.01 The Project has been designed by Baxter & Woodman, Inc., Consulting Engineers, hereinafter called Engineer, who shall act as Owner's representative and assume the duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

STRIKE OUT INAPPLICABLE PARAGRAPH

3.01 The Work will be substantially completed on or before \_\_\_\_\_, 20\_\_\_\_, and completed and ready for final payment in accordance with paragraph 1.11 of the Supplementary Conditions on or before \_\_\_\_\_, 20\_\_\_\_.

or

3.01 The Work will be substantially completed within \_\_\_\_\_ calendar days after the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions, and

AGREEMENT

00 52 00.13-1

completed and ready for final payment in accordance with paragraph 1.11 of the Supplementary Conditions within \_\_\_\_\_ calendar days after the Contract Time commences to run.

3.02 Liquidated Damages. Owner and Contractor 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 3.01 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They 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 \_\_\_\_\_ Dollars (\$\_\_\_\_\_) for each day that expires after the time or date specified in paragraph 3.01 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 Times or any proper extension thereof granted by Owner, Contractor shall pay Owner \_\_\_\_\_ Dollars (\$\_\_\_\_\_) for each day that expires after the time or date specified in paragraph 3.01 for completion and readiness for final payment.

#### ARTICLE 4. CONTRACT PRICE

4.01 Owner shall pay Contractor for completion of the Work in accordance with the conditions and prices stated in Contractor's Bid pursuant to the provisions of the Contract Documents.

#### ARTICLE 5. PAYMENT PROCEDURES

5.01 Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General and Supplementary Conditions.

#### ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

6.01 Contractor has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

6.02 Contractor has studied carefully all reports of explorations and tests of subsurface conditions, if any, and drawings of physical conditions which are identified in Section 00 31 32.13, Subsurface Drilling and Sampling Information as provided in Article 4 of the General Conditions, and accepts the determination set forth in Section 00 31 32.13, Subsurface Drilling and Sampling Information of the extent of the technical data contained in such reports and drawings, if any, upon which Contractor is entitled to rely.

6.03 Contractor has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and

studies (in addition to or to supplement those referred to in paragraph 6.02 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as Contractor considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.03 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

6.04 Contractor has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examination, investigations, explorations, tests, reports, studies or similar information or data in respect of said underground facilities are or will be required by Contractor in order to perform and furnish the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.04 of the General Conditions.

6.05 Contractor has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

6.06 Contractor has given Engineer written notice of all conflicts, errors or discrepancies that he/she has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Contractor.

## ARTICLE 7. CONTRACT DOCUMENTS

7.01 The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the Work consist of this Agreement, the General Conditions, Supplementary Conditions, Specifications and Drawings, all Addenda issued prior to receipt of Bids, Contractor's Bid, Performance and Payment Bonds, Insurance Certificates, and all written Amendments issued after the Effective Date of the Agreement pursuant to paragraphs 3.04 of the General Conditions.

7.02 There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.04 of the General Conditions.

## ARTICLE 8. MISCELLANEOUS

8.01 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

8.02 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitations, monies that may become due and monies 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.

8.03 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 of all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 9. OTHER PROVISIONS

9.01 Contractor certifies that it is not barred from bidding the Work or executing this Agreement as a result of conviction for violation of 720 ILCS 5/33 et seq. prohibiting bid rigging or bid rotating.

9.02 Contractor certifies that it complies with the provisions of the Employment of Illinois Workers on Public Works Act (30 ILCS 570/) as they may apply to this Project.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement as of the day and year first above written.

Owner:

(SEAL)

\_\_\_\_\_

By:

\_\_\_\_\_

ATTEST:

\_\_\_\_\_

Name - Title

\_\_\_\_\_

Name - Title

Contractor:

(SEAL)

\_\_\_\_\_

By:

\_\_\_\_\_

ATTEST:

\_\_\_\_\_

Name - Title

\_\_\_\_\_

Name - Title

END OF AGREEMENT

00 60 01

## REPRESENTATIONS, CERTIFICATIONS AND FORMS

00 61 13.13	PERFORMANCE BOND FORM
00 61 13.16	PAYMENT BOND FORM
00 61 19	MAINTENANCE BOND FORM
CERTIFICATE 00 62 07	SUBSTANCE ABUSE PREVENTION PROGRAM
CERTIFICATE 00 62 08	EMPLOYMENT OF ILLINOIS WORKERS ON PUBLIC WORKS ACT
CERTIFICATE 00 62 16	CERTIFICATE OF INSURANCE FORM
CERTIFICATE 00 62 16.13	ADDITIONAL INSUREDS
CERTIFICATE 00 62 16.16	ADDITIONAL INSUREDS
CERTIFICATE 00 62 16.19	ADDITIONAL INSUREDS
CERTIFICATE 00 62 16.21	ADDITIONAL INSUREDS
CERTIFICATE 00 62 76.01	SWORN STATEMENT
FORM 00 62 76.02	PARTIAL WAIVER OF LIEN
FORM 00 62 76.03	CONTRACTOR'S AFFIDAVIT
FORM 00 62 76.04	FINAL WAIVER OF LIEN
00 62 76.13	SALES TAX FORM
CERTIFICATE 00 62 78	LIST OF SPARE PARTS
00 62 79	STORED MATERIAL FORM
00 63 49	WORK CHANGE DIRECTIVE FORM
00 63 63	CHANGE ORDER FORM
CERTIFICATE 00 65 16	CERTIFICATE OF SUBSTANTIAL COMPLETION FORM
CERTIFICATE 00 65 19	CERTIFICATE OF COMPLETION FORM
00 65 36	WARRANTY FORM
00 65 36.03	CONTRACTOR'S AFFIDAVIT LETTER

## REPRESENTATIONS, CERTIFICATIONS AND FORMS

00 60 01 (221284.41)



00 61 13.13

**PERFORMANCE BOND FORM**

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

---

**CONTRACTOR:**

**SURETY:**

**OWNER:**

**CONSTRUCTION CONTRACT:**

Date:

Amount:

Description:

**BOND:**

Date:

Amount:

**CONTRACTOR AS PRINCIPAL:** (Corp. Seal)  
Company:

**SURETY:** (Corp. Seal)  
Company:

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

**PERFORMANCE BOND FORM**

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
  - 3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default: and
  - 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1: and
  - 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract: or
  - 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
  - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's 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 the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner: or
    2. Deny liability in whole or in part and notify the Owner citing reasons therefor.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
  - 6.1. The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract"
  - 6.2. Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions of failure to act of the Surety under Paragraph 4; and
  - 6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
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 the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the Owner or the 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 or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. 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 the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
  - 12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
  - 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY --- NAME, ADDRESS AND TELEPHONE)	
AGENT OR BROKER:	OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

00 61 13.16

**PAYMENT BOND FORM**

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

---

**CONTRACTOR:**

**SURETY:**

**OWNER:**

**CONSTRUCTION CONTRACT:**

Date:

Amount:

Description:

**BOND:**

Date:

Amount:

**CONTRACTOR AS PRINCIPAL:** (Corp. Seal)  
Company:

**SURETY:** (Corp. Seal)  
Company:

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

# PAYMENT BOND FORM

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2. With respect to the Owner, this obligation shall be null and void if the Contractor:

- 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
- 2.2 Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

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

4. The Surety shall have no obligation to Claimants under this Bond until:

- 4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the 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 the Contractor:
  - 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the 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 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 the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has 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 the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

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

6. RESERVED

7. The 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 the Surety.

8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and

the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this bond, subject to the Owner's priority to use the funds for the completion of the work.

9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond.

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

11. 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 is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (iii), 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 the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the 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 or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed 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 by any person or entity appearing to be a potential beneficiary of this Bond, the 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 the Contractor or with a subcontractor of the 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 limitations 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 Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
- 15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete with the other terms thereof.

FOR INFORMATION ONLY --- NAME, ADDRESS AND TELEPHONE)	
AGENT OR BROKER:	OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

00 61 19  
MAINTENANCE BOND FORM  
(SAMPLE FORM)

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**MAINTENANCE/WARRANTY BOND**

Know ALL MEN BY THESE PRESENTS. That we

\_\_\_\_\_ as Principal, and \_\_\_\_\_, as Surety, are held and firmly bound unto \_\_\_\_\_, State of Illinois as Obligee, in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) to which payment well and truly to be made we do bind ourselves, our and each of our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

WHEREAS, the said Principal entered into a Contract with the \_\_\_\_\_, State of Illinois \_\_\_\_\_ dated \_\_\_\_\_ for \_\_\_\_\_

WHEREAS, said Contract provides that the Principal will furnish a Bond conditioned to guarantee for the period of \_\_\_\_\_ year(s) after approval of the final payment on said job, by the Owner, against all defects in workmanship and materials which may become apparent during said period, and

WHEREAS, the said Contract has been completed, and was approved on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that, if the Principal shall indemnify the Obligee for all loss that the Obligee may sustain by reason of any defective materials or workmanship which becomes apparent during the period of \_\_\_\_\_ year(s) from and after \_\_\_\_\_ then this obligation shall be void, otherwise to remain in full force and effect.

SIGNED, SEALED, AND DATED

\_\_\_\_\_ (L.S.)

\_\_\_\_\_ (L.S.)

\_\_\_\_\_ (L.S.)

Principal(s)

*Surety Name*

by \_\_\_\_\_, Attorney-in-Fact



CERTIFICATE 00 62 07

SUBSTANCE ABUSE PREVENTION PROGRAM

The undersigned, upon being first duly sworn, hereby certifies to the (Owner) \_\_\_\_\_

\_\_\_\_\_

that

\_\_\_\_\_ (Contractor) has in place a written Substance Abuse Prevention Program that meets or exceeds the requirements of the State of Illinois P.A. 095-0635, or has a collective bargaining agreement in effect dealing with the subject matter of P.A. 095-0635. The Contractor and Subcontractors will file a copy of the Substance Abuse Prevention Program, or collective bargaining agreement, with the Client prior to any work being conducted on the project.

By: \_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Title)

Subscribed and sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

My Commission Expires:

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
SEAL



CERTIFICATE 00 62 08

EMPLOYMENT OF ILLINOIS WORKERS ON PUBLIC WORKS ACT

This law comes into effect following two consecutive months of a state unemployment rate above 5 percent. More information about the Employment of Illinois Workers on Public Works Act can be found here: <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=549&ChapterID=7>.

The Employment of IL Workers on Public Works Act requires the workforce on all public works projects to be comprised of a minimum of 90% Illinois residents.

The Illinois Department of Labor (IDOL) administers the Employment of Illinois Workers on Public Works Act, which was enacted to alleviate unemployment in Illinois by ensuring that most workers on public works projects live in the state. The requirement applies to all labor on public works projects or improvements. That includes public works projects that are funded in whole or in part with state funds or funds administered by the state of Illinois. Any public works project financed in whole or in part by federal funds administered by the State of Illinois is covered under the provisions of this act.

By signing below, the Contractor confirms awareness of this requirement.

\_\_\_\_\_  
(Typed Name & Title of Authorized Representative)

\_\_\_\_\_  
(Signature of Authorized Representative) (Date)

\_\_\_\_\_  
(Company/Organization)





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
 6/7/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A :	NAIC #
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

**COVERAGES** **CERTIFICATE NUMBER:** 2041553290 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
<input checked="" type="checkbox"/>	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:						EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
<input checked="" type="checkbox"/>	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
<input checked="" type="checkbox"/>	<b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Property Insurance - Minimum Amount - Initial Contract Prices	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	N/A				<input type="checkbox"/> PER STATUTE <input checked="" type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

SAMPLE  
SAMPLE  
SAMPLE

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 (PROJECT NAME AND LISTING OF ALL ADDITIONAL INSURED AS REQUIRED BY WRITTEN CONTRACT)

<b>CERTIFICATE HOLDER</b>  (OWNER'S NAME or CERTIFICATE HOLDERS NAME)	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE



CERTIFICATE 00 62 16.13  
ADDITIONAL INSUREDS  
(SAMPLE FORM)

POLICY NUMBER: ( \_\_\_\_\_ )

COMMERCIAL GENERAL  
LIABILITY

**THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED - OWNERS, LESSEES OR  
CONTRACTORS (FORM B)**

This endorsement modified insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

**Name of Person or Organizations:**

(OWNER)  
(BAXTER & WOODMAN, INC.)  
(Others as required by the Contract Documents)

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

\_\_\_\_\_  
Authorized Representative

This \_\_\_ day of \_\_\_\_\_, 20\_\_



CERTIFICATE 00 62 16.16  
ADDITIONAL INSUREDS  
(SAMPLE FORM)

POLICY NUMBER ( )

PROPERTY INSURANCE

**THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED - OWNERS, LESSEES OR  
CONTRACTORS (FORM B)**

This endorsement modified insurance provided under the following:

PROPERTY INSURANCE

**SCHEDULE**

**Name of Person or Organizations:**

(OWNER)  
(BAXTER & WOODMAN, INC.)  
(Others as required by the Contract Documents)

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

\_\_\_\_\_  
Authorized Representative

This \_\_\_ day of \_\_\_\_\_, 20\_\_



CERTIFICATE 00 62 16.19  
ADDITIONAL INSUREDS  
(SAMPLE FORM)

POLICY NUMBER (\_\_\_\_\_)

COMPLETED OPERATIONS

**THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED - OWNERS, LESSEES OR  
CONTRACTORS (FORM B)**

This endorsement modified insurance provided under the following:

COMPLETED OPERATIONS LIABILITY COVERAGE

**SCHEDULE**

**Name of Person or Organizations:**

(OWNER)  
(BAXTER & WOODMAN, INC.)  
(Others as required by the Contract Documents)

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

\_\_\_\_\_  
Authorized Representative

This \_\_\_ day of \_\_\_\_\_, 20\_\_



CERTIFICATE 00 62 16.21  
ADDITIONAL INSUREDS  
(SAMPLE FORM)

POLICY NUMBER (\_\_\_\_\_)

EXCESS/UMBRELLA LIABILITY

**THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED - OWNERS, LESSEES OR  
CONTRACTORS (FORM B)**

This endorsement modified insurance provided under the following:

EXCESS/UMBRELLA LIABILITY COVERAGE PART

**SCHEDULE**

**Name of Person or Organizations:**

(OWNER)  
(BAXTER & WOODMAN, INC.)  
(Others as required by the Contract Documents)

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

\_\_\_\_\_  
Authorized Representative

This \_\_\_ day of \_\_\_\_\_, 20\_\_







00 62 76.02  
PARTIAL WAIVER OF LIEN  
(SAMPLE FORM)

STATE OF ILLINOIS  
COUNTY OF \_\_\_\_\_

} SS

Gty # \_\_\_\_\_

Loan # \_\_\_\_\_

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by \_\_\_\_\_

to furnish \_\_\_\_\_

for the premises known as \_\_\_\_\_

of which \_\_\_\_\_

is the owner.

THE undersigned, for and in consideration of \_\_\_\_\_

\_\_\_\_\_ (\$ \_\_\_\_\_) Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged do(es) hereby waive and release any and all lien or claim or right of lien under the Statutes of the State of Illinois, relating to Mechanic's liens, on the above described premises and improvements thereon, and on the monies or other considerations due or to become from the owner, on account of labor or services, material, fixtures or apparatus heretofore furnished to this date by the undersigned for the above described premises.

Given under \_\_\_\_\_ hand \_\_\_\_\_ and seal \_\_\_\_\_ this

\_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

SEAL

SEAL

Note: All waivers must be for the full amount paid. If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.



00 62 76.03  
 CONTRACTOR'S AFFIDAVIT  
 (SAMPLE FORM)

STATE OF ILLINOIS }  
 COUNTY OF }SS

TO WHOM IT MAY CONCERN:

THE undersigned, being duly sworn, deposes and says that he is \_\_\_\_\_  
 \_\_\_\_\_ of the \_\_\_\_\_  
 who is the Contractor for the \_\_\_\_\_ work on the  
 being located at \_\_\_\_\_  
 owned by \_\_\_\_\_. That the  
 total amount of the Contract including extras is \$ \_\_\_\_\_ on which he has received payment of  
 \$ \_\_\_\_\_ prior to this payment. That all waivers are true, correct and genuine and delivered  
 unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the  
 following are the names of all parties who have furnished material or labor, or both, for said work and all parties  
 having contracts or sub-contracts for specific portions of said work or for material entering into the construction  
 thereof and the amount due or to become due to each, and that the items mentioned include all labor and material  
 required to complete said work according to plans and specifications.

NAMES	WHAT FOR	CONTRACT PRICE	AMOUNT PAID	BALANCE DUE
TOTAL LABOR AND MATERIAL TO COMPLETE				

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

Signed \_\_\_\_\_ this day of \_\_\_\_\_, 20\_\_\_\_  
 \_\_\_\_\_



00 62 76.04  
FINAL WAIVER OF LIEN  
(SAMPLE FORM)

STATE OF ILLINOIS  
COUNTY OF \_\_\_\_\_

} SS

Gty # \_\_\_\_\_  
Loan # \_\_\_\_\_

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by \_\_\_\_\_  
to furnish \_\_\_\_\_  
for the premises known as \_\_\_\_\_

of which \_\_\_\_\_ is the owner.

THE undersigned, for and in consideration of \_\_\_\_\_  
(\$ \_\_\_\_\_) \_\_\_\_\_ Dollars, and other good and valuable considerations, the

\_\_\_\_\_ receipt  
whereof is hereby acknowledged do(es) hereby waive and release any and all lien or claim or right of lien under  
the Statutes of the State of Illinois, relating to Mechanic's liens, on the above described premises and  
improvements thereon, and on the monies or other considerations due or to become from the owner, on account  
of labor or services, material, fixtures or apparatus heretofore furnished to this date by the undersigned for the  
above described premises.

Given under \_\_\_\_\_ hand \_\_\_\_\_ and seal \_\_\_\_\_ this  
\_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

\_\_\_\_\_  
SEAL

\_\_\_\_\_  
SEAL

Note: All waivers must be for the full amount paid. If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.



00 62 76.13  
SALES TAX FORM



**Illinois Department of Revenue**

Office of Local Government Services  
Sales Tax Exemption Section, 3-520  
101 W. Jefferson Street  
Springfield, Illinois 62702  
217 782-8881

**COPY**

July 14, 2000

Effective January 1, 2000, we have renewed your governmental exemption from payment of the Retailers' Occupation Tax, the Service Occupation Tax (both state and local), the Use Tax, and the Service Use Tax, as required by Illinois law. Your organization is not, however, exempt from Illinois Hotel Operators' Occupation Tax, Electricity Excise Tax, Electricity Distribution Tax, and Telecommunications Excise Tax.

We have issued the following new tax exemption identification number:

The terms and conditions governing use of your exemption number remain unchanged.

Office of Local Government Services  
Illinois Department of Revenue

**NOTE: CONTRACTOR TO RECEIVE A COPY OF OWNER'S  
LETTER AS PART OF PROJECT CONTRACT DOCUMENTS**

---







WORK CHANGE DIRECTIVE FORM

NO. \_\_\_\_\_

PROJECT: \_\_\_\_\_ DATE OF ISSUANCE: \_\_\_\_\_

OWNER: \_\_\_\_\_ ENGINEER: Baxter & Woodman, Inc.  
8678 Ridgefield Road  
Crystal Lake, IL 60012

CONTRACTOR: \_\_\_\_\_ ENGINEER'S PROJECT NO: \_\_\_\_\_

You are directed to proceed promptly with the following change(s):

Description:

Purpose of Work Directive Change:

Attachments:

If a claim is made that the above change(s) have affected Contract Price or Contract Time, any claim for a Change Order based thereon will involve one of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

Method of determining change in Contract Time:

- Time and materials
- Unit prices
- Cost plus fixed fee
- Other \_\_\_\_\_
- \_\_\_\_\_

- Contractor's records
- Engineer's records
- Other \_\_\_\_\_

Estimated increase(decrease) in Contract Price: \$\_\_\_\_\_. If the Change involves an increase, the estimated amount is not to be exceeded without further authorization.

Estimated increase(decrease) in Contract Time: \_\_\_\_\_ days. If the Change involves an increase, the estimated amount is not to be exceeded without further authorization.

RECOMMENDED: BAXTER & WOODMAN, INC.

AUTHORIZED: OWNER

By \_\_\_\_\_  
Name  
Title

By \_\_\_\_\_  
Name  
Title



CHANGE ORDER FORM

PROJECT: \_\_\_\_\_ DATE OF ISSUANCE: \_\_\_\_\_

OWNER: \_\_\_\_\_ ENGINEER: Baxter & Woodman, Inc.

CONTRACTOR: \_\_\_\_\_ ENGINEER's Project No. \_\_\_\_\_

You are directed to make the following changes in the Contract Documents:

Description: \_\_\_\_\_

Purpose of Change Order: \_\_\_\_\_

Attachments: \_\_\_\_\_

CHANGE IN CONTRACT PRICE:

Original Contract Price: \$ \_\_\_\_\_

Previous Change Orders:  
No. - to No. - \$ \_\_\_\_\_

Current Contract Price: \$ \_\_\_\_\_

Net increase/decrease of this Change Order: \$ \_\_\_\_\_

Contract Price with this Change Order: \$ \_\_\_\_\_

CHANGE IN CONTRACT TIME:

Original Contract Time:  
Substantial Completion:  
Completion: \_\_\_\_\_

Change from previous Change Orders: \_\_\_\_\_

Current Contract Time:  
Substantial Completion:  
Completion: \_\_\_\_\_

Net increase/decrease of this Change Order: \_\_\_\_\_

Contract Time with this Change Order:  
Substantial Completion:  
Completion: \_\_\_\_\_

Pursuant to 720 ILCS 5/33E-9, (1) the circumstances said to necessitate the change in performance were not reasonably foreseeable at the time the contract was signed, (2) the change is germane to the original contract as signed, and (3) the change order is in the best interest of the Entity of Municipality Name, Illinois.

PREPARED BY:  
BAXTER & WOODMAN, INC.

APPROVED:  
Municipality

ACCEPTED:  
Contractor

By \_\_\_\_\_  
Insert Name  
Construction Project Manager

By \_\_\_\_\_  
Insert Name  
Insert Title

By \_\_\_\_\_  
Insert Name  
Insert Title

RECOMMENDED BY:

By \_\_\_\_\_  
Insert Name  
Client Manager



CERTIFICATE 00 65 16

CERTIFICATE OF SUBSTANTIAL COMPLETION FORM

**PROJECT:** **ENGINEER'S Project No.:** \_\_\_\_\_

**CONTRACTOR:** **CONTRACT DATE:** \_\_\_\_\_

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

**TO:** [Owner] \_\_\_\_\_

**AND TO:** [Contractor] \_\_\_\_\_

The Work to which this Certificate applies has been observed 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 [follows -- is attached hereto]. This list may not be all-inclusive, and failure to include an item does not alter the responsibility of the 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 \_\_\_\_\_ calendar days of the above date of Substantial Completion.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, and warranties shall be as follows:

**RESPONSIBILITIES:**

**Owner:** \_\_\_\_\_

**Contractor:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

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

---

Executed by Engineer's Project Manager and Client Manager on \_\_\_\_\_, 20\_\_\_\_.

**BAXTER & WOODMAN, INC.**

By: \_\_\_\_\_

Client Manager

By: \_\_\_\_\_

Project Manager

Contractor accepts this Certificate of Substantial Completion on \_\_\_\_\_, 20\_\_\_\_.

**CONTRACTOR NAME - ALL CAPS**

By: \_\_\_\_\_

Name  
Title

Owner accepts this Certificate of Substantial Completion on \_\_\_\_\_, 20\_\_\_\_.

**OWNER NAME - ALL CAPS**

By: \_\_\_\_\_

Name  
Title

CERTIFICATE OF COMPLETION FORM

---

**ENGINEER'S PROJECT NO.:** \_\_\_\_\_

**PROJECT:** \_\_\_\_\_  
\_\_\_\_\_

**CONSTRUCTION CONTRACT DATE:** \_\_\_\_\_

---

**TO** \_\_\_\_\_

**AND TO** \_\_\_\_\_

The undersigned hereby gives notice that the completed work furnished and performed by Contractor under the Contract for the above Project is acceptable expressly subject to the provisions of the Contract and the terms and conditions set forth on the reverse side hereof.

BAXTER & WOODMAN, INC.  
CONSULTING ENGINEERS

By: \_\_\_\_\_

Date: \_\_\_\_\_, 20\_\_\_\_\_

---

---

The Notice on the front side of this paper is expressly made subject to the following terms and conditions:

1. Said Notice is given with the skill and care ordinarily used by members of the Engineering profession practicing under similar conditions at the same time and in the same locality.
2. Said Notice reflects and is an expression of the professional judgment of Engineer.
3. Said Notice is given as to the best of Engineer's knowledge, information and belief.
4. Said Notice is based entirely on the expressly limited scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Work) under Engineer's Agreement with Owner and under the Contract reference on the reverse hereof, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under Engineer's Agreement with Owner and the Contract referenced on the reverse hereof.
5. Said Notice is not a guarantee or warranty of Contractor's performance under the above-referenced Contract referenced on the reverse hereof nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents.

00 65 36  
WARRANTY FORM  
(SAMPLE FORM)

**TO BE TRANSFERRED TO THE CONTRACTOR'S LETTERHEAD**

Owner (see Bid Form) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Subject:** \_\_\_\_\_ - \_\_\_\_\_

Dear \_\_\_\_\_:

We, the \_\_\_\_\_, Contractor on the subject Project, hereby guarantee for a period of \_\_\_\_\_, commencing \_\_\_\_\_ and ending \_\_\_\_\_, that should any defect due to improper materials or workmanship develop during the period of the guarantee, the same shall be made good by us without expense to the \_\_\_\_\_.

This guarantee is for all work except that equipment separately guaranteed as called for under Section 01 61 01 of the Specifications.

Very truly yours,

A B C, INC.

\_\_\_\_\_

\_\_\_\_\_:

C: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



00 65 36.03  
CONTRACTOR'S AFFIDAVIT LETTER  
(SAMPLE FORM)

**TO BE TRANSFERRED TO THE CONTRACTOR'S LETTERHEAD**

Owner (see Bid Form) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Subject:* \_\_\_\_\_ - \_\_\_\_\_

Dear \_\_\_\_\_:

We, \_\_\_\_\_ (Contractor) do hereby certify that so far as we have knowledge, the waivers of lien furnished herewith represent releases for all the labor and material for which a lien could be filed.

Should any liens remain unsatisfied after all payments are made by the \_\_\_\_\_ (Owner), we the \_\_\_\_\_ shall refund to the \_\_\_\_\_ (Owner) all monies the Owner may be obligated to pay in discharging such liens, including all costs and reasonable Attorney's fees.

Very truly yours,

A B C, INC.

\_\_\_\_\_

\_\_\_\_\_:

C: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

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ASSOCIATED GENERAL CONTRACTORS OF AMERICA

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AMERICAN SOCIETY OF CIVIL ENGINEERS

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PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*A Practice Division of the*  
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

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**STANDARD GENERAL CONDITIONS OF THE  
CONSTRUCTION CONTRACT**

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## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents 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 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 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.
21. *General Requirements*—Sections of Division 1 of the Specifications.
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.
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. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *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.
38. *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.
39. *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.
40. *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.
41. *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.

42. *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 administrative requirements and procedural matters applicable thereto.
43. *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.
44. *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.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *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 Subcontractor.
48. *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.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *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.
51. *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 words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of 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 that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 – PRELIMINARY MATTERS**

### *2.01 Delivery of Bonds and Evidence of Insurance*

- A. 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; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

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 reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated 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, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the 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 discovers, or has actual knowledge of, 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 (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 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 had actual knowledge 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, or code, or the instruction of any Supplier (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 shall not:
  1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
  2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

#### 3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by 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 known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
  - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the 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 officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

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

#### 4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition 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
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 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, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall 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 provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all 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:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the 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 officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
  1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered 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. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
  - 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 written notice to Contractor: (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 any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
  - F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. 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, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (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, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition 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 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 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 or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- 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 and loss payee 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 and loss payee 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.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

### 5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such 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, be written on an occurrence basis, include as additional insureds (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, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
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 contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. 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);
5. 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
6. include completed operations coverage:
  - a. Such insurance shall remain in effect for two years after final payment.
  - b. 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, members, 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 a loss payee;
  2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
  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 loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown 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, members, 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 a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this 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 loss payee 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 this 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 as loss payees (and the officers, directors, members, 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 loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
  - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial 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, members, 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 loss payees, 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.

#### 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; and
- 3) it has a proven record of performance and availability of responsive service.

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 if 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 by 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 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 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; and
  - 4) 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 a Change Order in the case of a substitute and 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 so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- 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 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 a loss payee 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, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by 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, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

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 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, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any 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. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take

all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
  2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, 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. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 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 Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and 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 accepted 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:*

- 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:

- a. 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;

- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
  - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review 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 Drawings 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 officers, directors, members, partners, employees, agents, consultants, and subcontractors 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, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is

attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 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, members, partners, employees, agents, consultants and subcontractors arising out of:
  - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 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 through 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, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and 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 such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. 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 wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful 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 with respect to 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 relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with 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 with 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. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

**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.

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 believes 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.

#### 9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

### **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.D.

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

### 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 Times 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 not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, 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 approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 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, express and courier services, 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, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 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.

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; and
  - 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 to 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 Paragraphs 12.01.C.2.a and 12.01.C.2.b 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 their officers, directors, members, partners, employees, agents, consultants, or subcontractors 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. 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, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

### *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 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, Contractor shall, if requested by Engineer, uncover such Work 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 written 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.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

### 13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. 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) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, 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, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

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 payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

### 14.02 *Progress Payments*

#### 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 of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial

Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
    - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
    - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
  4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
    - a. to supervise, direct, or control the Work, or
    - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
    - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
    - d. to make any examination to ascertain how or for what purposes Contractor has used the 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:
    - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
    - b. the Contract Price has been reduced by Change Orders;
    - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
    - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

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.

D. *Reduction in Payment:*

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 remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

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, 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 remove its property and 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, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D 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 therefor. 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.6;
  - 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 might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

##### B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation

as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract 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 retainage 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 repeated disregard of the authority of Engineer; or
  4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- 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 the 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.

## **ARTICLES 18, 19 AND 20 ADDED IN THE SUPPLEMENTARY CONDITIONS**



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## SUPPLEMENTARY CONDITIONS

### PART 1 - GENERAL

#### 1.1 SUPPLEMENTARY CONDITIONS

- A. These Supplementary Conditions modify, change, delete from or add to the "Standard General Conditions of the Construction Contract" EJCDC No. C-700, 2007 edition. Where any Article of the General Conditions is modified, or any Paragraph, Subparagraph, or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph, or Clause shall remain in effect.
- B. The General Conditions also may be supplemented elsewhere in the Contract Documents by provisions located in, but not necessarily limited to Division 01 of the Specifications.

#### 1.2 ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

- A. SC-1
  - 1. The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract have the identical meaning assigned to them in said General Conditions.
- B. SC-(1.01A.17)
  - 1. The term "Drawings" and the term "Plans" shall be considered synonymous whenever and wherever used in the Contract Documents.
  - 2. The following Drawings are part of the Contract Documents:  
Drawings titled: Broad Street, Richmond Road, and Mill Street Water Main Replacement  
Project No.: 221284.41  
Owner: Village of McHenry, Illinois  
Sheets: Consisting of 15 sheets prepared by Baxter & Woodman, Inc.

#### 1.3 ARTICLE 2 - PRELIMINARY MATTERS

- A. SC-2.01.B
  - 1. Delete paragraph 2.01.B in its entirety and substitute the following:  
  
2.01.B When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner, with copies to each additional insured indicated in paragraphs 5.03 through 5.06, certificates of insurance which Contractor is required to purchase and maintain in accordance with paragraphs 5.03 and 5.04.

SUPPLEMENTARY CONDITIONS

00 73 00.13-1 (221284.41)

- B. SC-2.02
1. Delete paragraph 2.02 in its entirety and substitute the following:  
  
2.02 "Engineer will provide an electronic copy of the Drawings and Project Manual to the Contractor at the Preconstruction Conference."
- C. SC-2.03
1. Under paragraph 2.03, delete the last sentence in its entirety.
- D. SC-2.05.A
1. Delete paragraph 2.05.A in its entirety.
- E. SC-2.05.A.1 through 2.05.A.3
1. Delete paragraphs 2.05.A.1 through 2.05.A.3 inclusive in their entirety.
- F. SC-2.06
1. Under paragraph 2.06, change "paragraph 2.05.A " to "paragraph 2.07".
- G. SC-2.07
1. Delete paragraph 2.07 in its entirety and substitute the following:  
  
2.07 Prior to submission of the first Application for Payment, but no later than 30 calendar days after Contract Times commence, Contractor shall submit to Engineer for review and approval:
    - A. A 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;
    - B. A schedule of Shop Drawings and Sample submittal which will list each required submittal and the times for submitting, reviewing, and processing such submittal;
      1. The schedule for shop drawings shall show all submittals complete before 25 percent of Contract Price has been paid to Contractor.
      2. The schedule for maintenance manuals shall show all submittals complete before 50 percent of Contract Price has been paid to Contractor.
      3. Failure to meet either of these milestones will result in all future Pay Application Payments being delayed until such time as the milestone has been met in the opinion of the Engineer.
    - C. A schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work; and

- D. A schedule of progress payments Contractor anticipates will be earned during the course of the Work.

No progress payment shall be made to Contractor until the schedules are submitted to and acceptable to Engineer as provided below. The progress schedule will be acceptable to Engineer as providing an orderly progression of the Work to completion within any specified Milestones and the Contract Times, but such acceptance will neither impose on Engineer responsibility for the sequencing, scheduling or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor. Contractor's schedule of Shop Drawing and Sample submissions will be acceptable to Engineer as providing a workable arrangement for reviewing and processing the required submittals. Contractor's schedule of values will be acceptable to Engineer as to form and substance.

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

- A. SC-4.01.A
1. Under paragraph 4.01.A, third sentence, insert the words "and temporary construction easements shown on the Drawings" after the word "facilities".
- B. SC-4.02.A
1. Delete paragraph 4.02.A in its entirety and replace it with the following:
    - A. Reports and Drawings:
      1. Section 00 31 32.13 identifies those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
      2. The Supplementary Conditions identify those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- C. SC-4.02.B
1. Under paragraph 4.02.B, delete the second sentence "Such technical data is identified in the Supplementary Conditions".
- D. SC-4.03
1. Delete paragraph 4.03A in its entirety and substitute the following:
    - A. Notification by Contractor, and processing by the Engineer and Owner of Contractor's claims of differing site conditions shall be done in conformance with P.A. 91-0647.
- E. SC-4.05.A
1. Under paragraph 4.05.A., delete first sentence and substitute the following:
    - A. Owner shall provide land surveys necessary to establish right-of-way, easements and property lines. Engineer will provide base lines, bench marks and reference points which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall provide all stakes, markers, labor and assistance required by Engineer.

2. Under paragraph 4.05.A, last sentence, insert the words "and pay" between the words "responsible" and "for".

## 1.5 ARTICLE 5 - BONDS AND INSURANCE

### A. SC-5.02 through 5.10

1. Delete paragraphs 5.02 through 5.10, inclusive in their entirety and substitute the following:

#### 5.02 Licensed Sureties and Insurers; Insurance Policies:

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Contractor shall be obtained from surety or insurance companies that are fully licensed or authorized in the jurisdiction in which the Project is located.

#### 5.03 Certificates of Insurance and Endorsements to Insurance Policies:

- A. In addition to delivering certificates of insurance in accordance with SC paragraph 2.01.B, Contractor shall also deliver to Owner, with copies to each additional insured, copies of all endorsements to the insurance policies which Contractor is required to purchase and maintain in accordance with paragraphs 5.04 and 5.06. All certificates of insurance and endorsements must be found acceptable by the Engineer prior to the Agreement being signed by the Owner. Certificate of Insurance and endorsements shall be fully completed, signed and delivered in accordance with the requirements of Article 5. Samples of Certificate of Insurance Form, and Additional Insureds endorsements, acceptable to Owner, are included in Sections 00 62 16, 00 62 16.13, 00 62 16.16, 00 62 16.19 and 00 62 16.21. Other acceptable endorsements for general liability endorsements may include a combination of CG 20 10 and CG 20 37 endorsements. Endorsements or general liability endorsements shall not exclude supervisory and inspection services.

#### 5.04 Contractor's Insurance:

- A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below 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, or Supplier, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work or by anyone for whose acts any of them may be liable:

1. Workers' Compensation - Workers' Compensation in accordance with the laws of the State, but not less than:  
E.L. \$1,000,000 each accident.  
E.L. \$1,000,000 each employee.  
E.L. \$1,000,000 policy limit.
2. General Liability
  - (a) Bodily Injury Liability and Property Damage Liability in an amount not less than \$2,000,000 each occurrence and a per project aggregate of not less than \$2,000,000.
  - (b) Above to include Premises Operations, Blanket Contractual Liability, Products/Completed Operations, Independent Contractors, Broad Form Property Damage, Personal Injury and "X", "C", and "U" Exclusions deleted.
3. Automobile Liability
  - (a) \$1,000,000 - Bodily Injury and Property Damage (Combined Single Limit).
  - (b) Coverage shall include hired and non-owned automobiles.
4. Umbrella Liability - Umbrella Liability coverage in an amount not less than \$5,000,000. Such coverage shall include, but not be limited to, excess coverage for the Workers' Compensation, General Liability, and Automobile Liability policies.

The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

5. Be furnished by insurers with A. M. Best Company rating of at least A-(Excellent), and a financial size category of VIII or greater.
6. With respect to general liability and umbrella liability insurance required by paragraph 5.04A, include as additional insured Owner, Engineer, and Engineer's Consultants, all of whom shall be listed on such policy by name as additional insureds through an endorsement thereto which provides for no different coverage to the additional insureds than to Contractor, and include coverage for the respective officers, directors, employees, agents and other consultants of each and any of such additional insureds. The additional insured endorsements shall provide the following:
  - (a) that the coverage afforded the additional insureds will be primary and non-contributory insurance for the additional insureds with respect to claims arising out of operations performed by or on behalf of the Contractor;
  - (b) that coverage afforded the additional insureds shall not exclude claims asserted by Contractor's employees;

- (c) that if the additional insureds have other insurance which is applicable to the loss, such other insurance will be on an excess or contingent basis;
  - (d) that the amount of Contractor's liability under the insurance policy will not be reduced by the existence of such other insurance.
- 7. Include contractual liability insurance covering Contractor's indemnity obligations under paragraphs 6.07, 6.11, and 6.20, including, but not limited to, all fees and charges of engineers, architects, attorneys and other professionals, and all court, arbitration, or other dispute resolution costs;
- 8. 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 13.06; and
- 9. With respect to completed operations insurance remain in effect for at least two years after final payment (and Contractor shall furnish Owner and any other additional insured to whom an insurance policy has been furnished evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter).

5.05 Section Reserved.

5.06 Property Insurance:

- A. Contractor shall purchase and maintain Builder's Risk insurance on a 100% completed value basis for the entire work in progress, including materials stored off-site, while in transit, or on-site prior to being incorporated in the Work. The policy shall be written on a full replacement cost basis. Additionally, include soft cost expenses incurred in the repair or replacement of any insured property (including, but not limited to, fees and charges of engineers and architects) in an amount not less than 5 percent of Contract Price.
- B. This insurance shall include interests of Owner, Contractor, Subcontractors in the Work, and the Engineer, all of whom shall be listed by name as insureds or additional insureds on Contractor's Builder's Risk or Installation Floater policy. The policy deductible shall not exceed \$25,000 unless approved in advance by Owner in its sole discretion. Contractor shall be responsible for payment of claims within the deductible or above the policy limits. Contractor's insurance shall be primary to any Builder's Risk insurance maintained by Owner at its sole discretion and benefit. Contractor's insurer shall waive any right of subrogation or recovery against Owner.

5.07 Cancellation or Change:

All the policies of insurance required to be purchased and maintained by Contractor in accordance with paragraphs 5.04 and 5.06 shall contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least 30 days' prior written notice has been given to Owner, Engineer, and to each other additional insured to whom an insurance policy has been furnished.

5.08 Additional Insureds:

Additional insureds referenced in paragraphs 5.04, 5.06, and 5.07 shall be as follows:

- Owner: City of McHenry, IL
- Address: 333 S Green Street, McHenry, Illinois 60050
- Engineer: Baxter & Woodman, Inc.
- Address: 8678 Ridgefield Road, Crystal Lake, Illinois 60012
- Other: Illinois Department of Transportation
- Address: 201 West Center Court, Schaumburg, IL 60196
- Other: McHenry County Conservation District
- Address: 18410 US 14, Woodstock, IL 60098

1.6 ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

A. SC-6.02.B

1. Under paragraph 6.02.B, add: The regular working hours are between 7:00 AM and 5:00 PM, Monday through Friday. In the event Contractor works more than eight hours on any weekday, or works anytime on Saturdays, Sundays, or holidays, during which time the Engineer, Resident Project Representative, or assistants are required to be present, Owner shall pay the cost for such overtime engineering services and shall deduct such cost from payments due Contractor. Overtime engineering services shall be charged at Engineer's standard hourly rates applied on a time and one-half basis for all time over eight hours on any single working day and for all hours on Saturday, and on a double time basis for all Sunday and holiday hours. If the amount due Contractor is not sufficient to cover the cost of overtime engineering services, Contractor shall reimburse Owner in the amount necessary to cover such costs. Legal holidays include:

- |                  |               |
|------------------|---------------|
| New Years Day    | Memorial Day  |
| Independence Day | Labor Day     |
| Thanksgiving Day | Christmas Day |

If the legal holiday falls on Saturday, all hours worked on the preceding Friday and/or the Saturday will be considered as holiday hours. If the legal holiday falls on Sunday, all hours worked on the following Monday will be considered as holiday hours.

B. SC-6.06.A

1. Under paragraph 6.06.A, add: Any person employed by Contractor or Subcontractors who does not perform his work in a proper and skillful manner, or who is intemperate, disorderly, or otherwise objectionable, shall, at the written request of Owner, be forthwith removed from the project site and shall not be employed again in any portion of the Work without written consent of Owner.

C. SC-6.06.B

1. Under paragraph 6.06.B, add: Contractor shall identify all Subcontractors, major Suppliers and other persons or organizations providing principal items of work, material, and equipment. Contractor shall within ten working days of the date on the Notice of Award identify and submit in writing to the Engineer for Owner acceptance the names, addresses, and telephone numbers of all Subcontractors, Major Suppliers, and other persons or organizations providing principal items of work, material, and equipment.

D. SC-6.19.A

1. Delete paragraph 6.19.A in its entirety and substitute the following:

6.19.A Contractor shall execute and deliver to Owner, before the final payment will be issued, a written warranty which guarantees that all work is in accordance with the Contract Documents and will not be defective. This warranty shall guarantee all work for a period of three years from the date of acceptance of the Work and final payment by Owner, except for equipment, motors, electrical controls, and other mechanical devices which shall be guaranteed for a period of two years from the date of acceptance and use of each item of equipment by Owner unless a different guarantee period of time is specified under other parts of the Contract Documents.

If within these guarantee periods or such longer period of time as may be prescribed by the Contract Documents, any work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective work, or, if it has been rejected by Owner, remove it from the site and replace it with nondefective work. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective work corrected or the rejected work removed and replaced, and all direct and indirect costs of such repair and/or replacement of work, including compensation for additional professional services, shall be paid or reimbursed to Owner by Contractor.

Contractor shall furnish a warranty bond in an amount equal to five percent (5%) of the Contract Price, but not less than \$10,000, by a surety satisfactory to Owner to guarantee Contractor's warranty to repair or replace defective work. The warranty bond shall be in addition to Contractor's contract Performance-Payment Bond, and shall be delivered to Owner prior to final payment to Contractor for the Work.

E. SC-6.20.A

1. Under paragraph 6.20.A, add:

In addition, Contractor shall indemnify, hold harmless, and pay for the defense of Owner and Engineer from and against claims, losses, or damages in regard to any act or failure to act by Owner or Engineer in connection with general supervision, observation and/or coordination of Contractor's operations.

Contractor shall, at its own expense, appear, defend, and pay all fees of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith; and, if any judgments shall be rendered against any individual or entity indemnified hereunder in any such action, Contractor shall, at its own expense, satisfy and discharge same. Contractor expressly understands and agrees that any Letter of Credit or insurance protection required by the Contract, or otherwise provided by Contractor, shall in no way limit the responsibility to indemnify, keep, and save harmless, and defend any individual or entity indemnified hereunder as herein provided.

F. SC-6.20.C

1. Delete paragraphs 6.20.C.1 and 6.20.C.2 and replace them with the following:

1. The preparation of Drawings, Specifications, or Property Surveys.

2. After paragraph 6.20.C, add the following:

- D. For any matter for which Owner and Engineer are indemnified under Paragraph 6.20.A, Contractor shall pay for Owner's and Engineer's reasonable defense, 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 or awards until Owner or Engineer are found negligent. If Owner or Engineer are found negligent, Owner or Engineer shall reimburse Contractor for the prorata extent of Owner's or Engineer's negligence for the cost of Owner's or Engineer's reasonable defense.

- E. In Paragraphs 6.20.A. through D. as may be amended by the Supplementary Conditions, Contractor shall indemnify the additional insureds listed in paragraph 5.08.

G. SC-6.21

1. Under paragraph 6.21, add two new subparagraphs:

- F. The design professional providing the design calculations and design drawings shall be licensed in the State of Illinois.

- G. The design calculation and design drawings are not shop drawings, but shall be submitted to Engineer separately along with the required shop drawings for the system, material, or equipment specified. These calculations will be forwarded to Owner for its records.

H. SC 6.22

- 1. Add new paragraph 6.22 as follows:

6.22 Construction Debris Manifest: Prepare documentation identifying the hauler, generator, place of origin of debris or soil, the weight or volume of debris or soil, and the location, owner, and operator of the facility where debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the Contractor for three (3) years: (IL Public Act 90-761).

1.7 ARTICLE 8 - OWNER'S RESPONSIBILITIES

A. SC-8.06

- 1. Delete paragraph 8.06 in its entirety.

1.8 ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

A. SC-9.03

- 1. Under paragraph 9.03.A., delete the second sentence.
- 2. Under paragraph 9.03A add the following:

A LISTING OF THE DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE (RPR).

**A. General**

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 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 will 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 Engineer.

**B. Duties and Responsibilities of RPR**

- 1. *Schedules:* Review the progress schedule, schedule of the Shop Drawing submittals and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
3. *Liaison:*
  - a. Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent and assist in understanding the intent of the Contract Documents; and assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
  - b. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
4. *Shop Drawings and Samples:*
  - a. Record date of receipt of Shop Drawings and samples.
  - b. Receive samples which are furnished at the site by Contractor, and notify Engineer of availability of samples for examination.
  - c. Advise Engineer and Contractor of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by Engineer.
5. *Review of Work, Rejection of Defective Work, Inspections and Tests:*
  - a. Conduct on-site observations of the Work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made: and advise Engineer of Work that RPR believes should be corrected or rejected or uncovered for observation, or requires special testing, inspection and approval.
  - c. Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that Contractor maintains adequate records thereof; and observe, record and report to Engineer appropriate details relative to the test procedures and startups.
  - d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to Engineer.

6. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
7. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to Engineer. Transmit to Contractor decisions as issued by Engineer.
8. *Records:*
  - a. Maintain at the job site orderly files for correspondence, reports of job conference, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.
  - b. Complete a Daily Report recording Contractor hours on the job site, weather conditions, data relative to questions or Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send original to Engineer.
  - c. Record names, address and telephone numbers of all Contractors, subcontractors and major suppliers of materials and equipment.
9. *Reports:*
  - a. Furnish Engineer periodic reports as required of progress of the Work and the Contractor's compliance with the progress scheduled and schedule of Shop Drawings and sample submittals.
  - b. Consult with Engineer in advance of schedule major tests, inspections or start of important phases of the Work.
  - c. Draft Field Orders, obtain backup material from Contractor and recommend to Engineer Change Orders and Work Directive Changes. Furnish Engineer copies of all Field Orders.
  - d. Report immediately to Engineer and Owner upon occurrence of any accident.
10. *Payment Requests:* Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the

schedule of values. Work completed and materials and equipment delivered at the site but not incorporated in the Work.

11. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that certificates, operation and maintenance manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to Engineer for review and forwarding to Owner prior to final payment for the Work.
12. *Completion:*
  - a. Before Engineer issues a Certificate of Substantial Completion, prepare and furnish to the Engineer a list of observed items requiring completion or correction.
  - b. Conduct final inspection in the company of Engineer, Owner, and Contractor and prepare and furnish to the Engineer a final list of items to be completed or corrected.
  - c. Observe that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

### **C. Limitations of Authority**

Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by Engineer.
2. Shall not exceed limitations of Engineer's authority as set forth in the Agreement or the Contract Documents.
3. Shall not undertake any of the responsibilities of Contractor, subcontractors or Contractor's superintendent.
4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures or construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions relative or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than Contractor.
7. Shall not authorize Owner to occupy the Project in whole or in part.

8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Engineer.

1.9 ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

A. SC-12.04 through 12.06

1. Add the following paragraphs:

12.04 Start and Completion Times

The date of beginning and the time for completion of the Work are essential conditions of the Agreement and the Work required shall be commenced on a date specified in the Notice to Proceed.

12.05 Time for Completion

Contractor shall proceed with the Work at such rate of progress to insure full completion within the Contract Times. It is expressly understood and agreed, by and between the Contractor and the Owner, that the Contract Times for the completion of the Work described herein is a reasonable time, taking into consideration the adverse weather conditions for the season, or seasons, involved and other factors prevailing in the locality of the Work.

12.06 Liquidated Damages

Contractor understands that time is of the essence and that Owner will suffer financial loss if the Work is not completed within the times or by the dates specified in the Bid Form, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. Contractor also recognizes 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, Contractor shall pay Owner as liquidated damages for delay (but not as a penalty) \$1,200 for each day that expires after the time or date specified in the Bid Form 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 \$600 for each day that expires after the time or date specified in the Bid Form for completion and readiness for final payment. Liquidated damages accrued after the Substantial Completion date will be withheld from the project retention until the work is substantially completed. Liquidated damages accrued after the final completion date will also be withheld from the project retention until final completion is achieved. If the amount of project retention is not sufficient enough to cover the amount of accrued liquidated damages for substantial and final completion, further payments to the Contractor will be withheld until to the project is substantially and final completed.

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

A. SC-13.10

1. Add new paragraph 13.10 as follows:

13.10 Notification and Time Limit for Repairs:

- A. Contractor shall be responsible for the proper and safe protection of his work at all times during construction and also during the three-year guarantee period after the acceptance of the completed work by Owner. Contractor shall provide, erect, and maintain barricades, red flags, and torches and lights at all places where work is in progress, and wherever else required by Owner.
- B. Contractor shall maintain an emergency phone number where he/she can be notified at any time, Sundays and holidays included, of an emergency condition due to the work which requires immediate repair or protection. Upon such notification by Owner, Contractor shall be given a two-hour time limit to provide whatever barricades, flags, torches and lights are required to mark and protect the hazard. If Contractor fails to provide this protection within the two-hour period from time of notification, Owner will provide the necessary protection and deduct the sum of \$200.00 for each occurrence from the monies due and payable to Contractor for completed work.
- C. Also, upon notification by Owner, Contractor shall be given a 24-hour time limit to begin to make any repairs to the Work as deemed necessary by Owner. If Contractor fails to proceed with necessary repairs within the 24-hour notification period, Owner will make the necessary repairs to the Work and deduct the cost of labor and materials, including engineering costs, for each repair incident from the monies due and payable to Contractor for completed work.

1.11 ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

A. SC-14.01

1. Add the following paragraph after paragraph 14.01.A:

- B. Contractor shall submit revisions to the initial schedule of progress payments whenever actual outlays for the Work vary beyond -5 percent and +10 percent from the schedule, as determined by Engineer.

B. SC-14.02

1. Under paragraph 14.02.A.1, delete the remainder of the first sentence after "(but not more than one a month)" and insert the following:

Contractor shall submit to Engineer for review an original plus four duplicate copies of each Application for Payment and each copy shall be accompanied by a "Sworn Statement For Contractor And Subcontractor To Owner" on a pre-printed or computer generated form similar to Certificate 00 62 76.01.

2. Delete paragraph 14.02.A.3, and substitute the following:

Periodic partial payments shall be for the value of the completed work less a retained amount of 10 percent of the value of completed work as approved by Engineer until construction is 50 percent complete, after which no additional amount will be retained if Contractor is making progress to Owner's satisfaction and there is no specific cause for withholding 10 percent of the total value of completed work. When the project is substantially complete and available for Owner's operational or beneficial occupancy, the retained amount shall be reduced to only that amount estimated by Engineer as necessary to assure completion of the Work, unless, in the opinion of the Engineer and Owner, Substantial and Final Completion will not be achieved by the designated completion dates established by the Notice to Proceed, as described by Article 12.06 of the Supplementary Conditions. The final payment, including the retained amount, shall be payable within 30 days after the completion of the Work, approval by Engineer and acceptance by Owner. The acceptance of the final payment by Contractor shall be considered to be a waiver of all claims against Owner under the Agreement.

- C. SC-14.02.C

1. Under paragraph 14.02.C, change "Ten" to "Within 30".

- D. SC-14.03

1. Under paragraph 14.03.A, add the following:

B. Contractor shall procure from each Subcontractor and Supplier of material or labor a waiver of any claim which they may have under the mechanics lien laws of the state in which the Work is located, to insure Owner immunity from mechanics liens on account of anything which is done by Contractor or his Subcontractors in carrying out the Agreement and any work orders for additions thereto, all as a condition of any payment by Owner. Any payments made by Owner without requiring compliance with this paragraph shall not be construed as a waiver by Owner of the right to require compliance with this paragraph as a condition of later payments. Contractor shall furnish with his final Application for Payment a complete release of all liens arising out of this contract, or receipts in full in lieu thereof and an affidavit that the releases and receipts include all labor and material for which a lien could be filed.

- E. SC-14.07

1. Under paragraph 14.07.C, change "Thirty" to "Sixty".

1.12 ARTICLE 18 - EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION NOTICE

18.01 Equal Employment

- A. Contractor shall comply with the following Equal Employment Opportunity - Affirmative Action Clause required by the Illinois Department of Human Rights:
  - 1. In the event the Contractor's noncompliance with any provision of this Equal Employment Opportunity - Affirmative Action Clause, the Illinois Human Rights Act or the Department of Human Rights Rules and Regulations for Public Contracts, the Contractor 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 cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of the Work under this Agreement, the Contractor agrees as follows:
    - a. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, ancestry, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; 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.
    - b. That, if it hires additional employees in order to perform the Work under this Agreement, or any portion hereof, it will determine the availability (in accordance with the Department'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.
    - c. That it will have written sexual harassment policies that shall include, at a minimum, the following information: the illegality of sexual harassment; the definition of sexual harassment under State law; a description of sexual harassment, utilizing examples; the Contractor's internal complaint process including penalties; the legal recourse, investigative and complaint process available through the Department of Human Rights and the Illinois Human Rights Commission; directions on how to contact these State agencies; and protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act.
    - d. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin, ancestry, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.
    - e. 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 Human Rights Act and the Department's Rules and Regulations for Public Contracts. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

- f. That it will submit reports as required by the Illinois Department of Human Rights' Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
- g. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
- h. That it will include verbatim or by reference the provisions of Paragraphs a through h of this clause in every performance subcontract as defined in Section 1.1(17)(b) of the Department's Rules and Regulations so that such provisions will be binding upon every such Subcontractor; and that it will also so include the provisions of Paragraphs a, f, g, and h in every supply subcontract as defined in Section 1.1(17)(a) of the Department's Rules and Regulations so that such provisions will be binding upon every such Subcontractor. In the same manner as with other provisions of this Agreement, the 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 Department of Human Rights in the event any Subcontractor fails or refuses to comply therewith. In addition, no Contractor will utilize any Subcontractor declared by the Department to be nonresponsible and therefore ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

- 2. Contractor and Subcontractor shall in turn include this Equal Employment Opportunity - Affirmative Action Clause in each of its subcontracts verbatim or by reference so that the provisions of Paragraphs a through h of said clause will binding upon Subcontractors of every tier; provided, however, that only Paragraphs a, f, g, and h need be included in every subcontract as defined in Section 2.10(a) of the Rules and regulations of the Illinois Department of Human Rights.

## 1.13 ARTICLE 19 - PREVAILING WAGE RATES

### A. SC-19.01 Prevailing Wage Rates

- 1. Contractor shall comply with the Prevailing Wage Act, 820 ILCS 130/.01 et seq. except where a prevailing wage violates a federal law, order, or ruling, the rate

conforming to the federal law, order, or ruling shall govern. All Contractors and Subcontractors rendering service under this Agreement must comply with the Act.

2. Contractor shall comply with the prevailing wage rates as determined by the Illinois Department of Labor on their website <https://labor.illinois.gov/laws-rules/conmed/current-prevailing-rates.html>.
  3. If the Department of Labor revises prevailing wage rates, the revised prevailing wage rates on the Department of Labor's website shall apply to this contract and the Contractor will not be allowed additional compensation on account of said revisions. The Contractor shall review the wage rates applicable to the work of the contract at regular intervals to ensure timely payment of current wage rates. The Contractor agrees no additional notice is required. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto.
  4. It shall be mandatory upon the Contractor or construction manager to whom a contract for public works is awarded to post, at a location on the project site of the public works that is easily accessible to the workers engaged on the project, the prevailing wage rates for each craft or type of work or mechanic needed to execute the contract or project or work to be performed. A failure to post prevailing wage rates required by this section is a violation of 820 ILCS 130/4.
  5. Contractor shall provide certified payrolls each month to demonstrate compliance with regulations.
- B. SC-19.02 Payroll Records
1. The Contractor and each subcontractor shall make and keep, for a period of not less than five years from the date of the last payment on a contract or subcontract, records of all laborers, mechanics, and other workers employed by them on the project; the records shall include information required by 820 ILCS 130/5 for each worker. Upon seven business days' notice, the Contractor and each subcontractor shall make available for inspection and copying at a location within this State during reasonable hours, the payroll records to the public body in charge of the project, its officers and agents, the Director of Labor and his deputies and agents, and to Federal, State, or local law enforcement agencies and prosecutors.
- C. SC-19.03 Submission of payroll records.
1. The Contractor and each subcontractor shall file a certified payroll for the immediately preceding month with the Department of Labor in accordance with the Department of Labor requirements. The Contractor shall send a copy to the Owner if requested.
- D. SC-19.04 Employees interviews.
1. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department of Labor.

1.14 ARTICLE 20 – STEEL PRODUCTS PROCUREMENT

- A. SC-20.01 Steel Products Procurement
  - 1. Contractor shall comply with the provisions of Illinois Steel Products Procurement Act (30 ILCS 565/) as it may be amended from time to time.

1.15 ARTICLE 21 - EMPLOYMENT OF ILLINOIS WORKERS ON PUBLIC WORKS ACT

- A. SC-21.01 Comply with the provisions of the Employment of Illinois Workers on Public Works Act (30 ILCS 570/) as they may apply to this Project.

1.16 ARTICLE 22 – UNCONTAMINATED SOIL CERTIFICATION AND DISPOSAL

- A. SC-22.01 Comply with the requirements of Sections 22.51(f)(2)(B) and 22.51a(d)(2)(B) of the Illinois Environmental Protection Act ([415 ILCS5/22.51(f)(2)(B)] and [415 ILCS5/22.51a(d)(2)(B)]) for the disposal of uncontaminated soils including uncontaminated soil mixed with other clean construction or demolition debris (CCDD) materials. Provide soil testing and professional engineering services needed to certify the uncontaminated soils (LPC-663) unless the Bidding Documents state that the Owner will provide the uncontaminated soils certification.
- B. SC-22.02 Soils which cannot be certified as uncontaminated or soils that are found to be contaminated during the course of the Work shall be tested and disposed as required for Contaminated Waste Disposal.

END OF SUPPLEMENTARY CONDITIONS

## SECTION 01 22 29

## MEASUREMENT AND PAYMENT

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Payment will be made for the Pay Items listed herein and at the Contract Unit Prices unless otherwise indicated.
- B. Work for which a Pay Item is not listed will be considered incidental to the Contract and no additional compensation will be allowed.
- C. The Owner reserves the right to alter the Drawings, modify incidental work as may be necessary, and increase or decrease quantities of work to be performed including deduction or cancellation of any one or more of the Pay Items.
- D. Quantities necessary to complete the work as shown on the Drawings or as specified herein govern over those shown in the Bid Form. The Engineer will make corrections and interpretations as may be deemed necessary for fulfillment of the intent of the Contract Documents.
- E. The Engineer will make measurements and determinations as necessary to classify the work within Pay Items and determine the quantities for payment.
- F. If the Contractor's Application for Payment is not in accordance with the Engineer's determination of quantities for payment, the Application will be returned for correction and resubmittal.

## 1.2 PRECONSTRUCTION VIDEO RECORDING

- A. Description:
  - 1. The work of this Pay Item consists of video recording at the construction areas prior to start of construction.
  - 2. This Pay Item includes providing separate video and photographs of highway rights-of-way, prior to construction, at locations where pipelines are installed parallel to or across highways and the highway authorities require this documentation as a condition of the permit.
  - 3. This Pay item includes providing video in digital disk format if required by Owner or permitting agency.
- B. Basis of Payment:
  - 1. The work will be paid for at the Contract Lump Sum Price for PRECONSTRUCTION VIDEO RECORDING.

## MEASUREMENT AND PAYMENT

01 22 29-1 (221284.41)

### 1.3 TRAFFIC CONTROL AND PROTECTION

#### A. Description:

1. The work of this item consists of furnishing, installing, relocating, and maintaining traffic control devices for temporary control of vehicular and pedestrian traffic during construction. The following work items are associated with and shall be considered incidental to, this work:
  - a. Furnish, install, maintain, relocate, and remove traffic control devices.
  - b. Furnish and use temporary flaggers.
  - c. Furnish, place, and remove devices utilized for detours and construction safety.
  - d. Provide plans and schedules for detour and construction signage at Pre-construction Meeting for review and approval by Owner.
  - e. Provide and maintain temporary pavement markings (TAPE) until placement of final pavement markings.
  - f. Remove temporary pavement markings (TAPE) prior to installation of bituminous binder or surface courses.

#### B. Measurement:

1. This work will be measured as a lump sum, paid as a direct percentage of total project completion.

#### C. Basis of Payment:

1. This work will be paid for at the Contract Lump Sum Price for TRAFFIC CONTROL AND PROTECTION.

### 1.4 GRANULAR BACKFILL

#### A. Description:

1. The work of this Pay Item consists of backfilling with compacted granular materials complete in place, for the total width of the excavation, including removal and disposal of excavated materials; providing, installing and removing temporary aggregate pavement material; and compacting remaining temporary aggregate pavement material as aggregate base course.

#### B. Measurement:

1. The work will be measured in place and the volume calculated in cubic yards. The height of measurement will be from the top of the bedding and covering material to the top of the temporary aggregate pavement. The width of measurement will be total width of excavation except that the maximum trench width will be as allowed by the IDOT specifications Section 550, or a maximum payable width of 6-feet at pits for directionally drilled water main. The length will be measured along the centerline of the pipe, from centerline of manhole to centerline of manhole, or from edge of pavement to edge of pavement.

### MEASUREMENT AND PAYMENT

01 22 29-2 (221284.41)

- C. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price per cubic yard for GRANULAR BACKFILL.

#### 1.5 REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL

- A. Description:
  - 1. The work of this Pay Item consists of the removal of organic, soft, spongy or otherwise unsuitable soils found at the bottom of open trench pipe installations or at the bottom of tunnel shafts and the replacement with gradation No. CA 1 stone complete, including removal and disposal of unsuitable materials; protection, replacement, or repair of utilities; and dewatering, including erosion and sedimentation control methods and devices to provide protection to environment from all pumping operations.
  - 2. Payment will be allowed for only the material below an elevation one foot below the bottom of the pipe barrel, and when removal and replacement is approved by the Engineer.
- B. Measurement:
  - 1. The work will be measured in the field and computed in cubic yards.
- C. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price per cubic yard for REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL, at the locations noted.

#### 1.6 SOIL TESTS FOR CONTAMINANTS

- A. Description:
  - 1. The work of this Pay Item consists of providing the services of a geotechnical engineer to take samples of the soil at the site of the work and provide laboratory testing of the samples to determine if contaminants are present in the soil. If sampling and analysis is required for landfill disposal, it shall be included in this Pay Item.
- B. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price for each sample, as SOIL TESTS FOR CONTAMINANTS.

#### 1.7 CONTAMINATED WASTE DISPOSAL

- A. Description:
  - 1. The work of this Pay Item consists of disposal of material from the work site that is determined to be contaminated, based upon criteria of Illinois Environmental Protection Act for CCDD materials.
- B. Measurement:
  - 1. The work will be measured based on verified load tickets.

C. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per ton as CONTAMINATED WASTE DISPOSAL.

1.8 WATER MAIN (OPEN CUT)

A. Description:

1. The work of this Pay Item consists of water main pipe complete in place, including sawcutting, and removal and disposal of existing pavements; excavation; removal and disposal of waste excavated materials; protection, replacement, or repair of utilities; trench dewatering, including erosion and sedimentation control methods and devices to provide protection to environment from all pumping operations; installation of pipe; bracing; bedding and covering of pipe; trench backfilling with and compaction of excavated materials; testing; disinfection, finish grading; but not including backfilling with granular backfill materials.
2. This Pay Item includes all restrained joint type (R.J.T.) fittings complete in place as shown on the Drawings. Additional fittings not shown on the Drawings shall be paid for as MISCELLANEOUS FITTINGS.
3. This Pay Item includes the pipe within tree tunnels, and within casing installed by open cut.
4. Installing new mains in excess of 6 feet of cover in order to cross existing mains, provide for future improvements or cross below sewer lines is considered incidental to the installation of the water main, and no addition to the contract will be allowed.
5. This Pay Item includes polyethylene wrapping of all ductile iron pipe.
6. Removal and replacement of material, including unsuitable material, to a depth of one foot below the bottom of the pipe barrel is considered incidental to construction and no addition to the contract will be allowed.
7. Overexcavation, and removal and replacement of unsuitable materials with CA 1 greater than one foot below the bottom of the pipe barrel will be paid for in a separate Pay Item.
8. This Pay Item includes construction layout, fencing; and all other work or operations which must be performed or costs incurred when beginning work on the Project.

B. Measurement:

1. The work will be measured in lineal feet along the centerline of the pipe.
2. The measurement will go through fittings and valves.

C. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per lineal foot for WATER MAIN (OPEN CUT) of the pipe sizes, regardless of depth.

## 1.9 WATER MAIN (DIRECTIONALLY DRILLED)

### A. Description:

1. The work of this Pay Item consist of installing PVC, or ductile iron pipe complete in place by directional drilling methods; including providing insertion and receiving pits, tightsheeting where required to protect adjacent utilities, roadways and property, or to provide protection to the public; leaving tightsheeting in place if indicated on the Drawings; protection, repair or replacement of utilities; traffic control; fencing of work site to provide protection to public; excavation; removal and disposal of waste excavated materials; bracing; dewatering, including erosion and sedimentation control methods and devices to provide protection to environment from all pumping operations; providing and installing casing and carrier pipe; end seals; testing; backfilling with and compaction of excavated materials at pits; cleanup; and finish grading.
2. Backfilling with granular backfill materials at pits shall be paid under GRANULAR BACKFILL.

### B. Measurement:

1. The work will be measured in lineal feet along the centerline of the pipe, and will begin and end at the transition to ductile iron water main pipe.
2. Length of pipe can be measured with the Engineer prior to insertion, and totaled to arrive at total pay length.

### C. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per lineal foot for WATER MAIN (DIRECTIONALLY DRILLED).

## 1.10 MISCELLANEOUS FITTINGS

### A. Description:

1. The work of this Pay Item consists of any additional fittings not shown on the plans necessary to alter or adjust the water main as directed by the Engineer. All fittings shown on the plans shall be incidental to the cost per lineal foot of WATER MAIN (OPEN CUT). Any fitting indicated on the plans which is deleted will be credited against any claim for payment under MISCELLANEOUS FITTINGS, pound for pound. The Owner shall not in any case request a net credit under this provision.

### B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per pound for MISCELLANEOUS FITTINGS.

## 1.11 CONNECT TO WATER MAIN (NON-PRESSURE)

### A. Description:

1. The work of this Pay Item consists of connecting to existing water mains, including removal of existing plugs; cutting and removing existing mains;

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thrust blocking; excavation; bracing; bedding and covering of pipe; trench dewatering; trench backfilling with excavated materials; testing; disinfection; finish grading; removal and disposal of waste excavated materials; protection, replacement, or repair of utilities; including backfilling with compacted granular backfill materials where required.

2. Pipe fittings will be paid for under the Pay Item "WATER MAIN PIPE FITTINGS".
  3. This Pay Item includes installation and removal of temporary thrust blocking and temporary plugs and coordination of shutdown of main with Owner and Engineer during final connection.
- B. Basis of Payment:
1. The work will be paid for at the Contract Unit Price for each CONNECTION TO EXISTING WATER MAIN (NON-PRESSURE) of the pipe sizes.

#### 1.12 GATE VALVE

- A. Description:
1. The work of this Pay Item consists of gate valves complete in place, but not including fire hydrant auxiliary valves or tapping valves.
- B. Basis of Payment:
1. The work will be paid for at the Contract Unit Price for each GATE VALVE of the valve sizes.

#### 1.13 VALVE BOX

- A. Description:
1. The work of this Pay Item consists of valve boxes complete in place, including polyethylene wrapping of valve box; valve box stabilizer; but not including fire hydrant auxiliary valves.
- B. Basis of Payment:
1. The work will be paid for at the contract Unit Price for each GATE VALVE AND BOX of the valve sizes.

#### 1.14 VALVE VAULT

- A. Description:
1. The work of this Pay Item consists of the installation of valve vaults during open cut water main installation complete in place as outlined in the technical specifications and on plan details, including sawcutting, removal and disposal of existing pavements; excavation in excess of that required for standard pipeline trench construction; removal and disposal of waste excavated materials; bracing, sheeting, and shoring; protection, replacement, or repair of utilities; dewatering, including erosion and sedimentation control methods and devices to provide protection to the environment from all pumping operations; vault bedding; monolithic type vault base with watertight flexible pipe connectors where pipes enter vault

wall; manhole risers as required to provide proper depth; concentric cone or flat top cover; frame and cover adjusting rings; frame and cover; steps; backfilling with compacted excavated materials in parkways, and compacted granular materials under pavements; and including frame and cover adjustment to final grade at time of street or parkway restoration.

2. Provide eccentric cones only on vaults utilized for tapping of existing mains, or when indicated on the Drawings.
3. This Pay Item includes providing vaults of sufficient depth to provide the standard depth of cover indicated on the drawings, plus two feet, measured from the top of the water main to the top of the frame and cover. If depth of cover is 6 feet, vaults to a depth of 8 feet from top to main to top of frame and cover will be installed with no addition to the contract allowed.
4. This Pay Item including providing and installing bolt-down watertight frame and cover on all valve vaults.
5. This Pay Item includes providing exterior joint protection on all valve vaults.

B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price for each VALVE VAULT, of the size indicated.

#### 1.15 FIRE HYDRANT

A. Description:

1. The work of this Pay Item consists of fire hydrants complete in place, including excavation; bracing; bedding and covering of pipe; 5 lineal feet of 6-inch connecting pipe; auxiliary gate valve and valve box; thrust blocking; hydrant barrel drain washed stone pocket; support; trenching dewatering; trench backfilling with excavated materials; testing; disinfection; finish grading; removal and disposal of waste excavated materials; protection, replacement, or repair of utilities; and including backfilling with granular backfill materials where connecting pipe is below pavement.
2. This Pay Item includes polyethylene wrapping of connecting pipe, auxiliary valve, and hydrant.
3. This Pay Item includes providing a fire hydrant of sufficient height to position the hydrant nozzles and break-away flange to the elevations indicated in the technical specifications and plan detail. Contractor will determine the proper "bury" height based on water main size and depth of bury.

B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price for each FIRE HYDRANT.

#### 1.16 ABANDONMENT OF EXISTING WATER MAINS AND APPURTENANCES

A. Description:

1. The work of this Pay Item consists of the abandonment of existing water main, valves, vaults, and fire hydrants; including excavation, removal of

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valve, box top sections, fire hydrants, and valve vaults; protection, replacement, or repair of utilities; removal and disposal of waste excavated materials; backfilling of all excavations with granular backfill materials, and surface restoration where appurtenances to be abandoned are not in general area of water main construction.

2. Fire hydrants, hydrant barrel section, hydrant auxiliary boxes, and valve boxes are to be delivered to the Owner's Public Works Department; but vaults are to be disposed of offsite.
  3. Installation of concrete plugs in abandoned water mains or crimping of water services at the edge of the trench area is considered incidental to the installation of the new water main.
  4. Removal and disposal of existing water main that must be removed in order to install the new water main or services is considered incidental to construction.
  5. Filling of pipes located in IDOT Right-of-Way with low density cellular grout will be paid for under "FILLING OF EXISTING PIPE FOR ABANDONMENT."
- B. Basis of Payment:
1. The work will be paid for at the Contract Lump Sum Price for ABANDONMENT OF EXISTING WATER MAINS AND APPURTENANCES, of the type and location noted.

#### 1.17 FILLING OF EXISTING PIPE FOR ABANDONMENT

- A. Description:
1. The work of this Pay Item shall be completed in accordance with Section 31 23 79 and shall consist of filling existing force main pipe with Low Density Cellular Grout, including concrete brick and mortar plugs; temporary plugging of pipes and subsequent removal of temporary plugs; providing fill, vent, and drain holes in the concrete brick and mortar plugs; and all labor, equipment, and materials.
- B. Method of Measurement:
1. The work will be measured in cubic yards of Low Density Cellular Grout used to fill the water main pipes.
  2. Measurement quantity for pipes will be the volume of pipe determined by the length of pipe from inside face of a structure or cut end to inside face of a structure or cut end, and the nominal inside diameter of the pipe.
- C. Basis of Payment:
1. The work will be paid for at the Contract Unit Price per cubic yard for FILLING OF EXISTING PIPE FOR ABANDONMENT.

1.18 WATER SERVICE CONNECTION

A. Description:

1. The work of this Pay Item consists of connecting water service lines to the water mains complete in place, including service saddles; corporation stops; curb stops; service boxes; all required fittings, and including backfilling with granular backfill materials at locations under or within 2' of pavement.
2. This Pay Item includes connecting to the curb stop within meter pits, where meter pits are encountered.

B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price for each WATER SERVICE CONNECTION of the service pipe sizes, and the item noted.

1.19 WATER SERVICE LINE

A. Description:

1. The work of this Pay Item consists of water service pipe complete in place, by open cut, including excavation; bracing; bedding and covering of pipe; trench dewatering; trench backfilling with excavated materials; testing; disinfection; finish grading; removal and disposal of waste excavated materials; protection, and replacement or repair of utilities.
2. Water service can also be installed by trenchless methods, such as augering, percussion hammer, or horizontal directional drilling (as a contractor's option or where indicated on the Drawings).
3. The open cut method includes backfilling with compacted granular backfill materials.
4. Installing new services in excess of 6 feet of cover in order to cross existing mains, provide for future improvements or cross below sewer lines is considered incidental to the installation of the service, and no addition to the contract will be allowed.

B. Measurement:

1. The work will be measured in lineal feet along the centerline of the pipe.

C. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per lineal foot for WATER SERVICE LINE of the pipe sizes, and type of installation.

1.20 PRIVATE LEAD WATER SERVICE PIPE REPLACEMENT – CURB STOP TO WATER METER

A. Description:

1. The work of this Pay Item shall consist of providing all materials, labor, tools, equipment, and services required to install new water service lines originating at the curb stop and terminating inside buildings at the water meter, for all existing lead water service lines.

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2. This Pay Item includes excavation; granular trench backfill; private property restoration to the original condition, including pavement replacement, topsoil replacement and sodding; all connections to existing service lines; utility locates and all other incidentals to complete the replacement of a water service line from the curb stop to the interior of buildings with water service line sizes as determined by the Engineer.
3. As the case of each building requires, the water service shall be installed by trenchless methods, such as augering, percussion hammer, or horizontal directional drilling.
4. This Pay Item includes coring through foundation walls and sealing of annular space around pipe; all piping and plumbing modifications inside the building, including water meter relocation and new valve(s); connecting the water service to the existing indoor plumbing of the building and to the curb stop.
5. The work of this Pay Item shall include all project management; coordination and contact with private property owners; required inspections; flushing; documentation and all other required work to complete the water service line replacement work.
6. All work for this Pay Item shall be completed by a State of Illinois Licensed Contractor with a State of Illinois Licensed Plumber on-site.

B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price for each LEAD WATER SERVICE PIPE REPLACEMENT – CURB STOP TO WATER METER of the water service sizes specified.

1.21 REPLACEMENT OF EXISTING STORM SEWER

A. Description:

1. The work of this Pay Item consists of the removal and replacement of existing storm sewers and storm sewer structures, including sawcutting, and removal and disposal of existing pavement; protection, repair or replacement of utilities; excavation; removal and disposal of waste excavated material; trench dewatering, including erosion and sedimentation control; watertight connections to existing pipes or structures; installation of pipe or structure; bracing, bedding and covering of pipe; granular trench backfill material at pipe crossing and below all pavement; and cleanup.

B. Measurement:

1. The work will be measured in lineal feet along the centerline of the storm sewer removed and replaced.

C. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per lineal foot for storm sewers and for each structure as REPLACEMENT OF EXISTING STORM SEWER, of the size and type indicated.

1.22 REMOVE AND REPLACE INLET

A. Description:

1. The work of this Pay Item consists of the removal and replacement of inlets complete in place, including sawcutting, removal and disposal of existing pavements; excavation in excess of that required for standard trench construction; removal and disposal of waste excavated materials; bracing, sheeting, and shoring; protection, replacement, or repair of utilities; dewatering, including erosion and sedimentation control methods and devices to provide protection to the environment from all pumping operations; inlet bedding; including frames and grates; pipe connections; and frame and grate adjustment at time of final surfacing or restoration; but not including concrete curb and gutter removal and replacement..

B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price for each REMOVE AND REPLACE INLET of the type and size.

1.23 INLET PROTECTION FILTER

A. Description:

1. The work of this Pay Item consists of providing and installing inlet protection filters.

B. Basis of Payment:

1. The work will be paid for at the Contract Unit Price per each INLET PROTECTION FILTER.

1.24 TEMPORARY HOT-MIX ASPHALT PAVEMENT

A. Description:

1. The work of this Pay Item consists of temporary hot-mix asphalt pavement complete in place at pipelines, including subgrade preparation, for use during the period between backfilling the trench and constructing the permanent pavement.
2. Install temporary hot-mix asphalt pavement only at high traffic areas such as intersections.

B. Measurement:

1. The work will be measured in lineal feet along the centerline of the pipe and the quantity computed in square yards, with a maximum width of 6 feet used for payment calculations.
2. The limits of the work area will be indicated on the Drawings and the areas measured in the field and calculated in square yards.
3. Areas damaged due to Contractor's neglect or beyond the maximum pay width will not be measured for payment.

- C. Basis of Payment:
  - 1. This work will be paid for at the Contract Unit Price per square yard for TEMPORARY HOT-MIX ASPHALT PAVEMENT regardless of the depth of the pipeline.

#### 1.25 CLASS D PATCH

- A. Description:
  - 1. This work shall consist of the removal of the existing pavement, the necessary excavation and the replacement with the class and type specified according to Section 442 of IDOT Standard Specifications for Road and Bridge Construction, latest edition.
- B. Measurement:
  - 1. Street restoration pavement patches will be measure in place and the area computed in square yards.
- C. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price per square yards for CLASS D PATCH.

#### 1.26 HOT-MIX ASPHALT REMOVAL AND REPLACEMENT

- A. Description:
  - 1. The work of this Pay Item consists of replacing street pavement that has been removed as part of the water main work. Restoration will consist of hot-mix asphalt binder course and hot-mix asphalt surface course of the thicknesses specified, installed within the trench limits to match the existing surface. The following items are associated with and shall be considered incidental to this Pay Item:
    - a. All quality control testing in accordance with Article 1030.05(d).
    - b. Prime coat applications.
    - c. Sawcutting to provide clean, straight edges is mandatory, regardless of the number of times required.
  - 2. This Pay Item includes the removal and replacement of hot-mix asphalt surface material in IDOT Right-of-Way where full-lane resurfacing is indicated on the Drawings.
- B. Measurement:
  - 1. Street restoration of trenches will be measured in place and the area computed in square yards.
    - a. The length will be measured down the centerline of the pipe.
    - b. All areas disturbed shall be restored, but the maximum allowable trench widths used for pay quantity calculations will be 6 feet centered on the pipe. If the Contractor chooses to relocate the trench farther away from the curb and gutter, the pavement patch will extend from the sawcut in the existing pavement to the face of the gutter and the maximum allowable width of 6 feet will be used for pay quantity

calculations. If the Owner or Engineer relocates the trench away from the curb and gutter, additional quantities will be calculated based on the actual trench width as approved by the Engineer.

C. Basis of Payment:

1. The street pavement restoration at water main and sewer trenches will be paid for at the Contract unit price per square yard of the thicknesses indicated as HOT-MIX ASPHALT REMOVAL AND REPLACEMENT.

## 1.27 PORTLAND CEMENT CONCRETE REMOVAL AND REPLACEMENT

A. Description:

1. The work of this Pay Item consists of replacing street pavement that has been removed as part of the water main work. Restoration will consist of Portland cement concrete pavement of the thicknesses specified, installed within the trench limits to match the existing surface. The following items are associated with and shall be considered incidental to this Pay Item:
  - a. Sawcutting to provide clean, straight edges is mandatory, regardless of the number of times required.
  - b. State routes shall be restored to the full width of the lane.
  - c. Subgrade improvements, as directed by the Engineer.

B. Measurement:

1. Street restoration of trenches will be measured in place and the area computed in square yards.
  - a. The length will be measured down the centerline of the pipe.
  - b. All areas disturbed shall be restored, but the maximum allowable trench widths used for pay quantity calculations will be 6 feet centered on the pipe. If the Contractor chooses to relocate the trench farther away from the curb and gutter, the pavement patch will extend from the sawcut in the existing pavement to the face of the gutter and the maximum allowable width of 6 feet will be used for pay quantity calculations. If the Owner or Engineer relocates the trench away from the curb and gutter, additional quantities will be calculated based on the actual trench width as approved by the Engineer.

C. Basis of Payment:

1. The street pavement restoration at water main and sewer trenches will be paid for at the Contract unit price per square yard of the thicknesses indicated as PORTLAND CEMENT CONCRETE REMOVAL AND REPLACEMENT.

## 1.28 HOT-MIX ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT

A. Description:

1. The work of this Pay Item consists of constructing hot-mix asphalt driveway aprons to match current City standards. The following work items are associated with and shall be considered incidental to, this Pay Item:
  - a. All quality control testing in accordance with Article 1030.05(d).

- b. Excavate and dispose of existing subgrade material to proposed subgrade elevation.
  - c. Prepare Subgrade.
  - d. Replace steel edging if applicable.
  - e. Install minimum 3" aggregate Base Course.
  - f. Install 1.5-inch hot-mix asphalt base for driveways.
  - g. Install Bituminous Materials (Prime Coat).
  - h. Place hot-mix asphalt Surface Course, (1.5-inch compacted depth).
  - i. Utilize driveway mix for Surface Course if so directed by Engineer.
- B. Measurement:
- 1. Driveway removal and replacement will be measured in place prior, and the area computed in square yards.
  - 2. Additional quantities of driveway, subbase, or subgrade removed due to neglect by the Contractor, as determined by the Engineer, will not be measured for payment.
- C. Basis of Payment:
- 1. This work will be paid for at the Contract Unit Price per square yard for HOT-MIX ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT of the thickness indicated in the Specifications.

#### 1.29 PCC DRIVEWAY REMOVAL AND REPLACEMENT

- A. Description:
- 1. The work of this Pay Item consists of removing and replacing the Portland Cement Concrete driveway and subgrade where indicated on the Drawings or as directed by the Engineer. The following work items are associated with, and shall be considered incidental to, this Pay Item:
  - 2. Sawcut existing driveway, full depth.
  - 3. Break, remove, and dispose of existing driveway.
  - 4. Excavate and dispose of existing subgrade material to proposed subgrade elevation.
  - 5. Prepare Subgrade.
  - 6. Replace steel edging if applicable.
  - 7. Install Aggregate Base Course where required.
  - 8. Install Portland Cement Concrete.
  - 9. Apply Protective Coat.
- B. Measurement:
- 1. Driveway removal and replacement will be measured in place prior to removal, and the area computed in square yards.
  - 2. The limits of driveway removal shall be as shown on the Drawings, or as directed by the Engineer.
  - 3. Additional quantities of driveway, subbase, or subgrade removed due to neglect by the Contractor, as determined by the Engineer, will not be measured for payment.

C. Basis of Payment:

1. This work will be paid for at the Contract Unit Price per square yard for PCC DRIVEWAY REMOVAL AND REPLACEMENT.

1.30 CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT

A. Description:

1. The work of this Pay Item consists of removing the existing concrete curb and gutter and replacing it with combination concrete curb and gutter of the same type. The following work items are associated with, and shall be considered incidental to, this Pay Item.
  - a. Sawcut existing curb and gutter, including steel reinforcement.
  - b. Break, remove, and dispose of existing curb and gutter.
  - c. Prepare aggregate Base Course below curb and gutter.
  - d. Install Combination Concrete Curb and Gutter.
  - e. Install all expansion joints, contraction joints, slip dowels, and tie bars.
  - f. Install Protective Coat.
  - g. Provide handicap ramps at sidewalks and depressed curb at driveways.

B. Measurement:

1. Curb and Gutter Removal and Replacement will be measured in place in the flowline from full-depth sawcut to sawcut, to the limits indicated on the Drawings.
2. Curb and gutter damaged by the Contractor during construction operations beyond the limits described above, will be replaced but will not be measured for payment.
3. The repair of adjacent pavement, driveways, sidewalks, and landscaping is included in this item unless specifically identified for separate payment on the Drawings.

C. Basis of Payment:

1. This work will be paid for at the Contract Unit Price per lineal foot for CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

1.31 PCC SIDEWALK REMOVAL AND REPLACEMENT

A. Description:

1. The work of this Pay Item consists of constructing sidewalks to match existing. The following work items are associated with, and shall be considered incidental to this Pay Item:
  - a. Excavate and dispose of existing materials.
  - b. Install 2 inches of compacted Aggregate Base Course.
  - c. Form and pour Portland cement concrete sidewalk.
  - d. Remove forms and backfill areas adjacent to concrete sidewalk.
  - e. Apply protective coat.

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- B. Measurement:
  - 1. Portland Cement Concrete Sidewalk will be measured in place, and the area computed in square feet, up to the limits indicated on the Drawings.
- C. Basis of Payment:
  - 1. This work will be paid for at the Contract Unit Price per square foot for PCC SIDEWALK REMOVAL AND REPLACEMENT of the material thicknesses indicated in Section 32 10 00.19.

### 1.32 DETECTABLE WARNINGS

- A. Description:
  - 1. The work of this Pay Item includes constructing detectable warnings with cast-in-place 24" by 48" detectable warnings comprised of two 24" by 24" square cast iron plates. The panel shall comply with ADA requirements. The domes located on the plate shall be parallel to the pavement crosswalk with the closest corner at the back of curb. Installation shall be according to the manufacturer's recommendations.
- B. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit price per square foot for DETECTABLE WARNINGS.

### 1.33 PAVEMENT MARKING

- A. Description:
  - 1. The work of this Pay Item consists of complete replacement of pavement marking, lines, letters, or symbols of the patterns, sizes, and colors.
  - 2. Replace all pavement markings removed or damaged within the limits and construction, as shown on the Drawings, as recorded on the "Job Set" plan prior to removal, or as directed by the Engineer. This work shall be done as specified in Sections 780, 781, and 783 of the IDOT "Standard Specifications", and Section 32 10 00.19 of these Specifications.
- B. Measurement:
  - 1. The work will be measured in lineal feet of line, or in square feet for letters and symbols.
- C. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price per lineal feet for line, of the widths indicated, and per square foot for letters or symbols as PAVEMENT MARKING, of the type noted.

### 1.34 RESTORATION OF LAWNS AND PARKWAYS

- A. Description:
  - 1. The work of this Pay Item consists of complete surface restoration of lawns, parkways, and other grassed areas disturbed as a result of the

construction, including topsoil, lime, fertilizer, erosion control materials, hydro-seeding or sodding, and maintenance.

- B. Measurement:
  - 1. The work will be measured in lineal feet along the centerline of the pipe and the area computed in square yards, with a maximum allowable width of 6 feet for main line pipe and maximum width of 6 feet for service pipes.
  - 2. Areas damaged by or disturbed beyond the work area will be restored at no additional cost to Owner.
- C. Basis of Payment:
  - 1. This work will be paid for at the Contract Unit Price per square yard for RESTORATION OF LAWNS AND PARKWAYS.

### 1.35 EXPLORATORY EXCAVATION

- A. The work of this Pay Item consists of exploratory excavation for an Owner located water or sewer service pipe at a location more than 3 feet beyond the actual location of the service, complete including excavation and backfilling with granular materials but not including surface restoration.
- B. Measurement:
  - 1. The work will be measured in lineal feet beyond 3 feet of the given location that was marked in the field by the Owner.
- C. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price per each for EXPLORATORY EXCAVATION.

### 1.36 TREE ROOT PRUNING

- A. Description:
  - 1. The work of this Pay Item consists of root pruning using an approved mechanical root pruning saw prior to excavating around the tree and where indicated on the Drawings or as directed by the Engineer; and in such a manner as to preserve the natural growth habit of each tree complete including an equivalent amount of the top vegetative growth of the plant material within one week following root damage, the application of fertilizer nutrients, and supplemental watering. Root pruning depth to be 12" minimum.
- B. Basis of Payment:
  - 1. The work will be paid for at the Contract Unit Price for each TREE ROOT PRUNING.

END OF SECTION



## SECTION 01 26 13

## REQUESTS FOR INTERPRETATION

## PART 1 - GENERAL

## 1.1 SUMMARY: REQUESTS FOR INTERPRETATION (RFI)

- A. The Contractor may submit Requests For Interpretation (RFI) to the Engineer to expedite the Contractor's performance on the Project. RFIs will be submitted following the requirements, all as described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 01 of these Specifications.
  - 2. Individual requirements for submittals will be described in pertinent Sections of these Specifications.
- C. Work not included:
  - 1. Incomplete submittals will not be reviewed by the Engineer.
  - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer unless specifically called for within the Contract Documents.
- D. References – (Reserved).

## 1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).
- E. Make submittals of RFIs in accordance with the provisions of this Section.
- F. Prior to submitting each RFI, the Contractor shall first carefully study and compare the Contract Documents, field conditions, other Owner provided information, Contractor prepared Coordination Drawings, and prior Project correspondence and documentation to determine that the information requested is not reasonably obtainable from such sources.

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- G. The Contractor shall submit each RFI sufficiently in advance of the date by which such information is required to allow the Engineer sufficient time, in the Engineer's professional judgement, to permit adequate review and response and to permit Contractor compliance with the latest construction schedule.

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## PART 2 - PRODUCTS

2.1 This Subsection intentionally left blank.

## PART 3 - EXECUTION

### 3.1 IDENTIFICATION OF SUBMITTALS

- A. Each RFI shall be submitted to the Engineer, in writing, on such form and with such accompanying information as the Engineer may require for such purpose. Each RFI shall identify the specific sources which were reviewed by the Contractor in its efforts to determine the information requested, and a statement to the effect that the information being requested could not be determined from such sources.
- B. Consecutively number all submittals.
  - 1. When material is submitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
  - 2. On re-submittals, cite the original submittal number for reference.
- C. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
  - 1. Use Request for Interpretation (RFI) Form, Section 01 26 13.13.
- D. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.
- E. Submittal log:
  - 1. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times, the date of the request, to whom the request was made, by whom the request was made, the nature of the request, and the Engineer's resolution thereof.

2. Make the submittal log available to the Engineer for the Engineer's review upon request.
3. Review this log at each Project Meeting and make the resolution of RFIs a part of the minutes of such meetings.

END OF SECTION



01 26 13.13

REQUEST FOR INTERPRETATION (RFI) FORM

RFI NO. \_\_\_\_\_

Contractor requests for interpretation will be considered upon receipt of this completed RFI Form. By submission of this form the Contractor attests to the fact that having carefully reviewed the Contract Documents and coordinated the Work with the appropriate trades and reviewed field conditions, that the information requested cannot be determined from such efforts as called for in the General Conditions of the Contract.

Date: \_\_\_\_\_ Project: \_\_\_\_\_

To: \_\_\_\_\_

Description of Requested Interpretation: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Specification References: \_\_\_\_\_

Drawing References: \_\_\_\_\_

Proposed method of resolving issue. Sketches and/or Pages Attached: \_\_\_\_\_ Yes, \_\_\_\_\_ No

\_\_\_\_\_

\_\_\_\_\_

Potential impact on project cost: \_\_\_\_\_

Response Date: \_\_\_\_\_ List date by which response by Engineer is requested to maintain project schedule. (Allow sufficient time for response).

Signed: \_\_\_\_\_, Project Superintendent  
Signature signifies acceptance of responsibility for accuracy and completeness of information.

ENGINEER'S RESPONSE

Notations listed below indicate the Engineer's action on method proposed by the Contractor to resolve issues or remarks in response to RFI when no Contractor recommendation has been provided. Changes to Contract Amount and/or project time shall be processed using standard Change Order Forms. Sketches and/or Pages Attached \_\_\_\_\_ Yes \_\_\_\_\_ No

\_\_\_\_\_

\_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_



SECTION 01 31 19  
PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Work included: To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the Engineer will conduct project meetings throughout the construction period.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and normally are not part of project meetings content.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).
- E. Agenda items: To the maximum extent practicable, advise the Engineer at least 24 hours in advance of project meetings regarding items to be added to the agenda.
- F. Minutes:
  - 1. The Engineer will compile minutes of each project meeting, and will furnish three copies to the Contractor and required copies to the Owner.
  - 2. Recipients of copies may make and distribute such other copies as they wish.

1.3 QUALITY ASSURANCE

- A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## PART 2 - PRODUCTS

2.1 No products are required in this Section.

## PART 3 - EXECUTION

### 3.1 MEETING SCHEDULE

- A. Project meetings will be scheduled at the Preconstruction Meeting.
- B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

### 3.2 MEETING LOCATION

- A. The Engineer will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

### 3.3 PRECONSTRUCTION MEETING

- A. Preconstruction Meeting will be scheduled to be held within 20 working days after the effective date of the Agreement.
  - 1. Provide attendance by authorized representatives of the Contractor and major subcontractors.
  - 2. The Engineer will advise other interested parties, including the Owner, and request their attendance.
- B. Minimum agenda: Data will be distributed and discussed on at least the following items:
  - 1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and Engineer.
  - 2. Channels and procedures for communications.
  - 3. Construction schedule, including sequence of critical work.
  - 4. Contract Documents, including distribution of required copies of original Documents and revisions.
  - 5. Processing of Shop Drawings and other data submitted to the Engineer for review.
  - 6. Processing of Bulletins, field decisions, and Change Orders.
  - 7. Rules and regulations governing performance of the Work; and
  - 8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.

### 3.4 PROJECT MEETINGS

- A. Progress meetings will be held throughout progress of the Work at intervals agreed to by Owner, Engineer and Contractor. Interval will generally be bi-weekly.
- B. Contractor's project manager, job superintendent, major subcontractors and suppliers shall attend, as appropriate, to address agenda topics for each meeting. Contractor's representatives shall have authority to bind Contractor to decisions at the meetings.
- C. The project schedule shall be updated monthly and shall be reviewed at each progress meeting. Contractor shall provide the following information in written form at each meeting.
  - 1. Construction progress, including:
    - a. Activities completed this reporting period.
    - b. Activities in progress this reporting period.
    - c. Activities scheduled to commence this reporting period.
  - 2. Description of problem areas.
  - 3. Current and anticipated delays.
    - a. Cause of the delay.
    - b. Corrective action and schedule adjustments to correct the delay.
    - c. Impact of the delay on other activities, on milestones, and on completion dates.
  - 4. Changes in construction sequence.

END OF SECTION



## SECTION 01 32 16

## CONSTRUCTION PROGRESS SCHEDULES

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Prepare and maintain the schedules and reports described in this Section to assure adequate planning and execution of the Work so that the Work is completed within the Contract Times, and to assist the Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Requirements for progress schedule: General Conditions.
  - 3. Construction period: Form of Agreement.
- C. References – (Reserved).

## 1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).
- E. Comply with pertinent provisions of Section 01 33 01.
- F. Construction schedule: Prior to submission of the first Application for Payment, but no later than 30 calendar days after Contract Times commence, submit to the Engineer one reproducible copy and four prints of a construction schedule prepared in accordance with Part 3 of this Section.
- G. Periodic reports: Update the construction progress monthly and submit it to the Engineer prior to submittal of each Application for Payment for completed work.
  - 1. Submit four prints of the construction schedule updated as described in Part 3 of this Section.

## CONSTRUCTION PROGRESS SCHEDULES

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### 1.3 QUALITY ASSURANCE

- A. Perform data preparation, analysis, charting, and updating in accordance with standards approved by the Engineer.
- B. Reliance upon the approved schedule:
  - 1. The construction schedule as approved by the Engineer will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.
  - 2. Processing of the first Application for Payment will not be completed by the Engineer until the construction schedule has been submitted in accordance with 1.2 F. above.
  - 3. Processing of the 50 percent and 80 percent progress payment applications will not be completed by the Engineer until the periodic reports have been submitted in accordance with 1.2 G. above.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## PART 2 - PRODUCTS

### 2.1 CONSTRUCTION ANALYSIS

- A. Graphically show by Critical-Path (CPM), Program Evaluation and Review Technique (PERT), Precedence Methods, bar-chart, or other means acceptable to the Engineer, the order and interdependence of all activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram.
- B. Include, but do not necessarily limit indicated activities to:
  - 1. Project mobilization.
  - 2. Work elements.
  - 3. Special material and equipment installation and testing.
  - 4. Final cleanup.
  - 5. Final inspecting and testing.
  - 6. All activities by the Engineer that affect progress, required dates for completion, or both, for all and each part of the work.
  - 7. Contractor's anticipated working dates.

## CONSTRUCTION PROGRESS SCHEDULES

01 32 16-2 (221284.41)

## PART 3 - EXECUTION

### 3.1 CONSTRUCTION SCHEDULE

- A. As soon as practicable after receipt of Notice to Proceed, complete the construction schedule in preliminary form, meet with the Engineer, review contents of the proposed construction schedule, and make all revisions agreed upon.
- B. Submit in accordance with Paragraph 1.2 F. above.

### 3.2 PERIODIC REPORTS

- A. As required under Paragraph 1.2 G. above, update the approved construction schedule.
  - 1. Indicate "actual" progress in percent completion for each activity;
  - 2. Provide written narrative summary of revisions causing delay in the program, and an explanation of corrective actions taken or proposed.

### 3.3 REVISIONS

- A. Make only those revisions to approved construction schedule as are approved in advance by the Engineer.

END OF SECTION



SECTION 01 32 36

PRECONSTRUCTION VIDEO RECORDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide color audio-video documentation of construction areas prior to start of construction, as specified herein.
  - 1. Provide documentation on USB Flash drives.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

- A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.
- B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PRECONSTRUCTION VIDEO RECORDING

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## 1.7 REQUIREMENTS

- A. Include coverage of at least 100 feet in each direction along the street and/or pipeline when documenting areas of work that are of minimal length or are isolated locations.
- B. Upon acceptance of the USB Flash drives, the USB Flash drives become the property of the Owner. The Contractor may duplicate the video for his own use at his expense.

## 1.8 SCHEDULING

- A. Schedule video so that no area is recorded more than 6 months prior to the actual beginning of construction in that area.

## PART 2 - EQUIPMENT

### 2.1 GENERAL

- A. Furnish all equipment, accessories, and materials to perform this service, except the specific plans of the proposed area to be televised, which will be furnished by the Owner.

### 2.2 TECHNICAL REQUIREMENTS

- A. Provide the total audio-video recording system and procedures as required to produce a finished product that will fulfill the technical requirements of the project and the more subjective requirements of high quality video and audio production. Produce the video portion of the recording with bright, sharp, clear pictures with accurate colors and free from distortion, tearing, rolls, or other forms of picture imperfection. Produce the audio portion of the recording with proper volume, clarity, and free from distortion.
- B. Make recordings with a digital video recorder.
- C. Provide the documentation on USB Flash drives.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Audio-video coverage will be required in areas not accessible by conventional wheeled vehicles. Obtain such coverage by walking or special conveyance approved by the Engineer.

### 3.2 TIME AND POSITION RECORDS

- A. Audio:
  - 1. Begin each recording with the current date, project name, and Owner; followed by the general location, e.g., station along the route, name of the street, viewing side, and direction of progress.

### 3.3 RECORDING IDENTIFICATION

- A. Properly identify all USB Flash drives with number, location, and project name and municipality in a manner acceptable to the Owner.

### 3.4 CONSTRUCTION AREA

- A. Include coverage of all surface features located within the zone of influence of construction, supported by appropriate audio description. Make audio description simultaneously with video coverage. Include coverage, but not be limited to, all existing driveways, sidewalks, curbs, ditches, roadways, landscaping, trees, culverts, headwalls, bridges, and retaining walls or buildings located within such zone of influence.
- B. Identify houses and buildings visually by house or business number, when visible, in such a manner that structures of the proposed system, e.g., valve vaults, can be located by reference.
- C. Record at a rate of speed not exceeding 48 feet per minute in the general direction of travel. Control panning rates and zoom-in and zoom-out rates to provide clarity of the viewed object during playback.
- D. Perform all recording during times of good visibility. Perform no documentation during periods of visible precipitation, or when more than 10 percent of the ground area is covered with snow or fallen leaves, unless otherwise authorized by the Engineer.
- E. The Owner has the authority to designate what areas may be omitted or added for audio-video coverage.

### 3.5 CONTRACTOR'S RESPONSIBILITIES

- A. Use no electrical circuits within private property building structure at any time. Perform all documentation during regular business hours, unless otherwise specified by the private property owner or Engineer. Enter and leave private property in a professional and orderly, workmanship like manner.
- B. Provide for an audio-visual presentation for review.
  - 1. The Owner has the authority to reject all or any portion of the video recording not conforming to Specifications.

2. Re-record any coverage not acceptable to the Owner at no cost to the Owner.
  3. Reschedule recording of unacceptable coverage as soon as possible after being notified of non-acceptance of previous recordings.
  4. Submit completed audio-visual USB Flash drives to the Owner and Engineer before commencement of construction.
    - a. Provide at least two (2) copies of each USB Flash drive.
- C. All acceptable recordings are the property of the Owner.

END OF SECTION

## SECTION 01 33 01

## SUBMITTALS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Provide submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements, all as described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Individual requirements for submittals will be described in pertinent Sections of these Specifications.
- C. Work not included:
  - 1. Submittals not required by the various Specification Sections of the Contract Documents will not be reviewed by the Engineer.
  - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer unless specifically called for within the Contract Documents.
- D. References – (Reserved).

## 1.2 SUBMITTALS

- A. Provide submittals of Shop Drawings, Samples, Substitution Requests, progress schedules and other items required in the Contract Documents in accordance with the provisions of this Section.

## 1.3 QUALITY ASSURANCE

- A. Coordination of submittals:
  - 1. Review and coordinate all aspects of each item being submitted.
  - 2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
  - 3. Certify that this coordination has been performed by affixing the Contractor's signature to each Contractor's Submittal Transmittal Form Attachment 01 33 01.

## SUBMITTALS

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- B. Resubmittals and reimbursement of Engineer's costs.
  - 1. The Engineer will record all time used by the Engineer in the review of any third and subsequent submittals.
  - 2. The Owner will reimburse the Engineer at the Engineer's standard hourly rate for all time spent in such third and subsequent reviews and deduct such costs from payments due the Contractor.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## PART 2 - PRODUCTS

### 2.1 SHOP DRAWINGS

- A. Provide Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
  - 1. Shop Drawings are not required for manholes, valve vaults, catch basins, pipe, and appurtenances needed for infrastructure systems (storm sewers, sanitary sewers, and water distribution) so long as the items are the materials and manufacturers specified in the project manual.
- B. Submit Shop Drawings electronically to the Engineer as a single .pdf file set.
  - 1. Attach, as the first page of each Shop Drawing, a completely executed Contractor's Submittal Transmittal Form Attachment 01 33 01.
  - 2. Collate the electronic .pdf file to include all data pertaining to the Shop Drawing Submittal in one .pdf set.
    - a. Separate .pdf files submitted will be cause for rejection and the Shop Drawing will be returned to the Contractor.
  - 3. In cases where Electronic Shop Drawing files exceed a size that is practical for electronic transmission via electronic mail or through an FTP site, the Contractor may and will be required to submit up to five (5) .pdf file shop drawing submittals on separate compact discs or removable USB storage, if requested, plus the quantity of discs or removable USB storage that will be required to be returned to the Contractor.
- C. Submit all required shop drawings for a specification section at the same time under one Contractor's Submittal Transmittal Form Attachment 01 33 01.
- D. Do not submit partial submittals of an item within a specification section or use a separate Contractor's Submittal Transmittal Form for separate items within a particular section.
- E. Identify exceptions or items that do not comply with the specifications and provide explanation for exception or non-compliance.

- F. For Shop Drawings required to be resubmitted for review, include the following:
  - 1. A completely executed cover sheet Contractor's Submittal Transmittal Form Attachment 01 33 01.
  - 2. A cover letter responding to each of the review comments returned to the Contractor by the Engineer with the previous review and specifically stating:
    - a. If the equipment and resubmitted data provided complies with the review comment(s) then provide:
      - (1) How the equipment complies.
      - (2) Specifically indicate where support documentation can be located in the shop drawing.
    - b. If the equipment and resubmitted data provided cannot or does not comply with the review comment(s) then provide:
      - (1) What is being provided to comply instead.
      - (2) Justify why the Contractor feels the Engineer should consider it is acceptable to allow the Contractor to not comply with the specification.
  - 3. Resubmission of a complete and fully-inclusive shop drawing with all data pertinent to the item(s) being submitted.
    - a. Partial submission of data that only addresses the Engineer's specific review comments, or a portion thereof, and does not include all data for a complete resubmittal, will be cause for immediate rejection.
- G. Upon completion of the Engineers review of the Shop Drawings, one electronic .pdf file will be returned to the Contractor for their distribution.
  - 1. Upon the request of the Engineer or Owner at any time, the Contractor shall provide up to four (4) color, hard copy, shop drawing submittals.
  - 2. Upon the request of the Engineer or Owner at any time, the Contractor shall provide up to four (4) .pdf file shop drawing submittals on separate compact discs or removable USB storage.

## 2.2 MANUFACTURERS' LITERATURE

- A. Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, clearly indicate which portion of the contents is being submitted for review by highlighting, circling, or other means, or by crossing out contents that do not pertain to the submittal and are not to be considered.
  - 1. This also applies to specifically indicating, when applicable, which optional items will or will not be provided with items specified.

## 2.3 SAMPLES

- A. Provide Sample or Samples identical to the precise article proposed to be provided.
  - 1. Identify as described under "Identification of Submittals" below.

- B. Number of Samples required:
1. Unless otherwise specified, submit Samples in the quantity which is required to be returned, plus one which will be retained by the Engineer.
  2. By prearrangement in specific cases, a single Sample may be submitted for review and, when approved, be installed in the Work at a location agreed upon by the Engineer.
  3. Because submittals shall be submitted to the Engineer in an electronic format as described herein, the Contractor shall specifically indicate on the Contractor's Submittal Transmittal Form Attachment 01 33 01 included with each submittal (when samples are required) when and where the physical samples will or have been transmitted for physical observation.
  4. Include as part of the electronic submittal a .pdf copy of any and all transmittals, shipping information, signatures of receipt, etc. identifying the transmission and receipt of the said sample(s).

## 2.4 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available in the specified products, submit accurate color and pattern charts to the Engineer for selection.

## 2.5 MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES

- A. Maintain in a safe place at the site one copy of manufacturers' recommended installation procedures for all equipment and materials.
1. Make these installation procedures readily available to the Engineer for reference.
- B. When the manufacturers' recommended installation procedures are submitted as part of the shop drawings required by the Contract Documents, approval of such installation procedures by the Engineer will not be required.

## PART 3 - EXECUTION

### 3.1 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals, beginning with identifying number "001" for the first submittal delivered by the Contractor.
1. When items are submitted for any reason, transmit under a new Contractor's Submittal Transmittal Form Attachment 01 33 01 and with a new transmittal number.
  2. When material is resubmitted for any reason, cite the original identifying submittal number followed by insertion of a letter "A" for the first resubmittal, "B" for the second resubmittal, and so on.

- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
  - 1. Use Contractor's Submittal Transmittal Form Attachment 01 33 01.
- C. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.

### 3.2 GROUPING OF SUBMITTALS

- A. Shop Drawings may be submitted for different specification sections under one Contractor's Submittal Transmittal Form Attachment 01 33 01, provided the items are specifically and directly related to each other such that review of the items from different specification sections is pertinent for a complete review.
  - 1. Identify any and all items and their specific specification section(s) if included with and submitted under a differing main specification section submittal.
  - 2. Partial submittals may be rejected as not complying with the provisions of the Contract.
  - 3. The Contractor may be held liable for delays so occasioned.
  - 4. Do not submit unrelated items in group submittals.

### 3.3 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.
- B. In scheduling, allow at least ten working days for review by the Engineer following the Engineer's receipt of the submittal.

END OF SECTION



ATTACHMENT 01 33 01

CONTRACTOR'S SUBMITTAL TRANSMITTAL FORM

TO: BAXTER & WOODMAN, INC.  
8678 RIDGEFIELD ROAD  
CRYSTAL LAKE, IL 60012

DATE: \_\_\_\_\_

ATTN: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

FROM: \_\_\_\_\_ SPEC NO. \_\_\_\_\_

\_\_\_\_\_ ENGR. DWG. NOS. \_\_\_\_\_

\_\_\_\_\_ TRANSMITTAL NO. \_\_\_\_\_

1. The following submittals are forwarded for your review:

<u>No. of Copies</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Drawing No.</u>	<u>Date</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2. Have all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data been determined and verified? Yes \_\_\_ No \_\_\_\_\_

3. Has work indicated in this submittal been coordinated with all trades? Yes \_\_\_ No \_\_\_\_\_

4. Is work by all trades being provided as necessary to accommodate this submittal? Yes \_\_\_ No \_\_\_\_\_

5. Contractor's description and justification for deviations from Contract Documents (Use additional sheet if necessary.)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature: \_\_\_\_\_



## SECTION 01 41 26

## PERMITS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section describes permit requirements for building, work in highway rights-of-way, work in railroad rights-of way and for stormwater discharges.
- B. Related Sections:
  - 1. Documents affecting work of this Section include, but are not necessary limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Other permits requirements may also be described in other Sections of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## 1.7 BUILDING PERMITS

- A. Obtain all permits required, and pay all inspection fees for the respective work requiring such permits.

## 1.8 WORK IN HIGHWAY RIGHTS-OF-WAY

- A. Conform in all respects with the requirements of the controlling authority in performing construction work in the rights-of-way of Township, County, State, and Federal highways where required by the locations shown on the Drawings.
  - 1. Comply with IDOT "Permit Special Provision Governing Permit Work on State Right-of-Way".
- B. Execute all necessary highway permit forms, provide and pay for any bond requirements, execute and comply with any required Traffic Control Authorization Requests, and submit digital pictures (on a USB Flash drive) of the project showing all right-of-way that will be affected, and referenced to the project stationing.

## PERMITS

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1. IDOT has determined the value of the bond the contractor must provide is \$150,000.

- C. Notify the highway authority involved not less than ten (10) days prior to starting construction in highway rights-of-way.

#### 1.9 NPDES PHASE II STORMWATER PERMIT

##### A. ILR10:

1. A General NPDES Permit for Stormwater Discharges from Construction Site Activity (General NPDES Permit No. ILR10) is required because the project involves 1.0-acre or more of disturbed area.
2. The Engineer will provide the Notice of Intent (NOI) to the Contractor at the Pre-Construction Meeting.
  - a. Contractor shall pay for the NOI permit fee, or reimburse the Owner for permit fee already paid, in the amount of \$250.
3. The Contractor shall complete and fill-in the construction SWPPP included in the Drawings.
4. Update the NOI and construction SWPPP accordingly throughout the construction period.
  - a. Maintain a copy of the most recent revisions to the construction SWPPP at the construction site.
  - b. Perform inspections and maintain all control measures according to the permit requirements and the construction SWPPP.
  - c. Maintain records of inspections and maintenance of control measures at the construction site.
  - d. Submit a Notice of Termination (NOT) after construction has been completed and the construction site has been stabilized.

END OF SECTION

SECTION 01 42 13

ABBREVIATIONS AND ACRONYMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes abbreviations referenced in the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

- A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.
- B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 ABBREVIATIONS

- A. Referenced Standards:
  - 1. Where the Contract Documents reference any published specifications or standards of any organization or association, comply with the requirements of the specification or standards which are current on the date of

ABBREVIATIONS AND ACRONYMS

Advertisement for Bids. In case of a conflict between the referenced specifications or standards, the one having the more stringent requirements shall govern.

2. In case of conflict between the referenced specifications or standards and the Contract Documents, the Contract Documents shall govern.

B. Abbreviations:

1. The following are definitions of abbreviations that may be used within the Project Manual:

AA - Aluminum Association

AASHTO - American Association of State Highway and Transportation Officials

ACI - American Concrete Institute

AISC - American Institute of Steel Construction

ANSI - American National Standard Institute

ASTM - American Society for Testing and Materials

AWG - American Wire Gauge

AWS - American Welding Society

AWWA - American Water Works Association

CBM - Certified Ballast Manufacturers Association

CRSI - Concrete Reinforcing Steel Institute

ICEA - Insulated Cable Engineers Association

IEEE - Institute of Electrical and Electronics Engineers, Inc.

ISA - Instrument Society of America

FS - Federal Specifications

NAPF – National Association of Pipe Fabricators

NEC - National Electrical Code (NFPA 70)

NECA - National Electrical Contractors' Association

NEMA - National Electrical Manufacturer's Association

NFPA - National Fire Protection Association or National Forest Products Association

NSF - National Sanitation Foundation

OSHA - U.S. Department of Labor, Occupational Safety and Health Department

PS - United States Products Standards

IDOT "STANDARD SPECIFICATIONS" - Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction" including Recurring Special Provisions and Interim Special Provisions.

SSPC – Society for Protective Coatings

UL - Underwriter's Laboratories, Inc.

END OF SECTION

SECTION 01 45 29

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes testing to be provided by an independent testing laboratory service.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Requirements for specific tests will be described in various Sections of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

- A. Provide the services of a testing laboratory approved by the Engineer.
- B. Upon completion of each test and/or inspection, promptly distribute copies of test or inspection reports to the Engineer, to governmental agencies requiring submission of such reports, and to such other persons as directed by the Engineer.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

TESTING LABORATORY SERVICES

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## 1.7 TESTING AGENCY DUTIES AND LIMITS OF AUTHORITY

- A. Cooperate with the Engineer and the Contractor; provide qualified personnel and equipment to perform the scope of testing work outlined.
- B. Acquaint the Engineer and the Contractor with testing procedures for special conditions encountered at the site.
- C. Perform specified monitoring, sampling, and testing of the materials and construction.
  - 1. Comply with specified standards, ASTM, other authorities, and as specified.
  - 2. Ascertain compliance with the Contract Documents.
  - 3. Obtain written acknowledgment of sampling or testing.
- D. Give prompt written notice to the Engineer and the Contractor of irregularities or deficiencies of work which are observed during performance of service.
- E. The Laboratory is not authorized to release, revoke, alter or enlarge the Contract requirements, nor to approve or accept any portion of the work, nor to perform the duties of the Contractor.

## PART 2 - PRODUCTS

### 2.1 PAYMENT FOR TESTING

- A. Include within the Contract Price an amount sufficient to cover all testing required of the Contractor under pertinent Sections of these Specifications, and to cover all testing and inspecting required by governmental agencies having jurisdiction.
- B. The Owner will pay for all testing and inspecting specifically requested by the Engineer over and above those described in Paragraph 2.1 A. above.
- C. When tests indicate noncompliance with the Contract Documents, all testing and subsequent retesting occasioned by the noncompliance shall be performed by the same testing laboratory and the costs thereof shall be paid by the Contractor.

## PART 3 - EXECUTION

### 3.1 TAKING SPECIMENS

- A. Except as may be specifically otherwise approved by the Engineer, have the testing laboratory secure and handle all samples and specimens for testing.

### 3.2 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. Furnish casual labor and facilities:
  - 1. To obtain and handle samples at the site or at the source of the product to be tested.
  - 2. To facilitate testing operations.
  - 3. For laboratory's exclusive use for storage and curing of test samples on site.
- C. Notify the testing agency sufficiently in advance of operations to allow for assignment of personnel and scheduling of its operations.
- D. Provide the testing laboratory with copies of approved relevant shop drawings.

END OF SECTION



## SECTION 01 50 00

## TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section describes construction facilities and temporary controls required for the Work.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Comply with pertinent safety requirements and regulations for temporary facilities and controls.
  - 3. Equipment normally furnished by the individual trades in execution of their own portions of the Work is not part of this Section.
  - 4. Permanent installation and hookup of the various utility lines are described in other Sections.
- C. References – (Reserved).

## 1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

## 1.3 QUALITY ASSURANCE

- A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.
- B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

## 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

## TEMPORARY FACILITIES AND CONTROLS

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1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 REQUIREMENTS

- A. Provide construction facilities and temporary controls needed for the Work including, but not necessarily limited to:
  - 1. Temporary utilities and services such as heat, water, electricity, telephone, and internet access.
  - 2. Sanitary facilities.
  - 3. Enclosures such as fencing, tarpaulins, barricades, and canopies.
  - 4. Temporary fencing of the construction site.
  - 5. Fire extinguishers.
  - 6. Dust and mud control.
  - 7. Security.
  - 8. Right-of-way and property line control.
  - 9. Temporary work boundary fence.
  - 10. Construction layout and staking.

## PART 2 - PRODUCTS

2.1 UTILITIES AND SERVICES DURING CONSTRUCTION

- A. Water:
  - 1. The Owner will provide water for the initial filling for flushing and testing of new water main at no cost to the Contractor.
  - 2. Provide necessary temporary piping and water supply and, upon completion of the work, remove such temporary facilities.
  - 3. The Owner will provide water for use by the Contractor for miscellaneous construction activities. The Contractor will fill his tank truck at the location designated by the Owner. There will be no charge for the water utilized, but Contractor must coordinate the times of loading water with the Owner. Fire hydrants along the work route may not be used by the Contractor.

2.2 SANITARY FACILITIES

- A. Provide temporary sanitary facilities meeting federal, state, and local health department requirements.
  - 1. Maintain in a sanitary condition at all times.

2.3 ENCLOSURES

- A. Provide and maintain for the duration of construction all scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

## TEMPORARY FACILITIES AND CONTROLS

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## 2.4 TEMPORARY FENCING

- A. Provide and maintain for the duration of construction a temporary fence of design and type needed to prevent entry onto the Work by the public.
- B. Temporary work boundary fence (standard).
  - 1. Provide fence 36-inch to 48-inch in height.
    - a. Material: Polyethylene, PVC, or wood lath.
  - 2. Provide steel or wood posts.
    - a. Height: To support fence for total height after being driven.
- C. Jacking and receiving pit fences.
  - 1. As outlined in Section 33 05 23 of these Specifications.

## 2.5 FIRE EXTINGUISHERS

- A. Provide and maintain not less than two fire extinguishers, multi-purpose dry chemical type with UL rating of 4A-60 B:C, 10-pound capacity, Amerex Model ABC, or equal, enclosed in suitable protecting cabinets and conveniently located for proper protection.

## 2.6 CONSTRUCTION LAYOUT

- A. The Contractor shall furnish construction stakes required for layout and staking of the project.
- B. The Contractor shall provide personnel, equipment, and material to perform layout and staking and to establish supplementary benchmarks.

## PART 3 - EXECUTION

### 3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Engineer.

### 3.2 DUST AND MUD CONTROL

- A. Take necessary precautions to control dust and mud associated with the Work, subject to the approval of the Engineer.
  - 1. In dry weather, spray dusty areas daily with water in order to control dust.
  - 2. Apply calcium chloride having a minimum chemical content of 77 percent calcium chloride at an application rate of 3 pounds per square yard of surface covered at locations as directed by the Engineer.

## TEMPORARY FACILITIES AND CONTROLS

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- B. Take necessary steps to prevent the tracking of mud onto adjacent streets and highways.
  - 1. Wash mud resulting from the construction traffic off the adjacent streets and highways.
  - 2. Clean all permanent roadways used for construction activities by using motorized street sweeper that utilizes vacuum and water to pick up debris, when directed by Engineer.

### 3.3 TRAFFIC CONTROL

- A. Protect and maintain traffic by the proper use of barricades, warning lights, flares, and necessary traffic control and safety devices, conforming to federal, state, and local regulations regarding their use.
- B. Use forms of traffic control on public roadways required by the construction operations in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways", Articles 107.09 and 107.14 of the IDOT "Standard Specifications", and the "Highway Standards".
- C. Unless the Contractor has obtained written permission from the Engineer to temporarily close any street, alley, or other traveled way, keep such traveled way open to traffic on the existing pavement.
- D. Maintain alternating one-way traffic from opposing directions during working hours. At all other times, provide sufficient width within existing shoulders or curbs to permit one lane of traffic in each direction.
- E. Ensure that all barricades, warning signs, lights, and other devices are operational 24 hours each day, including Sundays and holidays, during the time the contract is in force.
  - 1. In the event of severe weather conditions, provide any additional personnel necessary to properly maintain all traffic control devices.
- F. At the preconstruction meeting, furnish the name of the individual in the Contractor's direct employ who is to be responsible for the installation and maintenance of the traffic control for this project.
  - 1. If the actual installation and maintenance are to be accomplished by a Subcontractor, obtain the Engineer's consent at the time of the preconstruction meeting.
  - 2. The Owner will provide the Contractor with the name of its representative who will be responsible for the administration of the traffic control plan.
- G. Provide access to private driveways at all times except during pipeline installation across a driveway.
  - 1. Keep driveway closure times to an absolute minimum.
  - 2. Warn homeowners 24 hours in advance of a driveway closure, and again just prior to closing to allow homeowners to move their vehicles.
  - 3. Maintain access for emergency vehicles at all times.

## TEMPORARY FACILITIES AND CONTROLS

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- H. Provide access to commercial or industrial driveways at all times except during pipeline installation across a driveway.
  - 1. Keep driveway closure times to an absolute minimum.
  - 2. If two driveway entrances exist, keep one driveway open at all times.
  - 3. Establish schedule for driveway closures with commercial or industrial establishments that will not obstruct passage of employees or customers during heavy use period.
  - 4. Maintain access for emergency vehicles at all times.

### 3.4 SECURITY

- A. Take whatever measures are necessary to protect the safety of the public, workmen, and materials.
  - 1. Provide inspection of work area daily.
  - 2. Provide the security of the site, both day and night.

### 3.5 RIGHT-OF-WAY AND PROPERTY LINE CONTROL

- A. Protect all right-of-way markers, property line iron pins, and easement iron pins during construction.
  - 1. Flag such control points prior to construction, and protect the points during the course of construction.
- B. Establish tie-down control for any right-of-way markers or iron pins that may be lost or damaged during the work.
- C. Re-establish any right-of-way markers or iron pins that are lost or damaged during construction, after completion of restoration work.
- D. Provide the services of a Registered Land Surveyor for replacement of lost markers and pins.
  - 1. The cost for this work will be considered incidental to the Contract, and no additional compensation will be allowed.

### 3.6 WORK BOUNDARY FENCE

- A. Provide fence along edges of all easement limits, shaft work zones, and access roads to delineate limit of Contractor's Work area, where indicated on the Drawings.
- B. Maintain fences until removal is approved by Engineer.
  - 1. Provide 6-foot tall chain link fence in place of standard work boundary fence where indicated on the Drawings.

### 3.7 CONSTRUCTION LAYOUT AND STAKING

- A. The Contractor shall place construction layout stakes for this project. The Owner will provide adequate reference points and benchmarks. Any additional control

points set by the Owner will be identified in the field to the Contractor and all field notes will be maintained by the Owner.

- B. The Contractor shall establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary benchmarks necessary to secure a correct layout of the Work.
  - 1. Stakes shall be set at sufficient intervals to assure construction in conformance with the Drawings.
  - 2. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a Pay Item in the contract or to determine property lines between private properties.
  
- C. The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions shown on the Drawings.
  - 1. Any inspection or checking of the Contractor's layout by the Engineer and the acceptance of all or any part of the layout shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the Work.
  - 2. The Contractor shall exercise care in the preservation of stakes and benchmarks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.
  
- D. Responsibility of the Contractor:
  - 1. The Contractor shall establish control points necessary to construct the individual project elements.
  - 2. The Contractor shall locate right-of-way and easement points. The Contractor shall set all line stakes for the construction of fences by the Contractor.
  - 3. All work shall be according to normally accepted self-checking surveying practices.
    - a. Field notes shall be kept in standard survey field notebooks and those books shall become the property of the Owner at the completion of the project.
    - b. All notes shall be neat, orderly, and in accepted form.

END OF SECTION

## SECTION 01 66 11

## STORAGE AND PROTECTION OF MATERIAL AND EQUIPMENT

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Additional procedures also may be prescribed in other Sections of these Specifications.
- C. References – (Reserved).

## 1.2 SUBMITTALS – (Reserved).

## 1.3 QUALITY ASSURANCE – (Reserved).

## 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with the requirements of this Section for off-site storage.
  - 1. The Engineer reserves the right to visit and observe the off-site storage areas.
- B. Store equipment and materials in accordance with the manufacturer's instructions.
- C. Provide temporary weathertight enclosures to protect products from damage by the elements.
- D. Protect finished surfaces through which equipment and materials are handled.
- E. Provide protection for finished floor surfaces in traffic areas prior to allowing equipment or materials to be moved over such surfaces.
- F. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.
- G. Do not store plant maintenance equipment, furniture, and laboratory equipment on site until they are needed by the Owner or for progress of work.

## 1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 MANUFACTURERS' RECOMMENDATIONS

- A. Except as otherwise approved by the Engineer, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.8 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
  - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
  - 2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.
- B. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to manufacturer, grade, quality, and other pertinent information.

1.9 REPAIRS AND REPLACEMENTS

- A. In event of damage, promptly make replacements and repairs to the approval of the Engineer and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the Contract Time of Completion.

END OF SECTION

SECTION 01 74 26

PIPELINE CONSTRUCTION SITE CLEANING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes requirements for maintaining cleanliness on underground pipeline construction projects.
  - 1. Throughout the construction period, maintain the site at a standard of cleanliness as described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. In addition to standards described in this Section, comply with requirements for cleaning as described in other pertinent Sections of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

- A. Conduct daily inspections, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## PART 2 - PRODUCTS

### 2.1 CLEANING MATERIALS AND EQUIPMENT

- A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

### 2.2 COMPATIBILITY

- A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, and also capable of providing the cleanliness required.

## PART 3 - EXECUTION

### 3.1 PROGRESS CLEANING

- A. General:
  - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
  - 2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
  - 3. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
  - 4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the environment.
  - 5. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
  - 6. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Restack, tidy, or otherwise service arrangements to meet the requirements of Paragraph 3.1 A. 1. above.
  - 7. Maintain the site in a neat and orderly condition at all times.
- B. Daily Cleaning:
  - 1. Take necessary steps to prevent tracking of mud onto adjacent streets, highways, driveways, sidewalks, and other paved areas.
    - a. Wash mud resulting from construction traffic off of adjacent pavements.
    - b. Provide a vacuum/washer/sweeper combination machine to clean pavements on a regular basis, and when requested by the Engineer.

### 3.2 FINAL CLEANING

- A. "Clean", for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality maintenance equipment and materials.
- B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Paragraph 3.1 above.
- C. Unless otherwise specifically directed by the Engineer, broom and wash clean paved areas on the site and public paved areas adjacent to the site.
  - 1. Completely remove resultant debris.
  - 2. Provide vacuum/washer/sweeper combination machine if requested by the Engineer.
- D. Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean Work.

END OF SECTION



SECTION 01 77 01  
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes an orderly and efficient transfer of the completed Work to the Owner.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Activities relative to Substantial Completion and Contract closeout are described in the General Conditions.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

- A. Prior to requesting that the Engineer issue a certificate of Substantial Completion in accordance with Paragraph 14.04 or 14.05 of the General Conditions, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for a joint inspection by Owner, Contractor, and Engineer.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

## 1.7 PROCEDURES

- A. Substantial Completion:
1. Prepare and submit the list required by the first sentence of Paragraph 14.04.A of the General Conditions and submit it along with a written request that Engineer issue a certificate of Substantial Completion.
  2. Within a reasonable time after receipt of the list, Owner, Contractor and Engineer will jointly inspect the Work to determine status of completion.
  3. Should the Engineer determine that the Work is not substantially complete:
    - a. The Engineer will so notify the Contractor, in writing, giving the reasons therefore.
    - b. Remedy the deficiencies and notify the Engineer when ready for reinspection.
    - c. Owner, Contractor and Engineer will reinspect the Work.
  4. When the Engineer concurs that the Work is substantially complete:
    - a. The Engineer will prepare a tentative "Certificate of Substantial Completion," accompanied by the Contractor's list of items to be completed or corrected, as verified by the Engineer.
    - b. The Engineer will submit the tentative Certificate to the Contractor for acceptance.
    - c. After Contractor signs and returns the tentative Certificate to Engineer, Engineer will submit the tentative Certificate to Owner accompanied by a tentative list of items to be completed or corrected before final payment.
    - d. Owner will have seven days after receipt of the tentative Certificate during which to make objection to Engineer as to any provisions of the Certificate on attached list.
      - (1) If Owner objects, Engineer will consider Owner's objections. If, after considering Owner's objections, Engineer concludes that the Work is not substantially complete, Engineer will, within fourteen days after submission of the tentative Certificate to Owner, notify Contractor in writing, stating reasons therefore. If, after considering Owner's objections, Engineer considers the Work substantially complete, Engineer will within said fourteen 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 of Owner.
      - (2) If Owner has no objections, Engineer will within fourteen days after submission of the tentative Certificate to Owner and Contractor issue a definitive Certificate of Substantial Completion.
    - e. 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, maintenance, heat, utilities, insurance, warranties, and guarantees. Unless Owner or Contractor advise the Engineer in writing of any objections within seven days after delivery of the tentative Certificate of Substantial Completion, the Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

B. Final Completion:

1. Prepare and submit the notice required by the first sentence of Paragraph 14.06A of the General Conditions.
2. Verify that the Work is complete including, but not necessarily limited to, the items mentioned in Paragraph 14.07.A of the General Conditions.
3. Certify that:
  - a. Contract Documents have been reviewed.
  - b. Work has been inspected for compliance with the Contract Documents.
  - c. Work has been completed in accordance with the Contract Documents.
  - d. Equipment and systems have been tested as required, and are operational.
  - e. Work is completed and ready for final inspection.
4. Owner, Contractor, and Engineer will make a joint inspection to verify status of completion.
5. Should the Engineer determine that the Work is incomplete or defective:
  - a. The Engineer will so notify the Contractor, in writing, listing the incomplete or defective work.
  - b. The Contractor will remedy the deficiencies promptly, and notify the Engineer when ready for reinspection.
6. When the Engineer determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals.

C. Closeout submittals include, but are not necessarily limited to:

1. Project Record Documents described in Section 01 78 39.
2. Warranties and bonds.
3. Section 00 65 36 Warranty Form.
4. Section 00 65 36.03 Contractor's Affidavit Letter.
5. Keys and keying schedule.
6. Spare parts and materials extra stock.
7. Evidence of compliance with requirements of governmental agencies having jurisdiction including but not necessarily limited to:
  - a. Certificates of Inspection.
  - b. Certificates of Occupancy.
8. Certificates of Insurance for products and completed operations.
9. Evidence of payment and release of liens.
10. List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be

reached for emergency service at all times including nights, weekends, and holidays.

- D. Final adjustment of accounts:
1. Submit a final statement of accounting to the Engineer, showing all adjustments to the Contract Price.
  2. If so required, the Engineer will prepare a final Change Order showing adjustments to the Contract Price which have not been made by previous Change Orders.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Paragraph 3.1 below and, upon completion of the Work, submit the recorded changes as described in Paragraph 3.2 below.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
  - 2. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).
- E. Comply with pertinent provisions of Section 01 33 01.
- F. The Engineer's approval of the current status of Project Record Documents may be a prerequisite to the Engineer's approval of requests for progress payment and request for final payment under the Contract.
- G. Prior to submitting each request for progress payment, secure the Engineer's approval of the current status of the Project Record Documents.
- H. Prior to submitting request for final payment, submit the final Project Record Documents to the Engineer and secure his approval.

1.3 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved by the Engineer.

PROJECT RECORD DOCUMENTS

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- B. Accuracy of records:
  - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
  - 2. Accuracy of records shall be such that future search for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.
- C. Make entries within 24 hours after receipt of information that the change has occurred.
- D. Do not conceal any work until the required information is recorded.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.
- B. In the event of loss of recorded data, use means necessary to again secure the data to the Engineer's approval.
  - 1. Such means shall include, if necessary in the opinion of the Engineer, removal and replacement of concealing materials.
  - 2. In such case, provide replacements to the standards originally required by the Contract Documents.

#### 1.5 SITE CONDITIONS – (Reserved).

#### 1.6 MAINTENANCE – (Reserved).

### PART 2 - PRODUCTS

#### 2.1 RECORD DOCUMENTS

- A. Job set: Promptly following receipt of the Owner's Notice to Proceed, secure from the Engineer at no charge to the Contractor one complete set of all Documents comprising the Contract.

### PART 3 - EXECUTION

#### 3.1 MAINTENANCE OF JOB SET

- A. Immediately upon receipt of the job set described in Paragraph 2.1 A. above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET".

- B. Preservation:
  - 1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set.
  - 2. Do not use the job set for any purpose except entry of new data and for review by the Engineer.
  - 3. Maintain the job set at the site of Work where designated by the Engineer.
- C. Making entries on Drawings:
  - 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
  - 2. Date all entries.
  - 3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
  - 4. In the event of overlapping changes, use different colors for the overlapping changes.
- D. Make entries in the pertinent other Documents as approved by the Engineer.
- E. Conversion of schematic layouts:
  - 1. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, is shown schematically and is not intended to portray precise physical layout.
    - a. Final physical arrangement is determined by the Contractor, subject to the Engineer's approval.
    - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items which are shown only schematically on the Drawings.
  - 2. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as are described in Paragraph 3.1 E. 1. above.

### 3.2 REVIEW AND SUBMITTAL

- A. Submit the completed set of Project Record Documents to the Engineer as described in Paragraph 1.2 H. above.
- B. Participate in review meetings as required.
- C. Make required changes and promptly deliver the final Project Record Documents to the Engineer.

### 3.3 CHANGES SUBSEQUENT TO ACCEPTANCE

- A. The Contractor has no responsibility for recording changes in the Work subsequent to Final Completion, except for changes resulting from work performed under Warranty.

END OF SECTION

PROJECT RECORD DOCUMENTS  
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## SECTION 31 23 79

### TRENCHING, BACKFILLING, AND COMPACTING

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Trench, backfill, and compact as specified herein and as needed for installation of underground pipelines and utilities associated with the Work.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- C. References – (Reserved).

##### 1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

##### 1.3 QUALITY ASSURANCE – (Reserved).

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01 66 11.

##### 1.5 SITE CONDITIONS – (Reserved).

##### 1.6 MAINTENANCE – (Reserved).

#### PART 2 - PRODUCTS

##### 2.1 GRANULAR PIPE BEDDING AND COVERING MATERIALS

- A. Provide well graded, washed, mixture of gravel or crushed stone aggregate free of clay, loam, dirt, calcareous or other foreign matter conforming to the IDOT "Standard Specifications" gradation No. CA 11, or the Standard Specifications for Water and Sewer Construction in Illinois, with the following gradation:

<u>Sieve Size</u>	<u>Percent Passing</u>
1-inch	100%
3/4-inch	84 - 100%
1/2-inch	30 - 60%
No. 4	0 - 12%
No. 16	0 - 6%

1. For flexible thermoplastic pipes including sewer pipes, sewage force mains, and water mains: Comply with ASTM D2321, Class I or II as modified below.
  - a. Exclude sharp angular granular materials.
  - b. Do not use natural rounded or smooth stone or gravel (such as pea gravel or similarly rounded materials).
  - c. Limit maximum particle size to ½-inch (IDOT CA 15 or CA 16).
  - d. Do not use Class II materials in wet conditions.
2. For rigid pipes comply with ASTM C12, Bedding Class B.

## 2.2 EXCAVATED BACKFILL MATERIALS

- A. Provide soil materials free from organic matter, rubble, or frozen material, containing no rocks or lumps over 6 inches, and with not more than 15 percent of the rocks or lumps larger than 2 inches.

## 2.3 GRANULAR BACKFILL

- A. Provide either sand or granular material.
  1. Sand: Well graded, free from organic matter, cohesionless, complying with the IDOT Standard Specification gradation No. FA 6.
  2. Granular material: Use 100 percent crushed stone or gravel complying with the IDOT "Standard Specifications" gradation No. CA 6.

## 2.4 TEMPORARY AGGREGATE PAVEMENT MATERIAL

- A. Provide well graded, 100 percent crushed gravel or crushed stone aggregate free of clay, loam, dirt, calcareous or other foreign matter conforming to the IDOT "Standard Specifications" gradation No. CA 6.

## 2.5 GROUT FOR FILLING OF ABANDONED PIPES

- A. Cellular grout:
  1. Low density cellular concrete capable of being mixed on site and pumped into place through a 2-inch hose.
  2. Foaming agent complying with ASTM C869.
  3. Portland Cement: ASTM C150, Type I or Type II.
  4. Contents: cement, fly ash, water and foaming agent.
  5. Minimum net density: 80 pcf.

6. Acceptable manufacturers:
  - a. Mearl Geofoam Liquid Concentrate.
  - b. Geofill-Lite by "MixOnSite".
  - c. Or equal.

## 2.6 WATER MAIN REPAIR

- A. Repair water main or water services damaged during construction utilizing products of type and manufacturers as approved by the Owner.
- B. Pipe couplings for joining of sections of cut water main where a section of new pipe is used to replace a broken pipe.
  1. Acceptable manufacturers:
    - a. Dresser Style 38.
    - b. Smith-Blair CC-441.
    - c. Or equal.
- C. Repair clamps for broken or cracked pipe and sealing of existing corporation stop opening.
  1. Use full-circle single band all stainless steel clamps.
  2. Acceptable manufacturers:
    - a. Dresser Style 360.
    - b. Smith-Blair 200 Series.
    - c. Or equal.
  3. Replace damaged service corporation stops by installation of full-circle single band all stainless steel clamps, with service outlet, matching manufacturer's and styles used for repair of a cracked pipe.

## 2.7 DRAIN TILE REPLACEMENT

- A. Replacement pipe: New pipe of the same size. Match material or use new PVC SDR-26 pipe per ASTM D3034.
- B. Utilize flexible couplings with stainless steel bands for connecting new pipe to old pipe.
- C. Provide CA-6, CA-7, CA-11 aggregate for backfill material.

## 2.8 PIPE INSULATION

- A. Rigid Pipe Insulation:
  1. Provide extruded polystyrene sheathing conforming with ASTM C578, Type IV.
  2. Thickness: 2 inches.
  3. R-Value: 10.
  4. Water absorption: No greater than 0.10% by volume per ASTM C272.

5. Acceptable product:
  - a. Formular Rigid Foam Insulation, Owens-Corning.
  - b. Or equal.

## 2.9 PIPE TRACER WIRE

- A. General:
  1. Provide wire to be used for electronic locating of PVC pipe installed by the open cut method.
  2. See Section 33 05 23.13 for tracer wire materials in HDD applications.
- B. Materials:
  1. Provide locating system components designed for compatibility to ensure end-to-end conductivity for detecting underground utilities.
    - a. Copperhead Complete Utility Locating System.
    - b. Or equal.
  2. Wire: Single Strand, single conductor, copper-clad steel, No. 12 AWG high strength, high carbon with min. 450 lb. break load, min. 30 mil. HDPE insulation thickness (1230B-HS) for direct bury installation; color coded per APWA Standards.
  3. Connectors: Single, three-way locking connectors (LSC1230C); Mainline to service connectors (3WB-01) and dielectric silicon sealant.
  4. Connect tracer wire to inside of valve vault walls with stainless steel grip clips.
  5. Provide 1.5 pound magnesium grounding anodes and 12-AWG wire.
  6. Tracer wire test station: Provide for a direct connection to the tracer wire by utility locate transmitter manufactured for the application location; Identified with "WATER" on the cap and color coded per APWA Standards; Two terminal tracer wires to include a manually interruptible conductive/connective link between the terminal for the tracer wire connection and the terminal for the ground rod wire connection; External direct connection points to bother tracer wire and ground rod on top of lid; Encapsulated magnet molded into the top portion of the box for detection by ferrous metal locator; Anti-corrosion wax/gel to protect wires.
    - a. Copperhead SnakePit Lite Duty XL or Concrete/Driveway Access Point.
    - b. Or equal.

## PART 3 - EXECUTION

### 3.1 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.

## 3.2 GENERAL CONSTRUCTION REQUIREMENTS

- A. Protection of existing facilities:
1. Unless shown to be removed, protect existing structures, conduits, active utility lines and all other facilities shown on the Drawings or otherwise made known to the Contractor. If damaged, repair, replace, or restore to a condition equal to or better than the original condition at no additional cost to the Owner.
  2. Notify all persons, firms, corporations, or agencies owning or using any existing structures, conduits, or utilities which may be affected by the Work prior to the start of construction.
  3. Make arrangements to locate, maintain, protect, and/or relocate facilities in order to complete the Work.
  4. Make such exploration as is necessary to determine the exact location of underground utilities.
  5. Exercise care during the progress of work in the area to prevent damage to the utilities.
  6. Whenever it becomes necessary to relocate underground gas mains, telephone conduit, or electrical lines or support or relocate utility poles, the utility company involved will make such relocation or provide pole support. Notify the utility company promptly.
  7. Whenever it becomes necessary to relocate water or other pipes or conduits in direct conflict with the proposed pipe (exclusive of culverts) which are not shown on the Drawings, obtain the direction from the Engineer for the relocation. Compensation will be allowed only for such quantities as directed by the Engineer.
  8. Do not block or obstruct sidewalks, streets, and pavements.
  9. Whenever during construction operations any loose material is deposited in the flow line of gutters, drainage structures, or ditches such that the natural flow line of water is obstructed, remove this loose material at the close of each working day. At the conclusion of construction operations, keep all drainage structures and flow lines free from dirt and debris.
  10. Do not obstruct accessibility of fire hydrants.
  11. Maintain access to adjacent areas at all times.
- B. Protection of Trees and Shrubs:
1. Protect trees and shrubs from damage.
  2. Do not remove trees or shrubs unless indicated on the Drawings or authorized in the field by the Engineer.
  3. Where trees which are to remain interfere with normal excavation operations, use the following procedures:
    - a. Prior to excavation, carefully remove trees with trunk diameters of less than 4 inches, shrubs, and other plantings in the way of construction.
    - b. Do not machine excavate within a distance of three trunk diameters or 12 inches (whichever is greater) of any tree, and do not cut roots over 2-inch diameter unless approved by the Engineer.

## TRENCHING, BACKFILLING, AND COMPACTING

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- c. Excavate by hand when closer than three tree trunk diameters or 12 inches (whichever is greater).
  - d. Tree tunneling where necessary to be determined by the Engineer.
  - e. Tie back shrubs and tree limbs to prevent loss or damage.
  - f. Prune damaged limbs and branches.
  - g. Provide plank wrappers wired in place to protect tree trunks from being damaged by trench machinery, tractors, or trucks; remove protective planking as soon as practical after work in vicinity has been completed.
  - h. Remove spoil banks from around trees by hand to prevent damage to trunks by construction machinery.
4. Replace trees and shrubs which cannot be protected or are damaged during construction:
    - a. Replant or replace with stock of like character, quality, variety, size, shape, color and condition upon completion of the construction.
    - b. Replace 4-inch diameter and larger trees with one 4-inch diameter size tree for each 6" of original tree diameter or fraction thereof.
    - c. Replace trees smaller than 4-inch diameter and shrubs with same kind and type.
    - d. As an option, replant trees smaller than 2-inch diameter or shrubs which are not damaged.
  5. Remove and replace trees and shrubs which do not survive in good condition for a period of 18 months after time of planting.
- C. Work on private property:
1. Construct work on private property within easements obtained by the Owner as shown on the Drawings.
    - a. The Contractor will be permitted construction privileges within construction easement lines as shown on the Drawings.
    - b. Perform the work in a manner such as to minimize damage to lawns, shrubs, trees and other plantings, driveways, sidewalks, fences, outbuildings, and any other miscellaneous improvements, using proper size and type of equipment.
    - c. The Engineer has the authority to prohibit the use of any equipment which in his judgment is too large or otherwise unsuitable for the conditions of the work on private property.
  2. Remove and replace fences, outbuildings and other miscellaneous improvements in the way of construction to the satisfaction of the property owner.
  3. When working in cultivated fields or gardens, remove original topsoil to a depth of 12 inches prior to excavation, and replace the topsoil to its original depth and grade upon completion of trench backfill.
  4. Restore the private property to its original condition or better, free of debris, stones and excess materials.

3.3 TRENCHING

- A. Do not advance trench excavation more than 50 feet ahead of completed pipe installation except as approved by the Engineer.
- B. Provide and maintain sheeting, shoring, and bracing necessary for protection of the Work, adjacent property, and for the safety of personnel.
  - 1. Remove temporary sheeting and bracing after backfilling to an elevation which will prohibit caving of exposed sidebanks.
  - 2. Fill voids left by the withdrawal of sheeting with compacted sand.
  - 3. The Engineer may direct that supports in trenches be cut off at any specific elevation to protect adjacent facilities or property. Compensation for support left in place will be negotiated.
  - 4. No extra payment will be made for the supports left in place without the direction of the Engineer.
  - 5. Do not leave supports within 4 feet of the ground or pavement surface in place without the permission of the Engineer.
- C. Provide pumping, bailing, wellpointing, and construct ditches and dikes required to dewater and drain ground water, sewage, or stormwater to keep the excavation and site dry for the completion of the Work.
- D. Excavation:
  - 1. Excavate by open cut unless otherwise indicated on the Drawings.
  - 2. Excavate trenches to the depths and grades necessary for the pipelines with allowances for bedding material.
    - a. Comply with the following minimum depth of cover unless otherwise noted on the Drawings.
    - b. Water pipelines: 6 feet.
    - c. Sewage and sludge pressure piping: 5 feet.
    - d. Air and gas piping: 3 feet.
    - e. Electrical or wiring conduits and cables: 30 inches.
  - 3. Over-excavate organic, soft, spongy, or otherwise unsuitable soils found at or below the bottom of the trench to meet firm subsoil or as directed by the Engineer.
  - 4. Comply with the following maximum trench widths at the top of pipelines:

<u>Nominal Pipe Sizes (inches)</u>	<u>Trench Widths (inches)</u>
12 or smaller	30
14 - 18	36
20 - 24	42
27 - 30	48
33 and larger	1-1/3 times pipe OD

### 3.4 EXCAVATION FOR APPURTENANCES

- A. Excavate for manholes and similar structures to the depths as shown on the Drawings and to a distance sufficient to leave at least 12 inches clear between outer surfaces and the embankment or shoring that may be used to hold and protect the banks.
- B. Over-depth excavation beyond depths indicated on the Drawings that has not been directed will be considered unauthorized. Fill with sand, gravel, or lean concrete as directed by the Engineer, and at no additional cost to the Owner.

### 3.5 BEDDING AND COVERING OF PIPE

- A. General:
  - 1. Bedding is defined as the shaped and tamped material which supports the pipes. Covering is defined as the compacted material which protects and covers the pipes.
  - 2. Provide continuous bedding and covering for underground pipelines, except where concrete encasement, concrete cradles, boring or jacking are indicated.
- B. Pipe bedding:
  - 1. Provide compacted granular pipe bedding and covering material with a minimum thickness of 4 inches under pipe barrels and 2 inches under bells.
  - 2. Wherever the trench is over-excavated due to the removal of unsuitable material, refill the excavated area to the bottom of the pipe bedding with material conforming to the IDOT "Standard Specifications" gradation No. CA 1.
    - a. Removal and replacement of material, or unsuitable material, to a depth of one foot below the bottom of the pipe barrel is considered incidental to installation of the pipe.
  - 3. Wherever the trench is over-excavated to remove unsuitable material, install geotextile fabric between native soil and granular material:
    - a. Install fabric to cover bottom and sides of trench to heights as follows:
      - (1) For all flexible pipe and rigid pipe 24-inch and smaller: to envelop entire bedding and covering material and overlap 1-foot at the top.
      - (2) For rigid pipe 27-inch and larger: to cover bedding material and from sides of trench to edge of pipe.
      - (3) Where undercut is of a depth that requires more than one piece of fabric to provide envelope, provide sewn seams between sections of fabric.
  - 4. Wherever two or more pipes or conduits are placed in the same trench or excavated area, backfill the trench with granular pipe bedding and covering material to support the uppermost pipe or conduit.
  - 5. Provide sand bedding with a minimum thickness of 3 inches under electrical and wiring conduits and cables.

- C. Pipe covering:
1. Following placement of pipe and inspection of joints, provide compacted granular pipe bedding and covering material for the full width of the trench to the following levels unless otherwise shown on the Drawings:
    - a. For pipes sizes 24-inch and smaller, except flexible thermoplastic pipe: To 4 inches above the top of the pipe.
    - b. For pipes sizes 27-inch and larger, except flexible thermoplastic pipe: To the horizontal centerline of the pipe.
    - c. For flexible thermoplastic pipes and other flexible type pipe: To 12 inches above the top of the pipe.
    - d. If compacted excavated materials are used for backfilling under the pavement as indicated on the Drawings: To 12 inches above the top of the pipe for all pipe sizes.
  2. Place granular pipe bedding and covering material in uniform loose layers not exceeding 8 inches thick.
    - a. Compact each layer firmly by ramming or tamping with tools approved by the Engineer in such a manner as not to disturb or injure the pipe to yield a minimum density of 95 percent of maximum dry density as determined according to ASTM D1557 or AASHTO-T180.
  3. Where trench is widened by installation of structures, jacking pits, or tunnel shafts, extend bedding and covering materials to total width of excavations and compact as noted in following section.
    - a. As a contractor's option, to eliminate compacting of the material, replace bedding and covering material with flowable fill at no additional cost to Owner.

### 3.6 TRENCH BACKFILLING AND COMPACTING

- A. General:
1. Backfill trench from the top of pipe cover to topsoil, paving subgrade, or foundation level.
  2. If trenches settle during the period of construction and within the guarantee period of the work, fill trench back to the surrounding grade, and restore the surfaces.
- B. For trench in lawns, parkways, and other improved areas not subject to vehicular traffic:
1. Backfill with excavated materials in uniform loose layer not exceeding 12 inches thick.
  2. Compact each layer of trench backfill materials to yield a minimum of 85 percent of maximum dry density as determined according to ASTM D1557 or AASHTO-T180.
- C. For trench in unimproved areas and cultivated fields:
1. Backfill with excavated materials.
  2. Provide crowned surface to compensate for settlement.

- D. For trench in streets, parking areas, driveways, sidewalks, curb and gutter, or within 2 feet of any proposed curb and gutter, sidewalk, or other paved areas:
1. Backfilling with granular backfill materials:
    - a. Place in uniform loose layer not exceeding 12 inches thick and compact with vibrating roller or equivalent.
    - b. Water jetting may be used in lieu of vibratory compaction when approved by the Engineer.
      - (1) Demonstrate jetting procedures before beginning operation.
      - (2) Place and jet in maximum lift of 6 to 8 feet.
      - (3) Do not place paving until surface settlement has occurred or a minimum of 30 days after jetting.
    - c. Fill the top of trenches with temporary aggregate pavement material to the depth(s) required to provide aggregate base and pavement base, binder and surface courses of the depths(s) shown in the Details in the Drawings.
  2. Compacting requirements:
    - a. Compact each layer of trench backfill materials to yield a minimum density of 90 percent of maximum dry density as determined according to ASTM D1557 or AASHTO T-180.
    - b. Determine the density of compacted backfill at intervals of not more than 500 feet at locations selected by the Engineer.
    - c. Provide the services of an independent testing laboratory for the density tests complying with the pertinent provisions of Section 01 45 29.
  3. Maintain temporary aggregate pavement level with adjoining pavement surfaces until the permanent pavement is placed.

### 3.7 BACKFILL AND BEDDING FOR APPURTENANCES

- A. Provide 3 inches of sand or granular bedding material unless otherwise shown on the Drawings.
- B. Do not backfill until new concrete has properly cured, and any required tests have been accepted.
- C. Backfill in lawns and landscaped areas with excavated materials.
- D. Backfill in pavement around manholes, catch basins, inlets, valve vaults, and other structures as directed by the Engineer with granular backfill materials.

### 3.8 FINISH GRADING

- A. General:
  1. Provide finish grading and filling to achieve the lines and grades.
  2. Slope grades to drain away from structures.
  3. Replace culverts damaged during the construction with new culverts of the same size and type unless instructed differently in other sections of these Specifications.

- B. Finish grading:
  - 1. Except where mounding over trenches is specified, grade smooth areas of the Work including previously grassed areas that have been disturbed, and adjacent transition areas.
  - 2. Fill and compact depressions from settlement and round tops of embankments and breaks in grade.
  - 3. Protect newly graded areas from traffic and erosion. Repair settlement or washing away that may occur prior to surface restoration and re-establish grades to the required elevations at no additional cost to the Owner.
- C. Disposal of waste excavated material:
  - 1. Remove unsuitable and surplus excavated materials not used for backfilling from the project site.
  - 2. Do not deposit on public or private property without written permission from property owner or authorized representative of appropriate public agency.

### 3.9 TEMPORARY HOT-MIX PAVEMENT SURFACE

- A. Provide a premixed hot-mix asphalt wearing surface for use during the period between backfilling the trench and constructing the permanent pavement surface at locations as shown on the Drawings or as directed by the Engineer.
  - 1. Comply with requirements of Section 32 10 00 of these Specifications.
- B. Remove the temporary pavement surface at the time of permanent pavement construction.

### 3.10 WATER MAIN REPAIR

- A. Whenever existing water mains and water service pipes are damaged during construction, stop the pipe installation work and immediately repair the damaged portion of the existing piping.
- B. Contact the Engineer and Owner immediately to report the location and extent of the damage.
- C. Repair the water main with methods complying with the "Standard Specifications for Water and Sewer Construction in Illinois", and any additional requirements required by the Owner.
- D. Utilize only materials of repair as noted in the products section of this specification or as dictated by the Owner.
- E. Where water services have been stripped or pulled from the water main, replace the corporation stop as instructed by the Engineer and Owner, and replace the water service pipe to a point as directed by the Owner.

- F. Comply with disinfection requirements as dictated by the Owner.
- G. Do not cover the repair until work is inspected and approved by Owner.

### 3.11 PIPE INSULATION

- A. Rigid Pipe Insulation:
  - 1. Place rigid insulation board above the pipe bedding material to the width of the trench.
  - 2. Place rigid insulation board to the required thickness and in the locations as shown on the Drawings.

### 3.12 DRAIN TILE REPLACEMENT

- A. Replace all drain tile disturbed or damaged with new pipe of the same size, at same grade and slope, and utilizing flexible couplings for connection to existing pipe.
- B. Indicate location, depth, and size of drain tile on Job Set of plans.
- C. Provide aggregate backfill from bottom of trench to a minimum of 12 inches above new drain pipe.
- D. Inform Engineer immediately when drain tiles are encountered as a part of the trenching operation.
  - 1. Drain tile repair conducted without the observance of the Engineer will not be paid for.

### 3.13 PIPE TRACER WIRE

- A. Install tracer wire system per manufacturer's instructions.
  - 1. See Section 33 05 23.13 for tracer wire installation in HDD applications.
- B. Place tracer wire taped to pipe at maximum intervals of 5 feet at 3 o'clock or 9 o'clock positions.
- C. Continue wire through valve boxes and other structures. Install tracer wire as a single continuous wire, except where using approved connectors.
- D. Install tracer wire test stations at each end of pipeline, behind each fire hydrant, at a maximum spacing of 1,000 feet, and adjacent to water service curb stops. Leave 24-inches of slack to facilitate connections.
- E. Extend tracer wire to top of valve vaults and mount tracer wire to vault walls with stainless steel grip clips. Leave 24-inches of slack to facilitate connections. Extend wire up to top of marker posts, if marker posts are included with project.

- F. Provide termination points with a direct connection point to the tracer wire by utility locate transmitter. Install tracer wire to allow proper access for connection of tracing equipment, without loss or deterioration of low frequency (512 Hz) signal, and without distortion of signal caused by more than one wire installed in close proximity.
- G. Interconnect tracer wires at intersections. At tees, join the three wires using single, three-way locking connectors. At crosses, join the four wires using two three-way locking connectors with a short jumper wire between them.
- H. Install grounding anodes at each end of pipeline and at a maximum spacing of 1,000 feet.
- I. Successfully test tracer wire system installation after final restoration by locating the full length of facility using a low frequency (512 Hz) line tracing equipment in the presence of Owner and Engineer.

END OF SECTION



SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide erosion and sedimentation controls as shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- C. References:
  - 1. "Illinois Urban Manual", a technical manual designed for Urban Ecosystem Protection and Enhancement, prepared by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and the Illinois Environmental Protection Agency (IEPA), latest revision.

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

EROSION AND SEDIMENTATION CONTROLS

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## PART 2 - PRODUCTS

### 2.1 GENERAL

- A. Provide erosion and sedimentation controls in accordance with the "Illinois Urban Manual" and the IDOT "Standard Specifications".
- B. Provide manufacturer's certification that product meets the minimum specified value, if requested by the Engineer.

### 2.2 TEMPORARY EROSION AND SEDIMENT CONTROL SYSTEMS

- A. Inlet Protection Filter:
  - 1. Provide a drainage structure inlet filter assembly consisting of a steel frame, replaceable geotextile fabric bag, reinforced filter basket, stainless steel band suspended from the frame, and an overflow feature.
  - 2. Provide a frame of rigid galvanized steel meeting the requirements of ASTM-A36.
  - 3. Provide a filter bag constructed of a non-woven geotextile fabric with the following properties:
    - a. Minimum weight: 4 ounces per square yard.
    - b. Minimum flow rate: 145 gallons per minute per square foot.
    - c. Minimum silt and debris capacity: 2 cubic feet.
  - 4. Provide reinforced filter basket of polyester or stainless steel mesh.
  - 5. Acceptable products:
    - a. FlexStorm Inlet Filter by Inlet & Pipe Protection, Inc.
    - b. Catch-All by Marathon Materials, Inc.
    - c. Or equal.
- B. Silt bag:
  - 1. Provide filter or silt bags for dewatering pump discharge hoses that are utilized at well points or on dewatering pumps used to lower the water table and allow trench work or structure installation.
  - 2. Utilize bags made of non-woven geotextile material.
  - 3. Acceptable products:
    - a. Silt Bag by Layfield.
    - b. Dirtbag by Geo-Synthetics.
    - c. Or equal.

## PART 3 - EXECUTION

### 3.1 INLET PROTECTION FILTER

- A. General:
  - 1. Verify the number and dimensions of the drainage structure frames for installation of the inlet filter assemblies.
  - 2. Inspect and clean filters weekly and after every rainfall.

3. Dispose of debris removed at an approved location.
4. Remove filter assembly as directed by the Engineer.
5. The drainage structure inlet filter assembly will remain the property of the Contractor.

### 3.2 SILT BAG

- A. Provide protection from sedimentation to storm sewers, streams, ponds, or wetlands during well pointing or trench dewatering by the use of silt bags or silt socks at the hose or pipe discharge points.
- B. Dispose of collected silt or sediment offsite or at locations approved by the appropriate permitting authority.

END OF SECTION



SECTION 32 10 00.19

STREET, DRIVEWAY, AND SIDEWALK REPLACEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes replacement of streets, driveways, curbs and gutters, and sidewalks removed or damaged during pipeline construction.
- B. Provide base course and surface courses as specified herein, and as needed for a complete replacement of all streets, driveways, curbs and gutters, and sidewalks.
- C. Construct streets, driveways, concrete curbs and gutters, and sidewalks in accordance with IDOT "Standard Specifications for Road and Bridge Construction", hereby referred to as IDOT "Standard Specifications".
- D. Related work:
  - 1. Comply with only the pertinent provisions of this Section for the type of replacement required for the Work.
  - 2. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 01 - General Requirements of these Specifications.
- E. References – (Reserved).

1.2 SUBMITTALS – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 BASE COURSE

- A. Aggregate:
  - 1. Provide well graded, 100 percent crushed gravel or crushed stone aggregate free of clay, loam, dirt, calcareous or other foreign matter conforming to the IDOT "Standard Specifications", gradation No. CA 6.

- B. Hot-mix asphalt:
  - 1. Comply with applicable articles of Section 355 of the IDOT "Standard Specifications" and the most recent edition of IDOT District 1 Special Provisions, "HMA Mixture Design Requirements", "Ground Tire Rubber (GTR) Modified Asphalt Binder", "Friction Aggregate", the BDE Special Provisions for "Hot-Mix Asphalt Density Testing of Longitudinal Joints".
    - a. Hot-Mix Asphalt Binder Course, IL-19.0, N50 on Broad Street and Mill Street.
    - b. 4% air voids @ 50 gyrations.
    - c. Hot-Mix Asphalt Binder Course, IL-19.0, N70 on Richmond Road.
    - d. 4% air voids @ 70 gyrations.

## 2.2 SURFACE COURSE

- A. Aggregate surface course (Type A or Type B):
  - 1. Use crushed stone or crushed gravel complying with the IDOT "Standard Specifications" Articles 1004.01 and 1004.04 gradation No. CA 6.
- B. Hot-mix asphalt: Comply with applicable articles of Section 406 of the IDOT "Standard Specifications" and the most recent IDOT District 1 Special Provisions, "HMA Mixture Design Requirements", "Ground Tire Rubber (GTR) Modified Asphalt Binder", "Friction Agreement" and the BDE Special Provision for "Hot-Mix Asphalt Density Testing for Longitudinal Joints".
  - 1. Hot-mix asphalt surface course:
    - a. Use Hot-mix asphalt Surface Course, Mix "D", N50 on Broad Street and Mill Street.
      - (1) Mix type: IL 9.5 mm.
      - (2) 4% air voids @ 50 gyrations.
    - b. Use Hot-mix asphalt Surface Course, Mix "D", N70 on Richmond Road.
      - (1) Mix type: IL 9.5 mm.
      - (2) 4% air voids @ 70 gyrations.
  - 2. Hot-mix asphalt binder course:
    - a. Use Hot-mix asphalt Binder Course, IL-19, N50 on Broad Street and Mill Street.
      - (1) Mix type: IL 19.0.
      - (2) 4% air voids @ 50 gyrations.
    - b. Use Hot-mix asphalt Binder Course, IL-19, N70 on Richmond Road and W Crystal Lake Road.
      - (1) Mix type: IL 19.0.
      - (2) 4% air voids @ 70 gyrations.
  - 3. Hot-mix asphalt leveling binder:
    - a. Use Hot-mix asphalt Leveling Binder (Machine Method), N50 on Broad Street and Mill Street.
      - (1) Mix type: IL 9.5 mm.

- b. Use Hot-mix asphalt Leveling Binder (Machine Method), N70 on Richmond Road and W Crystal Lake Road.
      - (1) Mix type: IL 9.5 mm.
      - (2) 4% air voids @ 70 gyrations.
  - 4. Hot-mix asphalt driveway:
    - a. Use Hot-mix asphalt Surface Course, Mix "D", N50.
      - (1) Mixture type: IL 9.5 mm.
      - (2) 4% air voids @ 50 gyrations.
- C. Portland Cement concrete pavement:
  - 1. Comply with applicable articles of Section 420 of the IDOT "Standard Specifications" for materials and material preparation.
- D. Portland Cement concrete driveway pavement:
  - 1. Comply with Section 423 of IDOT "Standard Specifications" for materials and material preparation.
- E. Portland Cement concrete walk:
  - 1. Comply with applicable requirements of Section 424 of the IDOT "Standard Specifications".
- F. Detectable warnings:
  - 1. Comply with Section 424.09 of IDOT "Standard Specifications" for materials, installation and certification requirements.

## 2.3 SHOULDERS

- A. Hot-mix asphalt: Comply with paragraph 2.2, Hot-mix asphalt binder course and Hot-mix asphalt surface course.
  - 1. Use Hot-mix asphalt Shoulder complying with Sections 312 and 482 of the IDOT "Standard Specifications".

## 2.4 PORTLAND CEMENT CONCRETE DRIVEWAY

- A. Comply with applicable requirements of Section 423 of IDOT "Standard Specifications".

## 2.5 CURB AND GUTTER

- A. Portland Cement concrete:
  - 1. Comply with applicable requirements of Section 606 of the IDOT "Standard Specifications".

## 2.6 PROTECTIVE COAT

- A. Use combination of 50 percent boiled linseed oil and 50 percent petroleum spirits by volume.
  - 1. Comply with Section 1023 of the IDOT "Standard Specifications".

## 2.7 TEMPORARY HOT-MIX ASPHALT PAVEMENT MATERIAL

- A. Provide hot-mix asphalt during summer months while plants are operating.
- B. Materials:
  - 1. Hot-mix asphalt binder or surface course, Mix "D", N50.
    - a. See paragraph 2.2, Hot-mix asphalt binder course and Hot-mix asphalt surface course.
- C. Provide asphalt (cold-patch) wearing surface during winter months when hot-mix is not available.
- D. Minimum compacted thickness: 2 inches.

## 2.8 PAVEMENT MARKINGS

- A. General:
  - 1. Comply with IDOT "Standard Specifications" applicable articles of Sections 780, 781, and 783, for all preparation and materials to remove and replace all obstructed pavement markings.
- B. Materials - Permanent:
  - 1. Thermoplastic: Article 1095.01.
  - 2. Paint: Article 1095.02.
  - 3. Raised reflective pavement markers: Section 1096.01.
- C. Materials - Temporary:
  - 1. Tape: Comply with IDOT "Standard Specifications" for Road and Bridge Construction, Article 1095.06 for materials.
    - a. Do not use paint for temporary pavement markings.

## PART 3 - EXECUTION

### 3.1 GENERAL CONSTRUCTION REQUIREMENTS

- A. Comply with the applicable articles of the following Sections of the IDOT "Standard Specifications" except as modified herein:
  - 1. Base courses:
    - a. Aggregate Type A or Type B: Section 351.
    - b. Hot-mix asphalt: Section 355.
    - c. Portland Cement concrete: Section 353.
  - 2. Surface courses:
    - a. Aggregate, Type A, or Type B: Section 402.
    - b. Hot-mix asphalt: Section 406.
    - c. Portland Cement concrete: Section 420.
  - 3. Prime coats: Section 406.
  - 4. Curb and gutter: Section 606.

5. Portland Cement concrete driveways: Section 423.
6. Area Reflective Crack Control Treatment, System A: Section 443.

- B. Maintain the temporary pavement material installed during trench backfilling as temporary driving surface.
  1. Provide and maintain temporary culverts or other drainage devices.
  2. Shape the road bed to provide positive drainage.

### 3.2 REMOVAL OF EXISTING PAVEMENT SURFACES

- A. Remove and dispose of all existing pavement surface materials as necessary to complete the Work.
  1. Remove all existing street and driveway pavements, including surfaces, bases and stabilized subbases, curbs and gutters, and sidewalks to a width of not less than one foot on undisturbed ground on each side of the trench excavation.
  2. Saw cut to a full depth to provide a straight line joint between the existing pavement, curb and gutter or sidewalk which will remain and the portion to be removed and replaced.
    - a. Remake the saw cut joint as required at the time of resurfacing.
  3. Do not use any broken pavement, curb and gutter or sidewalk materials for backfilling the trench.

### 3.3 REPLACEMENT OF PAVEMENT SURFACES

- A. Reconstruct all street and driveway pavement including surfaces, bases, and stabilized sub-bases, curbs and gutters, and sidewalks which are removed or damaged as a result of the construction.
  1. Set all manholes, valve vaults, inlets, service boxes, and other structures and appurtenances to the established finish grade before pavement replacement.
  2. Construct in accordance with the details as shown on the Drawings.
  3. Replace all surface courses, and base courses to match the grade, cross-section, and thickness of existing, except:
    - a. Comply with the minimum thickness as specified herein.
- B. Base courses:
  1. Use existing temporary aggregate pavement material installed during trench backfilling as aggregate base.
  2. Remove portion of the existing temporary aggregate pavement material necessary to install base, binder and surface courses.
    - a. Scarify, grade, and shape the aggregate base courses.
    - b. Place and compact additional material as directed by the Engineer.
  3. Reuse the removed temporary pavement material for any of the following:
    - a. Trench backfill or bedding.
    - b. Temporary pavement at another location.
    - c. Fill material for subgrade removal and replacement.

- d. Subbase granular material or aggregate base course if the Engineer determines that there is not significant segregation or contamination of the material and if it is constructed as specified in these Specifications.
- 4. Replace existing PCC base course with a minimum of 12 inches of Portland Cement concrete base course.
- 5. Replace existing hot-mix asphalt base course with a minimum of 6 inches of hot-mix asphalt base course.

### 3.4 PRIME COATS

- A. Bituminous prime coat:
  - 1. Apply prime coat to all aggregate base courses prior to installation of asphalt binder courses at a minimum rate of 0.40 gallons per square yard.
    - a. Apply prime coat to saw-cut edges of existing pavement or driveway that abuts trench limits, by hand swabbing, if necessary.
  - 2. Apply prime coat to all existing concrete or asphalt surfaces prior to installation of new hot-mix asphalt leveling binder, binder, or surface courses at a rate of 0.05 to 0.10 gallons per square yard.
    - a. Prime may be eliminated between new binder and surface courses only when surface course is applied immediately after binder course, when binder has cooled to the appropriate temperature.
    - b. Apply prime coat to new binder course if traffic has been allowed on binder course prior to installation of surface course at a rate of 0.10 gallons per square yard.
  - 3. Do not apply when ambient temperature is less than as specified by IDOT Section 406, or when local conditions indicate that rain is imminent.

### 3.5 SURFACE COURSES

- A. Hot-mix asphalt binder courses and surface courses:
  - 1. Install hot-mix asphalt binder with a minimum thickness of 2½ inches and hot-mix asphalt surface courses with a minimum thickness of 1½ inches to attain a minimum total thickness of 4 inches.
    - a. Install binder and surface course with greater thicknesses if so indicated on the Drawings.
      - (1) Install a minimum thickness of 6 inches of hot-mix asphalt binder course and 2 inches of hot-mix asphalt surface course on Richmond Road.
    - b. Install thick binder courses in lifts approved by Engineer and provide steel plate over trenches if necessary to allow cooling.
  - 2. Repair settled trenches, spalled asphalt, and other defective binder before placement of hot-mix asphalt surface course.
  - 3. Resaw-cut edges of trench limits, if necessary, to provide a clean-straight edge prior to installation of hot-mix asphalt surface course.

- B. Portland Cement concrete driveway pavement:
  1. Replace concrete driveway pavement with a minimum of 6 inches of Portland Cement concrete.
  2. Provide steel reinforcing bars equal in size and spacing to reinforcement of original pavement.
  3. Provide 6 x 6-W4.0 x W4.0 welded wire fabric if steel reinforcing does not exist.
  4. Provide #4 grade 60 steel dowels around total perimeter of sawcut and adjacent curb and gutter where PCC pavement is replaced.
    - a. Provide 24-inch long dowels.
    - b. Drill existing concrete to a depth of 12 inches and set dowels with epoxy.
    - c. Space dowels at 24 inches center to center.
- C. Aggregate surface courses and driveways:
  1. Replace aggregate surface courses and driveways with a minimum of 8 inches of surface aggregate.

### 3.6 CURB AND GUTTER

- A. Replace curb and gutter with curb and gutter of the same size and cross-section.
- B. Provide protective coat if so directed by the Owner.
- C. Provide two 1/2-inch steel reinforcing bars in full length of new curb and gutter and two 12-inch long slip dowels extended 6 inches into existing curb and gutter.

### 3.7 SIDEWALKS

- A. Construct to match existing walks.
- B. Portland Cement concrete walks:
  1. Erect temporary forms for placement of concrete as specified in Article 424.05 of the IDOT "Standard Specifications".
  2. Construct in accordance with applicable articles of Section 424 of the IDOT "Standard Specifications".
    - a. Provide a minimum thickness of 5 inches, with a minimum thickness of 6 inches through driveways.
    - b. Construct sidewalks using lumber forms with a nominal thickness of 2 inches and a minimum depth of 6 inches.
  3. Provide ramps accessible to the disabled in locations as shown on the Drawings and in accordance with current IDOT Highway Standard Details.
    - a. Refer to IDOT Standard Details 424001, 424006, 424011, 424016, 424021, and 424026, latest revision.
  4. Provide detectable warnings at ramps as specified in Section 424.09 of IDOT's "Standard Specifications".

### 3.8 TEMPORARY ASPHALT PAVEMENT SURFACE

- A. Provide a hot-mix asphalt wearing surface for use during the period between backfilling the trench and constructing the permanent pavement surface.
- B. Provide 2-inch (compacted) minimum wearing surface.
  - 1. Utilize mechanical tamper, vibrating tamper, or self-propelled roller to achieve compaction.
  - 2. To facilitate extra compaction by traffic, surface of patch may be finished up to 1/2-inch above existing pavement.
  - 3. Provide smooth, drivable surface, free of ruts or depressions.
  - 4. Remove all loose materials from edges of patch, and provide temporary sawcuts if directed by the Engineer.
- C. Utilize premix asphalt (cold patch) wearing surface only during winter months when hot-mix asphalt is not available.
  - 1. Comply with paragraph 3.8 B. when installing asphalt cold-patch.
- D. Remove and dispose of all temporary asphalt pavement surface materials at the time of permanent pavement construction.

### 3.9 STRUCTURE ADJUSTMENT

- A. Comply with applicable articles of Section 603 of IDOT "Standard Specifications" for materials and installation except as modified below:
  - 1. Do not use steel, ductile iron, or cast iron adjusting rings.
  - 2. Do not use common brick.
- B. Provide watertight joints between concrete adjusting rings, frame, and structure when adjusting sanitary sewer manhole frames.

### 3.10 PAVEMENT MARKINGS

- A. General:
  - 1. Replace all existing pavement markings that are removed or damaged during pipe installation operations.
  - 2. Mark locations (by dimensions) on Job Plan of all existing pavement lane markings, turn arrow, stop bars, and parking stall markings prior to excavation.
  - 3. Replace all existing markings after placement of final surfaces.
  - 4. Replace pavement markings with same kind and type unless otherwise noted on the Drawings or in Contract Documents.
- B. Removal:
  - 1. Remove pavement markings or reflectors per applicable articles of IDOT "Standard Specifications" Section 783.

- C. Temporary - tape:
1. Use temporary marking tape to delineate temporary lanes of traffic, stop bars, or parking stall lanes on temporary asphalt pavement, asphalt base courses, and surface courses if indicated on the Drawings or if so directed by the Engineer.
  2. Remove temporary marking tape prior to installation of permanent markings.

END OF SECTION



SECTION 32 92 00.13

LAWNS AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide topsoil, seeding, sodding, and care of grass during establishment period for a complete surface restoration of lawns, parkways, and other areas disturbed as a result of the construction.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 TOPSOIL

- A. Provide a mixture of black dirt having at least 90 percent passing a No. 10 sieve, free of large roots, brush, sticks, weeds, and stones larger than 1/4-inch in diameter, and any other debris.

2.2 AGRICULTURAL LIMESTONE

- A. Provide agricultural-grade ground limestone, ground sufficiently fine so that at least 80 percent will pass through a No. 8 sieve, containing not less than 80 percent calcium carbonate equivalent. Moisture content at time of delivery not exceeding 8 percent.

2.3 FERTILIZER

- A. Provide commercial grade fertilizer, having nutrient content of 16 percent nitrogen, 6 percent phosphorus, and 24 percent soluble potash.

2.4 EXCELSIOR BLANKET

- A. Excelsior blanket:
  - 1. Provide excelsior blanket consisting of a machine produced mat of wood excelsior of 80 percent 6 inches or longer fiber length.
  - 2. Provide cover with a 60-day photodegradable extruded plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting having an approximate minimum opening of 5/8" x 5/8" to maximum opening of 2" x 2".
  - 3. Comply with the following:
    - Minimum width: 24 inches.
    - Minimum weight: 0.9 lbs./sq.yd.
    - Minimum length of roll: 150 feet.
- B. Provide 6-inch long staples of 11 gauge wire to hold blanket in place.

2.5 MULCH

- A. Vegetative mulch:
  - 1. Provide vegetative mulch for seeded areas of a high-quality, air-dried straw of wheat, rye, oats, beans, or other approved straw, free from grass, broom sedge, noxious weeds, and weed seeds detrimental to growth of grass.
- B. Hydraulic mulch:
  - 1. Provide virgin wood cellulose fibers complying with the following properties (percent by weight):

Moisture content	15
Organic matter, minimum	95
Water holding capacity	400
pH	4.3-8.5

2.6 SEED

- A. Provide new crop seed furnished in standard sealed containers bearing seed tags showing purity, germination, and weed seed content, free of all primary noxious

weed seeds and seeds of other noxious weeds as stipulated in the IDOT Standard Specifications, complying with the following minimum requirements:

<u>Seed Type</u>	<u>Purity</u>	Pure Live Seed
Kentucky Bluegrass	97%	80%
Red Top	90%	78%
Creeping Red Fescue	97%	82%
Tall Fescue	98%	83%
Annual Ryegrass	97%	85%
Perennial Ryegrass	97%	85%
Oats	92%	88%
Winter Wheat	92%	89%

B. In level areas to be used for lawns, use the following seed mixture:

<u>Seed Type</u>	<u>Lbs/Acre</u>
Kentucky Bluegrass	100
Perennial Ryegrass	60
Creeping Red Fescue	40

C. In level and sloped areas where reduced mowing will occur, use the following seed mixture:

<u>Seed Type</u>	<u>Lbs/Acre</u>
Tall Fescue	100
Perennial Ryegrass	50
Creeping Red Fescue	40
Red Top	10
Annual Ryegrass	15

D. For temporary erosion control seeding, use 130 lbs/acre of oats between March 1 and July 31 or 130 lbs/acre of winter wheat between August 1 to November 15.

2.7 SOD

- A. Provide field or nursery grown sod that is native to the locality of the Project.
- B. Provide sod that will not break, crumble or tear during handling and placing, free of stones, crab grass, noxious weeds, and other objectionable plants or substances injurious to plant growth.
- C. Provide sod having at least 1-inch of soil adhering firmly to the roots and cut in rectangular pieces with the shortest side not less than 12 inches. At the time of cutting sod, mow the grass height not less than 2 inches nor more than 4 inches.
- D. Do not use sod cut for more than 48 hours.

## PART 3 - EXECUTION

### 3.1 TOPSOIL PLACEMENT

- A. Scarify the compacted subgrade to a depth of 3 inches to receive the topsoil.
- B. Spread at least 4 inches of prepared topsoil in areas of new grading raked smooth and level.
- C. Grade flush with walks, curbs, and paving.

### 3.2 PREPARATION FOR SODDING OR SEEDING

- A. Do not start preparation until all other site and utility work and finished grading within the areas to be seeded have been completed.
- B. Till topsoil to a depth of at least 3 inches and smooth out all surface irregularities resulting therefrom. Leave area free of rocks or hard soil clods which will not pass through the tines of a standard garden rake.
- C. Take a test of the site soils to determine the need for application of agricultural limestone (soil pH less than 7.0). If agricultural limestone is needed, then at least 7 days before applying fertilizer, spread lime uniformly in sufficient quantity to produce in the soil a pH of 7.0. Work lime thoroughly into topsoil to a depth of 3 inches.
- D. Apply fertilizer uniformly at a rate of 7 lbs. per 1,000 sq. ft. Work fertilizer into soil prior to seeding or sodding.

### 3.3 SODDING

- A. Provide sod in developed areas that were grassed prior to construction and as indicated on the Drawings. Sodding shall also be used in ditches and drainage swales and on all embankment slopes steeper than 3 to 1 unless protection is provided against erosion of seeding. At the Contractor's option, sodding may be substituted for seeding, but at no additional cost.
- B. Place sod with the edges in close contact and alternate courses staggered. Lightly tamp or roll to eliminate air pockets. On slopes 2 to 1 or steeper, stake sod with not less than 4 stakes per square yard and with at least one stake for each piece of sod. Stakes shall be driven with the flat side parallel to the slope. Do not place sod when the ground surface is frozen or when air temperature may exceed 90 degrees F. Water the sod thoroughly within 8 hours after placement and as often as necessary to become well established.
- C. In ditches, the sod shall be placed with the longer dimension perpendicular to the flow of water in the ditch. On slopes, starting at the bottom of the slope, the sod shall be placed with the longer dimension parallel to the contours of the ground.

- D. All exposed edges of sod shall be buried flush with the adjacent turf.

### 3.4 SEEDING

- A. Seed all grassed areas disturbed by construction operations and not receiving sod, and as indicated on the Drawings.
- B. Sow seed between September 1 and November 1, or in spring from time ground can be worked until June 1.
- C. Apply seed during favorable climatic conditions. Do not seed in windy weather or when soil is very wet. Sow seed at the rate specified for each seed mixture.
- D. Broadcasting seeding method:
  - 1. Sow seed with mechanical seeder in two directions at right angles to each other to achieve an even distribution of seed.
  - 2. After seeding, rake seed lightly into ground and roll with a roller weighing between 100 and 200 pounds per foot of roller width.
- E. Hydraulic seeding method:
  - 1. When seed is applied with a hydraulic seeder, apply at a rate of not less than 1,000 gallons of slurry per acre containing the proper quantity of seed specified above.
  - 2. When using a hydraulic seeder, apply the fertilizer in a separate operation.

### 3.5 TEMPORARY EROSION CONTROL SEEDING

- A. Seed all erodible/bare areas with a temporary cover crop within 7 days of disturbance, unless the area is to have an alternative temporary or permanent soil erosion control measure implemented within 7 days of disturbance, or as directed by Engineer.
- B. Seed bed preparation will not be required if the soil is in a loose conditions. Light disking shall be done if the soil is hard packed or caked. Fertilizer will not be required.

### 3.6 EXCELSIOR BLANKET

- A. Immediately after rolling seeded areas, place erosion control excelsior blanket on all seeded areas.
- B. Apply erosion control in accordance with the IDOT "Standard Specifications".

### 3.7 MULCHING SEEDED AREAS

- A. Immediately after rolling seeded areas, apply mulch at the rate of 2 tons per acre within 24 hours after seeding. Use vegetative mulch on all seeded areas unless hydraulic seeding method is used.
- B. If the hydraulic mulch application method is to be used, apply the hydraulic mulch at a rate of 2,000 pounds per acre.
- C. Apply mulch in accordance with the IDOT Standard Specifications.

### 3.8 WATERING

- A. Immediately after placing erosion control matting or mulch, water seeded areas thoroughly with a fine mist spray. Keep soil thoroughly moist until seeds have sprouted and achieved a growth of 1-inch. For sod, immediately begin watering and continually keep moist until the sod has firmly knit itself to the topsoil.

### 3.9 PROTECTION OF WORK

- A. Protect newly seeded and sodded areas from all traffic by erecting temporary fences and signs. Protect slopes from erosion. Properly and promptly repair all damaged work when required.

### 3.10 APPLICATION OF FERTILIZER

- A. Six weeks after completion of seeding or sodding apply granular fertilizer over all areas at the rate of 2 lbs. of nitrogen nutrients per 1,000 sq.ft. of area.

### 3.11 CLEAN-UP

- A. At the time of final inspection of work, but before final acceptance, remove from seeded and sodded areas all debris, rubbish, excess materials, tools, and equipment.

### 3.12 MAINTENANCE

- A. Provide watering, mowing, and replanting and continue as necessary until a close healthy stand of specified grasses is established.
- B. Replace lawns not showing a close uniform stand of healthy specified grasses at the end of the guaranty period and maintain until acceptance.

END OF SECTION

## SECTION 33 05 23.13

## UTILITY PIPE HORIZONTAL DIRECTIONAL DRILLING

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section describes pipes installed by the trenchless horizontal directional drilling (HDD) method as shown on the Drawings, as specified herein, and as needed for a complete installation.
- B. Provide labor, materials, tools, and equipment necessary to perform all work specified in this Section.
- C. References – (Reserved).
- D. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

## 1.2 SUBMITTALS

- A. Shop Drawing Submittals – Submit shop drawings in compliance with pertinent provisions of Section 01 33 01, specifically including, but not limited to:
  - 1. Manufacturer's data on installation procedures, pipe specifications and butt-fusing specifications.
    - a. Obtain approval prior to beginning work.
  - 2. General specifications for drilling fluid/mud.
    - a. Using water and native soils only for drilling fluid/mud is not acceptable.
- B. Operation and Maintenance Manuals – (Reserved).
- C. Comply with pertinent provisions of Section 01 33 01.
- D. Submit detailed construction scheduling plan at preconstruction meeting.
  - 1. Comply with all portions of Section 01 32 16 concerning schedules and submittals.
  - 2. Provide detailed plan of means and methods to maintain clean and safe conditions in the event drilling material escapes to surface or adjacent storm sewers, including list of material and equipment that will be on-site during drilling and pipe insertion.

- E. Prepare a written, comprehensive contingency plan to address the response to, and clean-up of, hydrofracture (frac-outs) and surface spill events (release events).
  - 1. Provide and submit the contingency plan at the Preconstruction Meeting in accordance with Project Meetings – Section 01 31 19 and Submittals – Section 01 33 01.
- F. Submit horizontal directional drilling contractor qualifications.

### 1.3 QUALITY ASSURANCE

- A. Use an adequate number of workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.
- B. Contractor performing horizontal directional drilling shall have the following qualifications:
  - 1. Experience with at least 3 projects of similar pipe diameters and pipe/pullback lengths.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01 66 11.

### 1.5 SITE CONDITIONS – (Reserved).

### 1.6 MAINTENANCE – (Reserved).

### 1.7 GENERAL CONSTRUCTION REQUIREMENTS

- A. Comply with the requirements of the permit issued by the controlling agency.
- B. Provide the insurance and other information required for the above referenced permits.
- C. Notify the controlling agency of the construction schedule not less than 10 days prior to the start of the construction.
- D. Provide all excavation, pits, installation and removal of tight sheeting, leaving of sheeting in place if indicated on the Drawings, backfilling of pits, compaction of excavated materials, and providing and compacting granular backfill materials where indicated on the Drawings.

### 1.8 TRENCHING AND EXCAVATIONS

- A. Comply with all requirements of Section 31 23 79 for work involving open cutting, trenching, excavations for structures or services, and backfilling of excavations.

## PART 2 - PRODUCTS

### 2.1 DIRECTIONAL DRILLING SYSTEM

- A. Provide hydraulically or pneumatically operated, fluid-assisted, remote guided drilling system capable of installing pipe indicated on the Drawings by trenchless methods.
  - 1. Provide compressors, pumps, apparatus, tools, and all devices certified as suitable by the system manufacturer to install the new pipe without damaging or stressing the pipe.
  - 2. Provide recovery system that will recover bentonite slurries or other drilling fluids without releasing the slurry/fluid onto the surrounding ground or water surfaces.
  - 3. Provide, use and maintain downhole pressure monitoring equipment.
  - 4. Provide and stock a complete variety of equipment, tools and materials to respond to release events.
    - a. Equipment and tools include, but are not limited to: backhoe, dozer, tank or dump trucks, rowboat, barrels, vacuum truck, vacuum hoses, shovels, hand tools, lumber, sandbags, tarps, silt fence, compost filter logs, coir wattles, straw bales, spill containment socks and pads, spill berms and portable pumps.
- B. Provide certification from pipe manufacturer the proposed pipe material and strength classification is appropriate for this project's application(s).

### 2.2 PVC PIPE (SPLINED JOINT)

- A. Material:
  - 1. Provide 12454A or B polyvinyl chloride complying with ASTM D-1784.
  - 2. Provide pipe that complies with AWWA C900 pressure pipe with a standard dimension ratio of 18 (DR 18).
  - 3. Provide restrained joint PVC pipe with restraining grooves, built-in sealing gaskets, and beveled edges, manufactured to D.I. O.D.
    - a. Acceptable manufacturer: CertainTeed Certa-Lok.
  - 4. Color:
    - a. Provide blue pipe for potable water applications.
    - b. Provide green pipe for sewage force main applications.
    - c. Provide purple pipe for reclaimed water applications.
    - d. Provide yellow pipe (ASTM D2241) where pipe is to be a sleeve for other pipes.
- B. Joints:
  - 1. PVC restrained joint separate coupling or integral bell, with elastomeric seal and restraining grooves.
    - a. Restraining spline: Provide splines sized to fit coupling grooves made of Nylon 101.

2. Provide restrained joint mechanical gland adapters for connection to ductile iron pipe at ends of PVC piping.
3. Acceptable manufacturer: CertainTeed Certa-Lok or Certa-Lok RJIB.

## 2.3 DUCTILE IRON PIPE

### A. Material:

1. Provide ductile iron pipe complying with ANSI A21.51, thickness Class 52, with joints complying with ANSI A21.11.
  - a. Use cement lining complying with ANSI/AWWA C104/A21.4, standard thickness.
2. Provide restrained joint pipe system that utilizes one of the following methods:
  - a. Lock rings welded into place around pipe barrel.
  - b. Bolted rings installed around pipe barrels that fit inside pipe bells.
  - c. Acceptable products:
    - (1) American Flex-Ring or Lok-Ring.
    - (2) Clow Tyton Joint – Super-Lock.
    - (3) U.S. Pipe TR-Flex Gripper.
    - (4) Griffin Bolt Lok or Snap Lok.

### B. Polyethylene sheet: comply with ANSI/AWWA C105/A21.5-99:

1. Thickness: linear low-density polyethylene film (minimum 8 mils) or high-density cross laminated polyethylene film (minimum 4 mils).
2. Markings: the following information will be clearly marked on the sheet at minimum increments of 2 feet along its length.
  - a. Manufacturer's name or trademark.
  - b. Year of manufacture.
  - c. Min, film thickness and material type (LLDPE or HDCLPE).
  - d. Applicable range of nominal pipe diameter size(s).
  - e. Warning – Corrosion Protection – Repair any damage.

## 2.4 SERVICE CONNECTIONS

### A. Water system:

1. Comply with Sections 33 11 43 and 33 05 23.16 of these Specifications.

## 2.5 SERVICE PIPE

- ### A. Water: Comply with Sections 33 11 43 and 33 05 23.16 of these Specifications.

## 2.6 INSTALLATION AND RECEIVING PITS

- ### A. Sheeting: Comply with OSHA requirements.

### B. Fencing:

1. As required to protect the public.

- C. Granular backfill material:
  - 1. Comply with Section 31 23 79.

## 2.7 PIPE TRACER WIRE

- A. General:
  - 1. Provide wire to be used for electronic locating of all PVC pipe installed.
  - 2. See Section 31 23 79 for tracer wire materials in open cut applications.
- B. Materials:
  - 1. Provide locating system components designed for compatibility to ensure end-to-end conductivity for detecting underground utilities.
    - a. Copperhead Complete Utility Locating System.
    - b. Or equal.
  - 2. Wire: Provide wire rated for HDD applications:
    - a. Single Strand, single conductor, copper-clad steel, No. 10 AWG extra-high strength, high carbon with min. 2,032 lb. break load, min. 45 mil. HDPE insulation thickness (1045B-EHS) for direct bury installation; color coded per APWA Standards.
      - (1) Use higher strength wire if necessitated by drilling conditions.
    - b. Provide 7x19SS (T304) PVC coated stainless steel Aircraft Cable.
      - (1) Sized to withstand pull required, but minimum 3/16-inch diameter.
  - 3. Connectors: Single, three-way locking connectors (LSC1030C); Mainline to service connectors (3WB-01) and dielectric silicon sealant.
  - 4. Provide 1.5 pound magnesium grounding anodes and 12-AWG wire.
  - 5. Tracer wire test station: Provide for a direct connection to the tracer wire by utility locate transmitter manufactured for the application location; Identified with "WATER" on the cap and color coded per APWA Standards; Two terminal tracer wire to include a manually interruptible conductive/connective link between the terminal for the tracer wire connection and the terminal for the ground rod wire connection; External direct connection points to both tracer wire and ground rod on top of lid; Encapsulated magnet molded into the top portion of the box for detection by ferrous metal locator; Anti-corrosion wax/gel to protect wires.
    - a. Copperhead SnakePit Lite Duty XL or Concrete/Driveway Access Point.
    - b. Or equal.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install horizontally directionally drilled utility pipe in accordance with manufacturer's recommendations.

- B. Limit size of borehole to 1.5 times the outside diameter of the pipe bell.

### 3.2 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.

### 3.3 PROTECTION

- A. Protect existing utilities indicated or made known.
- B. Protect trees and shrubs by plank wrappers securely wired in place or by providing a fence around the tree or shrub of sufficient distance away and of sufficient height so trees and shrubs will not be damaged in any way as part of this Work.
  - 1. Do not permit any equipment to operate within 5 feet of any trees or shrubs that are to remain or in a manner as to harm overhanging branches.
- C. Protection of persons and property:
  - 1. Barricade open depressions and holes occurring as part of this Work, and post warning lights on property adjacent to or with public access.
  - 2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
  - 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by operations under this Section.
- D. Remove the top six (6) inches of topsoil at entry and exit locations and stockpile the topsoil on-site. Cover the topsoil with tarps and sandbags or other weights to keep the tarps in place. Surround topsoil storage areas and the drilling and separation equipment and tanks with silt fence and/or compost filter logs and/or coir wattles.
- E. Use means necessary to prevent dust from becoming a nuisance to the public, to neighbors, and to other work being performed on or near the work areas.
- F. Maintain access to the work areas at all times.
- G. Provide protection to environment, public and private property, and public or private utilities from drilling fluid used as lubricant, cooling, suspending cuttings, controlling downhole pressures, providing pipe buoyancy, and for hole support during drilling and pipe insertion.
  - 1. Provide vac-trucks and apparatus of sufficient size and quantity to reclaim drilling fluid used during operations.
  - 2. Provide trucks, end loaders, and any other equipment and manpower necessary to maintain a clean and safe work site during construction.
  - 3. Comply with requirements of paragraph 1.2 E. of this Specification.

- H. HDD activities shall be constantly monitored by the Contractor and may be monitored by the representatives of the Owner, the Engineer, the Resident Project Representative and Environmental Inspector, or any combination of these representatives. Monitoring shall include:
1. Inspection along the drill path.
  2. Continuous examination of drilling fluid pressure gauges and return flows to the surface pits by the Contractor.
  3. Monitoring of drill status information regarding drilling conditions and alignment of the drilling profile during the course of drilling activities, by the Contractor.
  4. If a release event occurs, contain the drilling fluids and continue inspection to determine any potential for movement of released drilling mud into or within a wetland or water body. Collect drilling mud returns at the release location for future analysis, as required. Notify the Owner, the Engineer, the Resident Project Representative and Environmental Inspector, or any combination of these representatives. The Owner, or their representative, will keep documentation and photographs of release events.
  5. If a monitoring indicates a release is occurring or has occurred, the Contractor shall immediately begin containment.
    - a. The Contractor shall determine and implement any modifications to the drilling technique or composition of drilling fluid (e.g., thickening of mud by increasing bentonite content, temporary lowering of the downhole pressures, etc.) to minimize or prevent further releases of drilling mud.
    - b. If a release occurs within a wetland or water body, reasonable actions within the limitation of directional drilling technology and the Contractor's ability, shall be taken to re-establish drilling mud circulation.
    - c. The Owner may evaluate the release to determine if containments structures are warranted and can effectively contain the release. When making this determination, the Owner may consider if placement of containments structures will cause additional adverse environmental impact.
    - d. Upon completion of the drilling operations, the Owner may consult with applicable regulatory agencies to determine any final clean-up requirements for the release.
    - e. If public health and safety are threatened by the release, drilling operations might be shut down until the threat is eliminated. This measure would be taken as a last resort because of the potential for drill hole collapse resulting from loss of downhole pressure.
- I. Dispose of all bentonite slurry, drilling fluid, cuttings, pit spoils, etc. at a legal off-site disposal area.

### 3.4 INSTALLATION AND RECEIVING PITS

- A. Although most horizontal directional drilling is done without the use of pits, in the rare case that pits are required, comply with the following criteria.

- B. Provide pits as required to install and receive pipes.
  - 1. Provide tight sheeting where required to provide protection to public, permitting agency and public property, and adjacent utilities.
  - 2. Comply with OSHA requirements for type, installation, and removal of sheeting.
  - 3. Leave sheeting in place where indicated on the Drawings.
  - 4. Provide fencing around pits to secure the area and to provide protection to the public.
- C. Provide pits of length and width as necessary to install pipes and sized to fit area available for Work.
- D. Provide dewatering as required to allow excavation of pits and installation of pipes.
  - 1. Provide protection to environment from erosion or sedimentation resulting from all pumping operations.
- E. Backfilling of pits:
  - 1. Backfill with compacted granular backfill materials where indicated on the Drawings.
  - 2. Backfill with compacted excavated materials where granular backfill material is not indicated.
  - 3. Comply with compaction requirements outlined in Section 31 23 79.
  - 4. Re-grade slopes and ditches to match preconstruction condition and adjacent area.
  - 5. Remove all construction debris, materials, excess excavated material, and sheeting from construction area upon completion of the Work.

### 3.5 PIPE INSTALLATION

- A. Install pipe by HDD methods unless conditions require installation by open-cut methods.
- B. Complete open-cut installation in strict accordance with pertinent provisions of Section 31 23 79 of these Specifications.
- C. Provide pipe insertion pits necessary for complete installation of pipe.
  - 1. Position pits at locations indicated on the Drawings whenever possible.
  - 2. Provide additional pits as required to install new pipe.
  - 3. Provide all traffic control, barricades, flagmen, and other items at insertion pit areas as necessary to complete the work.
  - 4. Provide tight sheeting at insertion pits to keep pit to the minimum size necessary to do the work.
    - a. Remove sheeting when work is completed.
- D. Connect to valve vaults where indicated on the Drawings and as outlined in these Specifications.

- E. Install splined joint PVC or ductile iron pipe by pulling the pipe into place.
  - 1. Provide winch systems designed to protect structures, provide directional stability, and pull pipe from insertion point to exit point without causing damage to the pipe being inserted.
  - 2. Insert pipe in a continuous operation from point to point.
  - 3. Provide lubricants as specified by pipe manufacturer to avoid stressing of pipe beyond its elastic limit during insertion.
  - 4. Provide silencers, mufflers, or other devices required to reduce noise from compressors and other equipment to meet limits as outlined by Owner's local ordinances.
  
- F. Joints:
  - 1. For PVC, provide elastomeric seals in non-metallic restrained joint couplings that are restrained with use of nylon splines.
    - a. Utilize ductile iron mechanical gland adapters only when connecting to ductile iron pipe at extremities of PVC installation.
  - 2. For D.I. pipe utilize only the restrained type joints allowed in paragraph 2.4.
  
- G. Provide transition fittings and temporary plugs and/or caps on pipes where pipes are left for others to connect to.
  
- H. Provide neoprene or rubber seals between drilled pipe and carrier pipe at termination of drilled pipe, if dual pipes are indicated.
  
- I. Mark location of drilled pipe termination points on "Job Set" of plans, measured from adjacent permanent structures or iron pins.
  
- J. Install pipe tracer wire (and conduit) pulled into place alongside the main pipe, at each drilling location for the total length of pipe.
  - 1. Connect tracer wire to ductile or steel pipe or to tracer wire on pipe installed by other methods with a "hard" connection at each end of directional drilled pipe.
  - 2. Connect tracer wire to pipe installed by open cut methods.

### 3.6 POLYETHYLENE WRAPPING OF DUCTILE IRON PIPE

- A. Comply with requirements of AWWA C105/ANSI A21.5-99.
  - 1. Place polyethylene sheet around the entire circumference of the pipe, tie or tape sheet securely to prevent displacement during backfilling.
  - 2. Utilize spiral wrapping that extends for the entire length of the pipe or circumferential wrapping at 2-foot intervals.
  - 3. Provide double wrap at first two pipe sections at pull head end of pipe that consists of one layer of 8 mil LLDPE and a second layer of HDCL with a minimum of 4 mils thickness for the outer wrap.
  - 4. Comply with recommendations of DIPRA's article for "Horizontal Directional Drilling with Ductile Iron Pipe" in installation and wrapping of polyethylene film.

### 3.7 PIPE TRACER WIRE

- A. Install tracer wire system in accordance with manufacturer's instructions.
  - 1. See Section 31 23 79 for tracer wire installation in open cut applications.
- B. Install tracer wire as a single continuous wire, except where using approved connectors.
- C. Install tracer wire test stations at each end of trenchless pipeline and at a maximum spacing of 1,000 feet. Provide termination points with a direct connection point to the tracer wire by utility locate transmitter. Leave 24-inches of slack to facilitate connections. Install tracer wire to allow proper access for connection of tracing equipment, without loss or deterioration of low frequency (512 Hz) signal, and without distortion of signal caused by more than one wire installed in close proximity.
- D. Install grounding anodes at each end of pipeline and at a maximum spacing of 1,000 feet.
- E. Successfully test tracer wire system installation after final restoration by locating the full length of facility using a low frequency (512 Hz) line tracing equipment in the presence of Owner and Engineer.
- F. If the tracer wire is compromised during the pull-back process, install a secondary conduit and tracer wire over the trenchless pipeline.

### 3.8 TESTING

- A. Comply with testing requirements outlined in other Sections of these Specifications.
- B. Repair any defects or leaks in the pipe discovered during testing.
  - 1. Retest all repaired sections until they meet all testing and inspection requirements.

END OF SECTION

## SECTION 33 05 23.16

## WATER SERVICES DRILLED UNDER PAVEMENTS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section describes water service pipes installed by the trenchless horizontal directional drilling (HDD) method as shown on the Drawings, as specified herein, and as needed for a complete installation.
- B. Provide labor, materials, tools, and equipment necessary to perform all work specified in this Section.
- C. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

## 1.2 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 33 01.
- B. Submit shop drawings, including:
  - 1. Manufacturer's data on installation procedures.
    - a. Obtain approval prior to beginning work.
- C. Submit detailed construction scheduling plan at preconstruction meeting.
  - 1. Comply with all portions of Section 01 32 16 concerning schedules and submittals.
  - 2. Provide detailed plan of means and methods to maintain clean and safe conditions in the event drilling material escapes to surface or adjacent storm sewers, including list of material and equipment that will be on-site during drilling and pipe insertion.
- D. Prepare a written, comprehensive contingency plan to address the response to, and clean-up of, hydrofracture (frac-outs) and surface spill events (release events).
  - 1. Provide and submit the contingency plan at the Preconstruction Meeting in accordance with Project Meetings – Section 01 31 19 and Submittals – Section 01 33 01.

## 1.3 GENERAL CONSTRUCTION REQUIREMENTS

- A. Comply with the requirements of the permit issued by the controlling agency.

- B. Provide the insurance and other information required for the above referenced permits.
- C. Notify the controlling agency of the construction schedule not less than 10 days prior to the start of the construction.
- D. Coordinate and pay for inspection services by controlling agency.
- E. Provide all excavation, pits, installation and removal of tight sheeting, leaving of sheeting in place if indicated on the Drawings, backfilling of pits, compaction of excavated materials, and providing and compacting granular backfill materials where indicated on the Drawings.

## PART 2 - PRODUCTS

### 2.1 PIPE

- A. Copper service lines:
  - 1. Provide Type K soft temper seamless copper water tubing complying with ASTM B-88.
- B. Water service corporation stops, curb stops, and service boxes:
  - 1. Comply with Section 33 11 43.

### 2.2 INSERTION AND RECEIVING PITS

- A. Sheeting: Comply with OSHA requirements.
- B. Granular backfill material:
  - 1. Comply with Section 31 23 79.

### 2.3 DIRECTIONAL DRILLING SYSTEMS

- A. Compact directional drilling systems.
  - 1. Provide system capable of working in tight conditions.
  - 2. Acceptable systems:
    - a. GRUNDODRILL by TT Technologies, Inc.
    - b. Or equal.
- B. Pit launched mini-directional drill system.
  - 1. Provide package system capable of being installed in a pit small enough to be inserted in parkway tight conditions.

2. Acceptable systems:
  - a. GRUNDOPIT by TT Technologies, Inc.
  - b. GRUNDOPIT K Keyhole by TT Technologies, Inc.
  - c. Or equal.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Provide all excavation, insertion and receiving pits, piping, and security.
- B. Install pipes.
  1. Location of pipes will be determined in the field at time of construction.
- C. Location, protection, repair or replacement of underground utilities will be complete responsibility of the Contractor.
  1. No additional compensation will be allowed for damage to underground utilities, or time lost due to utility repair or relocation.

### 3.2 INSERTION AND RECEIVING PITS

- A. Provide pits as required to insert drilling equipment and install pipe.
  1. Provide tight sheeting where required to provide protection to public, permitting agency and public property, and adjacent utilities.
  2. Comply with OSHA requirements for type, installation, and removal of sheeting.
  3. Leave sheeting in place where indicated on the Drawings.
  4. Provide fencing of pits to provide protection to the public and security.
- B. Provide pits of length and width as necessary to install pipes and sized to fit area available for Work.
- C. Provide dewatering as required to allow excavation of pits and installation of pipes.
  1. Provide protection to environment from erosion or sedimentation resulting from all pumping operations.
- D. Backfilling of pits:
  1. Backfill with compacted special granular backfill materials whenever pit is below or within 2 feet of paved surfaces or curb and gutter or where indicated on the Drawings.
  2. Backfill with compacted excavated materials where special granular backfill material is not indicated.
  3. Comply with compaction requirements outlined in Section 31 23 79.
  4. Re-grade slopes and ditches to match preconstruction condition and adjacent area.
  5. Remove all construction debris, materials, excess excavated material, and sheeting from construction site upon completion of the Work.

6. Restore areas disturbed as outlined in Section 32 10 00 for Pavements, and Section 32 92 00 for Lawns and Grasses.

### 3.3 SERVICE PIPE INSTALLATION

- A. Install water service pipe below paved areas by use of directional drilling method.
- B. Install water service pipe outside of paved areas by use of open cut methods, in compliance with Section 33 11 43 of these Specifications.
- C. Make connections to new water main and existing services as outlined in Section 33 11 43 of these specifications.

END OF SECTION

SECTION 33 05 23.39

TREE TUNNELING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section describes pipes installed below trees by augering or directional boring methods, where shown on the Drawings, as specified herein, and as needed for a complete installation.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- C. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – Submit shop drawings in compliance with pertinent provisions of Section 01 33 01, specifically including, but not limited to:

1.3 QUALITY ASSURANCE

- A. Provide adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 PIPE TRACER WIRE

- A. General:
  - 1. Provide wire to be used for electric locating of PVC, HDPE or other pipe installed by the tree tunneling method.
  - 2. See Section 31 23 79 for tracer wire materials.

## PART 3 - EXECUTION

### 3.1 TREE TUNNELING

- A. Auger method:
  - 1. Use boring auger with a diameter at least 6 inches larger than the outside diameter of the bell of the pipe to be installed.
  - 2. Push the pipe carefully into place so as not to disturb the bore hole.
  - 3. Fill the void space around the pipe with sand.
  
- B. Directional boring:
  - 1. As an alternate, Contractor may attempt to tunnel trees by use of directional boring methods, such as hydro-boring, or others when pipe is not a gravity sewer, which must be done by the auger method.
  - 2. The alternate method must be approved by Owner and Engineer at Pre-construction Meeting.
  - 3. No additional compensation will be allowed if alternate methods proves to be unsuccessful, and Contractor will complete installation of pipe as outlined in paragraph 3.1 A. at established Contract Unit Prices.

### 3.2 PIPE TRACER WIRE

- A. General:
  - 1. Comply with Section 31 23 79 of these Specifications.

END OF SECTION

## SECTION 33 11 43

## WATER DISTRIBUTION SYSTEM

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Provide water distribution system as shown on the Drawings, as specified herein, and as needed for a complete and proper installation, and in accordance with the latest edition of the "Standard Specifications for Water and Sewer Construction in Illinois", except as revised herein.
- B. Provide labor, materials, tools, chemicals and equipment necessary to perform the pressure and leakage tests and disinfection.
- C. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- D. References – (Reserved).

## 1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).
- E. Furnish two (2) copies of bacteriological test reports.

## 1.3 QUALITY ASSURANCE

- A. Ensure all brass and bronze alloys supplied with the products contain less than 15 percent zinc, unless otherwise specified.
  - 1. Brass that will come in contact with potable water shall contain no more than 0.25% lead.
    - a. Brass fittings shall be marked with industry standard marking to indicate the amount of lead (no lead, low lead, etc.) in the brass.
    - b. Brass for service saddles may contain more than 0.25% lead to improve ductility of the saddles.

## WATER DISTRIBUTION SYSTEM

33 11 43-1 (221284.41)

## 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of Section 01 66 11.

## 1.5 SITE CONDITIONS – (Reserved).

## 1.6 MAINTENANCE – (Reserved).

# PART 2 - PRODUCTS

## 2.1 PIPE AND FITTINGS

### A. Ductile Iron Pipe:

1. Provide ductile iron pipe complying with ANSI A21.51, thickness Class 52, with joints complying with ANSI A21.11.
  - a. Use cement lining complying with ANSI/AWWA C104/A21.4, standard thickness.
  - b. Exterior Coating:
    - (1) The exterior of ductile iron pipe shall be coated with a layer of arc-sprayed zinc per ISO 8179.
    - (2) The mass of the zinc applied shall be 200 grams per square meter of pipe surface area.
    - (3) A finishing layer of asphaltic coating shall be applied over the zinc coating.
      - i. The mean dry film thickness of the finishing coat shall not be less than 3 mils, with a local minimum not less than 2 mils.
    - (4) The coating system shall conform in every respect to ISO 8179-1 "Ductile iron pipes - External zinc-based coating - Part 1: Metallic zinc with finishing layer. Second edition 2004-06-01".
  - c. In areas where petroleum contaminated soils are present, use ductile iron pipe with Buna-Nitrile gaskets.
2. Provide restrained joint pipe system, where indicated on the Drawings, that utilizes one of the following methods:
  - a. Lock rings welded into place around pipe barrel.
  - b. Bolted rings installed around pipe barrels that fit inside pipe bells.
  - c. Gaskets which include stainless steel locking segments vulcanized into the gasket.
  - d. Mechanical joint retainer gland systems that provide locking segments shaped to pipe barrel that do not create stress points on pipe barrel.
    - (1) Do not use set screw type retainer glands.

- e. Acceptable products:
    - (1) Meg-A-Lug System.
      - i. Series 1100 Megalug for MJ to pipe.
      - ii. Series 1700 Megalug Harness for push on joint.
      - iii. As recommended by manufacturer for connection to existing pipes.
- B. PVC plastic pipe:
- 1. Pipe material: Use Class 12454A or B polyvinyl chloride complying with ASTM D1784.
  - 2. Pipe 12-inch and smaller: Comply with AWWA C900 for Class 235 pressure pipe with a standard dimension ratio of 18.
  - 3. Use push-on bell and spigot type joints with elastomeric ring conforming to ASTM F-477.
  - 4. Provide restrained joint pipe system, where indicated on the Drawings, that utilizes one of the following methods:
    - a. Provide PVC pipe complying with all requirements of Section 33 05 23.13 of these Specifications.
    - b. Mechanical joint retainer gland systems that provide locking segments shaped to pipe barrel that do not create stress points on pipe barrel.
    - c. Acceptable products for pipes:
      - (1) Meg-A-Lug System.
        - i. Series 2000PV Megalug for MJ to Pipe (C900).
        - ii. Series 1500 Megalug Harness for push on joint (C900).
        - iii. As recommended by manufacturer for connection to existing pipes.
- C. Fittings:
- 1. Ductile iron fittings: Provide mechanical joints complying with ANSI A21.10 or A21.53.
    - a. Cement lining: Comply with ANSI A-21.4, standard thickness.
    - b. Bolts and nuts:
      - (1) Use Corten bolts and nuts, or
      - (2) Use Cor-blue bolts and nuts, or;
- D. Polyethylene sheet: Comply with ANSI/AWWA C105/A 21.5-99:
- 1. Thickness: Linear low-density polyethylene film (minimum 8 mils) or High-density cross laminated polyethylene film (minimum 4 mils).
  - 2. Markings: The following information will be clearly marked on the sheet at minimum increments of 2 feet along its length:
    - a. Manufacturers name or trademark.
    - b. Year of manufacture.
    - c. Minimum film thickness and material type (LLDPE or HDCLPE).
    - d. Applicable range of nominal pipe diameter size(s).
    - e. Warning – Corrosion Protection – Repair Any Damage.

- E. Conductivity appurtenances:
  - 1. Provide wedges of serrated silicon bronze or #10-copper cable and tapping devices specifically designed for this purpose.
  - 2. Use devices provided by the pipe manufacturer.
  - 3. Standard mechanical joints, Field-Lok, Megalug joints or similar joints/restrained joint systems do not provide conductivity.
- F. Pipe tracer wire:
  - 1. See Section 31 23 79 for tracer wire options in open cut applications.
  - 2. See Section 33 05 23.16 for tracer wire options in trenchless applications.

## 2.2 VALVES

- A. Provide valves with clockwise closing direction.
- B. Gate valves:
  - 1. Valves 3-inch and larger:
    - a. Design in accordance with AWWA C509 (cast iron body), or AWWA C515 (ductile iron body), bronze fitted, resilient wedge and seat type with non-rising stem and O-ring packing.
    - b. Provide gear operator for valves 14-inch and larger.
  - 2. Provide mechanical joint ends for buried valves and ANSI Class 125 flange ends or mechanical joint ends for valve installed in vaults as indicated on the Drawings.
    - a. Provide restrained type joints for all mechanical joint end valves.
    - b. Provide and install nuts and bolts matching the nuts and bolts used for fittings.
  - 3. Acceptable valve manufacturers:
    - a. Mueller A-2360, or equal.

## 2.3 VALVE BOXES

- A. Provide adjustable valve boxes on buried valves:
  - 1. Valve box compatible with size and type of valve protected.
  - 2. Extend box to finished grade.
  - 3. Mark valve box cover "WATER" for potable water piping valves. Other valve box covers unmarked.
  - 4. Bituminous coated carbon steel valve extension stems and 2-inch square operating nuts 2 inches below the cover.
- B. Provide valve box stabilizer for all valve boxes.
  - 1. Acceptable manufacturers:
    - a. Alberico.
    - b. American Flow Control.
    - c. Adaptor, Inc.
    - d. Or equal.

## 2.4 VALVE VAULTS

- A. Precast:
  - 1. Provide precast reinforced concrete manhole sections, bottoms, and flat top slabs complying with ASTM C478 unless otherwise indicated on Drawings.
  - 2. Provide concentric cone section unless otherwise indicated on the Drawings.
  - 3. Provide precast reinforced concrete monolithic or separate base.
  - 4. Design flat slab tops for HL-93 wheel loading.
- B. Concrete:
  - 1. Provide 4,000 psi concrete using Type I Portland Cement complying with ASTM C150.
- C. Mortar:
  - 1. Mix one part Portland Cement to three parts fine aggregate.
- D. Preformed Gaskets:
  - 1. Provide joints of either flexible watertight rubber gaskets or preformed bituminous plastic gaskets consisting of a homogeneous blend of refined hydro-carbon resins and plasticizing compound reinforced with inert mineral filler.
    - a. Acceptable manufacturers:
      - (1) Henry Company, RAM-NEK.
      - (2) ConSeal Concrete Sealants, Inc., Type CS-102.
      - (3) Or equal.
- E. Steps:
  - 1. Provide steps with a minimum width of 12 inches and a minimum projection of 5 inches.
  - 2. Use steps consisting of copolymer polypropylene plastic with a continuous ½-inch steel reinforcement as manufactured by M.A. Industries, Inc.; cast iron steps, Neenah R-1981-J; or equal.
- F. Frames and covers:
  - 1. Provide cast iron frames and covers with heavy duty, indented top, with solid self-sealing lids and machined bearing surfaces, stamped with the word "WATER" and "MCHENRY".
    - a. Acceptable products: Neenah R-1713, East Jordan 1050 EXHD, or equal.
    - b. See plans for Owner's Cover Detail.
- G. Flexible pipe connectors:
  - 1. Provide flexible rubber gasket collar for connecting pipe to the manhole.
    - a. Comply with ASTM C923.

- b. For pipe 24-inch and smaller, use PSX gasket system by Press-Seal Gasket Corporation, or equal.
- c. For pipe 27-inch and larger, use resilient gasket by A-LOK Products, Inc., or equal.

## 2.5 FIRE HYDRANTS

### A. General:

1. Comply with AWWA C502.
2. Paint fire hydrants red as approved by the Owner.
3. Match the fire hydrants generally installed in the Owner's water system.
4. Acceptable manufacturers:
  - a. Mueller Centurion A423.
  - b. Clow Medallion.
  - c. East Jordan 5CD 250.

### B. Materials:

1. Provide compression type with a 5¼-inch minimum size main valve assembly, O-ring seals, two 2½-inch hose nozzles, and a 4½-inch pumper nozzle with National Standard threads, a National Standard operating nut, and an above ground break flange.
2. Provide a 6-inch auxiliary resilient seat type gate valve with restrained type joints or bituminous coated metal tie rods between the valves and the tee fittings.
  - a. Provide and install nuts, bolts, and tie rods matching the nuts and bolts used for fittings.
  - b. Auxiliary valve manufacturer to match mainline gate valves.
3. Provide valve boxes with cover marked with the word "WATER".
  - a. Bituminous coated carbon steel valve extension stems and 2-inch square operating nuts 2 inches below cover.

## 2.6 WATER SERVICES

### A. General:

1. Provide service saddles, corporation stops, curb stops, service boxes, and water service tubing.
2. Comply with the most recent edition of AWWA C800 (or NSF/ANSI 372) for service lines and service line appurtenances.

### B. Materials:

1. Service lines: Type K soft temper seamless copper water tubing complying with ASTM B88.
2. Service saddles:
  - a. Provide service saddles on all water mains.
  - b. Epoxy coated bodies with double stainless steel straps; Smith Blair 317, or equal.
3. Corporation stops: A.Y. McDonald No. 4701, or Mueller No. H15000, or equal.

4. Curb stops: A.Y. McDonald No. 6104, or Mueller No. H15154, or equal.
5. Services boxes: Extension type with stationary rods, A.Y. McDonald No. 5610, or Mueller No. H10300, or equal.

## 2.7 TAPPING SLEEVES AND VALVES

- A. Tapping sleeves:
  1. Use two-piece bolted sleeve ductile iron or stainless steel type with mechanical joints.
  2. Provide joint accessories.
  3. Measure existing water main outside diameter to determine proper tapping sleeve size.
  4. Acceptable manufacturers:
    - a. Ductile iron: McWane Ductile F-5205, or equal.
    - b. Stainless steel: Cascade CST extra heavy duty.
- B. Tapping valves:
  1. Use fully ported gate valves complying with AWWA C500.
  2. Use mechanical joints type, McWane Ductile F-5093, or equal.

## 2.8 RESTRAINED FLANGE ADAPTOR

- A. Provide a ductile iron flange adaptor dual ring system with bolt circles compatible with 125#/Class 150 bolt pattern.
  1. Provide adaptor with individual actuated gripping wedges that utilize torque limiting screws to insure proper initial set.
  2. Set screw "only" restraining adaptors are not acceptable.
  3. Provide system that allows joint deflection of up to 5°.
  4. Provide a fluoropolymer coating to the wedge and wedge assembly and powder coating to the restraint body.
- B. Acceptable manufacturers:
  1. Series 2100 Megaflange by EBAA Iron:
    - a. Or approved equal.

## 2.9 PIPE INSULATION

- A. Rigid Pipe Insulation:
  1. Provide extruded polystyrene sheathing conforming with ASTM C578, Type IV.
  2. Thickness: 2 inches.
  3. R-Value: 10.
  4. Water absorption: No greater than 0.10% by volume per ASTM C272.
  5. Acceptable product:
    - a. Formular Rigid Foam Insulation, Owens-Corning.
    - b. Or equal.

## PART 3 - EXECUTION

### 3.1 PIPE INSPECTION, HANDLING, STORAGE, AND INSTALLATION

- A. General:
  - 1. Install in accordance with pipe manufacturer's recommendations.
- B. Ductile iron water mains and appurtenances:
  - 1. Comply with AWWA C600.
  - 2. Protect pipe and fittings installed in corrosive soils containing cinders or having a high organic content by loose wrapping or tubing with polyethylene sheet.
    - a. Place polyethylene sheet or tube around the entire circumference of the pipe, tie or tape sheet securely to prevent displacement during backfilling.
    - b. Comply with ANSI/AWWA A21.5-99/C105 regarding installation of polyethylene protection.
  - 3. Install conductivity through joints by use of conductivity wedges or copper cable and taps.
    - a. Use two (2) wedges per joint for pipes 12 inches or smaller.
    - b. Use number of copper cable connectors per joint as recommended by the pipe manufacturer.

### 3.2 DEPTH OF PIPE COVER

- A. Install water mains and water service lines with a minimum depth of cover of six feet below finished grade ground level unless otherwise indicated on the Drawings.
- B. Where new water mains cross existing water mains, install new water main below existing main unless otherwise indicated on the Drawings.

### 3.3 CONNECTIONS TO EXISTING WATER MAINS

- A. Make connections to existing water mains.
- B. Use non-pressure connections except where pressure connections are shown on the Drawings, or required by the conditions encountered at the time of construction.
- C. Make one connection at a time except as approved by the Engineer.
- D. Do not operate the valves on the existing water mains. The employees of the Owner's Water Department will open and close the valves as required for the connections.
- E. Coordinate shutdown of existing water mains with Owner's Water Department and Engineer with a minimum of 48 hours' notice prior to shutdown.

### 3.4 PIPE RESTRAINING SYSTEMS

- A. General:
  - 1. Provide protection from movement of water main piping, plugs, caps, tees, valves, hydrants, and bends of 11¼ degrees or greater.
- B. Restrained joint pipe, fittings and valves:
  - 1. Provide restrained joint pipe to a distance indicated on the Drawings, or if not shown on the Drawings, to a distance not less than two pipe lengths on each side of a fitting or valve to be restrained.
  - 2. Protect all restrainers used for PVC fittings with a double layer of polyethylene wrapping or tubing.
- C. Concrete thrust blocks:
  - 1. When conditions prevent the use of restrained joints, use concrete thrust blocks of an approved type. The use of concrete thrust blocks in lieu of restrained joint pipe, fittings and valves requires written approval of the Engineer.
  - 2. Provide precast or cast-in-place concrete thrust blocking with a compressive strength of 3,000 psi in 28 days.
  - 3. Locate thrust blocking between solid ground and the fitting to be anchored.
  - 4. Unless otherwise shown or directed by the Engineer, place the base and thrust bearing sides of thrust blocking directly against undisturbed earth.
  - 5. Sides of thrust blocking not subject to thrust may be placed against forms.
  - 6. Place thrust blocking so the fitting joints will be accessible for repair.

### 3.5 SEWER CROSSING

- A. General:
  - 1. Separate water mains and water service lines from sanitary sewer, storm sewers, combined sewers, house sewer service connections, and drains in accordance with the "Standard Specifications for Water and Sewer Construction in Illinois".
- B. Water mains:
  - 1. Wherever water mains cross storm sewers, sanitary sewers, or sewer service connections:
    - a. Install the water main so that its invert is at least 18 inches above the top of the sewer.
    - b. Maintain this vertical separation for that portion of the water main located within 10 feet horizontally of any sewer or drain crossed.
    - c. Center a length of water main pipe over the sewer to be crossed with joints equidistant from the sewer or drain.
  - 2. When it is impossible to obtain the minimum 18 inches vertical separation, or when it is necessary for the water main to pass under a sewer or drain:
    - a. Construct the sewer or drain of pressure pipe, conforming to the specification for water main materials.

- b. Extend the sewer construction on each side of the crossing until the normal distance from the water main to the sewer or drain is at least ten feet.
  - c. As an alternate, install either the water main or sewer inside a water main quality casing pipe for a distance of 10 feet measured perpendicular to the sewer on each side of the crossing.
3. Where a water main must cross under a sewer:
- a. Maintain a vertical separation of 18 inches between the invert of the sewer and the crown of the water main.
  - b. Support the sewer or drain line to prevent settling and breaking the water main.
- C. Water service lines:
- 1. Comply with the requirements of water main separation.
- D. Sewer manholes:
- 1. Do not install water line through sewer manhole.

### 3.6 VALVE VAULTS

- A. General:
- 1. Install pipe through valve vault as shown on the Detail.
  - 2. Make vault watertight with use of flexible manhole connectors as per the Detail.
- B. Steps:
- 1. Provide each valve vault over 3 feet deep with individual wall-mounted steps as shown on the valve vault detail.
  - 2. Comply with the requirements of governmental agencies having jurisdiction.
- C. Jointing:
- 1. Use flexible watertight gaskets for each joint.
  - 2. Trim smooth and free from surplus gaskets.
- D. Frames and covers: Unless otherwise shown on the Drawings or as directed by the Engineer, set frames and covers:
- 1. In paved areas: So that the top of the solid cover will be flush with the finished pavement.
  - 2. In unpaved areas: To drain away from the valve vault.
  - 3. With flexible watertight gaskets.
  - 4. With grade rings not to exceed 8 inches.

### 3.7 FIRE HYDRANT INSTALLATION

- A. Install fire hydrants plumb with the lowest hose connection at least 18 inches, but not more than 26 inches, above the finished grade ground level.

- B. Install fire hydrants at least 36 inches from the back of curb, unless otherwise directed by Engineer.
- C. Set fire hydrant and auxiliary valve on precast concrete blocks to provide firm support for the bases.
- D. Brace the fire hydrant base with solid concrete blocking between the base and undisturbed trench wall to counteract the reaction thrust of water pressure at the base.
  - 1. Provide mechanical joint anchoring fittings, or approved restrained joints.
- E. Brace the fire hydrant barrels during backfilling.
  - 1. Do not block the drain hole in fire hydrant.
- F. Place a minimum of 1/2 cubic yards of washed coarse stone at and around the base for proper drainage.
  - 1. Cover stone with plastic before backfilling.
- G. Place and compact backfill materials in 6-inch layers around the fire hydrant and auxiliary gate valve.
- H. Cover new fire hydrant with plastic bag until new system is in service.

### 3.8 WATER SERVICE CONNECTION

- A. General:
  - 1. Make service connections at locations shown on the Drawings or determined by the Engineer at the time of construction.
  - 2. Install water service pipe, corporation stop and curb stop as shown on the standard water service installation detail.
  - 3. Set curb stop on a precast concrete block.
  - 4. Do not splice the water service pipe.
  - 5. Sequence of installation: See TESTING AND INSPECTING section of these Specifications for outline of when, in the sequence of construction, the corporation stops, curb stops, and service boxes are to be installed, leakage tested, and disinfected.
  - 6. Complete water service installations authorized under the State of Illinois Plumbing License Law, including performing work with licensed plumbers and registered plumbing contractors.
- B. Service boxes:
  - 1. Install over the curb stop in a truly vertical position.
  - 2. Set the top of the box flush with the finished grade ground level.
- C. Direct tapping of polyethylene-encased D.I.P.:
  - 1. Wrap two or three layers of polyethylene adhesive tape completely around the pipe to cover the tapping machine and chain mounting area.

2. Make the tap and install the corporation stop directly through the tap and polyethylene.
3. After making the direct service connection, inspect the entire circumferential area for damage and make any necessary repairs.
4. Wrap the corporation stop and a minimum distance of 3 feet of the copper service pipe with polyethylene.

### 3.9 PVC WATER MAIN TRACER WIRE

- A. See Section 31 23 79 for tracer wire installation methods in trenching applications.

### 3.10 PRESSURE CONNECTION

- A. Support the exposed existing water main on concrete pedestals at sufficient intervals to properly carry its own weight, plus the weight of the tapping machinery and fitting.
  1. Provide a concrete thrust block behind tapping sleeve.
- B. Minimum tap hole diameter:
  1. For pipe 12-inch or smaller: 1/2-inch less than the nominal pipe diameter.
- C. Open valve to flush any foreign material after completion of the pressure tapping.

### 3.11 PIPE INSULATION

- A. Rigid Pipe Insulation:
  1. Place rigid insulation board above the pipe bedding material to the width of the trench.
  2. Place rigid insulation board to the required thickness at locations as directed by the Engineer.

### 3.12 POLYETHYLENE WRAPPING OF DUCTILE IRON PIPE AND APPURTENANCES

- A. Comply with requirements of ANSI/AWWA A21.5-99/C105.
  1. Place polyethylene sheet around the entire circumference of the pipe, tie or tape sheet securely to prevent displacement during backfilling.
  2. Wrap all water mains, fittings, valves, fire hydrant leaders, fire hydrants, and service lines.
    - a. Wrap copper service lines to a point 3 feet from center of water main.
    - b. Do not block fire hydrant weep hole.

### 3.13 TESTING AND INSPECTING

- A. Sequence of installation:
  1. Install new water main but do not install corporation stops, service lines, curb stops, or service boxes; conduct pressure test, leakage test; and disinfection of new water main; flush main; after acceptance for use put

main into service (while existing main continues to function): Install corporation stops, curb stops, and new service boxes; and connect new service box to existing service lines.

B. Hydrostatic tests:

1. Where any section of a water line is provided with concrete thrust blocking for fittings, do not make hydrostatic tests until at least 5 days after installation of the concrete thrust blocking, unless otherwise directed by the Engineer.
2. Devise a method for disposal of wastewater from hydrostatic tests, and for disinfection, as approved in advance by the Engineer.

C. Pressure tests:

1. Subject the new water mains and service lines, including valves and hydrants, to a hydrostatic pressure of 125 psi.
2. Hold the test pressure for a duration of one hour without pressure loss or further pressure application.
3. Carefully examine exposed pipe, joints, fittings, and valves.
4. Replace or remake joints showing visible leakage.
5. Remove cracked pipe, defective pipe, and cracked or defective joints, fittings, and valves. Replace with sound material and repeat the test until results are satisfactory.
6. Make repair and replacement without additional cost to the Owner.
7. Use only solid stainless full-body repair clamps as approved by the Engineer.

D. Leakage test:

1. Conduct a metered leakage test after the pressure test has been satisfactorily completed.
2. Duration of each leakage test: At least 24 hours.
3. During the test, subject water lines to a normal water pressure of the Owner's water system.
4. Install water meter approved by the Engineer.
  - a. Provide double check valve assembly between water meter and existing water main.
5. Maximum allowable leakage: As recorded by a meter approved by the Engineer, with leakage to not exceed the number of gallons per hour (gph) as determined by the following formula:
 
$$\text{gph} = LD (P^{1/2}) / 133,200$$
 in which:
  - L = Length of pipe test, in feet
  - D = Diameter of water main, in inches
  - P = Average pressure, in pounds per square inch (gage)
6. Should any test of pipe disclose leakage greater than the maximum allowable amount, locate and repair the defective joint or joints and then repeat the 24-hour metered leakage test until the leakage is within the specified allowance, and at no additional cost to the Owner.

- E. Time for making test:
1. Except for joint material setting, or where concrete reaction backing necessitates a 5 day delay, pipelines jointed with rubber gaskets, mechanical, or push-on joints, or couplings may be subjected to hydrostatic pressure, inspected, and tested for leakage at any time after partial completion of backfill.
  2. Perform the pressure and leakage tests satisfactorily prior to requesting the Engineer to witness the official tests.
  3. Notify the Engineer at least 48 hours prior to the time of the requested official tests.
  4. Depending on traffic conditions, public hazard, or other reasons, the Engineer may direct when to conduct the tests, and may order the tests to be made in relatively short sections of water mains.

### 3.14 PRELIMINARY FLUSHING

- A. Prior to disinfection, flush water main as thoroughly as possible.
1. Flush water main until water runs clear.
  2. Provide a minimum flushing velocity of 2.5 feet per second in the water main.
  3. Where no fire hydrant exists on the end of a water main, the plug (or cap) on the end of the water main must be tapped with opening in the end for flushing purposes. After acceptance install threaded plug into tap.
    - a. 8", 10" and 12" mains: 2½-inch tap.
  4. Contractor has the option to use temporary fire hydrants in lieu of taps. Temporary fire hydrants must be removed after testing is complete.
- B. Coordinate time of flushing with Owner and Engineer, at least 72 hours in advance of flushing.
1. Do not initiate flush without Owner's permission.
  2. City staff will turn valves.

### 3.15 DISINFECTION

- A. General:
1. After the water main work has been satisfactorily completed and tested, disinfect the work in accordance with AWWA C651, and "Standard Specifications for Water and Sewer Construction in Illinois" as modified by these Specifications.
- B. Application of chlorine:
1. Apply chlorine by gas feed or solution feed chlorinator as approved by the Owner.
    - a. Provide effective diffusion of the gas or solution into the water.
    - b. Provide means for preventing the backflow of water into the feeder.
  2. Chlorine solution:
    - a. Apply solution of sodium hypochlorite into one end of the section of main to be disinfected while filling the main with water.

- C. Requirement of chlorine:
  1. Initial chlorine solution in pipe: At least 50 mg/L, but not more than 100 mg/L.
  2. Retain the disinfecting solutions in the work for at least 24 hours.
  3. Chlorine residual after the retention period: At least 25 mg/L.
  
- D. Flushing and testing:
  1. Following chlorination, flush treated water thoroughly from the water mains until the chlorine concentration in the water flowing from the main is no higher than generally prevailing in the Owner's system, or less than 1 mg/L.
  2. After flushing, collect two water samples on successive days at least 24 hours apart in sterile bottles treated with sodium thiosulfate. Notify the Engineer and the Owner to witness sample collection.
  3. The Owner will deliver the samples to Pace Analytical, 4314-A Crystal Lake Rd, McHenry, for bacteriological analysis.
  4. Should the initial disinfection result in an unsatisfactory bacterial test, repeat the chlorination and sampling procedures until satisfactory results are obtained.
  5. The Owner will provide the water for initial flushing and testing only. Compensate the Owner for water used in subsequent flushing and testing.
  
- E. Swabbing:
  1. Flush and swab the piping, valves, and fittings that must be placed in service immediately and cannot be disinfected by the above specified methods, with 5 percent solution of calcium hypochlorite prior to assembly.
    - a. Secure the Engineer's approval before applying this method of disinfection.

### 3.16 DECHLORINATION

- A. Comply with AWWA C651-05 requirements to neutralize the residual chlorine in new water mains.
  
- B. After new water mains have passed disinfection requirements, utilize portable diffusing dechlorinators that utilize sulfur dioxide or other chemicals listed in Appendix C of AWWA C651 to lower chlorine residuals prior to discharge to the drainage system.
  1. Lower concentration to 1 mg/L or less.

### 3.17 ABANDONMENT OF EXISTING WATER MAINS AND APPURTENANCES

- A. Abandon water mains indicated on the Drawings as "to be abandoned" only after all requirements for testing and disinfection have been satisfied and all existing services have been connected to new water mains.
  
- B. Provide concrete plugs in all water main pipes to be abandoned at the limits of the trench excavations, or at other locations if so indicated by the Drawings.

- C. Provide ductile iron plugs, caps, or other necessary fittings, and thrust blocking, on ends of portions of existing water mains that are to remain in service.
- D. Close existing water valves only with the permission of the Engineer.
- E. Remove valves and valve boxes, and fill excavation with compacted granular material.
- F. Remove valves and valve vaults to top of pipe, and backfill with compacted granular backfill material.
- G. Remove fire hydrants in total, including auxiliary box, and backfill excavation with compacted granular material.
- H. Deliver valves, valve boxes, fire hydrants, and frames and lids to the Owner's Public Works Department.
- I. Where abandonment of existing water mains or appurtenances require work outside of the work zone, restore area of work as indicated on the Drawings or Section 32 92 00 of the Specifications.
- J. Removal of existing water mains that are being replaced by new water mains in the same location is considered incidental to the installation of the new water main and no additional compensation will be allowed.
- K. Pipes to be retired within IDOT right-of-way shall be filled with low density cellular grout as specified in Section 31 23 79 of the Specifications.

END OF SECTION

SECTION 33 11 43.13

LEAD WATER SERVICE PIPE REPLACEMENT – CURB STOP TO WATER METER

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide lead or galvanized water service pipe replacement, from curb stop to water meter, as shown on the Drawings, as specified herein, and as needed for a complete and proper installation, and in accordance with the latest edition of Section 41-2.12 and 41-2.13 of the “Standard Specifications for Water and Sewer Construction in Illinois”, the details in the Drawings, and as specified herein.
  - 1. For the purpose of Section 33 11 43.13, the City of McHenry will be referred to as the City and the owner of the private property with a lead or galvanized requiring replacement water service line will be referred to as the Property Owner.
  - 2. For the purposes of this section, galvanized water service lines requiring replacement will be referred to as a lead water service line unless otherwise specified.
- B. Perform water service installations in accordance with the State of Illinois Plumbing License Law, including licensed plumbers and registered plumbing contractors.
- C. Related work:
  - 1. Documents affecting work under this Section include, but are not necessarily limited to, the General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
- D. References – (Reserved).

1.2 SUBMITTALS

- A. Shop Drawing Submittals – (Reserved).
- B. Operation and Maintenance Manuals – (Reserved).
- C. Certificates and Guarantees – (Reserved).
- D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

- A. Ensure all brass and bronze alloys supplied with the products contain less than 15 percent zinc, unless otherwise specified.

LEAD WATER SERVICE PIPE REPLACEMENT – CURB STOP TO WATER METER

1. Brass that will come in contact with potable water shall contain no more than 0.25% lead.
  - a. Brass fittings shall be marked with industry standard marking to indicate the amount of lead (no lead, low lead, etc.) in the brass.
  - b. Brass for service saddles may contain more than 0.25% lead to improve ductility of the saddles.

B. All employees of the Contractor entering a house shall be 18 years of age or older and shall provide photograph identification.

1. All of the Contractor's staff present themselves in a professional manner and appearance.
2. The Contractor's staff appearance shall include some sort of uniform shirt with a company logo identifying this staff member as an employee of the Contractor.
3. The vehicle the Contractor and staff use for this project shall be clearly marked with the Contractor's company name.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

#### 1.5 SITE CONDITIONS – (Reserved).

#### 1.6 MAINTENANCE – (Reserved).

### PART 2 - PRODUCTS

#### 2.1 GENERAL

A. Provide lead or galvanized water service pipe replacement across private property, from curb stop to water meter, including service tubing, interior ball valve and water service line appurtenances.

B. Design Criteria:

1. Comply with the most recent edition of AWWA C810-17 – Replacement and Flushing of Lead Service Lines.

#### 2.2 Service Tubing

A. Provide 1-inch Type K, soft temper copper, for underground service, conforming to ASTM B88 and B251.

1. Pipe shall be marked with manufacturer's name or trademark and a mark indicating the type of pipe.
2. The outside diameter of the pipe and minimum weight per foot of the pipe shall not be less than listed in ASTM B251, Table 11.

3. All copper connections shall be made with flared joints.
4. Provide larger sizes as shown on the Drawings and as approved by the Engineer, Property Owner and City.

B. Provide a brass two-way ball valve for interior shut-off valve.

## 2.3 FILTERS

A. Provide a pitcher filter or point-of-use filter that is certified by an accredited third-party certification body to NSF/ANSI 53 and NSF/ANSI 42 for the reduction of lead and particulate.

B. Provide six (6) months' worth of cartridges with pitcher filter or point-of-use filter.

## PART 3 - EXECUTION

### 3.1 SEQUENCE OF INSTALLATION

A. The City will provide the following two options to Property Owners with lead water service lines:

1. Option 1. The City's Contractor replaces the lead water service line at the unit prices established under this Section 33 11 43.13 with a 1" (minimum size) Type K copper water service pipe (*Option 1 – Private Owner Pipe Replacement*). For private Property Owners who choose this option, the Contractor and private Property Owner will enter into a separate contract that includes access, the details of the work, and the other coordination issues ("*Contractor / Private Owner Agreement*"). The specifications for this work are detailed below.

2. Option 2. The private Property Owner declines Option 1. For this Option, the Contractor is responsible for connecting the new Type K copper water service pipe and new curb stop to the existing private lead service pipe. No work will be completed on private property and the lead water service pipe will not be replaced from curb stop to water meter.

B. It is the responsibility of the Contractor to coordinate with all Property Owners on the replacement of the water service line, as specified herein.

C. The City will update the Contractor at the Pre-Construction Meeting with Property Owners who responded to City correspondence in advance of Construction commencing.

## 3.2 RESIDENT COORDINATION

### Option 1 - Private Owner Pipe Replacement

- A. In the event a Private Property Owner selects Option 1, a Contractor / Private Owner Agreement must be executed for each private Property Owner.
- B. The Contractor will coordinate appointments with the Property Owners to schedule the work, which may include evenings and weekends, and to gain access to perform the installation.
- C. Once the Property Owner and Contractor have executed the Owner Agreement, the Contractor shall execute the following:
  1. Coordinate and schedule the replacement of the water service line from the water main to the water meter with City, Engineer, Plumber performing the work on private property and the Property Owner. Coordination efforts shall minimize the delays between the replacement of the water service from water main to curb stop and the replacement of the water service from the curb stop to the interior of the home.
  2. Provide the Property Owner with a City-approved Notice (to be provided by the City at the Pre-Construction Meeting) notifying the Property Owner of the date of installation appointment. The Notice shall be provided a minimum of 14 days prior to the installation appointment date. The Contractor shall give the Property Owner a four-hour maximum time window on the selected day to arrive at the property to do the work.
  3. After the appointment is made, the Contractor shall call the Property Owner 24 hours in advance of the scheduled appointment to confirm and tell the Property Owner the name of the installer for this work.
    - a. In the event that the Contractor or Plumber needs to reschedule the work, the Property Owner, City and Engineer shall be notified with a written notice as soon as possible.
  4. Prior to the beginning the replacement work, the water supply to the service line and the property shall be shut off to avoid release of particulate lead into the Property Owner's premises.
  5. The Contractor shall execute the installation of the new water service line from water main to meter as described herein and shown in the Drawings. Documentation of the work shall comply with this Section.
  6. Immediately after all connections have been completed, the Contractor shall perform the following:
    - a. Flush the water service line to remove any particles in the service line as specified herein.
    - b. Provide the Property Owner with a City-approved Notice (to be provided by the City at the Pre-Construction Meeting) notifying the Property Owner of the completion of the work.
    - c. Advise the Property Owner to flush the premise's interior plumbing in accordance with the instructions provided in the City-approved Notice.

- d. Provide the Property Owner with a pitcher filter or point-of-us filter, as specified herein.
- e. Provide a Point of Contact for the Property Owner for any additional follow up concerns related to the work completed herein.

Option 2 - Private Owner Denies Pipe Replacement

- A. In the event that a Private Property Owner selects Option 2, the Contractor needs to provide written notice to the Engineer within 48 hours. The Engineer will then perform the following:
  - 1. Provide the Property Owner with the Illinois Department of Public Health's (IDPH) Waiver of Complete Lead Service Line Replacement (IDPH Waiver) for signature. The original executed IDPH Waiver will be provided back to the City and the Contractor will be notified of the executed notice.
  - 2. Provide notice to the City and Contractor, if the Property Owner refuses to sign the IDPH Waiver.
- B. Once the Property Owner has signed the Waiver or Notice has been given to the Contractor of the Property Owner's refusal to sign the Waiver, the Contractor shall execute the following:
  - 1. The Contractor shall execute the installation of the new water service line from water main to curb stop as described herein and shown in the Drawings. Documentation of the work shall comply with this Section.
- C. Immediately after the new water service line and curb stop are installed and connected to the existing lead service line, the Contractor shall perform the following:
  - 1. Flush the water at full velocity for at least 10 minutes from an outside connection (such as a hose bib or hose leading from the building side of the meter) to remove any particles in the water service line
  - 2. Provide the Property Owner with a City-approved Notice (to be provided by the City at the Pre-Construction Meeting) notifying the Property Owner of the completion of the work.
  - 3. Advise the Property Owner to flush the premise's interior plumbing in accordance with the instructions provided in the City-approved Notice.
  - 4. Provide the Property Owner with a pitcher filter or point-of-us filter, as described herein.

## 2.2 INSTALLATION

- A. The water service line replacement shall originate at the curb stop and terminate inside the building at the water meter.
  - 1. New water service line pipe shall be installed across private property by horizontal directional drilling or pulling methods (trenchless methods).
    - a. Open-cut excavation will be permitted where trenchless methods are unable to be used and as approved by the Engineer.
  - 2. Maintain a minimum depth of cover of 5 ½ feet below finished grade unless otherwise indicated on the Drawings.

3. All copper connections shall be made with flared joints.
  4. Replacement will go across private property, entering the building through the foundation wall or slab at approximately the same location as the existing water service line where possible or as directed by the Engineer.
    - a. If the water service line cannot be installed in approximately the same location as the existing water service line, Contractor shall notify the Engineer and review alternative locations for the proposed water service line for the Engineer to approve.
  5. Unless otherwise directed by the Engineer, splices between the curb stop and the building will not be allowed.
- B. Where access pits are required, the Contractor shall conduct excavation and install bedding and trench backfill as required within the excavation limits in accordance with City standards shown on the Drawings.
- C. Core the existing foundation wall/slab or saw cut and remove a portion of the slab to allow for penetration by the water service pipe.
  1. Exercise caution to prevent damaging the existing foundation.
  2. Repair any damage to the foundation caused by the coring operation.
  3. Install a PVC sleeve in the foundation to protect the service pipe.
  4. The interior and exterior of the cored hole shall be completely sealed with hydraulic cement to prevent water infiltration.
  5. Move and restore any items on the interior of the home or structure that infringe upon the work. Make modifications to the interior plumbing only if necessary to install new water service.
  6. Install new interior water shut-off valves (ball valves) shall be installed on either side of meter.
    - a. If existing meter is determined to be in need of replacement, contractor shall notify the City.
- D. Maintain at least 10 feet from the building's sanitary sewer service pipe where possible.
  1. In all locations, lead service line replacements shall be in accordance with Illinois Plumbing Code Variance for Sewer and Water Service Separation, Title 77 Il. Adm. Code 891.1150
- E. In the event an existing water service line is grounded, the Contractor shall reinstall water service grounding as a part of this work consistent with pre-existing grounding conditions.
  1. Ground straps shall not be installed where not already in place.
- F. The Contractor shall abandon the existing water service pipe in-place.

## 2.3 FILTERS

- A. At time of resuming water service after the replacement of a lead water service line, the Contractor shall provide a pitcher or point-of-use filter, as specified herein.

## 2.4 WATER SERVICE LINE FLUSHING

- A. For each lead or galvanized requiring replacement water service line replacement, the Contractor shall flush the premise plumbing in accordance with ANSI/AWWA C810-17 (First Edition) Replacement and Flushing of Lead Service Lines.
  - 1. Flush the water from an outside connection (such as a hose-bib or hose leading from the house side of the meter installation) to remove any particles in the water service line and near point-of-entry.
  - 2. Flush at full velocity for at least 10 minutes.

## 2.5 EXTERIOR RESTORATION

- A. Areas disturbed to install the new water service shall be restored to its original condition.
  - 1. The Contractor shall take every measure to protect all existing trees, shrubs, bushes and lawns. Protect the existing lawn by laying work mats or plywood sheathing.
  - 2. In the event landscaping materials need to be removed for the proper installation of the new water service line, the Contractor shall salvage and protect the existing materials until they are able to be reused.
    - a. If existing landscaping materials are unable to be salvaged, restoration will consist of raking in pulverized topsoil (minimum of 3"), over seeding the disturbed areas and installing blanket or straw netting.

## 2.6 INTERIOR RESTORATION

- A. The Contractor shall take every measure to protect the interior of the home, including but not limited to, laying work mats, wearing new shoe/boot coverings, and installing temporary dust control measures such as plastic tarps.
- B. If the water meter or water service line are located behind a finished wall or under a finished floor, Contractor shall take remove the wall or finished floor to establish access to where the water service line enters the building.
  - 1. Contractor shall minimize disturbance to finished areas where at all possible.
  - 2. Restoration of areas disturbed in order to gain access to the water service line within the residents will be the Property Owner's responsibility to restore.
    - a. If it appears that property will be damaged with the installation of the water service, the Property Owner shall be contracted before the installation.
- C. Modifications to the existing interior of the home requested by the Property Owner shall be coordinated between the Contractor and Property Owner and will be paid directly by the Property Owner to the Contractor.
  - 1. Separate payment will be made to the Contractor.

2. The Property Owner and Contractor shall submit to the City a Notice of Intent (Contractor's Proposal Form) to have the interior modified prior to this work being performed along with a waiver from the Property Owner.
3. A City permit will be required for the additional requested work.
4. The City will be released from any claims or disputes between the Contractor and Property Owner.

## 2.7 DOCUMENTATION

- A. For each lead service line replacement, the Contractor shall provide the City with the following documentation:
  1. Digital photograph of each building with address clearly visible.
  2. Digital photographs of water main and meter connection locations showing new pipe and old pipe.
  3. Digital photographs of the exterior and interior pre-installation and post-installation conditions on private property.
  4. Length, size, and material type of the new pipe installed.
  5. Type and size of pipe material the new pipe is connected to inside the building.
  6. Date of installation.
  7. Method of installation.
  8. Installation completed by.
  9. Approximate length and location of abandoned lead service line pipe left in the ground.
  10. Flushing time and location(s).
- B. The above documentation shall be provided by the Contractor to the City in digital format (utilizing Adobe Acrobat, Microsoft Word, or other City-approved software on external 2 TB hard drive, or other City-approved media).

END OF SECTION