

**REQUEST FOR SEALED BIDS**  
**FOR THE**  
**CITY OF ALPENA PROJECT**  
**2024 North Second Avenue Infrastructure Upgrades**

March 2024

Prepared By:

City of Alpena  
Engineering Department  
208 N. First Avenue  
Alpena, MI 49707  
(989) 354-1730



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## REQUEST FOR SEALED BIDS

### 2024 North Second Avenue Infrastructure Upgrades

The City of Alpena will receive sealed bids in the office of the City Clerk, Alpena City Hall, 208 N. First Avenue, Alpena, Michigan, 49707, until 2:00 p.m., Tuesday, April 9, 2024, for the 2024 North Second Avenue Infrastructure Upgrades. This project includes, but is not limited to, Water main installation, sanitary sewer main installation, water and sewer services, street reconstruction including concrete curb and gutter, concrete sidewalk, concrete driveway, HMA surface

The bids shall be opened and read publicly and then referred to City Council for action at a regular Council meeting.

Beginning on March 22, 2024, Drawings, Specifications, and other Contract documents may be obtained on the City of Alpena website at [www.alpena.mi.us](http://www.alpena.mi.us).

Questions regarding the bid contents should be directed to the City of Alpena Engineering Department via letter, written facsimile (989) 354-1709 or e-mail to [engineer@alpena.mi.us](mailto:engineer@alpena.mi.us).

The Contractor shall furnish all labor, equipment, and materials necessary to complete the work in accordance with the specifications.

A bid bond provided by a surety company authorized to do business in the state, or the equivalent in cash, or otherwise supplied in a form satisfactory to the City for a sum of not less than five percent (5%) of the amount of the minimum base bid will be required with each proposal submitted where the cost estimated by the bidder exceeds \$35,000. The City reserves the right to require bid security for bids under \$35,000 when the circumstances warrant.

The City reserves the right to reject any and all bids and to waive irregularities in bids and to accept any bids which in the opinion of the City Council may be most advantageous to the City of Alpena and/or in accordance with the City's "Award Process" and other bidding documents.

**Please pay particular attention to Section III., Award Process, A. Evaluation on page 9, as this language has changed.**

**Sealed bids may be submitted by the following option: Sealed bids will be accepted by the City of Alpena's Clerk's Office at 208 N. First Avenue, Alpena, Michigan, 49707. Please mark your envelope "SEALED BIDS – 2024 North Second Avenue Infrastructure Upgrades, April 9, 2024."**

City of Alpena



By: Anna Soik  
City Clerk

## **ADVERTISEMENT**

### I. Sealed Bids Due

Sealed bids on forms prepared by the Engineer will be received by the City of Alpena at 208 N. First Avenue, Alpena, Michigan, 49707, until 2:00 p.m. (local time) on Tuesday, April 9, 2024, for the 2024 North Second Avenue Infrastructure Upgrades, in accordance with drawings, specifications, and other contract documents prepared by the City of Alpena Engineering Department.

### II. Proposals Will be Publicly Opened and Read

At 2:00 p.m. (local time) on April 9, 2024, at 208 N. First Avenue, Alpena, Michigan, 49707. Bids received after the aforementioned time shall be considered late and returned to the submitting entity unopened.

### III. Reviewing Documents

Drawings, specifications, and other contract documents may be reviewed at the following plan rooms:

City of Alpena  
City Engineering Office  
208 North First Av  
Alpena, MI 49707

### IV. Obtaining Contract Documents

Drawings, specifications, and other contract documents may be obtained on the City of Alpena website beginning on March 22, 2024.

## INSTRUCTIONS TO BIDDERS

I. Proposals Requested for Supply of the necessary materials, tools, and all of the equipment and labor necessary, and all utilities and transportation services required to be performed and completed in workmanlike manner all of the work shown in accordance with drawings, specifications, and other contract documents prepared by the City of Alpena:

- A. Proposal: To be considered, each bidder shall submit a COMPLETE proposal in response to this Request for Sealed Bids. No other distribution of proposals is to be made by the bidder. Each proposal shall be made on a form prepared by the Engineer and included as one of the contract documents and shall be submitted in a sealed envelope bearing the title of the work and the name of the Bidder.
- B. Discrepancies: In case of a difference between the stipulated amount of the proposal written in words and the stipulated amount written in figures, the stipulated amount stated in written words shall govern.
- C. Modifications: Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modifications will not be considered.
- D. Examination of Contract Documents and Visit to Site: Before submitting a proposal, Bidders shall carefully read the specifications and the other contract documents, shall visit the site of work and shall fully inform themselves as to all existing conditions and limitations and shall include in the proposal a sum to cover the cost of all items included in the contract documents.
- E. Delivery of Proposals: Proposals shall be delivered by the time and to the place stipulated in the Advertisement. It is the sole responsibility of the Bidder to see that his proposal is received in proper time. Any proposal received after the scheduled closing time for receipt of proposals shall be returned to the Bidder unopened.
- F. Withdrawal: Any Bidder may withdraw his proposal, either personally or by telegraphic or written request, at any time prior to the scheduled closing time for receipt of proposals.
- G. Opening: Proposals will be opened and publicly read aloud at the time and place set forth in the Advertisement.
- H. Award or Rejection: The contract will be awarded to the responsive and responsible bidder who offers the best value to the City of Alpena in compliance with the instructions herein and with the Advertisement. (See section "Award Process" in the "Instructions to Bidders".)

## II. Interpretation of Documents

If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of the specifications or other contract documents or finds discrepancies in or omissions from the drawings or specifications he may submit to the Engineer a written request for an interpretation or correction thereof. The person submitting the request will be responsible for the prompt delivery. All requests for information on the project shall be via, letter, written facsimile (989) 354-1709 or e-mail to [engineer@alpena.mi.us](mailto:engineer@alpena.mi.us).

In the event that information is transmitted other than by letter, facsimile, or email, answers furnished shall not be considered official until verified in writing by the City of Alpena.

The City of Alpena does not commit to answering questions during the last seven (7) workdays prior to sealed bid opening date.

Answers that change or substantially clarify the request for sealed bids or the specifications will be made only by Addendum duly issued and a copy of the Addendum will be mailed or delivered to each person receiving a set of the contract documents until seven (7) working days prior to date of sealed bid opening. Neither the Owner nor the Engineer will be responsible for any other explanations or interpretations of the contract documents.

## III. Addenda

Any addenda issued during the time of bidding or forming a part of the contract documents loaned to the Bidder for the preparation of his proposal shall be covered in the proposal and shall be made a part of the contract. Receipt of each Addendum shall be acknowledged in the proposal. Information requests shall follow the procedure as above and must be received a minimum of seven (7) working days prior to bid letting date for sufficient time to issue an addendum if warranted.

## IV. Bidders Interested in More Than One Proposal

No person, firm, or corporation shall be allowed to make, file, or be interested in more than one proposal for the same work, unless alternate proposals are called for. A person, firm or corporation who has submitted a sub-proposal to a Bidder or who has quoted prices on materials to a Bidder is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders.

V. Correction or Withdrawal of Bids; Cancellation of Awards

Correction or withdrawal of inadvertently erroneous bids before or after bid opening, or cancellation of awards or contracts based on such bid mistake, may be permitted where appropriate. Mistakes discovered before bid opening may be modified or withdrawn by written or electronic notice received in the office designated in the invitation for bids prior to the time set for bid opening. After bid opening, corrections in bids shall be permitted only to the extent that the bidder can show by clear and convincing evidence that a mistake was made, the nature of the mistake, and the bid price actually intended. After bid opening, no changes in bid prices or other provisions of bids prejudicial to the interest of the City or fair competition shall be permitted. In lieu of bid correction, a low bidder alleging a material mistake of fact may be permitted to withdraw its bid if:

- A. the mistake is clearly evident on the face of the bid document but the intended correct bid is not similarly evident; or
- B. the bidder submits evidence which clearly and convincingly demonstrates that a mistake was made. All decisions to permit the correction or withdrawal of bids, or that cancel awards or contracts based on bid mistakes, shall be supported by a written determination made by the City Clerk.

VI. Performance Bond and Labor and Material Payment Bond

When a contract is awarded in excess of \$35,000, a Performance Bond and Labor and Material Payment Bond shall be required. These bonds or security shall be delivered to the City and shall become binding on the parties upon the execution of the contract.

- A. Performance Bond: A bond satisfactory to the City, executed by a surety company authorized to do business in the state or otherwise secured in a manner satisfactory to the City, in an amount equal to 100% of the price specified in the contract; and
- B. Labor and Material Payment Bond: A bond satisfactory to the City, executed by a surety company authorized to do business in the state or otherwise secured in a manner satisfactory to the City for the protection of all persons supplying labor and material to the contractor or its subcontractors for the performance of the work provided for in the contract. The bond shall be in an amount equal to 100% of the price specified in the contract.

The City reserves the right to require these bonds and security when the contract does not exceed \$35,000 when the circumstances warrant. The City further reserves the right to require, regardless of contract amount, additional bonds and security including, but not limited to, the bond required by sidewalk contractors when circumstances warrant.

VI. Contractor's Liability Insurance

The Construction Contractor shall maintain at its own expense during the term of this Contract the insurance coverage(s) where indicated by an [X]:

A. [X] Workers Compensation Insurance

1. Contractor shall maintain statutory workers compensation and employer's liability insurance. Limits shall be no less than \$ 500,000 for bodily injury by accident or \$500,000 each employee for bodily injury by disease, Dependent on the type of project the minimum coverage may be increased.
2. Waiver of Subrogation - Contractor waives all rights against the City of Alpena, its agents, public officials, employees, and volunteers for recovery of damages to the extent these damages are covered by workers compensation and employer's liability insurance obtained by the Contractor.
3. If Contractor is self-insured for purposes of workers compensation, the Contractor must submit a copy of a current letter, permit, or certification issued by the appropriate state agency.

B. [X] Commercial General Liability and Umbrella/Excess Liability Insurance:

1. [X] a. Contractor shall maintain commercial general liability (CGL), and, if necessary, commercial umbrella/excess insurance with a limit of not less than \$1,000,000 each occurrence/\$2,000,000 aggregate. If the CGL insurance contains a general aggregate limit, such limit shall apply separately to this project.  
  
[ ] b. Projects of a larger scope that could or would impact the greater population may require a CGL of \$2,000,000 per occurrence and \$4,000,000 aggregate. The required amount of coverage will be included in the bid specifications.
2. CGL insurance shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract, including this contract.
3. City of Alpena shall be included as an additional insured under the CGL and under the commercial umbrella/excess, if any. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance program afforded to the City of Alpena. **A copy of the certificate shall be provided to the City prior to the execution of the contract.** On the Additional Remarks Schedule of the certificate it shall state: "The City of Alpena is an Additional Insured on the noted policies with respect to any contract between the Named Insured and the Certificate Holder." A sample



Certificate of Liability Insurance form is attached to the end of this policy.

4. Waiver of subrogation - Contractor waives all rights against the City of Alpena and its agents, public officials, employees, and volunteers to the extent these damages are covered by the CGL or commercial umbrella liability maintained pursuant to this agreement.

C.  Business Auto and Umbrella/Excess Liability Insurance:

1. Contractor shall maintain business auto liability and, if necessary, commercial umbrella/excess liability insurance with a limit of not less than \$1,000,000 each accident. Such insurance shall cover liability arising out of any auto, including owned, non-owned, and hired.
2. Waiver of subrogation - Contractor waives all rights against the City of Alpena and its agents, public officials, employees, and volunteers for recovery of damages to the extent these damages are covered by the business auto liability or commercial umbrella insurance obtained pursuant to this agreement.

D.  Professional Liability Insurance (for Professional Services)

- a. Professional shall maintain professional (Errors & Omissions) coverage with a limit of not less than \$1,000,000 per loss.
- b. Such insurance shall cover damages arising out of a Wrongful Act including any error, omission, or negligent act committed in the performance of professional services for the City of Alpena.
- c. If coverage requested in 4 is written on a claims-made basis, the Professional warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this contract; and that continuous coverage will be maintained or an extended discovery period (EDP) will be exercised for a period of 3 years beginning from the time that work under this Contract is completed. Contractor shall bear the expense of purchasing the EDP, if applicable.

A copy of the certificate shall be provided to the City prior to the execution of the contract. On the Additional Remarks Schedule of the certificate it shall state: "The City of Alpena is an Additional Insured on the noted policies with respect to any contract between the Named Insured and the Certificate Holder."

E.  Builder's Risk Insurance:

1. Contractor shall purchase and maintain builder's risk insurance on

the Contractor shall purchase and maintain builder's risk insurance on the entire project. Such insurance shall be written in an amount equal to the contract sum. Insurance shall be written on a replacement costs basis. All approved change orders must be accompanied by an increase in the builder's risk limit of insurance at the time the change order is approved.

2. The insurance shall name as insured the Owner, General Contractor, Construction Manager, and all contractors and subcontractors undertaking the work.
3. The insurance shall cover the entire work at the site identified in this agreement, including reasonable compensation for architect's fees made necessary by an insured loss. Insured property shall include property on the site but not yet a part of the building, portions of the work located away from the site but intended for use at the site, and shall also cover portions of the work in transit. The policy shall include as insured property scaffolding and temporary buildings located at the site. The policy shall cover the cost of removing debris, including demolition as may be legally made necessary by operation of building laws and ordinances.
4. Contractor shall purchase and maintain boiler and machinery insurance, the insurance shall name as insured the Owner, General Contractor, Construction Manager, and all contractors and subcontractors undertaking the work.
5. The insurance required in this section shall be written to cover "all risk" of physical loss except those specifically excluded in the policy.
6. A copy of the certificate shall be provided to the City prior to the execution of the contract. On the Additional Remarks Schedule of the certificate, it shall state: "The City of Alpena is an Additional Insured on the noted policies with respect to any contract between the Named Insured and the Certificate Holder."

F. All the above insurance policies shall contain the following wording:

"It is agreed that this insurance shall not be cancelled, materially changed, or non-renewed without at least a sixty (60) day written notice to the City of Alpena at their principal mailing address."

G. Insurance Company Approval and Certificates of Insurance:

Insurance Companies, additional insured endorsements, and policy forms shall be subject to the approval of the City of Alpena. Such approval shall not be unreasonably withheld. Contractor shall furnish the City Manager of the City of Alpena with certificates of insurance or a certified copy of the policy, if requested by the City Manager.

## VIII. HOLD HARMLESS CLAUSE

The Contractor shall defend, pay on behalf of, and hold harmless the City of Alpena, its employees, agents, public officials, and volunteers from and against any and all losses, damages, expenses, claims, suits, and demand of whatever nature resulting from damages or injuries, including death, to any persons or property, and including any claim for losses incurred by reason of project delay, impact (soft) costs, or other intangible losses that might result from Contractor's late or defective performance, caused by or arising out of any action, omission, or operation performed in connection with work attributable to the Contractor, any Sub-contractor, any Sub-subcontractor, any material men, any of their respective employees, agents, servants, or representatives; provided, however, the Contractor shall not be required to indemnify the City of Alpena, its employees, agents, public officials, and volunteers for any damages or injuries, including death, to any person or property caused solely and exclusively by the negligence of the City of Alpena, its employees, public officials, and volunteers.

## IX. Award Process

Responses to this request for sealed bids will be evaluated based upon the bidder's current ability to provide the highest level of service and quality product that meets the requirements and goals of this request for sealed bids and is in the best interest of the City.

- A. Evaluation: **All bidders must submit either a completed "Contractor's Qualification Statement" included at the end of this package or have submitted a Contractor's Qualification Statement within the past 3 years. If three or more years have passed since the submission of a Contractor's Qualification Statement, the contractor shall submit a Statement with this bid package.** The cover sheet and Sections 1 through 4 and Section 6 MUST be completed in their entirety. **Section 5 "Financing" need only be submitted upon request of the City of Alpena.** This document will be used in evaluating your request for sealed bids response. Failure to provide this information shall make the bid ineligible.

Bidders shall also submit unit cost and/or total project cost on the prepared proposal forms included.

- B. Past Performance: The City of Alpena reserves the right to evaluate the bidder's prior performance with the City of Alpena, and the prior performance information may be a factor in the award decision.
- C. Financial Stability: In making an award decision, the City of Alpena reserves the right to evaluate the financial stability of any bidder. The City of Alpena may seek financial information from the bidder via the "Financing" section of the "Contractor's Qualification Statement". If the City of Alpena determines in its sole discretion that contracting with a bidder presents an unacceptable risk to the City of Alpena, the City of Alpena reserves the right to not award a contract to that bidder.

D. Additional Steps: The City of Alpena, at its option, may engage other processes in order to make a final award decision:

1. Clarifications

If it is determined to be in the best interest of the City of Alpena and/or if a bidder's proposal is unclear, the City of Alpena may request from one or all bidders, a clarification. The City of Alpena will document, in writing, clarification being requested and forward to the bidders affected. This process does not allow for changes, rather to simply clarify the proposal submitted.

2. Site Visit

The City of Alpena may conduct a site visit to tour and inspect the bidder's facilities. The City of Alpena will schedule these visits, if required.

3. Pricing Negotiations

If it is determined that the pricing offered by bidders exceeds the budget or the cost expectation for the bid, the City of Alpena may enter into negotiations with the bidders on pricing only. No modification to the technical requirements or specifications will be allowed. If once a recommendation is made to award to a bidder, the City of Alpena, at its discretion, may engage in further pricing negotiations with the recommended bidder.

E. Method of Award: Award will be made to the responsive and responsible bidder who offers the best value to the City of Alpena. Best Value is determined by the bidder offering the best combination of the factors stated above in Sections IX-A through IX-D in the Instructions to Bidders section.

The City of Alpena reserves the right to reject any or all bids in whole or in part, and to waive any informality or technical defects, if it is determined by the City of Alpena that the best interest of the City of Alpena will be served by doing so. In determining an award, qualifications of the bidder, conformity with specification of goods and/or services to be supplied, cost, and delivery terms, and a bidder's past performance on City of Alpena contracts will be considered. Bidders in violation of City Ordinance at the time of the bid opening may be considered ineligible to contract with the City or the bid may be rejected entirely.

The City reserves the right to enact the Local Bidders Preference if the City determines that bidders in question have first satisfied the conditions set forth by sections A through D of the "IX Award Process" section. The City may grant an award to a *qualified* local bidder/vendor as defined below for an amount equal to the lowest bid submitted meeting specifications. The following businesses shall be given the opportunity to lower their overall bid amount if they are within the following percentages:

A. Alpena City businesses:

Within 7% for projects under \$100,000 and 5% for projects at or over \$100,000

- B. Alpena County businesses:  
Within 5% for projects under \$100,000 and 3% for projects at or over \$100,000

City of Alpena businesses shall have priority over Alpena County businesses.

To be considered for local bidder preference, a local bidder/Vendor shall have met the following qualifications for at least one year prior to the date bid proposals are due:

1. Shall have a legal and permanent business address within Alpena County.
2. Shall be a personal property and real property taxpayer in Alpena County.
3. Shall be in compliance with all City Codes and Ordinances.
4. Shall not be indebted or in default to the City.

F. Available Funding: In the event the low responsive and responsible bid for a construction project exceeds available funds, the City Clerk or City staff under the direction of the City Clerk, is authorized when time or economic considerations preclude re-solicitation of work of a reduced scope, to negotiate an adjustment of the bid price with the low responsive and responsible bidder, in order to bring the bid within the amount of available funds. **Any such negotiated adjustment shall be based only upon eliminating independent deductive items specified in the request for bids and must be approved by the City Clerk or City Manager.**

G. Lawsuits and Arbitration: The City reserves the right not to award a contract to any individual, organization, contractor, or subcontractor who has filed any lawsuits or requested arbitration with regard to construction contracts within 5 years prior to the bid.

## **BID PROPOSAL**

I. The Following Proposal is Hereby Made to:

The City of Alpena, 208 N. First Avenue, Alpena, Michigan, 49707.

II. Evaluation Section

Please attach pages in accordance with the section "Evaluation". Failure to provide this information shall make the bid ineligible.

III. Stipulated Amount

The Undersigned hereby proposes and agrees to furnish all necessary labor, tools, apparatus and other means of construction, and do all the work, for the unit prices named in the itemized bid to complete the work herein described for the City of Alpena all in accordance with the specifications and other contract documents prepared by the City of Alpena Engineering Department.

Prices and notations must be made on the bid sheets following this page in ink or typed. Prices shall be for new items only unless specified otherwise. Any form of pricing corrections made to the proposal by the bidder prior to submission should be initialed in ink by the person signing the proposal.

The City of Alpena shall perform a mathematical check. In the event that a total is incorrect for any one or more items, the unit price recorded for that item will be multiplied by the bid quantity to obtain a new item and project total.

**City of Alpena**  
**Schedule of Items (Itemized Bid Sheet)**

**Letting Date:** Tuesday, April 9, 2024 2:00 PM

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**Contract ID:** 23.161  
**Location:** Second Ave  
**Description:** Fletcher St to Huber St

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<b>Project Number:</b> 23.161	<b>Project Engineer:</b> Rebecca Rivard, P.E.
<b>Estimate Number:</b> 1	<b>Date Created:</b> 12/28/2023
<b>Project Type:</b> Miscellaneous	<b>Fed/State #:</b>
<b>Location:</b> Second Ave	<b>Fed Item:</b>
	<b>Control Section:</b>

**Description:** Water St to Huber St

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**Instructions to Bidders:** See Specifications

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount	
				Dollars	Cts	Dollars	Cts
<b>Project #: 23.161 Second Ave</b>		<b>Category: 0001 Street Items</b>					
1100001	Mobilization, Max \$50,000	1	LSUM				
2020002	Tree, Rem, 19 inch to 36 inch	5	Ea				
2030011	Dr Structure, Rem	17	Ea				
2050010	Embankment, CIP	100	Cyd				
2057021	_ Excavation, Earth, LM, Modified	8,465	Cyd				
2057021	_ Subgrade Undercutting, Type II, Modified	500	Cyd				
2080014	Erosion Control, Filter Bag	20	Ea				
2090001	Project Cleanup	1	LSUM				
3010002	Subbase, CIP	500	Cyd				
3027031	_ Aggregate Base, 22A, Modified	4,984	Ton				
4021202	Sewer Tap, 8 inch	16	Ea				
4027001	_ Sewer, CI A, Sch 40 PVC, 8 inch, Tr Det B2	1,634	Ft				
4027050	_ Sewer Bulkhead, 8 inch	9	Ea				
4037050	_ Dr Structure, 24 inch dia, with Cover and Casting, Special	29	Ea				
4037050	_ Dr Structure, Repl and Adj, Case 1, Modified	8	Ea				
4040073	Underdrain, Subgrade, 6 inch	1,600	Ft				
4047050	_ Underdrain Outlet to Dr Structure, 6 inch	10	Ea				
5010061	HMA Approach	527	Ton				
5017031	_ HMA, 13A, Modified	2,750	Ton				
8010005	Driveway, Nonreinf Conc, 6 inch	3,429	Syd				



Pay Item	Description	Quantity	Units	Unit Price		Bid Amount	
				Dollars	Cts	Dollars	Cts
8020023	Curb and Gutter, Conc, Det C4	6,878	Ft				
8030044	Sidewalk, Conc, 4 inch	12,108	Sft				
8032002	Curb Ramp, Conc, 6 inch	3,634	Sft				
8037001	_ Detectable Warning Surface, Modified	745	Ft				
8037010	_ Sidewalk, Colored Conc, 4 inch, Stamped	12,108	Sft				
8107051	_ Remove and Replace Permanent Signage	1	LSUM				
8110127	Pavt Mrkg, Regular Dry, 6 inch, White	1,750	Ft				
8110128	Pavt Mrkg, Regular Dry, 6 inch, Yellow	1,000	Ft				
8117050	_ Pavt Mrkg, Regular Dry, Parking Stall	88	Ea				
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	18	Ea				
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	18	Ea				
8120026	Pedestrian Type II Barricade, Temp	20	Ea				
8120170	Minor Traf Devices	1	LSUM				
8120252	Plastic Drum, Fluorescent, Furn	25	Ea				
8120253	Plastic Drum, Fluorescent, Oper	25	Ea				
8120350	Sign, Type B, Temp, Prismatic, Furn	550	Sft				
8120351	Sign, Type B, Temp, Prismatic, Oper	550	Sft				
8120370	Traf Regulator Control	1	LSUM				
8157050	_ Street Trees, Ball and Burlap, 3 inch	30	Ea				
8167011	_ Slope Restoration, Modified	9,650	Syd				
8247051	_ Contractor Staking, Modified	1	LSUM				

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount	
				Dollars	Cts	Dollars	Cts
<b>Project/Category Total:</b>							

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount	
				Dollars	Cts	Dollars	Cts
<b>Project #: 23.161 Second Ave</b>		<b>Category: 0002 Sanitary Sewer Items</b>					
2030011	Dr Structure, Rem	11	Ea				
2030015	Sewer, Rem, Less than 24 inch	480	Ft				
2030016	Sewer, Rem, 24 inch to 48 inch	3,784	Ft				
4021204	Sewer Tap, 12 inch	1	Ea				
4027001	_ Dr Structure, Add Depth of 48 inch dia, 8 feet to 15 feet	6	Ft				
4027001	_ Sanitary Sewer, SDR 35, 12 inch, Tr Det B2	3,275	Ft				
4027001	_ Sanitary Sewer, SDR 35, 6 inch, Tr Det B2	25	Ft				
4027050	_ Sanitary Sewer Service	62	Ea				
4037050	_ Dr Structure, 48 inch Dia, with Cover and Casting, Special	9	Ea				
<b>Project/Category Total:</b>							

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount		
				Dollars	Cts	Dollars	Cts	
<b>Project #: 23.161 Second Ave</b>		<b>Category: 0003 Water Items</b>						
8237001	_ Water Main, DI 12 inch, Tr Det G, Modified	3,294	Ft					
8237001	_ Water Main, DI 6 inch, Tr Det G, Modified	80	Ft					
8237001	_ Water Main, DI 8 inch, Tr Det G, Modified	772	Ft					
8237001	_ Water Main, Rem	4,161	Ft					
8237050	_ Bend, DI, Cross, 12 inch x 8 inch	6	Ea					
8237050	_ Connect to Existing Water Main	20	Ea					
8237050	_ Fire Hydrant Assembly	10	Ea					
8237050	_ Fire Hydrant Assembly, Rem	10	Ea					
8237050	_ Fittings Not Shown on Plans	15	Ea					
8237050	_ Gate Valve and Box, 12 inch, Modified	43	Ea					
8237050	_ Gate Valve and Box, 6 inch, Modified	11	Ea					
8237050	_ Gate Valve and Box, 8 inch, Modified	7	Ea					
8237050	_ Tee, DI 12 inch by 6 inch	10	Ea					
8237050	_ Tee, DI 12 inch by 8 inch	6	Ea					
8237050	_ Water Service, Varies 1 inch to 6 inch	62	Ea					
8237050	_ Water, Reducer, 12 inch to 4 inch	1	Ea					
8237050	_ Water, Reducer, 12 inch to 8 inch	3	Ea					
8237051	_ Testing and Chlorination	1	LSUM					
<b>Project/Category Total:</b>								

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount		
				Dollars	Cts	Dollars	Cts	
<b>Total Bid:</b>								

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

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

IV. Addenda

The Undersigned hereby acknowledges receipt of the following addenda:

<u>Addenda No.</u>	<u>Dated</u>
_____	_____
_____	_____

V. Execution of Agreement and Furnishing Bonds

Within ten (10) days of receiving the prepared contract documents, the Undersigned agrees to execute the form of agreement included as part of the contract documents and to furnish a faithful performance bond in an amount equal to one hundred percent (100%) of the contract amount and a labor and material payment bond in an amount equal to one hundred percent (100%) of the contract amount.

VI. Subcontractor Acknowledgment

The Undersigned hereby acknowledges all subcontractors to be utilized on the above stated projects. The successful bidder agrees to bind every subcontractor by the terms of the contract documents. The City reserves the right to disqualify any potential subcontractor listed herein and any subcontractors which the contractor may elect to use on the project. The City reserves the right to require subcontractors to submit the information required in the section "Award Process". The contract documents shall not be construed as creating any contractual relation between any subcontractor and the Owner. All subcontractors shall be held accountable to the criteria and obligations as described by specifications and contract documents herein. Failure to list subcontractors may result in rejection of the bid.

<u>Subcontractor</u>	<u>Item of Work</u>
_____	_____
_____	_____
_____	_____
_____	_____

VII. Execution of Contract

A Contract will be executed with the responsive and responsible bidder who offers the best value to the City of Alpena upon approval by City Council.

VIII. Bid Price Guarantee

The bidder shall honor the individual bid prices and project bid total for a period of sixty (60) days following the bid submittal date.

IX. Contract Time

If awarded the contract, the Undersigned shall start work on the project within ten (10) days or on an agreed upon date after the receipt of the executed contract, which shall serve as the notice to proceed, and shall complete all work described in the contract by **June 30 2025**. Five Hundred (\$500) dollars per day will be deducted from monies due the Contractor for each calendar day, exclusive of Sundays and holidays, that the work remains uncompleted beyond the completion date. Written extensions will be reviewed and may be approved by the City Engineer with justifications.

X. Owners Rights Reserved

The Undersigned understands that the Owner reserves the right to reject any or all proposals or to waive any formality or technicality in any proposal in the interest of the Owner in accordance with section "Award Process".

XI. Termination

The City shall have the right to terminate this contract with a ten (10) day written notice to the other party. If the Contractor fails to maintain continuous work practices or delays completion of the project, the City may consider this default of the Contract.

XII. This Proposal is Submitted By:

Company Name \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City, State & Zip \_\_\_\_\_

Telephone No. \_\_\_\_\_

**AGREEMENT**

I. THIS AGREEMENT, made as of the \_\_\_\_\_ day of \_\_\_\_\_, 2024, by and between the City of Alpena, hereinafter called the OWNER, AND \_\_\_\_\_, hereinafter called the CONTRACTOR, WITNESSETH that whereas the CONTRACTOR intends to furnish all materials, tools, and all of the equipment and labor necessary, and all utilities and transportation services required to perform and complete in workmanlike manner all of the work shown being the **2024 North Second Avenue Infrastructure Upgrades**, hereinafter called the PROJECT, in accordance with the drawings, specifications, and other contract documents.

THE OWNER AGREES TO PAY and the CONTRACTOR agrees to accept, in full payment for the performance of this contract, the contract amount of:

\_\_\_\_\_ (\$ \_\_\_\_\_ )

The contract amount listed above is based on unit prices for estimated quantities. Completed contract amount may vary.

NOW, THEREFORE, the OWNER and CONTRACTOR for the considerations hereinafter set forth, agree as follows:

II. THE CONTRACTOR AGREES to furnish all labor, materials, equipment, tools and services necessary to perform and complete in a workmanlike manner all work required for the construction of the project, in strict compliance with the contract documents herein mentioned, which are hereby made a part of the contract, including the following addenda:

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

A. Contract Time: Work under this agreement shall start within ten (10) days or on an agreed upon date after the receipt of the executed contract, which shall serve as the notice to proceed and shall be completed by the following date: **June 30 2025**. Five Hundred (\$500) dollars per day will be deducted from monies due the Contractor for each calendar day, exclusive of Sundays and holidays, that the work remains uncompleted beyond the completion date. Written extensions will be reviewed and may be approved by the City Engineer with justifications.

B. Subcontractors: The Contractor agrees to bind every subcontractor by the terms of the contract documents. The contract documents shall not be construed as creating any contractual relation between any subcontractor and the Owner. The contractor shall submit a written request and receive permission from the Engineer to use any subcontractor other than those



listed in Section VI of the Bid Proposal prior to that subcontractor working on the project.

III. THE OWNER AGREES to make and the Contractor agrees to accept payment in accordance with the unit price schedule of the proposal and in accordance with the provisions of the contract documents.

A. Progress payments will be made in accordance with the General Conditions of the contract.

IV. Contract Documents

The contract documents comprise the following general classifications of documents, including all additions, deletions and modifications incorporated therein before the execution of the agreement.

A. Bidding Documents

B. Contractual Documents

C. Standard General Conditions of the Construction Contract

D. Modifications to the Standard General Conditions of the Construction Contract

E. Performance Bond

F. Labor and Material Payment Bond

G. Special Provisions

- 1 Safety Requirements
- 2 Permit Requirements
- 3 Excavation, Earth, LM, Modified
- 4 Subgrade Undercutting
- 5 Aggregate Base, Modified
- 6 Storm Sewer
- 7 Replace and Adjust Structure Covers
- 8 Drainage Structures and Castings
- 9 Underdrain Outlet to Drainage Structure
- 10 HMA Surface
- 11 HMA Application Estimate
- 12 Detectable Warning Surface, Modified
- 13 Concrete Stamping
- 14 Removing and Replacing Permanent Signage
- 15 Pavement Marking
- 16 Slope Restoration
- 17 Tree Planting
- 18 Contractor Staking, Modified
- 19 Sanitary Sewer System
- 20 Concrete Asbestos Water Main
- 21 Water Main Installation
- 22 Dewatering
- 23 Maintaining Traffic
- 24 Coordination Clause
- 25 Utility Coordination

In the event that any provision of one contract document conflicts with the provision of another contract document, the provision in that contract document first listed below shall govern, except as otherwise specifically stated:

- A. Agreement (this instrument)
- B. Addenda to Contract Documents
- C. Remaining Legal and Procedural Documents
  - 1. Proposal
  - 2. Information for Bidders
  - 3. Advertisement
- D. Detailed Specification Requirements
- E. Drawings
- F. Modifications of the General Conditions of the Contract (Article 18)
- G. Standard General Conditions of the Construction Contract (Articles 1 through 17)
- H. Bonds
  - 1. Performance Bond
  - 2. Labor and Material Payment Bond
  - 3. Proposal Guaranty

VI. Authority and Responsibility of the Engineer

All work shall be done under the general observation of the Engineer. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of drawings and specifications and all questions as to the acceptable fulfillment of the contract on the part of the Contractor.

VII. Successors and Assigns

This agreement and all of the covenants hereof shall insure to the benefit of and be binding upon the Owner and the Contractor, respectively and his partners, successors, assigns and legal representatives. Neither the Owner nor the Contractor shall have the right to assign, transfer or sublet his interests or obligations hereunder without written consent of the other party.

VIII. Special Provisions

The Owner and the Contractor mutually agree that this agreement shall be subject to the Special Provisions, which shall supersede other conflicting provisions of the Agreement.

IX. Termination

The City shall have the right to terminate this contract with a ten (10) day written notice to the other party. If the Contractor fails to maintain continuous work practices or delays completion of the project, the City may consider this default of the Contract.

X. Agreement Execution

IN WITNESS WHEREOF, the parties have made and executed this agreement, the day and year first above written.

City of Alpena

OWNER

CONTRACTOR

By:

Cindy Johnson, Mayor Date

By:

Title

By:

Anna Soik, City Clerk Date

By:

Title

208 N. First Avenue

Business Address

Business Address

Alpena, MI 49707

City, State, Zip

City, State, Zip

 3/22/24

William Pfeifer, City Attorney Date

Business Telephone Number

(approved as to form only)

## PERFORMANCE BOND

The successful Bidder, simultaneously with the execution of the contract, will be required to furnish a faithful performance bond in amount equal to one hundred percent (100%) of the contract amount; said bond shall be secured from a surety company satisfactory to the Owner. The forms of the bond the successful Bidder will be required to execute are included in the contract documents.

I. KNOW ALL MEN BY THESE PRESENTS that \_\_\_\_\_ as Principal, hereinafter called Contractor, and \_\_\_\_\_ as Surety, hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_ as Obligee, hereinafter called Owner, in the amount of (\$ \_\_\_\_\_) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

II. WHEREAS, Contractor has by written agreement dated \_\_\_\_\_, 2024, entered into a Contract with Owner for \_\_\_\_\_ in accordance with drawings and specifications prepared by \_\_\_\_\_, which contract is by reference made a part hereof, and is hereinafter referred to as the contract.

III. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

- A. The Surety hereby waives notice of any alteration or extension of time made by the Owner.
- B. Whenever contract shall be and declared by Owner to be in default under the contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly.
  - 1. Complete the contract in accordance with its terms and conditions, or
  - 2. Obtain a bid or bids for submission to Owner for completing the contract in accordance with its terms and conditions and upon determination by Owner and Surety of the lowest responsible bidder arrange for a contract between such bidder and Owner and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the

Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph shall mean the total amount payable by Owner to Contractor under the contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

- C. Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the contract falls due.
- D. No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

IV. SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_ A.D. 2024

In the presence of:  
(Seal)

\_\_\_\_\_

Principal

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Title

## LABOR AND MATERIAL PAYMENT BOND

I. KNOWN ALL MEN BY THESE PRESENT that \_\_\_\_\_ as Principal, hereinafter called Principal, and as Surety, hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_ as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the amount of (\$ \_\_\_\_\_) for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by those presents.

II. WHEREAS, Principal has by written agreement dated \_\_\_\_\_, 2024, entered into a contract with Owner for \_\_\_\_\_ in accordance with drawings and specifications prepared by the City of Alpena Engineering Department, 208 N. First Avenue, Alpena, Michigan 49707, which contract is by reference made a part hereof, and is hereinafter referred to as the contract.

III. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably hereinafter defined, for all labor and material used or reasonably required for use in the performance of the contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- A. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or equipment rental directly applicable to the contract.
- B. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant.
  - 1. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: the Principal, the Owner or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for

whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

2. After the expiration of one (1) year following the date on which Principal ceased work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
3. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof is situated, or in the United States District Court for the district in which the project, or any part thereof is situated, and not elsewhere.

D. The amount of this bond shall be reduced by and to the extent of the payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IV. SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_ A.D. 2024

In the presence of:  
(Seal)

\_\_\_\_\_

Principal

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_

Surety

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Title

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

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



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# **GUIDELINES FOR USE OF EJCDC® C-700, STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT**

## **1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT**

EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), is the foundation document for the EJCDC Construction Series. The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the Owner and Contractor, and establish how the Contract is to be administered.

## **2.0 OTHER DOCUMENTS**

EJCDC documents are intended to be used as a system and changes in one EJCDC document may require a corresponding change in other documents. Other EJCDC documents may also serve as a reference to provide insight or guidance for the preparation of this document.

These General Conditions have been prepared for use with either EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price), or EJCDC® C-525, Agreement Between Owner and Contractor for Construction Contract (Cost-Plus-Fee) (2018 Editions). The provisions of the General Conditions and the Agreement are interrelated, and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018).

The full EJCDC Construction series of documents is discussed in the EJCDC® C-001, Commentary on the 2018 EJCDC Construction Documents (2018).

## **3.0 ORGANIZATION OF INFORMATION**

All parties involved in a construction project benefit significantly from a standardized approach in the location of subject matter throughout the documents. Experience confirms the danger of addressing the same subject matter in more than one location; doing so frequently leads to confusion and unanticipated legal consequences. Careful attention should be given to the guidance provided in EJCDC® N-122/AIA® A521, Uniform Location of Subject Matter (2012 Edition) when preparing documents. EJCDC® N-122/AIA® A521 is available at no charge from the EJCDC website, [www.ejcdc.org](http://www.ejcdc.org), and from the websites of EJCDC's sponsoring organizations.

If CSI MasterFormat™ is used for organizing the Project Manual, consult CSI MasterFormat™ for the appropriate document number (e.g., under 00 11 00, Advertisements and Invitations), and accordingly number the document and its pages.

## **4.0 EDITING THIS DOCUMENT**

Remove these Guidelines for Use. Some users may also prefer to remove the two cover pages.

Although it is permissible to revise the Standard EJCDC Text of C-700 (the content beginning at page 1 and continuing to the end), it is common practice to leave the Standard EJCDC Text of C-700 intact and unaltered, with modifications and supplementation of C-700's provisions set forth in EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018). If the Standard Text itself is revised, the user must comply with the terms of the License Agreement, Paragraph 4.0, Document-Specific Provisions, concerning the tracking or highlighting of revisions. The following is a summary of the relevant License Agreement provisions:

1. The term "Standard EJCDC Text" for C-700 refers to all text prepared by EJCDC in the main body of the document. Document covers, logos, footers, instructions, or copyright notices are not Standard EJCDC Text for this purpose.
2. During the drafting or negotiating process for C-700, it is important that the two contracting parties are both aware of any changes that have been made to the Standard EJCDC Text. Thus, if a draft or version of C-700 purports to be or appears to be an EJCDC document, the user must plainly show all changes to the Standard EJCDC Text, using "Track Changes" (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions.
3. If C-700 has been revised or altered and is subsequently presented to third parties (such as potential bidders, grant agencies, lenders, or sureties) as an EJCDC document, then the changes to the Standard EJCDC Text must be shown, or the third parties must receive access to a version that shows the changes.
4. Once the document is ready to be finalized (and if applicable executed by the contracting parties), it is no longer necessary to continue to show changes to the Standard EJCDC Text. The user may produce a final version of the document in a format in which all changes are accepted, and the document at that point does not need to include any "Track Changes," redline/strikeout, highlighting, or other indication of additions and deletions to the Standard EJCDC Text.

## 5.0 LICENSE AGREEMENT

This document is subject to the terms and conditions of the **License Agreement, 2018 EJCDC® Construction Series Documents**. A copy of the License Agreement was furnished at the time of purchase of this document, and is available for review at [www.ejcdc.org](http://www.ejcdc.org) and the websites of EJCDC's sponsoring organizations.

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

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



10. *Claim*

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

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.
22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
  - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
  - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
  - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor’s plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

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

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

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

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2—PRELIMINARY MATTERS

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

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

### 2.02 *Copies of Documents*

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

### 2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  2. a preliminary Schedule of Submittals; and
  3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

### 2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

### 2.05 *Acceptance of Schedules*

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

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

**ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
  - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
  - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.



### 3.02 *Reference Standards*

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

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
  - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

#### **ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

##### **4.01 *Commencement of Contract Times; Notice to Proceed***

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

##### **4.02 *Starting the Work***

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

##### **4.03 *Reference Points***

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

##### **4.04 *Progress Schedule***

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
  - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  - 2. Abnormal weather conditions;
  - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
  - 4. Acts of war or terrorism.
- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
  - 1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
  - 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
  - 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
  - 1. The circumstances that form the basis for the requested adjustment;
  - 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

## **ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

### **5.01 *Availability of Lands***

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

### **5.02 *Use of Site and Other Areas***

- A. ***Limitation on Use of Site and Other Areas***
  1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c)

damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

### 5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
  2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
  3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
  2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
  3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
  4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
  2. is of such a nature as to require a change in the Drawings or Specifications;
  3. differs materially from that shown or indicated in the Contract Documents; or
  4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
    - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
    - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
  2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
    - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
    - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or



- c. Contractor failed to give the written notice required by Paragraph 5.04.A.
  - 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  - 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
- 1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
  - 2. complying with applicable state and local utility damage prevention Laws and Regulations;
  - 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
  - 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  - 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
- 1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
    - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
    - c. Contractor gave the notice required in Paragraph 5.05.B.
  2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
  2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
  3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
  1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
  2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition,

then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom

Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 6—BONDS AND INSURANCE**

### **6.01 *Performance, Payment, and Other Bonds***

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner’s option, may purchase and maintain Owner’s own liability insurance. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
  - 1. Subcontractors to purchase and maintain worker’s compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional

insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

### 6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
  - 1. include at least the specific coverages required;
  - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
  4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
  5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
  2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
  3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
  4. not seek contribution from insurance maintained by the additional insured; and
  5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

#### 6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-



risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

#### 6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
  - 1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
  - 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

#### 6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

### **ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

#### 7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with

respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

#### 7.02 *Supervision and Superintendence*

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

#### 7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.
- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

#### 7.04 *Services, Materials, and Equipment*

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

7.05 "Or Equals"

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
      - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
      - 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
      - 3) has a proven record of performance and availability of responsive service; and
      - 4) is not objectionable to Owner.
    - b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
      - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
      - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

- E. *Treatment as a Substitution Request:* If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

#### 7.06 *Substitutes*

- A. *Contractor’s Request; Governing Criteria:* Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
  3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
    - a. will certify that the proposed substitute item will:
      - 1) perform adequately the functions and achieve the results called for by the general design;
      - 2) be similar in substance to the item specified; and
      - 3) be suited to the same use as the item specified.
    - b. will state:
      - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
      - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
      - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
    - c. will identify:
      - 1) all variations of the proposed substitute item from the item specified; and
      - 2) available engineering, sales, maintenance, repair, and replacement services.

- d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

#### 7.07 Concerning Subcontractors and Suppliers

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed

Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

#### 7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the

payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

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

#### 7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### 7.10 *Taxes*

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

#### 7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the



Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.12 *Record Documents*

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

#### 7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed

by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

#### 7.14 *Hazard Communication Programs*

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

#### 7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

## 7.16 Submittals

### A. Shop Drawing and Sample Requirements

1. Before submitting a Shop Drawing or Sample, Contractor shall:
  - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determine and verify:
    - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
    - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
  - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

### B. Submittal Procedures for Shop Drawings and Samples: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

#### 1. Shop Drawings

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

#### 2. Samples

- a. Contractor shall submit the number of Samples required in the Specifications.

- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
  3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
  3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
  4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
  5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
  6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
  7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
  8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.
- D. *Resubmittal Procedures for Shop Drawings and Samples*
1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
  - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
  - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
  - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
  - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.

F. *Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.*

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
  1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
  2. Recommendation by Engineer or payment by Owner of any progress or final payment;
  3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  4. Use or occupancy of the Work or any part thereof by Owner;
  5. Any review and approval of a Shop Drawing or Sample submittal;
  6. The issuance of a notice of acceptability by Engineer;
  7. The end of the correction period established in Paragraph 15.08;
  8. Any inspection, test, or approval by others; or
  9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

#### 7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent

caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

#### 7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
  - 1. Checking for conformance with the requirements of this Paragraph 7.19;
  - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
  - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

## **ARTICLE 8—OTHER WORK AT THE SITE**

### **8.01 *Other Work***

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.



## 8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  2. An itemization of the specific matters to be covered by such authority and responsibility; and
  3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

## 8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
  2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## **ARTICLE 9—OWNER'S RESPONSIBILITIES**

### **9.01 *Communications to Contractor***

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

### **9.02 *Replacement of Engineer***

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

### **9.03 *Furnish Data***

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

### **9.04 *Pay When Due***

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

### **9.05 *Lands and Easements; Reports, Tests, and Drawings***

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

### **9.06 *Insurance***

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

**ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will

determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

#### 10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

#### 10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

#### 10.05 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

#### 10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations,

Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

#### 10.07 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

#### 10.08 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

### **ARTICLE 11—CHANGES TO THE CONTRACT**

#### 11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

#### 11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
  - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

#### 11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.
- B. If Owner has issued a Work Change Directive and:
  - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
  - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

#### 11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

#### 11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
  - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
  3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
  2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.



## 11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

## 11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.
- B. *Change Proposal Procedures*
  - 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
  - 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
    - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
    - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such

actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision:* Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion:* Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

#### 11.10 *Notification to Surety*

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

### ARTICLE 12—CLAIMS

#### 12.01 *Claims*

A. *Claims Process:* The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an

increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
  2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
  3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval:* If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim:* If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

### 13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
  3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
5. Other costs consisting of the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
    - 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
  - c. *Construction Equipment Rental*
    - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
    - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
    - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.
  - g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
  - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
  - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
  - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
  - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
  - 6. Expenses incurred in preparing and advancing Claims.
  - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
  - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
  - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
    - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
    - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
  1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

### 13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.
- E. *Adjustments in Unit Price*
  - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
    - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
    - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
  - 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
  - 3. Adjusted unit prices will apply to all units of that item.



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

### 14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

### 14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
  - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  - 3. by manufacturers of equipment furnished under the Contract Documents;
  - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
  - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

#### 14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

## **ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

### **15.01 Progress Payments**

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
  - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
  - 3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
  - 4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications*
  - 1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend

- payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
    - a. the Work has progressed to the point indicated;
    - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
    - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
  3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
    - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
    - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
  4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
    - a. to supervise, direct, or control the Work;
    - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
    - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
    - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
    - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
  - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. The Work is defective, requiring correction or replacement;

- g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. The Contract Price has been reduced by Change Orders;
  - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
  - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
  - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to

any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
  - 1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
  - 2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
  - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the



provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 15.06 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
  - d. a list of all duly pending Change Proposals and Claims; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

#### 15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  1. correct the defective repairs to the Site or such adjacent areas;

2. correct such defective Work;
  3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
  4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

## 16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
  2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
  2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

## ARTICLE 17—FINAL RESOLUTION OF DISPUTES

### 17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
  2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
  2. agree with the other party to submit the dispute to another dispute resolution process; or
  3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## ARTICLE 18—MISCELLANEOUS

### 18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
  2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
  3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

### 18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

### 18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of,

any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

#### 18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

#### 18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

#### 18.06 *Survival of Obligations*

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

#### 18.07 *Controlling Law*

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

#### 18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

#### 18.09 *Successors and Assigns*

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

#### 18.10 *Headings*

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





## **Modifications to the Standard General Conditions of the Construction Contract**

The following modifications to the Standard General Conditions will apply to this contract.

18.1 Commencement of contract time: Notice to Proceed:

Article 2.03 will be deleted entirely.

18.2 Contractors Liability Insurance:

Articles 5.05 and 5.06 will be deleted entirely.

Article 5.03 shall be amended to reflect insurance requirements of the City of Alpena per Section VI in the Instructions to Bidders.

18.3 Waiver of Rights:

Article 5.07 will be deleted entirely.

18.4 Indemnifications:

Article 6.20 the wording "or arbitration" will be deleted.

18.5 Owner's Responsibility:

Article 8.02 will be deleted entirely.

18.6 Owner May Terminate:

Article 15.03 the wording "or arbitration" will be deleted.

18.7 Arbitration:

Article 16 will be deleted entirely.

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AIA Document A305

# Contractor's Qualification Statement

1986 EDITION

*This form is approved and recommended by The American Institute of Architects (AIA) and The Associated General Contractors of America (AGC) for use in evaluating the qualifications of contractors. No endorsement of the submitting party or verification of the information is made by the AIA or AGC.*

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED TO:

ADDRESS:

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

Corporation

Partnership

Individual

Joint Venture

Other

NAME OF PROJECT (if applicable):

TYPE OF WORK (file separate form for each Classification of Work):

\_\_\_\_\_ General Construction

\_\_\_\_\_ HVAC

\_\_\_\_\_ Plumbing

\_\_\_\_\_ Electrical

\_\_\_\_\_ Other \_\_\_\_\_

(please specify)

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**1. ORGANIZATION**

1.1 How many years has your organization been in business as a Contractor?

1.2 How many years has your organization been in business under its present business name?

1.2.1 Under what other or former names has your organization operated?

1.3 If your organization is a corporation, answer the following:

1.3.1 Date of incorporation:

1.3.2 State of incorporation:

1.3.3 President's name:

1.3.4 Vice-president's name(s):

1.3.5 Secretary's name:

1.3.6 Treasurer's name:

1.4 If your organization is a partnership, answer the following:

1.4.1 Date of organization:

1.4.2 Type of partnership (if applicable):

1.4.3 Name(s) of general partner(s):

1.5 If your organization is individually owned, answer the following:

1.5.1 Date of organization:

1.5.2 Name of owner:

- 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

## 2. LICENSING

- 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

- 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

## 3. EXPERIENCE

- 3.1 List the categories of work that your organization normally performs with its own forces.

- 3.2 Claims and Suits. (If the answer to any of the questions below is yes, please attach details.)

3.2.1 Has your organization ever failed to complete any work awarded to it?

3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

- 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)

3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

3.4.1 State total worth of work in progress and under contract:

3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

3.5.1 State average annual amount of construction work performed during the past five years:

3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

#### 4. REFERENCES

4.1 Trade References:

4.2 Bank References:

4.3 Surety:

4.3.1 Name of bonding company:

4.3.2 Name and address of agent:

## 5. FINANCING

### 5.1 Financial Statement.

5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);

Net Fixed Assets;

Other Assets;

Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);

Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

5.1.2 Name and address of firm preparing attached financial statement, and date thereof:

5.1.3 Is the attached financial statement for the identical organization named on page one?

5.1.4 If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidiary).

5.2 Will the organization whose financial statement is attached act as guarantor of the contract for construction?

**6. SIGNATURE**

6.1 Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Name of Organization:

By:

Title:

6.2

M \_\_\_\_\_ being  
duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be  
misleading.

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public:

My Commission Expires:



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SPECIAL PROVISION  
FOR  
**Safety Requirements**

**ALP**

**1 of 1**

**01/09**

**a. Description of Work** - While the Contractor is performing any work on or related to the project described by the specifications herein, they shall conform with all applicable occupational safety and health regulations as set forth by Federal, State, and Local agencies, especially, but not limited to MDOT, FHWA, OSHA, MIOSHA.

**b. Materials** - All materials, including, but not limited to, all safety equipment shall conform to the most current applicable standards and requirements.

**c. Construction Operations** - The Contractor shall be solely responsible for maintaining conformance with all applicable Federal, State, and Local safety requirements while performing any work for the City of Alpena as part of this contract. The City of Alpena shall not assume any responsibility, nor enforce, any safety standards or requirements. The Contractor shall hold the City of Alpena harmless to any violations incurred or fines received precipitating from non-conformance with any safety regulations.

The contractor SHALL provide a typed copy of the emergency contacts for this project at the pre-construction meeting or 72 hours prior to work.

**d. Measurement and Payment** - There shall be no additional payment for conformance with safety and health regulations. Any costs for fines, safety equipment, safety materials, or safety training as specified by Federal, State, and Local agencies initially or as a result of inspections at the job site shall be borne by the Contractor.

SPECIAL PROVISION  
FOR  
**Permit Requirements**

ALP

1 of 1

06/18

**a. Description.** The Contractor shall be responsible for obtaining all Federal, State, and Local permits required as part of this project, whether stated or implied.

**b. Application Preparation.** Unless otherwise noted, the Contractor shall be responsible for preparing all application paperwork and any additional modifications to the Contract plan sheets as needed for permits.

**c. Cost.** The Contractor shall be solely responsible for all costs associated with making application for and obtaining permits.

**d. Permit Types.** The following permits may be required as part of this project. Checked boxes indicate permits specifically required for this project. This list may or may not be complete, it shall be the responsibility of the Contractor to determine the need for any additional permits.

- Soil Erosion and Sedimentation Control (SESC)**  
(Engineer's Office will prepare, and Contractor shall submit application and make payment)
- State of Michigan Electrical (Through City Building Department)
- State of Michigan Plumbing (Through City Building Department)
- State of Michigan Mechanical (Through City Building Department)
- MDEQ/Army Corps of Engineers Joint Permit

**e. Notice to Proceed.** The Engineer's Office shall receive copies of all permits secured for the project. City will not issue the Notice to Proceed until the proper permits are secured for the applicable portions of work on the project. The City may issue a partial notice to proceed, depending upon which permits are secured or in process.

City of Alpena  
Special Provision  
For  
**Excavation, Earth, LM, Modified**

**ALP**

**1 of 1**

**08/12**

**a. Description.** All work in this section shall be done in accordance with Section 205.01 of the 2012 MDOT Standard Specifications for Construction.

**b. Materials.** All materials shall be as specified in Section 205.02 of the 2012 Standard Specifications for Construction.

**c. Construction.** All operations shall be as specified in Section 205.03 of the 2012 Standard Specifications for Construction and as modified herein.

Removal of all pipes smaller than 8" in diameter shall be included as part of this item.

Removal of all driveway approaches, of any material, shall be included as part of this item.

Unless otherwise specified, removal of HMA surface (street) shall be included as part of this item, as indicated on the typical cross-section sheet.

**d. Measurement and Payment.** The completed work of excavation will be measured by volume, loose measure, and paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Excavation, Earth, LM, Modified	Cubic Yard

Payment for "Excavation, Earth, LM, Modified" will be based upon load tickets issued to the Engineer in field. The tickets will specify the loaded quantity for each truck carrying excavated material that has become the property of the contractor and is being removed from the site under the contract definition of "Excavation, Earth, LM, Modified". The quantities shown on the plans and in the proposal reflect a compacted volume multiplied by one hundred and twenty-five percent to approximate loose measure volume.

CITY OF ALPENA  
SPECIAL PROVISION  
FOR  
**SUBGRADE UNDERCUTTING**

**ALP**

**1 of 1**

**07/23**

- a. Description.** All work in this section shall be performed in accordance with section 205 of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- b. Materials.** Provide materials in accordance with subsection 205.02 of the MDOT Standard Specifications for Construction.
- c. Construction.** All operations shall be as specified in subsection 205.03 of the MDOT Standard Specifications for Construction and as modified herein.

This item shall also include the removal of all materials including, but not limited to, topsoil, muck, peat, clay, and similar. No additional payment shall be made for varying classifications of material to be removed.

- d. Measurement and Payment.** The completed work of Subgrade Undercutting, Type \_\_, Modified will be measured by volume, loose measure, and paid for at the contract unit price for the following contract item (pay item):

<b>Pay Item</b>	<b>Pay Unit</b>
Subgrade Undercutting, Type __, Modified.....	Cubic Yard

Payment for Subgrade Undercutting, Type \_\_, Modified will be based upon load tickets issued to the Engineer in field. The tickets will specify the loaded quantity for each truck carrying excavated material that has become the property of the Contractor and is being removed from the site under the contract definition of "Subgrade Undercutting, Type \_\_, Modified." The quantities shown on the plans and in the proposal reflect a compacted volume multiplied by one hundred and twenty-five percent to approximate loose measure volume.

This item shall be measured in full depth as determined necessary by the Engineer from the bottom of the subbase (18 inches below aggregate base) and the width necessary as determined by the Engineer and as shown on the typical sections.

City of Alpena  
Special Provision  
for  
**Aggregate Base, 22A, Modified**

**ALP**

**1 of 1**

**08/12**

**a. Description.** This work shall consist of furnishing and placing of all aggregate base under proposed paved surfaces as described by the plan drawings in accordance with Section 302.01 of the 2012 Standard Specifications for Construction and as directed by the Engineer.

**b. Materials.** All materials shall be as specified in Section 302.02 of the 2012 Standard Specifications for Construction except as modified herein.

Aggregate shall be 100 percent crushed limestone meeting the gradation of Dense Graded aggregate as described in the MDOT 2012 Standard Specifications for Construction.

**c. Construction.** All operations shall be as specified in Section 302.03 of the 2012 Standard Specifications for Construction.

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

<u>Pay Item</u>	<u>Pay Unit</u>
Aggregate Base, 22A, Modified	Ton

Payment for "Aggregate Base, 22A, Modified" includes furnishing and placing aggregate as required on the plans or directed by the Engineer. Additional depth of aggregate that exceeds that called for on the plans or as directed by the Engineer, will not be eligible for payment.

Aggregate under HMA surface mainline, HMA approaches, and Aggregate Approaches shall be paid as "Aggregate Base, 22A, Modified".

CITY OF ALPENA  
SPECIAL PROVISION  
FOR  
**STORM SEWER**

**ALP**

**1 of 1**

**07/23**

- a. Description.** All work in this section shall be done in accordance with section 402 of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- b. Materials.** Provide materials in accordance with subsection 402.02 of the MDOT Standard Specifications for Construction, except as modified herein.

The pipe used for catch basin leads shall be Schedule 40 PVC of the diameter as indicated on the plans.

- c. Construction.** All operations shall be as specified in subsection 402.03 of the MDOT Standard Specifications for Construction.
- d. Measurement and Payment.** The completed work of Storm Sewer installation will be measured and paid for at the contract unit price for the following contract item (pay item):

<b>Pay Item</b>	<b>Pay Unit</b>
Sewer, CI A, Sch40 PVC, __ inch, Tr Det B2.....	Foot
Sewer Bulkhead, 8 inch .....	Each

SPECIAL PROVISION  
FOR  
**Replace and Adjust Structure Covers**  
1 of 1

ALP

01/17

**a. Description.** This work shall consist of supplying and installing new and adjusting all drainage structure covers to the proposed paved surfaces as described by the plan drawings in accordance with Section 403.01 of the most current MDOT Standard Specifications for Construction and as directed by the Engineer.

**b. Materials.** All materials shall be as specified in Section 403.02 of the most current MDOT Standard Specifications for Construction except as modified herein. The following castings and cover types shall be used unless otherwise specified on the construction plans:

<u>Structure Type</u>	<u>Cover Type</u>
Storm Sewer Manhole	EJIW 1040, must have ALPENA logo and "STORM" inscribed on cover
Sanitary Sewer Manhole	EJIW 1040, must have ALPENA logo and "SANITARY" inscribed on cover
Catch Basin	EJIW 7045, with M-1 Grate and T1 back, must have "dump no waste" & "drains to rivers" inscribed on casting. Or as directed on plans.

**c. Construction.** All operations shall be as specified in Section 403.03 of the most current MDOT Standard Specifications for Construction except as modified herein:

Contractor shall remove existing cover and casting and replace with the above noted materials. All structures shall be adjusted after installation of the leveling course of asphalt and prior to placing the top course of asphalt. All HMA and aggregate material disturbed while adjusting casting to grade shall be collected and removed from the site. After casting is set, Contractor shall replace disturbed material to top of aggregate base with 4-sack grout. After 16 hours (minimum) of cure time the Contractor shall replace disturbed HMA material with HMA as described by the typical cross-sections and compact with plate compactor as directed by Engineer in field. All work to be included in the corresponding structure adjust or new structure item.

**d. Measurement and Payment.** The completed work of supplying and installing new and adjusting drainage structure covers will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Dr Structure Cover, Repl and Adj, Case 1, Modified	Each



City of Alpena  
Special Provision  
for  
**Drainage Structures and Castings**

ALP

1 of 1

08/12

**a. Description.** This work shall consist of furnishing and installing of all drainage structures in accordance with Section 403.01 of the MDOT 2012 Standard Specifications for Construction and as directed by the Engineer.

**b. Materials.** All materials shall be as specified in the MDOT 2012 Standard Specifications for Construction except as modified herein. The drainage structure itself shall be pre-cast in accordance with standard plan R-1-E "Drainage Structures".

Materials also included as part of this pay item are the drainage structure cover and casting which shall conform to Section 403.02 of the MDOT 2012 Standard Specifications for Construction. The castings and cover types shall be as specified on the construction plans.

All granular material influencing the structure as determined by the trench details noted or by the engineer in field shall be in accordance with ASTM D2321 gradation (1½" maximum particle size)

**c. Construction.** Construction of drainage structures shall conform to Section 403.03 of the 2012 Standard Specifications for Construction.

**d. Measurement and Payment.** The completed work of furnishing and installing drainage structures with the appropriate covers will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Dr Structure, 24 inch dia, with Cover and Casting, Special	Each
Dr Structure, 48 inch dia, with Cover and Casting, Special	Each

Additional pipe needed for connecting proposed structures to existing sewers shall not be paid for separately and shall be included part of the completed work of furnishing and installing drainage structures with the appropriate covers.

CITY OF ALPENA  
SPECIAL PROVISION  
FOR  
**UNDERDRAIN OUTLET TO DRAINAGE STRUCTURE**

**ALP**

**1 of 1**

**07/23**

- a. Description.** This work shall consist of furnishing and installing Underdrain Outlet to Drainage Structures as described by the plan drawings, in accordance with section 404 of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction and as directed by the Engineer.
  
- b. Materials.** Provide materials in accordance with subsection 404.02 of the MDOT Standard Specifications for Construction, except as modified herein.
  
- c. Construction.** All operations shall be as specified in subsection 404.03 of the MDOT Standard Specifications for Construction.

Contractor shall outlet all subgrade underdrains into the city storm system.

- d. Measurement and Payment.** The completed work of furnishing and placing aggregate will be paid for at the contract unit price for the following contract item (pay item):

<b>Pay Item</b>	<b>Pay Unit</b>
Underdrain Outlet to Dr Structure, __ inch .....	Each

City of Alpena  
Special Provision  
For  
**HMA Surfaces**

**ALP**

**1 of 1**

**08/19**

**a. Description.** This work shall consist of furnishing and placing of all HMA surfaces as described by the plan drawings in accordance with Section 501.01 of the 2012 MDOT Standard Specifications for Construction and as directed by the Engineer.

**b. Materials.** All materials shall be as specified in Section 501.02 of the 2012 MDOT Standard Specifications for Construction except as modified herein.

Mix Type	Total percent passing Indicated Sieve											Min % Crush	Max % Soft Part. (a)	Min Ang. Index (b)	L.A. Abrasion (max) (c)	Max Sand Ratio (d)
	1 ½	1	¾	½	3/8	#4	#8	#30	#50	#100	#200					
13A	-	-	100	75-95	60-90	45-80	30-65	15-40	10-25	5-15	3-6	25	8.0	2.5	40	50
<p>a. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8.0 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.</p> <p>b. The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the fine material contributed by RAP if present in the mixture.</p> <p>c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50</p> <p>d. No more than 50% of the material passing the No. 4 sieve is allowed to pass the No. 30 Sieve.</p>																

**c. Construction.** All operations shall be as specified in Section 501.03 of the 2012 MDOT Standard Specifications for Construction.

**d. Measurement and Payment.** The completed work of furnishing and placing HMA mixture will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
HMA, 13A, Modified	Ton
HMA Approach, Modified	Ton

Unless otherwise specified as "Hand Patching" or "HMA Approach", all paving around radii, intersection legs, and driveways shall be included as part of the mainline paving items and shall not be paid for separately.

City of Alpena  
Special Provision  
for  
**HMA Application Estimate**

**ALP**

**1 of 1**

**08/12**

**a. Description of Work.** This work shall be done in accordance with the requirements of Section 501 of the 2003 Standard Specifications for Construction except as modified herein.

**b. Materials.** The HMA Mixture, 13A shall have a yield of 165 pounds per square yard for the top course.

The HMA Mixture, 13A shall have a yield of 165 pounds per square yard for the leveling course.

HMA bond coat application rate shall be 0.05 – 0.15 gallons per square yard.

AWI shall be minimum 220.

**c. Construction.** The Nuclear Gauge Method for testing compaction, Section 501.03.G is here-by waived for this project. The Number of Rollers Method chart below shall apply.

**Number of Rollers Required Based On Placement Rate:**

Average Laydown Rate, Square Yards Per Hour	Number of Rollers Required	
	Compaction Rollers	Finish Rollers
Less Than 700	1	*1
700 - 1500	1	1
1500 - 3300	2	1
3300 - 6000	3	1

\* The compaction roller may be used as the finish roller also.

**d. Measurement and Payment.** Measurement and Payment shall be at the contract unit price per ton.

<u>Pay Item</u>	<u>Pay Unit</u>
HMA, 13A	Ton

Unless otherwise specified as “Hand Patching” or “HMA Approach”, all paving around radii, intersection legs, and driveways shall be included as part of the mainline paving items and shall not be paid for separately.

CITY OF ALPENA  
SPECIAL PROVISION  
FOR  
**DETECTABLE WARNING SURFACE, MODIFIED**

**ALP**

**1 of 1**

**07/23**

- a. **Description.** This work shall consist of furnishing and placing of detectable warning surfaces in sidewalk ramps as described by the plan drawings in accordance with section 803 of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction and as directed by the Engineer.
  
- b. **Materials.** All materials shall be as specified in subsection 803.02 of the MDOT Standard Specifications for Construction except as modified herein:  
  
Detectable Warning Surface shall be cast iron material.
  
- c. **Construction.** All operations shall be as specified in subsection 803.03 of the MDOT Standard Specifications for Construction.
  
- d. **Measurement and Payment.** The completed work of furnishing and placing Detectable Warning Surface, Modified will be paid for at the contract unit price for the following contract item (pay item):

<b>Pay Item</b>	<b>Pay Unit</b>
Detectable Warning Surface, Modified.....	Foot

City of Alpena  
Special Provision  
For  
**Concrete Stamping**

**ALP**

**1 of 4**

**03/24**

**a. Description.** This work shall consist of constructing stamped concrete in accordance with MDOT Standard Plan series R-29 and the MDOT 2012 Standard Specifications for Construction and as directed by the Engineer.

**b. Materials.** All materials shall be as specified in the MDOT 2012 Standard Specifications for Construction except as modified herein.

Concrete

Concrete mixture shall be MDOT mixture P1.

Admixtures

All concrete admixtures shall meet the requirements of Section 903 of the MDOT 2012 Standard Specifications for Construction. Admixtures containing calcium chloride are not permitted.

Coloring

No integral coloring shall be utilized.

Color Hardener

Dry-shake color hardener for application on the crosswalks shall be equal or comparative by shade to LM Scofield color #C-21 or approved equal. Recommended coverage is 60 lbs./100ft<sup>2</sup>.

Release Agent

Dry-shake powder for facilitating release of imprinting tools shall be LM Scofield #A-21 "Deep Charcoal", or approved equal.

Surface Seal

The final surface seal shall be two coats of solvent based, non-yellowing, crystal clear, class B standards or better, with non-skid additive.

- a. Brickform: Gemseal GS-5
- b. Vexcon Chemicals:
  1. AC 1315 Solvent base sealer (with curing compounds)
  2. Gloss Sealer FT Solvent base sealer (without curing compounds)

Imprinting Tools

Imprinting tools shall be Brickform Model Number FM-8010 S Cedar Wood Plank Set w/ Nails. The concrete surface shall be patterned as shown on the plans. Contractor may utilize imprinting tools supplied by the City of Alpena. Contractor shall return cleaned

City of Alpena  
Special Provision  
For  
**Concrete Stamping**

**ALP**

**2 of 4**

**03/24**

imprint tools to the City upon completion of project. The Contractor shall be responsible for any damage to the imprint tools and shall replace as necessary at no cost to the City.

**c. Construction.** Construction of stamped concrete shall conform to MDOT 2003 Standard Specifications for Construction and as modified herein.

Base Preparation

Excavation shall be made to the required depth and to a width that will permit forming. All unsuitable material shall be removed below the required depth and replaced with sound earth. The prepared base shall be compacted to 95% of its maximum unit weight in accordance with Section 205 of the Standard Specifications for Construction. Granular material base shall be placed and compacted on the sound earth, as directed by the Engineer. A vapor barrier shall not be used.

Concrete Coloring

The coloring pigment must be added at the batch plant. The truck mixer drum shall be rotated a minimum of 50 revolutions at mixing speed after adding the coloring pigment. The amount of coloring pigment to be added shall be as specified by the pigment manufacturer.

Protection of Surroundings

All surrounding surfaces, including, but not limited to walls, store fronts, should be protected to prevent discoloration from the concrete. All clean-up and reports shall be responsibility of the contractor.

Placing Concrete

Concrete placement shall meet the requirements of Subsection 803.03.C of the Standard Specifications for Construction, and as described herein.

The surface shall be struck off and floated to produce a smooth even surface with a maximum surface variance of plus or minus 1/8 inch in 10 feet in any direction. All edges and joints shall be rounded to the specified radius with an approved finishing tool.

Controls shall be laid out prior to stamping the concrete with any necessary strings and stakes for lining up the stamping tools. Unless otherwise specified, ungrouted installations shall be stamped 5/16 inch. The concrete is ready to be stamped when a 2 inch deep impress made with the finger does not fill with water and the concrete maintains its shape.

The stamps must be clean of foreign matter prior to the stamping operation. It is

City of Alpena  
Special Provision  
For  
**Concrete Stamping**

**ALP**

**3 of 4**

**03/24**

generally recommended to clean stamps and reapply powdered or clear liquid release to all contact surfaces approximately every 25-30 square yards.

The freshly placed concrete surface shall be barricaded against access for at least 24 hours after the release powder has been applied. The concrete shall not be opened to pedestrian traffic until the release powder has been washed off.

Joists

The control joints shall be sawed as soon as the concrete has hardened such that no raveling or spalling occurs, but before any random uncontrolled cracking develops. Joint depths shall be maintained at  $\frac{1}{4}$  of the slab(s) thickness. Layout control joints to follow stamping pattern as closely as possible.

Joists shall be sawed with their faces perpendicular to the surface of the sidewalk and shall not vary more than  $\frac{3}{16}$  inch from their designated position. Transverse joints shall be constructed at right angles to the centerline of the sidewalk and longitudinal joints parallel to the centerline. Locations for longitudinal and transverse joints shall be as directed by the Engineer.

When the sidewalk is constructed adjacent to a previously placed slab, transverse joints in the succeeding slab shall be aligned with like joints in the adjacent slab.

Expansion joint filler shall extend to the full depth of the joint with its top surface  $\frac{1}{4}$  -  $\frac{1}{2}$  inch below the finished surface.

Acid Washing

Apply a one (1) part muriatic acid to 10 parts water to the surface and agitate the concrete with the side of a straw broom a minimum of 36 hours after placement. Wash surface until proper color has been achieved and then flush thoroughly. The contractor shall attempt to remove 70% or more of the color release prior to sealing.

Detailing

If squeeze joints are present a grinder or chisel shall be used to remove. Ground areas shall be burnished with dry release agent using a camel back sponge or 1-2" wide brush with bristles cut down to  $\frac{1}{2}$ ". Blow away excess release with a high velocity blower.

Surface Sealing

The surface must also be allowed to completely dry prior to sealing. Surface sealer shall be applied within 24 hours of acid washing.

The surface temperature of the concrete shall not exceed 80 F or be below 30 F



City of Alpena  
Special Provision  
For  
**Concrete Stamping**

**ALP**

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**03/24**

at the time the sealer is applied. Two (2) uniform coats shall be applied to the concrete at the manufacturer's recommendation rate. The concrete surface shall be barricaded against access from the time of the casting to at least 24 hours after the sealer is applied.

Pedestrian Traffic

The concrete shall not be opened to pedestrian traffic until at least 24 hours after the sealer has been applied. During such period, entrance to all residents and businesses shall be maintained at all times. Construction should be staged to allow for such access.

**d. Measurement and Payment.** The completed work of constructing stamped concrete will be paid for at the contract unit price(s) for the following contract item(s) (pay item(s)) as they appear in the contract schedule of items:

<u>Pay Item</u>	<u>Pay Unit</u>
Sidewalk, Colored Conc, 4 inch, Stamped	Square Feet
Crosswalk, Colored Conc, 6 inch, Stamped	Square Feet
Sidewalk Ramp, ADA, Colored Conc, Stamped	Square Feet

Stamped Concrete will be measured in place by area in square feet. Payment shall include all labor, material and equipment required to perform all work in accordance with this special provision and as show on the plans, including, but not limited, to providing the Engineer with the final documentation of the concrete mix design.

CITY OF ALPENA  
 SPECIAL PROVISION  
 FOR  
**REMOVING AND REPLACING PERMANENT SIGNAGE**

**ALP**

**1 of 3**

**07/23**

- a. Description.** All work in this section shall be done in accordance with section 810 of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, except as modified herein.
- b. Materials.** Provide materials in accordance with subsection 810.02 of the MDOT Standard Specifications for Construction.
- c. Construction.** Construct in accordance with subsection 810.03 of the MDOT Standard Specifications for Construction.

Contractor shall remove and store all permanent signage within the Construction Influence Area (CIA) limits as defined in the special provision "Maintaining Traffic". Removal of the signs and supports shall be done in a careful manner to avoid damage to the sign and support during the life of the project. The signs and supports shall be stored outside the work area at a site within the CIA limits as directed. Any damage incurred in the removal and/or storage of the signs or supports which cause the sign or support to be replaced in order to be reinstalled properly shall be at the full cost of the Contractor.

City of Alpena (City) owned permanent signs and supports shall be reinstalled within one day of work completion, unless otherwise directed by the Engineer. Signs not re-installed, under the direction of the Engineer, shall remain property of the City and delivered to a City specified site, by the Contractor, at no additional cost. The locations of the signs and supports will be staked by the City prior to the Contractor reinstalling them. For staking purposes, the Contractor shall notify the City's Engineering Department 72 hours prior to planned reinstallation. The vertical distance from the bottom of the lowest sign mounted on the post to the ground at the base of the post shall be 7'-6".

The contractor is not responsible for any additional or new signage in the CIA limits, unless otherwise directed by the Engineer, in which case the City of Alpena will provide the sign and supports necessary.

- d. Measurement and Payment** - The completed work, as described, will be measured and paid for at the contract unit price using the following pay item: **Subsection 810.04 of the MDOT Standard Specifications for Construction is hereby deleted and replaced as follows:**

<b>Pay Item</b>	<b>Pay Unit</b>
Removing and Replacing Permanent Signage .....	Lump Sum

When City owned permanent signs and supports are removed to avoid damage or for the Contractor's convenience as described above, payment for removing, storing, and reinstalling permanent signs shall be included in the payment for "Removing and Replacing Permanent Signage".

CITY OF ALPENA  
SPECIAL PROVISION  
FOR  
**REMOVING AND REPLACING PERMANENT SIGNAGE**

ALP

2 of 3

07/23

Existing Signage:

Sign	Station	Offset	Action
<b>City Alignment</b>			
No Parking Symbol	1+70	18 Rt	Relocate
Yield Except to Right Turn	2+14	13 Rt	Remove and Salvage
Stop Sign	2+23	50.4 Rt	Relocate
Street Signage	2+29	25 Rt	Relocate
Directional Arrow	2+64	17.8 Lt	Relocate
Watch for Children	2+74	17.3 Rt	Remove and Salvage
Reduce Speed 30 Ahead	3+72	12 Lt	Relocate
Sweet Water Trail (Rt Arrow)	3+72	12 Lt	Relocate
Stop Sign	4+39	19.4 Lt	Relocate
Stop Sign	4+39	22.5 Lt	Relocate
Street Signage	4+53	28.3 Rt	Relocate
Authorized Vehicle Only	4+61	35 Lt	Protect in Place
No Truck Symbol	4+72	21.1 Rt	Relocate
<b>MDOT Alignment</b>			
Chevron	378+26	30.6 Lt	Relocate
Route Marker	378+26	30.6 Lt	Relocate
No Parking Symbol	379+68	69.2 Rt	Relocate
Sweet Water Trail (Lt Arrow)	379+68	69.2 Rt	Relocate
Stop Sign	380+24	43.3 Rt	Relocate
Street Signage	380+34	31.9 Rt	Remove and Salvage
Chevron	380+38	32.5 Lt	Protect in Place
No Parking Symbol	380+89	27.9 Rt	Protect in Place
Route Marker	380+89	27.9 Lt	Protect in Place

CITY OF ALPENA  
SPECIAL PROVISION  
FOR  
**REMOVING AND REPLACING PERMANENT SIGNAGE**

**ALP**

**3 of 3**

**07/23**

Proposed Signage:

<b>No</b>	<b>Sign</b>	<b>Station</b>	<b>Offset</b>	
<b>City Alignment</b>				
1	No Parking Symbol	1+80	25	Rt
2	Stop Sign	2+20	37	Lt
3	Directional Arrow	2+48	23.5	Rt
4	Street Name Signage	2+62	32	Lt
5	No Parking Symbol	3+00	25	Rt
6	Street Name Signage	3+50	61	Lt
7	Stop Sign	3+70	33	Rt
8	Stop Sign	4+40	23	Lt
9	Street Name Signage	4+50	36	Rt
10	Stop Sign	4+65	24	Lt
11	No Truck Symbol	5+00	23	Rt
<b>MDOT Alignment</b>				
12	Route Marker	378+26	29	Lt
12	Chevron	378+26	29	Lt
13	Reduce Speed 30 Ahead	377+20	29	Rt
13	Sweet Water Trail (Rt Arrow)	377+20	29	Rt
14	Sweet Water Trail (Lt Arrow)	379+80	29	Lt

This table also appears in the plan set. The Numbers correspond to locations shown on plan sheet 7 of 13.

City of Alpena  
Special Provision  
for  
**Pavement Marking**

**ALP**

**1 of 1**

**08/16**

**a. General.** This work consists of furnishing all labor, tools, equipment and materials necessary to apply traffic control pavement markings in accordance with the 2012 Michigan Department of Transportation Specifications for Construction. The color and width of longitudinal or transverse markings; and the color, type and size of symbols or legends shall conform to the 2011 edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), according to intended purpose and function.

**b. Materials.** The paint and glass beads shall conform to Section 811.02 in the 2012 MDOT Michigan Department of Transportation Specifications for Construction except as modified herein.

All paint shall conform to the 2012 Michigan Department of Transportation Specifications for Construction for "Regular Dry Marking Material" in Section 920 (white and yellow). Regular Dry Paint shall be used for all crosswalk lines, stop bars, legends and symbols.

**c. Construction Operations.** Construction operations shall conform to Section 811.03 in the 2012 Michigan Department of Transportation Specifications for Construction.

**d. Measurement and Payment.** The completed work of furnishing and installing pavement markings will be paid for at the contract price for the following contract item (pay items):

<b>Item</b>	<b>Unit</b>
Pavt Mrkg, Regular Dry, ___ inch, Stop Bar	Foot
Pavt Mrkg, Regular Dry, ___ inch, Cross Walk	Foot
Pavt Mrkg, Regular Dry, _____ Arrow Sym	Each
Pavt Mrkg, Regular Dry, ___ inch, Parking Stall	Each
Pavt Mrkg, Regular Dry, ___ inch Crosshatch, Yellow	Square Foot

City of Alpena  
Special Provision  
for  
**Slope Restoration**

ALP

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08/12

- a. **Description of Work** - This work shall consist of fine grading all disturbed areas outside of the curb and gutter and sidewalks that were disturbed by construction operations to Class A slopes, furnishing and placing topsoil, hydroseeding, and watering. Hydroseeding shall be the only acceptable method of stabilization. Seed, fertilizer, and mulch shall not be placed by hand.
- b. **Materials** - All materials shall be as specified herein.
  1. **Topsoil** - All topsoil, on-site or hauled in, must be screened prior to placement. The material shall be free of stone and contain approximately 35-50% organic materials. Topsoil shall be placed to a compacted depth of no less than 6 inches. The Engineer reserves the right to reject any topsoil placed or require additional raking and stone and debris removal
  2. **Mulch** - Hydromulch products shall be wood fibers of varying lengths or wood fibers combined 50/50 with cellulose paper. Mulch shall not be comprised entirely of cellulose paper or paper fibers and shall not contain any straw materials. Mulch shall be applied at a rate of 1600 to 1800 lbs/acre.
  3. **Fertilizer** - Fertilizer shall be 6-24-24 or 15-30-15 and be applied at a rate of 500 lbs/acre minimum.
  4. **Seeding** - Seed mixture shall be MDOT TDS (Turf Dry Sandy) Seed Mixture in accordance with the MDOT 2012 Standard Specifications for Construction unless otherwise specified by the Engineer. Seed certifications must be provided to the Engineer prior to hydroseeding. Seeding shall be applied at the rate of 220 lbs/acre.
  5. **Equipment** - Equipment shall have a built in agitation system and operating capacity sufficient to agitate, suspend a homogeneous slurry mix.
- c. **Construction Operations** - The Contractor shall restore all areas as described in Section 816.03 of the MDOT 2012 Standard Specifications for Construction. Materials shall be placed at the rates described above, or as directed by the Engineer. The plans and proposal show the estimated quantities.

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The contractor shall be responsible for the watering of all hydroseeded areas. A minimum of 2.5 gallons of water shall be placed for every square yard of hydroseeded area by the spray method. The area restored shall be watered within eight hours of initial placement and additional applications shall be made every other calendar day for three weeks at the rate identified above. Additional applications of water may be required by the Engineer based on the season and weather conditions.

Actual rates and frequency calculations may be waived by the Engineer if grass growth is acceptable in the opinion of the Engineer.

- d. Turf establishment** - Shall be defined by three inches of grass growth over 75% of the restored area forty-five (45) days after hydroseed application as determined by the engineer. Turf establishment requirements MAY be waived by the Engineer if the growth is deemed acceptable.
- e. Measurement and Payment** - The completed work as measured for Slope Restoration will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Slope Restoration	Square Yard

Payment for "Slope Restoration" includes furnishing and placing Class A Slopes, 4 inches topsoil, hydroseeding, and watering. No separate payment shall be made for these items. "Slope Restoration" will be measured in place by area in square yards.

The City reserves the right to withhold 5% of the total contract amount as sufficient funds to guarantee turf establishment. The City will, after 45 days from the date of seeding inspect the area and determine if adequate growth has been attained and if the retained funds can be released to the contractor. If there is, in the opinion of the City, insufficient growth, the City may retain these funds for an additional 45 day period. If after the second 45 day period the City continues to determine that there is insufficient growth, the City reserves the right to subcontract out additional lawn restoration services to correct the deficiency with any cost to the City deducted from any funds owed to the primary contractor. The failure by a contractor to achieve adequate grass growth may result in dismissal of any bids received by that contractor for future work.

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**a. Description.** The work under this specification consists of furnishing all materials, labor, transportation, tools, and services required for the execution of all plantings and related work noted in the specifications.

**b. Materials.**

General Planting Mixture

The material used for tamping around the roots of plant material shall be conducive to promoting plant growth for the particular tree species.

Mulch

Mulch shall consist of bark products, well-rotted sawdust, or other prior approved products.

Superphosphate

If utilized, shall be composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than 18% available phosphoric acid.

Fertilizer

Fertilizer shall be a complete fertilizer, part of the elements of which are derived from organic sources.

Sand

Clean, coarse, ungraded materials suitable for plant growth and transmit water to the root system or ball.

Manure

Manure shall consist of well-rotted cow manure or well-rotted horse manure aged for at least three months in a building or large pile. It shall be free from shavings, sawdust, and cornstalks. Straw or similar bedding may be present to the extent of not more than 15% by volume, provided that it is well rotted.

Wrapping Material

Tree wrap shall be waterproofed crepe tree wrapping paper four inches wide, made up of two layers of crepe Kraft paper weighing not less than 30 pounds each per ream, cemented together with asphalt or an equally approved substitute.



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Twine used to secure tree wrap shall be composed of a minimum of two-ply jute material.

Wound Dressing

Shall be waterproof, asphalt base paint with antiseptic properties, manufactured for use on tree wounds.

Plant Materials

Plants shall conform to the size indicated in the contract with the exception that larger plants than those specified may be used if approved by the city. Use of such plants shall not increase the contract price.

Trees and shrubs shall be measured when their branches are in normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch or root tip to tip. Caliper of trees shall be taken six inches above ground level.

Plant material substitutions will be allowed only upon written approval by the City of Alpena.

Plants shall conform to the measurements specified. Exceptions are as follows: plants larger than specified on the plan may be used if approved by the city, but use of such plants shall not increase the contract price. If the use of larger plants is approved, the spread of roots shall be increased in proportion to the size of the plant.

Plants shall not be pruned prior to delivery except upon written approval by the city.

Plants shall have normal, well-developed branches and vigorous, fibrous root systems; and shall conform to the specifications of the latest edition of American Standards for Nursery Stock sponsored by the American Association of Nurserymen, Inc.

Plants shall have a normal habit of growth and shall be typical of their species unless the general shape and overall character of a particular plant is specifically noted in the Plant List. Overall branch width dimension, measured perpendicular to the trunk of the plant, in any direction shall not be any less than 40% of the maximum branch width dimension. (see detail)

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Plants shall be healthy, vigorous, and free from defects, decay, disfiguring roots, sun-scale injuries, bark abrasions, plant diseases, insect pests, eggs, or larvae.

Plants shall be hardy under climatic conditions similar to those in the locality of the project.

Plants shall be nursery grown unless specifically authorized to be collected.

The city shall allow the following varieties:

- Sycamore
- Sweetgum
- Little Leaf Linden
- Greenspire Linden
- Redmond Thornless
- Gingko – Male variety only
- Callery Pear
- American Liberty Elm
- Norway Maple
- Autumn Breeze Maple
- Japanese Zelkova
- Seedless Kentucky Coffee Tree
- Black Gum/Tupelo
- Yellow Wood
- Hackberry

For quantities greater than four, contractor shall select a variety of trees for the project with no one variety having greater than one third of the overall quantity.

Plant Labels

Durable, legible labels stating the correct plant name and size, in weather-resistant ink or embossed process, shall be attached securely to all plants. Labels shall be removed only after inspection by the city.

**c. Construction.**

Inspections, Tests, and Samples

The contractor shall be responsible for all certificates of inspection of plant materials required by Federal, State, or other authorities. These shall be supplied to the City prior to installation.

Plants shall be inspected and approved upon delivery for conformity to specification requirements as to size, quality, and variety. Such approval shall not impair the right

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of inspection and rejections during the progress of the work for reasons of size or condition of roots, diseases, insects, latent defects, or injuries. Plants that meet the measurements specified but do not possess a normal balance between height and spread shall be rejected. Rejected plants shall be removed from the site immediately.

When specifically requested the contractor shall also provide material samples for approval by the city before the material is delivered to the site. Any materials that are supplied but do not conform to the approved sample will be rejected.

Planting Season

All planting operations shall take place during the following specified times:

Spring deciduous trees and shrubs planting: March 1 thru June 30

Fall deciduous trees and shrubs planting: September 15 thru November 1

If special conditions exist which warrant a variance in the above planting dates, a written request may be submitted to the city stating the special conditions and the proposed variance. Permission for the variance will be given if, in the opinion of the city, the variance is warranted.

Staking Plant Locations

The city shall stake out on the ground all plant locations.

The city shall accurately stake plant materials. Stakes for all trees shall be 12 inches high above ground and painted a bright color to be clearly visible for inspection.

Inspections for Acceptance of Work

A final inspection of all work under the contract will be made by the city within 14 days following the planting. The trees and planting areas shall be inspected and must conform to specifications before final acceptance will be made. If any planting locations do not conform with the specifications the contractor shall resolve any discrepancies at no additional cost to the owner. The contractor shall be notified of final acceptance and may issue a final billing for full payment.

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Guarantee

For a period of one full growing season (the season in which the trees are planted does not constitute a growing season) and at no additional cost to the city, the contractor shall replace any plant materials that are dead or that are, in the opinion of the city, in an unhealthy or unsightly condition, or that have lost their natural shape due to dead branches or excessive pruning. All plant materials rejected by the city shall be removed from the site and legally disposed of by the contractor at no additional cost to the owner.

Replacement plants and planting operations shall be in accordance with the original specifications. All costs for such replacements shall be considered to be included in the bid price. Replacement planting shall be completed no later than the next succeeding planting season. All areas damaged by replacement operations shall be fully restored by the contractor to their original and/or specified condition.

The contractor shall be responsible for filling to the original grade level any areas that have settled around the trees and shrubs.

The contractor shall not assume responsibility during the guarantee period for damages resulting from natural causes such as floods, lightning storms, freezing rains, or winds over 60 miles per hour, nor will be held responsible for damages resulting from acts of negligence on the part of the owner occupying the site, fires, or vandalism.

New Tree Planting Warranty

Any contractor planted tree that fails to achieve the City of Alpena (city) growth/vigor standards following planting shall be subject to rejection, removal and replacement at the direction of the city and at no cost to the city. All replacement trees will also be subject to the growth/vigor standards and the warranty period for tree replacement shall start anew from the date replaced.

Growth/Vigor Standards

During the first growing season following transplanting, the tree shall be expected to grow and leaf out in accordance with the industry standards for the particular species of tree.

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Root Protection

Plants shall be handled at all times in accordance with the best horticultural practices so that the balls are adequately protected from the sun and drying winds. No plant shall be bound with rope or wire in a manner that would damage the bark, break the branches, or destroy its natural shape.

Plants shall be dug with a firm, natural ball of earth of sufficient diameter and depth to encompass the fibrous and feeding root systems necessary for full recovery of the plant. Balls shall be securely wrapped with burlap and bound with cord.

No balled and burlapped plant shall be planted if the ball is cracked or broken. Plants shall be lifted and handled from the bottom of the ball only. Plants handled otherwise will be cause for rejection.

Protection During Delivery

All plant material shall be delivered in closed vehicles or in open vehicles with the entire load properly covered while in transit for protection from drying winds.

Protection After Delivery

All plant material shall be planted as soon as possible after delivery. Plants that cannot be planted immediately shall have their roots kept moist and adequately protected until planted.

Plants shall have the balls covered with topsoil or an approved mulch and kept constantly moist until planted.

Planting Procedures.

Plants shall be located as approved in the field by the city. If obstructions are encountered, the contractor shall not proceed with planting operations until alternate plant locations have been selected.

Circular pits with vertical sides shall be excavated for all plants. Diameter of all plant pits shall be at least one foot greater than the diameter of the ball. Depth of pits shall be enough to accommodate the root system. The earth in the bottom of the pits shall be loosened by spading, or other approved means, to a depth of four inches. All excavated material shall be removed from the site and legally disposed of by the contractor. Under no circumstances shall the contractor mound up

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excavated material for use as a watering basin. The contractor must barricade each unattended excavation.

All planting, unless otherwise directed, shall be performed as herein specified. No planting shall be done when the ground is frozen unless approved by the city.

All plants shall be set in the planting pit to the proper grade and position. Set plants upright and faced to give the best appearance or relationship to each other or adjacent structures. Planting mixture shall then be carefully worked or puddled around the ball. When approximately 2/3 of the planting pit has been backfilled, the pit shall be filled with water and the soil allowed to settle around the roots. The burlap shall be cut away or folded back from the top of the ball before applying the water. After the water has been absorbed, the planting pit shall be filled with planting mixture and tamped lightly to grade. Any settlement shall be brought to grade with additional planting mixture.

Mulching

All pits shall be mulched as follows:

All tree plantings shall be mulched to the depth of two to three inches. Mulch shall be placed from the top of the ball to the finished grade and not higher than the finished grade.

All mulched areas shall be thoroughly soaked at the time of planting or within three days following. After watering, all mulched areas shall be raked and left in a complete and finished manner.

Pruning

After planting, the branches of deciduous stock shall be pruned to balance the loss of roots in such manner as to retain the natural form of the plant type.

Trees shall be pruned by removing all dead wood, all surplus, badly formed, and interfering limbs. In general, not more than 1/3 of the branches shall be removed, but the proportion shall in all cases be subject to the approval of the city. Broken, damaged, and unsymmetrical branches shall be removed or cut back and sufficient other growth shall be removed or cut back to insure healthy and symmetrical growth of new wood.

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In the case of multiple leaders, the one which will best promote the symmetry of the tree shall be preserved and the remainder shall be removed or cut back so that they will not compete with the selected leader. Surrounding top branches shall be cut back to conform to the leader trimming. Branches to be removed shall be cut off flush with the trunk or main branch. Branches to be cut back shall be cut off at a point beyond a lateral shoot or bud a distance of not less than ½ the diameter of the supporting branch. The cut shall be made on an angle sloping in the direction of the lateral shoot and in no case shall stubs be left.

All pruning shall be done by workmen experienced in this type of work.

Tree Wrapping

Trees shall be wrapped immediately after planting. The trunks of all deciduous trees shall be carefully wrapped with tree wrapping paper. The wrapping shall begin at the base of the trunk just above the roots and below the normal ground line and shall extend upward in a spiral manner with an overlap of ½ the width of the paper strip. The portion of the wrapping below the finished grade shall be covered with soil. The paper shall be held in place with approved twine or taped in place.

Support for Trees

A minimum of three wooden stakes will be placed in the ground, evenly spaced around the tree root excavation area. It shall be the contractor's responsibility for determining the type of material to use to support the tree from the wooden stakes to the tree and may include wire or cable with a section of rubber hose (around the tree) or twine.

Instructions to Owner

Full, complete, and written instructions for maintenance of the plantings are to be furnished by the contractor to the city within 30 days after the award of the contract.

**d. Measurement and Payment.** The completed work of supplying, transporting, and installing trees in accordance with these specifications will be paid for at the contract unit price for the following contract items (pay items):

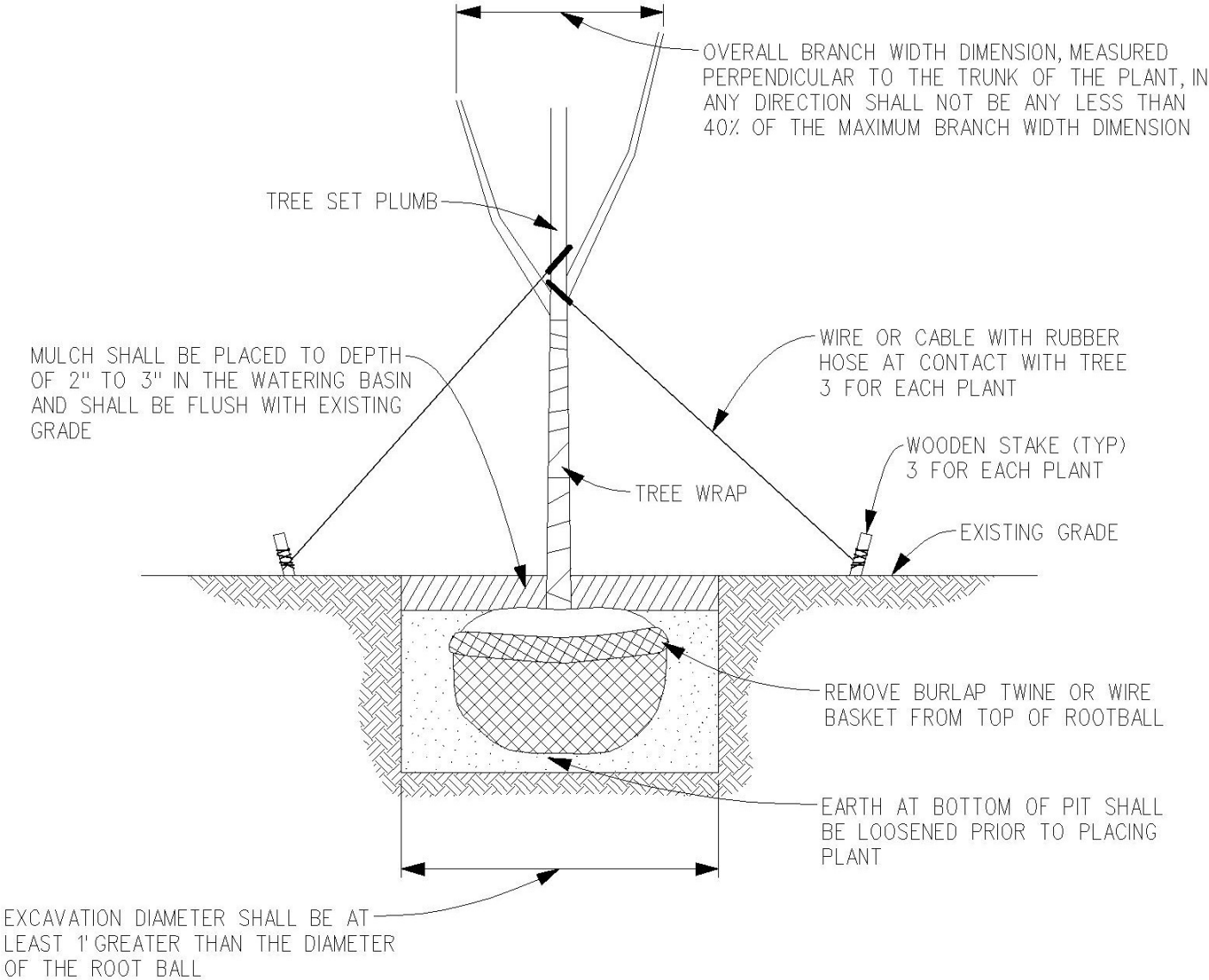
<u>Pay Item</u>	<u>Pay Unit</u>
Street Trees, <root-type>, __ inch	Ea

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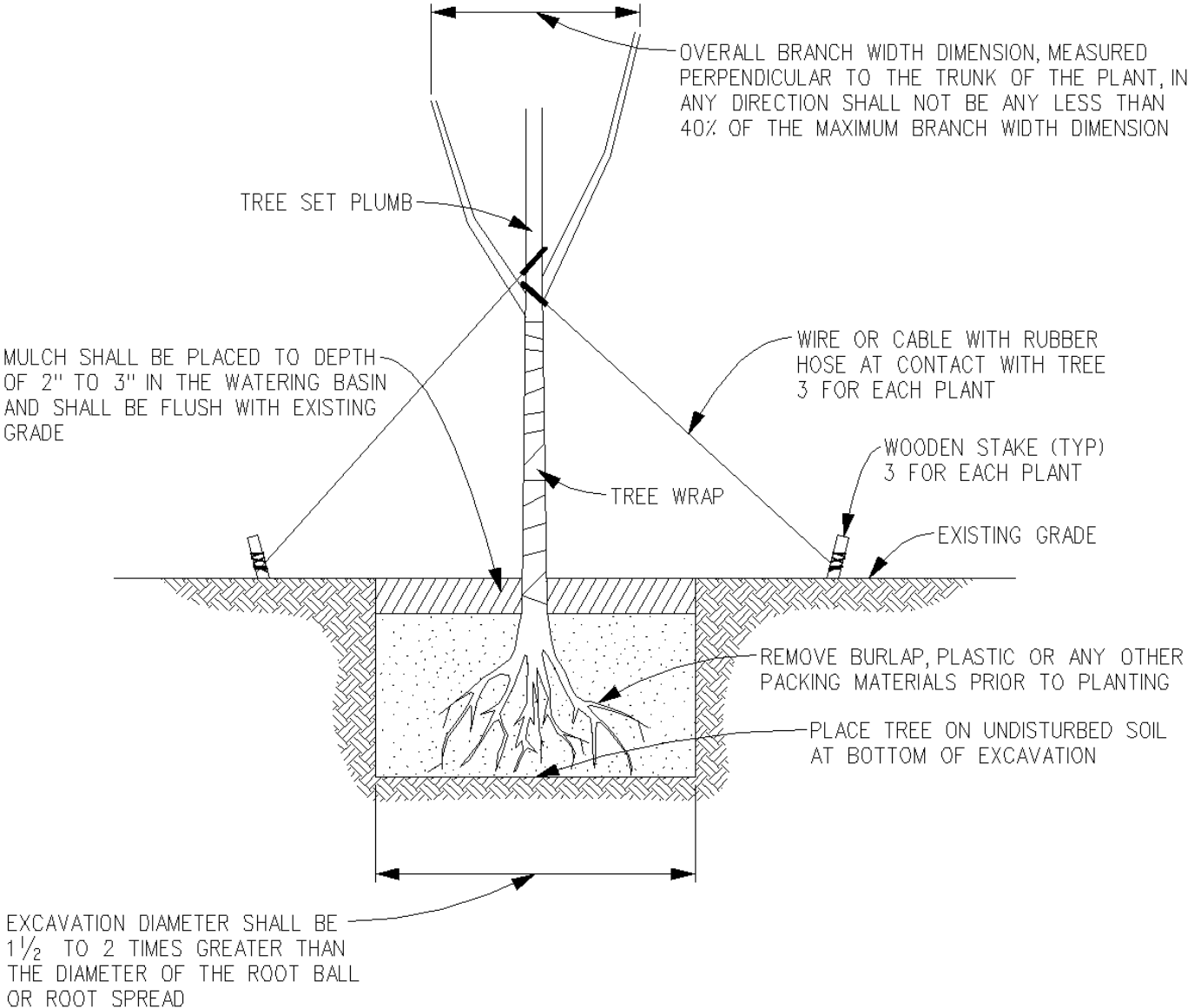


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FOR  
**CONTRACTOR STAKING, MODIFIED**

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- a. **Description.** This work shall consist of furnishing all labor, equipment, and materials to provide line and grade for all phases of road and utility construction based on the plans provided and provide as-built data in accordance with section 824 of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, as modified herein, and as directed by the Engineer.
- b. **Materials.** All materials shall be as specified in subsection 824.02 of the MDOT Standard Specifications for Construction, except as modified herein.

Grade stakes shall be of sufficient quality to legibly indicate grade elevations. Sidewalks may be used for stations and offsets provided that temporary marking paint is used.

- c. **Construction.** All operations shall be as specified in subsection 824.03 of the MDOT Standard Specifications for Construction, except as modified herein.

In addition to providing line and grade for construction purposes, this item shall also include providing as-built locations and elevations to the Engineer within two (2) weeks of project completion.

Contractor shall provide the following data as part of the as-built submittal:

1. **Structures.** Includes all sanitary and storm structures and catch basins. Cover elevation and location, all pipe sizes, material, and invert elevations
2. **Water Mains.** Locations of all connections to existing pipes, changes in horizontal alignment, all tees, all crosses, and all valves.
3. **Services.** Locations of all water shut off boxes and sewer cleanouts for each address. Service shutoff/cleanout locations shall be witnessed from the house corners and provided in drawing format. GPS locations for services shall not be accepted.
4. **Hydrants.** Locations of all hydrants and the elevation of the steamer hub.

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This data may be collected using a GPS-based device (preferred), by hand, or a combination thereof. House corners and utility poles are sufficient for use as witnesses, however, signposts or trees shall not be used.

The data shall be delivered as a digital CAD file (dwg or dgn) and/or combined with legibly tabulated notes. All notes shall be of sufficient quantity and quality for City staff to reproduce the data in CAD drawing format. The Contractor shall be available for questions or clarifications of the as-built information for a period of 60 days following the submittal of the data.

- d. **Measurement and Payment.** The completed work of furnishing all labor, equipment, and materials to provide line and grade for all phases of road and utility construction based on the plans provided and provide as-built data will be paid for at the contract unit price for the following contract item (pay item):

<b>Pay Item</b>	<b>Pay Unit</b>
Contractor Staking, Modified .....	Lump Sum

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**SANITARY SEWER SYSTEM**

**a. General**

1. Work included:

Includes, but is not limited to, the furnishing of all labor, materials, and equipment necessary for:

- A. Installation and testing of sanitary sewers, manholes, and appurtenances indicated on the Drawings and described in these Specifications.
- B. Any other item necessary for the proper and complete performance of the system or the Work.

2. Related work described elsewhere:

Related work is described in various other Sections of these Specifications.

**SUBMITTALS**

Product data:

Contractor shall submit manufacturer's test data demonstrating that materials to be used on project meet applicable ASTM, ANSI, and similar specifications.

Service line witnesses:

Report locations of wyes, tees, and markers to Engineer upon completion of any 400-foot section of sewer.

Leakage testing procedure:

Equipment and method: Approval required.

**QUALITY ASSURANCE**

General:

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Acceptability of materials and performance shall be determined by Engineer.

Materials:

Pipes, manholes, and other system materials – certifications by Manufacturer.

Performance:

Pipe System.

Pressure test for leakage.

Light or reflected light test for alignment

Plastic pipe (PVC) Go-no go test for deflection.

Manholes.

Visible inspection for leakage and workmanship.

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**PRODUCTS**

Pipe Materials

General:

Sanitary sewer pipe up to 15" size shall be of one type for the complete system:

Except as a specific type is required by the Drawings.

Other pipes shall conform to sizes and types shown on the Drawings and specified below.

PSM Polyvinyl chloride (PVC) sewer pipe:

Diameter: 4" – 21"; ASTM D3034 (SDR 35).

Diameter: 24" and greater; ASTM F679 (SDR 35).

Ductile Iron Sewer Pipe:

Diameter: 4"-24"; ANSI A21.50 and ANSI A21.51; Class 52

Class IV Reinforced Concrete Pipe:

Diameter: 24"-60"; ASTM C76

Pipe Thickness

Pipe wall thickness shall be in accordance with ANSI A21.51-1981.

Other pipe type wall thicknesses shall be governed by industry practices for the certified pipe.

1. Cement Mortar Lining:

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Cement mortar lining shall conform to ANSI Specification A21.4, except for the following items: the minimum thickness of lining shall be 1/16" and the maximum thickness of lining shall be 1/8" for all sizes of pipe furnished. Care shall be taken to insure that no mortar remains in the joint surface of the bell. If mortar is found in the joint surface of lining of greater thickness than allowed, the pipe will be returned.

2. Length of Pipe:

The minimum nominal laying length of the pipe shall be 20 feet or as determined by the pipe material as specified on the plans.

3. Outside Coating:

The outside of the pipe shall be coated with a bituminous coating of either coal, tar, or asphalt base one mil thick.

A. Joints:

PVC Pipe:       ASTM D3212 Push-on type joints  
(and ASTM F679 for large diameter pipes)

1.     "Super Bell – Tite"
2.     "Tyton"

Ductile Iron Pipe:   Rubber Gasket, Bell and Spigot in accordance with  
ANSI/AWWA 21.11/C111

Reinforced Concrete Pipe:    Joints shall conform to ASTM 443

C. Fittings:

1.     Fittings shall be of the same material, have the same joints, and conform to the specifications for the type of pipe being used.
2.     Transitions from one material to another shall be made only with approved adapters.
3.     Wyes and tees shall be integrally pre-cast or molded to the main line portion of the unit.

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III. MANHOLES

- A. General - See MDOT English standard plan R-1 series Drainage Structures- "Typical Manhole" Detail. All manholes shall be in accordance with this standard plan except as modified herein.
- B. Sections:
1. Cone and riser sections: ASTM C478 precast concrete units. In locations designated for watertight installations, cone section shall be furnished with 4 5/8" threaded anchor bolts.
  2. Base sections: ASTM C478 precast concrete units. Bottom slab and walls shall be cast integrally.
  3. Joints: ASTM C443 Rubber "O" ring.
  4. Pipe to Manhole Joints: Flexible water-tight connection utilizing a rubber boot or "kor-n-seal" or equal.
- C. Steps:
1. Cast iron: ASTM A48, Class Number 30, 10" deep by 10" wide, 5" tread depth, 1" by 1" tread section, with 2" rail height.
  2. Plastic: Reinforced with 3/8" steel rod and dimensioned same as cast iron.
  3. Steps shall have a minimum vertical spacing of 12" (max 16").
- D. Drop Connections:
1. Outside drop connections, sufficiently supported, shall be required for all connections with a 24" or greater differential between the pipe and the lowest invert.
- E. Bench and Flow Channel:



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1. All manholes shall have a bench on each side of flow channel where pipe diameter is less than the manhole diameter. Bench surface shall slope toward the flow channel at 4% minimum.
2. The flow channel shall conform to the shape of the pipe with the wall channel height equal to the crown of the pipe.

F. Castings:

1. Standard: East Jordan 1040A or approved equal. Casting shall have solid cover with no vent holes. (Alpena Logo is required per Special Provision "Drainage Structures and Castings" found in the contract documents)
2. Watertight: East Jordan 1040A (with watertight assembly) or approved equal, equipped with 4 7/8" holes in the frame flange. (Alpena Logo is required per Special Provision "Drainage Structures and Castings" found in the contract documents)

G. Mortar:

ASTM C270: 1 part Portland cement, 1 part lime, and 3 parts sand by volume.

H. Brick:

1. Concrete: ASTM C55, Grade U-1.
2. Clay: ASTM C62, Grade SW.

I. Grade rings:

ASTM C478.

J. Concrete:

Class A. 3500 psi 28 day.

K. Waterproofing:

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1. Bituminous: ASTM D449.
2. Cement: Masonry Filler.

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**EXECUTION**

**I. EARTHWORK**

All earthwork required shall be done in accordance with Sections 206.03 (structures) and 402.03 (pipe) of the 2012 Michigan Department of Transportation Standard Specifications for Construction except as modified herein.

For Flexible Pipe Installation: All references in these sections to Class II or III granular material shall be omitted. All granular material influencing the pipe or structures as determined by the trench details noted or by the engineer in field shall be in accordance with ASTM D2321 gradation (1 ½" maximum particle size).

**II. LINE AND GRADE**

- A. Staking: The Contractor shall be responsible for ensuring the alignment and grade of the pipe are in accordance with the plans and specifications. Single Beam Laser or GPS system are the only acceptable means for ensuring alignment and grade. All staking for pipe and structures shall be included in the "Contractor Staking" item. If contractor staking is not part of the contract, all staking shall be considered included as part of the sewer work items.

Allowable drift between structures from plan or stakes.

1. Horizontal

- a. Up to 36-inch pipe: 0.20 feet.
- b. 42 inch and larger pipe – 0.40 feet.

2. Vertical

- a. None, unless specified by engineer in field

- B. Separation: All water main/sewer main crossings shall have a minimum 18" vertical separation. All proposed sewer main shall be installed with a minimum 10' horizontal separation to all water main.

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**III. INSTALLATION**

**A. General:**

1. Protect all materials before, during and after installation.
2. Install pipes, fittings, and appurtenances in strict accordance with manufacturer's recommendations.
3. Contractor shall be responsible for the protection of all pipe, structures, and all other appurtenances from the entrance of foreign materials, including groundwater, while on site and working as well and ensuring their protection while off-site (overnight). Further, the Contractor shall not hinder the flow of existing sewers. Failure to comply will result in an initial warning from the Engineer. ***Further violations will result in a \$500.00 penalty per incident per day in addition to all expenses incurred as a result of the entrance of foreign materials or hindering the sewer flows. (ie: invoices for basement clean-up resulting from a service flooding) Repeat violations are subsequent to a \$1000 penalty per incident per day. The penalty(ies) shall be deducted from the next payment to the Contractor following the incident(s).***
4. Install PVC pipe in accordance with ASTM D2321. Install Ductile Iron and Concrete pipe in accordance with ASTM C12
5. Removal of water entering the excavation shall be included in the pay item "Dewatering System, Trench". If the item "Dewatering System, Trench" is not included in the original contract documents and any method of dewatering is implemented, it will not be paid for separately but will be considered as having been included in the original contract unit prices for the related item for pipe installation.

**B. Placement of Pipe:**

1. All pipe trenches shall be in accordance with the current MDOT Standard Plan R-83 series "Utility Trenches" (Trench detail as identified by pay item).

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2. Highly compressible and organic soil materials found in the trench bottom shall be replaced with material as specified by ASTM D2321.
3. Bearing: Support entire length of pipe barrel evenly with extra excavation at joints.
4. Direction: Commence at outlet and proceed up grade with spigot ends pointing in direction of flow.
5. Method: Socket of pipe last laid shall be wiped clean and spigot end of pipe to be laid shall be centered and pushed home against base of socket. Pipe shall be centered to form a sewer with a uniform invert.

C. Jointing:

1. General: Solvents, adhesives, lubricants, and gaskets shall be furnished by pipe manufacturer.
2. Clay, Concrete, and Ductile Iron Pipe: Surfaces of joint shall be clean and dry before lubricant is applied. Care shall be taken in laying that pipe does not shift and that it remains in a home position after assembly.
3. PVC: Pipe manufacturer's recommendation.

D. Manholes:

1. Base section placement: Full and even bearing.
2. Joints and lift holes: Mortared finish on inside.
3. Top of casting elevation:
  - a. Gravel areas: 6" below surface.
  - b. Bituminous base course: At base course grade.
  - c. Final wearing surface: At finished grade. Adjustment of castings from base course grade to finished grade is incidental.

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- d. Ditches: 6" below ditch bottom or protruding not more than 6" above slope; as applicable.
  - e. Other areas: As directed by Engineer or as detailed on plan.
4. Visible leakage shall be prevented. Watertight castings required in locations subject to submergence (i.e. ditches), or otherwise shown on Drawings.
5. A manhole flow channel shall be required. Channel wall height shall be equal to the crown of the pipe. A bench is required on both sides of the flow channel and shall slope to the flow channel.

E. Service leads:

- 1. Locations:
  - a. Existing or proposed service lead locations shown on Drawings are schematic only to present approximate locations, length and total number.
  - b. Contractor shall contact United Water to assist in locating existing service leads. United Water shall attempt to locate the leads by means of records and on-site investigation. Services for which and exact location cannot be determined shall be located by the contractor through contact with the home owner or by sewer investigation.
  - c. Unless otherwise directed by the Engineer in field, service leads shall be installed at center of vacant lots.
- 2. Alignment: right angles to street centerline, except as specifically shown otherwise.
- 3. Grade: Uniform minimum of 1/8" per foot (1%).

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4. Depth:
  - a. Elevations at property line shown on Drawings.
  - b. If Drawings are not specific, depth shall be adequate to serve existing buildings. At property line of vacant lots, mobile homes, or temporary structures, minimum depth shall be 10 feet (or maximum depth possible).
  - c. In event of high groundwater risers may be required, which decision shall be made by Engineer.
5. Plugs: Plug ends air tight with standard disc.
6. Markers: Install #4 Rebar, 12" long at end of each service lead extending vertically to within 4" of ground surface.
7. Witnesses and Measurements:
  - a. Wyes and Tees: Measurement to center of nearest downstream manhole. Note manhole by number shown on Drawings.
  - b. Ends of service leads: 3 measurements to permanent surface features.
8. Payment: Service leads and cleanouts shall be paid as an entire unit item. The wye at the main shall be paid for in the mainline of the sanitary sewer. The entire 6" service lead length and the 4" service cleanout riser shall be placed as one item measured by each.

F. Connections:

1. For future use:
  - a. Plug: Pipe 4" through 21" with standard disc.  
Bulkhead: Pipe 24" and larger with 8" thick brick and mortar

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G. Backfilling:

1. Engineer's Approval: Backfill shall be included in price per lineal foot of pipe installed unless otherwise specified. Backfilling shall be done on sections of sewer only after such sections have been approved for backfilling by the Engineer or Inspector. Except where additional work is necessary or unless specifically allowed by the Engineer, backfilling shall be kept completed to within 100 feet of the sewer. Under no circumstances shall water be allowed to rise in unbackfilled trenches after pipe has been laid.
2. Placing Backfill: Utilize the MDOT trench detail specified by the unit item, "A2" or "B2" for plastic pipe. The granular material shall meet ASTM D2321 gradation (1 ½" maximum particle size) or MDOT Class IIIA. Granular material shall be placed in layers not more than 12" in thickness, unless otherwise approved by the Engineer, and compacted to 95 percent of Maximum Unit Weight. Puddling or flooding for consolidation of backfill is not permitted.
3. Excess Material: With the exception of the volume of excavated material equal to the volume of the space occupied by the sewer appurtenances, all excavated material shall be placed in the backfill to provide for future settlements. All excess material encountered shall be removed and disposed of by the Contractor. The Contractor shall receive no extra compensation for this work.

IV. CLEANING

A. Methods:

1. Inflatable rubber ball: Place snug-fitting ball in upstream manhole of sewer and introduce water behind it. Ball shall pass through pipe with only the force of water propelling it.
2. High pressure water jet.



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B. Debris:

Including that cemented or wedged, shall be removed at first available downstream manhole.

- C. Final acceptance: All sewers shall be thoroughly cleaned before final acceptance. If sand, or other foreign materials in the pipe prevent testing and inspection, the Contractor shall bear all cost to remove foreign materials to facilitate testing and inspection.

V. TESTING AND INSPECTION

A. Observation: By Engineer.

B. Notification:

1. 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.
2. Testing: Contractor arrange with Engineer following cleaning and pretesting.

C. Equipment and manpower: Contractor provide everything required for testing.

D. Low pressure air test for leakage:

1. The air test shall be performed in accordance with ASTM F1417 for PVC and ASTM C924-89 for Concrete Pipe.
2. Required for all types of pipes.
3. Measure time interval for pressure drop from 3.5 to 2.5 psi. Compare with the table below for allowable time interval.

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**SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP FOR SIZE AND LENGTH**

Pipe Diameter (inches)	Minimum Time (min:sec)	Length for Minimum Time (ft)	Length for Longer (sec:ft)	Specification Time for Length Shown (min:sec)				
				100 ft	150 ft	200 ft	250 ft	300 ft
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27

Note: If the section of line to be tested includes more than one pipe size (i.e. lateral connections), calculate the test time for each size and add the test times to arrive at the total test time for the section.

4. Contractor shall repair leaks and repeat tests until acceptable results are achieved.
- E. Other leakage tests: May be required by Engineer in addition to air test.
1. Method approval of Engineer.
  2. Water infiltration:
    - a. Groundwater: Minimum 2 feet above high point of pipe.
    - b. Allowable rate: 100 gal./inch pipe dia./mile/day.
  3. Water exfiltration:
    - a. Water test elevation: Minimum 2 feet above high of high point of pipe or groundwater elevation.
    - b. Allowable rate: 100 gal./inch pipe dia./mile/day.

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- F. Deflection test for plastic pipe:
1. Go, no go gauge, conducted with rigid ball or mandrel method.
  2. Allowable maximum: 5% of diameter
  3. Testing shall be performed no sooner than 30 days following the proper installation and backfill and shall be completed prior to the installation of the top course of HMA.

VII. POST CONSTRUCTION INFILTRATION

Following complete construction and prior to connection of services to the sewer, the Engineer shall have the option of requiring re-testing of any section of sewer where excessive infiltration is observed or suspected. Any of the above tests may be utilized per the Engineer's requirements.

VIII. TV INSPECTION

The owner or the Engineer shall have the option of performing a TV inspection of any section of sewer for signs of structural damage, joint leaks, or infiltration.

IX. CORRECTION OF DEFECTIVE WORK

In the event any of the above tests or inspections indicate defective material or installation, the Contractor shall repair and retest the section to the satisfaction of the Engineer. The use of chemical grouts shall be limited to the repair of minor joint leaks and shall not be used without the specific written approval of the Engineer. Any pipe or fitting having structural damage shall be removed and replaced. Any PVC sewer with deflection in excess of the 5.0% limitation shall be re-excavated, inspected for structural damage, rebedded, backfilled, and retested. The corrective work shall be done immediately.

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**X. METHOD OF PAYMENT**

Removal of the existing sewer pipe and structures that are in the same trench as the proposed sanitary sewer is required and **shall not** be paid for separately.

These specifications cover the following items. Additional sanitary sewer items may appear in the plans that may not be listed here but are governed by this specification:

<u>Pay Item</u>	<u>Unit</u>
Sanitary Sewer, _____, ___ inch, Tr Det _____	Foot
Sanitary Sewer Tap, ___ inch	Each
Dr Structure Tap, ___ inch	Each
Sanitary Sewer, Rem, Less than 24 inch	Foot
Sanitary Sewer, Bulkhead, _____ inch	Each
Sanitary Sewer, Abandon _____	Foot
Plug, _____, ___ inch	Each
Sanitary Sewer Service	Each
Sanitary Sewer Cleanout	Each
Dr Structure, ___ inch dia, with Cover and Casting, Special	Each
Dr Structure, Add Depth of ___ in dia, 8 feet to 15 feet	Foot
Dr Structure, Add Depth of ___ in dia, more than 15 feet	Foot
Sewer Investigation	Each

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**Concrete Asbestos Water Main**

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**a. Description.** This work shall consist of the abandonment of Concrete Asbestos Water Main in accordance with Section 204.01 of the MDOT 2012 Standard Specifications for Construction and as directed by the Engineer.

**b. Materials.** All materials shall conform to Section 403.02 of the 2012 Standard Specifications for Construction.

**c. Construction.** Construction of the abandonment of Concrete Asbestos Water Main shall conform to Section 204.03 of the 2012 Standard Specifications for Construction and the City of Alpena Special Provision for Water Main Installation except as modified herein.

All work for abandonment of concrete asbestos pipe shall be done in accordance with the current EPA regulations for proper handling and disposal of asbestos materials.

All concrete asbestos pipe shall be grouted in place. Every effort shall be made to prevent any crushing of concrete asbestos water main. Any reconnection points shall be cut in a wet condition to prevent any friable materials from becoming airborne. Any concrete asbestos materials removed from site shall be properly encapsulated in 6 mil plastic and disposed of at the appropriate disposal facilities.

**d. Measurement and Payment.** The completed work removal and disposal of concrete asbestos pipe will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Asbestos Water Main, Abandon	Foot

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I. GENERAL

A. Scope of Work

These specifications are intended to technically describe the nature of the materials, and the workmanship required to complete the project. It is the intent of these specifications to provide guidelines for the construction of public water mains complete and ready in every respect for use by the Owner. Any minor items not specifically called for in the plans and specifications, but which are clearly necessary, are to be included at no increase in the contract price. The Contractor shall supply all labor, material and equipment required for the installation and testing of water mains and appurtenances in full compliance with these Standard County Specifications and Standard Details and in compliance with the project specifications and contract drawings. In all instances project specifications, contract drawings or details shall supersede the requirements found in these specifications. All construction shall begin at a valved stub or at a pressure tapping sleeve and valve when a valved stub has not been provided. All pressure taps to existing water mains shall be made only under the supervision of the City of Alpena (354-1730) or SUEZ (354-1400). The Contractor shall have SUEZ personnel (354-1400) operate all water valves on this project.

B. Shop Drawings

The Contractor shall be required to supply the Engineer and Owner with detailed shop drawings or certificates of compliance prior to delivery of material for a construction project. Where the item to be supplied is in conformance with these general water main specifications, certificates of compliance will be accepted by the Owner. Should shop drawings be required, the manufacturer shall supply five copies of the drawings to the Owner and Engineer, and shall not ship the material until shop drawing approval has been received from the Owner and Engineer. The Contractor shall submit all shop drawings and/or certificates to the Engineer.

The following material will require approval by the Owner prior to use on the project:

1. Pipe, fittings and joints.
2. Joint material.

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3. Valves, hydrants and valve boxes.
4. Valve manholes including frames, covers, and steps.
5. Meters, couplings and appurtenances.
6. Reinforcing steel layout for all structures.

I. CONSTRUCTION MATERIALS

A. General

All materials or equipment supplied by the Contractor shall be new and shall be of first class ingredients and construction, designed, manufactured, and guaranteed to meet these specifications and to perform the service required. All pipe shall be clearly marked with the size, grade and/or class.

If not otherwise provided, materials or work called for shall be furnished and performed in accordance with well known and established practices and standards recognized by architects, engineers and the trades.

All materials to be incorporated in the construction of water mains shall be subject to inspection and tests as specified by ASTM, ANSI or AWWA regulations. The Owner reserves the right to subject any material supplied for a particular project to tests by an independent testing laboratory. Such tests, if scheduled, shall be paid for by Owner. The result of such test shall govern in material acceptance.

The Contractor will be required to supply the Owner with a certificate of testing or actual test results stating that the material to be used is in conformance with the specifications prior to using said material for construction.

B. Ductile Iron Pipe

All water main piping shall be ductile iron conforming to ANSI/AWWA-C151/A21.51 with cement mortar lining in accordance with ANSI/AWWA-C104/A21.4. Water mains shall be Class 52 ductile iron pipe. Pipe joints shall be push-on type consisting of a single molded rubber gasket and shall conform to ANSI/AWWA-C111/A21.11. Mechanical joints conforming to ANSI/AWWA-C111/A21.11 are also acceptable for use. If harmful contamination is suspected, nitrile, or equal gaskets conforming to ANSI/AWWA-C111/A21.11 shall be used.

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All ductile iron pipe shall be furnished with external type conductivity straps capable of withstanding 400 amps over an extended period of time. Pipe shall be strapped across all joints, fittings and valves. Use of heavy gauge wire across valves and fittings is also acceptable. Any cad-weld or grinding spots shall be coated with coal tar varnish. This shall be the only acceptable method of ensuring conductivity, bronze wedges, or any other method shall *NOT* be accepted.

**C. Ductile Iron River Crossing Pipe**

All river-crossing pipe shall be ductile iron conforming to ASNI A21.51 with cement mortar lining in accordance with ANSI/AWWA-C104/A21.4. Pipe joints shall be boltless ball and socket flexible type which will permit a deflection of fifteen (15) degrees without leakage. The bell, ball and retainer ring shall be cast of 70-50-05 ductile iron in accordance with the applicable requirements of ANSI A21.10. Pipe class, wall thickness, pressure rating and maximum safe tension strength shall conform to the following table:

Nominal Pipe Size (Inches)	Thickness Class Number (Inches) (PSI)	Minimum Wall Thickness (lbs)**	Minimum Pressure Rating	Safe Tension
6	55	.40	350	50,000
8	55	.42	350	70,000
10	55	.44	350	95,000
12	55	.46	350	120,000
14	56	.51	350	145,000
16	56	.52	350	165,000
18	56	.53	350	195,000
18	58*	.59	350	195,000
20	56	.54	350	210,000
20	59*	.63	350	210,999
24	56	.56	350	260,000
24	62*	.74	350	260,000

\* Thickness required to overcome buoyancy (empty pipe condition).

\*\* Maximum tension that can safely be applied to a single joint when pulling pipe into position or laying it from a barge.



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D. Fittings

All bends, tees, wyes and other special fittings used on the water main shall be cast iron Class 250 conforming to ANSI/AWWA-C110/A21.10 or ductile iron class 350 conforming to AWWA-C153/A21.53-94 with cement mortar lining in accordance with ANSI/AWWA-C104/A21.4. Fitting joints shall be push-on type or to ANSI/AWWA-C111/A21.11, and shall include the required conductivity devices.

E. Gate Valves

Epoxy coated (conforming to AWWA C-550), iron body resilient wedge gate valves shall be utilized. Resilient wedge gate valves shall conform to AWWA C-515 with 150 pound working pressure. Valve stems shall be high tensile strength non-rising type with double O-Ring stem seals. The valve wedge shall be ductile iron encased in a bonded-in-place styrene butadiene (SBR) elastomer covering which shall form the sealing surface and shall provide sealing in either direction. Resilient wedge gate valves shall be equal in all respects to Waterous Series 500 or American Darling Model CRS-80 resilient wedge gate valves.

All gate valves 16 inches or smaller shall be installed in the vertical position and shall open to the left (counter clockwise). Gate valves larger than 16 inches may be installed in either the vertical or horizontal position and shall be spur gear operated when installed vertically and bevel gear operated when installed horizontally. Gate valves 18 inches and larger shall be equipped with a by-pass and by-pass valve. The by-pass valve shall be of the same type as the main valve and the stem shall be in the vertical position. By-pass sizes shall be as follows:

<u>Main Valve Size</u>	<u>By-Pass Size</u>
18" – 30"	4"
36"- 42"	6"
48 and larger	8"

All gate valves shall be tested for leakage at the factory and the cost of such testing shall be merged in the cost of the valves. Any valves which leak or which show any defects shall be rejected. Certificates shall be furnished by

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the valve leakage tests. Said certificates shall be submitted along with shop drawings. Every valve shall carry the name of the manufacturer.

Valve boxes shall be supplied for all buried gate type valves.

F. Fire Hydrants

This item shall include the fire hydrant, an auxiliary valve, a valve box, and connector pieces. These items shall be installed in accordance with the standard construction practices and the standard fire hydrant detail.

All fire hydrants shall be manufactured in accordance with standard AWWA C502 specifications in accordance with the latest revised edition. The hydrant shall be equipped with a minimum 5-1/4" compression type valve that assures a tight closure and prevents water from slowly seeping in the hydrant barrel. The hydrant valve can open either with the water pressure or against the water pressure. All hydrants shall be designed for 150 pounds working pressure and shall be tested to 300 pounds hydrostatically at the place of manufacture. All hydrants shall have a breakaway hydrant barrel flange at the ground line and a safety stem coupling designed to breakaway should the hydrant be subjected to a severe impact. Each hydrant shall be equipped with two 2-1/2" hose nozzles and one 4" pumper nozzle with threads conforming to the National Standard Design. Nozzle caps shall be secured to the hydrant with chains. The inlet to the hydrant shoe shall be 6".

Hydrants shall open to the left or "Counter Clockwise" with a standard 1 1/2" pentagon operating nut. The hydrant valve operator mechanism shall be designed so that the operator will have a second operating means should the 1 1/2" pentagon operating nut become inoperative. The upper operating assembly shall be weatherproof and shall have either an oil reservoir or a permanent lubrication system. Hydrants shall be delivered with the drainholes plugged by the supplier, Contractor shall verify that the drainholes are plugged prior to installation. Hydrants shall be factory painted a red in accordance with AWWA C502.

The fire hydrants shall have a minimum bury of 6'. Where field conditions dictate the use of barrel extensions to bring the top of the hydrant to final grade plus 32 inches, the Contractor shall supply and install such extensions or order fire hydrants with a longer bury than 6'. There will be no extra compensation due to the Contractor for achieving the required final elevation

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of the hydrant. The hydrant shall be placed with the pump nozzle facing the roadway unless otherwise directed by the Owner. The center line of the pumper nozzle shall be approximately 21 inches above finished grade.

Wherever possible, fire hydrants shall be anchored to water mains using restrained joints or flanged connections. Concrete thrust blocks shall be installed behind all hydrants.

The auxiliary valve shall be a 6" internal diameter resilient wedge gate valve constructed in accordance with AWWA C509 specifications. Auxiliary valves shall be mechanical joints. A cast iron curb box of 3 sectional design shall be constructed over the auxiliary valve. Curb boxes shall be buffalo pattern with a 5- ¼" shaft diameter of sufficient length to put the box at finished grade elevation. The curb box cover shall be marked "WATER".

Hydrants shall be East Jordan Water Master 5BR250, or approved equal.

G. Valve Boxes

Valve boxes shall be made of good quality cast iron and shall be of the sectional type. The lower section shall be a minimum of five (5) inches in diameter, enlarged at the base to fit around the bonnet of the valve. The upper section shall be arranged to slide or screw down over the adjoining lower section and shall be full diameter throughout. Valve boxes shall be provided with cast-iron lids or covers. Lids or covers shall be marked "WATER". The over-all length of valve boxes shall be sufficient to permit the top to be set flush with the final ground surface grade. Valve boxes shall be as manufactured by Traverse City Iron Works, Clow Corporation, or equal.

H. Services Pipes and Appurtenances

All service connections shall be in accordance with AWWA C800 for Underground Service Lines and Fittings

1. Copper Pipe

All water service connections shall be type K soft temper copper tubing conforming to ASTM B-88 and B-251. The pipe shall be marked with the manufacturer's name or trademark and an indication of the type of pipe. The outside diameter of the pipe and minimum

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weight per foot shall not be less than that listed in ASTM B-251, Table 11. The copper pipe installed from the water main to the service box shall have a minimum size of 1”.

2. Stops and Fittings

All corporation stops and curb stops shall be fabricated of brass or bronze alloy.

Corporation stops shall be for ductile iron water main with taper thread inlet and flared copper outlet connection. Corporations shall be Mueller Model H-15000, Ford Meter Box Co. Model F-600, or approved equal.

Curb stops shall be inverted key, ball valve or roundway type with copper to copper flared or compression connections. Curb stops shall be Mueller Model H-15204, Ford Model B-22, or equal.

3. Service Boxes

Curb stop service boxes shall be standard cast iron adjustable arch type capable of extension from a minimum length of 4'-6” to a maximum length of 6'-6”. Curb boxes shall have a minimum internal diameter of 2-1/2 inches for stops 1-1/4 inches and smaller, and shall be 3 inches in diameter for stops larger than 1-1/4 inches.

All curb boxes shall be furnished with cast iron covers labeled “WATER” and all curb boxes shall be coated with a corrosion resistant material.

I. Steel Casing Pipe

Steel casing pipe shall meet the requirements of ASTM designation A-139, Grade B material, and shall be of sufficient strength to meet the loading conditions of H-20 loading for pavements and Cooper E-72 loading for railroad crossings.

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Successive lengths of casing pipe shall be connected by continuous circumferential welds. Casing diameter and wall thickness shall be as specified in the following table.

Pipe Thickness	Recommended Minimum Casing Diameter (I.D.)	Minimum Wall
4"	10"	.375
6"	12"	.375
8"	15"	.375
10"	20"	.375
12"	20"	.375
14"	24"	.375
16"	30"	.406
18"	30"	.406
24"	36"	.469

**II. MATERIAL TESTING**

**A. General**

Testing of materials to be incorporated in water main construction shall be conducted by a testing laboratory at the place of manufacture. All materials to be incorporated in water main construction shall be subject to the most current versions of Standard ASTM, USAS or AWWA Specifications as here in before referenced.

The Contractor will be required to furnish the Owner with certificates from suppliers or manufacturers certifying that materials supplied are in accordance with these specifications.

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III. CONSTRUCTION METHODS

Construction, flushing, and pressure testing shall be in accordance with the most current version of *AWWA Standard C600 for installation of Ductile-Iron Water Mains and Their Appurtenances*. All construction practices and related activities shall meet OSHA requirements.

A. General

Where water mains are to be installed across streams or rivers the Contractor shall abide by all the requirements of State Act 347 (Soil Erosion and Sediment Control), State Act 346 (Inland Lakes and Streams), and compliance with these requirements shall be included in applicable pay items.

If at any time during excavation, the contractor encounters what he believes to be volatile organic compounds, work shall be halted immediately. The City shall be notified and the City's Environmental Contractor shall provide direction and procedures. All work shall also be in accordance with EGLE standards. Any additional work in relation to the VOC shall be at no additional cost unless otherwise specified in the contract documents or agreed upon with the City prior to dealing with the VOC.

B. Excavation

1. General

The Contractor shall perform all excavation of every description and of whatever substance encountered to the depths indicated or as otherwise specified. The excavation shall provide a minimum of six (6) feet of cover over the top of the water main as measured from finish grade. During excavation, material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading and to prevent slides or cave-ins. Excavated materials stored along the trench shall be placed in a manner that will not cause damage to trees, shrubs, fences or other property. All excavated materials not required or not suitable for backfill shall be removed and wasted as indicated on the plans or as directed by the Engineer. All excavation, except for crossing of hard surfaced streets shall be by open cut, except where otherwise

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indicated on the plans or directed by the Owner in written change order. Crossing paved streets shall be accomplished by boring and jacking or by other means approved by the Owner.

2. Protection of Excavation

Grading shall be done as may be necessary to prevent surface water from flowing into trenches or other excavations, and any water accumulating therein shall be removed by pumping or by other approved methods. Sheet piling and shoring shall be installed as may be necessary for the protection of the work and for the safety of personnel.

3. Trench Excavation

Trenches shall be in accordance with MDOT Standard Plan R-83-C and the Trench Detail as called out on the plan sheets.

Whenever unstable soil is encountered in the trench bottom which the Engineer and Owner considers is incapable of properly supporting the pipe, such material shall be removed to the depth required and for such length as the Engineer and Owner may designate, and the trench backfilled to trench bottom grade with crushed stone or other material approved by the Owner. Required "over-depth" construction will be paid for as an extra to the contract price, but must be negotiated prior to construction and authorized in writing by the Engineer and Owner.

The excavation of the trench shall not advance more than 200 feet ahead of the pipe work, except where in the opinion of the Engineer and Owner it is necessary to drain wet ground.

The location of water mains has been selected to provide the least amount of interference with existing utilities. The Owner reserves the right to make minor variations in the alignment and grade of these mains during construction to meet any changed conditions which may be encountered, and no extra payment will be allowed the Contractor for such minor shifts in alignment and grade.

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At the locations where detailed positions of underground facilities become necessary to the new construction, the Contractor shall furnish all labor and tools to either verify and substantiate the record drawing location or definitely establish the position of the facilities. The utility companies will aid in establishing the position of underground utilities at no expense to the Contractor.

Construction of service connections can be by open trench or use of hydraulically bored tunnels or other methods approved by the Owner. Service connections shall not be placed in the same trench as sewer services unless the trench is widened to provide the horizontal separation requirement required by the plumbing code.

C. Boring and Jacking

Boring and Jacking as required by the plans or by the Engineer shall be completed in full compliance with the City of Alpena specifications which, if required, are included in a separate Special Provision attached.

D. Pipe Laying

The full length of each section of underground pipe shall rest solidly upon a 4" sand cushion with recesses only to accommodate pipe bells and joints. Any pipe which has its alignment, grade or joints, disturbed after laying shall be taken up and relayed.

The interior of all pipe shall be thoroughly cleaned of all foreign matter before being installed, and shall be kept clean during laying operations. The pipe shall not be laid in water, or when trench or weather conditions are unsuitable for work. When the work is not in progress, open ends of pipe shall be securely closed so that no water, earth, rodents or other foreign substances can enter the line. Any section of pipe found to be defective, either before or after laying, shall be replaced with new pipe at no additional expense to the Owner.

When water mains in the distribution system are shown routed along streets or highways, the alignment of the water mains shall be parallel to the centerline of the road and at a distance therefrom as indicated on the



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construction drawings. Where water mains are shown crossing private property, the alignment of the mains shall be located as indicated on the construction drawings, and the work shall be done within the construction easements provided by the Owner.

Ductile iron pipe shall be examined for defects while suspended in a sling prior to being lowered into place. All damaged, defective or unsound material will be rejected and shall be removed immediately from the site or destroyed. All lumps, blisters and excess coal tar coating shall be removed from the inside of the bell and outside of the spigot and these areas wire brushed and wiped clean using a dry oil-free rag. The pipe shall be cleaned of all foreign material prior to laying and no debris, tools, clothing or other materials shall be allowed in the pipe during the laying operation.

Pipe shall be laid in a dry trench with bell ends facing in the direction of laying, and shall have a minimum of five feet of cover. After placing a length of pipe in the trench, and after installing the gasket and applying the gasket lubricant, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade.

The pipe shall be secured in place with Class II material tamped under it. Pipe which does not allow a sufficient and uniform space for joints shall be removed and replaced with pipe of proper dimensions to insure such uniform space. Precautions shall be taken to prevent dirt from entering the joint space.

Whenever it is necessary to deflect pipe from a straight line either in the vertical or horizontal plane to avoid obstructions, or where long radius curves are permitted, the amount of deflection allowed shall not exceed the values shown below:

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Nominal Joint Maximum Length (Inches)	Slip-On Joint Pipe Maximum Deflection 18 Foot Length (Inches per Length)	Mechanical Deflection 18 Foot (Inches per Length)
6	19	27
8	19	20
10	19	20
12	19	20
14	11	13-1/2
16	11	13-1/2
18	11	11
20	11	11
24	11	9
30	7-1/2	9
36	7-1/2	9

**E. Handling**

Ductile iron pipe shall be handled in such a manner as to insure delivery on the site and final installation in a sound, undamaged condition. Care shall be taken not to split or damage the ends of pipe, or cause injury to pipe coatings or linings. The pipe shall be loaded and unloaded using hoists in a manner so as to avoid shock or damage and shall not be dropped, skidded, or rolled against other pipe. If any part of the coating or lining is damaged, the repair thereof shall be made by the Contractor at his expense, in a manner satisfactory to the Owner.

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F. Cutting Pipe

Any cutting of pipe shall be done in a neat and workmanlike manner without damage to the pipe or lining and so as to leave a smooth end at right angle to the axis of the pipe. Cutting shall be done by means of an approved type mechanical cutter or saw except that for pipe 20 inches or more in diameter, electric arc cutting using carbon or steel rod may be used. Only qualified welders shall be allowed to do this work. Flame cutting using an oxyacetylene torch shall not be allowed.

G. Jointing

1. Mechanical and Push-On Joints

Mechanical and “push-on” joints shall be installed in strict accordance with the recommendations of the joint manufacturer. Copies of such recommendations and instructions shall be furnished to the Engineer and Owner prior to starting the laying of this type of pipe and additional copies shall be available on the project at all times during construction.

H. Water Main Separation

Wherever pipe lines designated to carry potable water supplies cross or are laid less than ten (10) feet horizontally from existing or proposed drain or sewer lines, special precautions shall be taken as follows:

1. Horizontal Separation

Should conditions prevail which prevents a lateral separation of 10 feet, the water main may be laid closer than 10 feet to a storm drain or sanitary sewer only with prior written approval of EGLE. The main shall then be laid in accordance with the EGLE instructions.

2. Vertical Separation

Whenever the water main crosses house sewers, storm drains, or sanitary sewers, the pipe line shall be laid at such an elevation that the bottom of the line is at least 18 inches above the top of the drain or sewer while maintaining the required minimum 6’ of earth cover.

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This minimum vertical separation shall be maintained for a distance of 8' each way of the sewer or drain being crossed. In making such crossings a full length of water main shall be centered over the sewer to be crossed so that the water main joints will be equidistant from the centerline of the sewer. Where a water main must cross under a sewer, the vertical separation of 18 inches between the bottom of the sewer and the top of the water main shall be maintained. The sewer shall be supported to prevent its settling as directed by the Engineer. The water main may be laid closer than 18 inches to a storm, sanitary or service crossing only with prior written approval of EGLE. The main shall then be laid in accordance with the EGLE instructions.

I. Incidental Items of Work

1. Connections to Existing Systems

All connections to existing water mains shall be done using pressure tapping sleeves and valves. At no time shall an existing water main be shut down to facilitate the connection of a new water main, except as approved by the Engineer.

2. Concrete Encasement

Concrete encasement for ductile iron water pipe shall be provided at locations shown on the plans or where directed by the Engineer. It shall be placed in conformance with details shown in the plans. Concrete shall have a minimum 28 day compressive strength of 3000 psi.

3. Anchorage

Mechanically restrained joints shall be used at all fittings, including, but not limited to, bends, crosses, stubs, tees, and plugs. Concrete thrust blocks may be used in accordance with the plans with prior approval and as directed by the Engineer.

Unless otherwise approved by the Owner, the Contractor shall install all fire hydrants using restrained joints. Said restraints shall tie the hydrant to the main line.

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J. Service Connections

Where service connections are shown on the contract drawings or listed in the contract proposal, they shall be installed according to the following standards.

Existing or proposed service lead locations shown on Drawings are schematic only to present approximate locations, length and total number.

Contractor shall contact SUEZ to assist in locating existing service leads. SUEZ shall attempt to locate the leads by means of records and on-site investigation. Services for which and exact location cannot be determined shall be located by the contractor through contact with the home owner or by water investigation.

Unless otherwise directed by the Engineer in field, service leads shall be installed at center of vacant lots.

Each water service pipe shall be connected to the water main through a brass corporation stop. If pressure is available, the water main shall be tapped and the corporation's stops inserted under pressure. The tapping of mains shall be done in accordance with good practice. The main shall be drilled and tapped by use of a tapping machine with a combination drill and tap of the appropriate size for the connection being installed. All materials shall be disinfected prior to installation.

After tapping the main and installing the corporation stop, the tap shall be tested by turning the corporation stop on and off. A slack line consisting of 18 inches shall be left in the service connection at the water main. The service pipe shall be laid in the trench sufficiently weaving to allow not less than one (1) foot extra length in its entire length. After installing the curb stop, the connection shall be tested by turning the corporation stop on and turning the curb stop on and off. All joints shall be examined to be sure there is not leakage.

All joints of copper pipe to fittings shall be compression or flared joints. The connection shall be left with the corporation stop in the open position and the curb stop in the closed position.

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Where service connections are made to a water main that is pressurized, the Contractor shall be responsible for repairing any house leads that leak and shall also be responsible for making sure that the corporation stop is open and the curb stop is closed. Any additional expense involved because of this condition shall be borne by the Contractor.

K. Valve Boxes and Manholes

1. General

This item shall include the installation of valve boxes or precast concrete manholes for valves as required on the drawings.

2. Valve Boxes

Valve boxes shall conform to the appropriate material specifications in Part B entitled "CONSTRUCTION MATERIALS". Valve boxes shall be installed in a true and vertical position over the bonnet of the valve. The top of the valve box shall be flush with finished pavement or lawn grade, or 6" below finish road grade in gravel roads. Following final backfill and/or final grading, the Contractor shall verify that the valve can be opened and that the box is free of dirt or other debris. Valve boxes are required for all valves.

3. Valve Manholes

Contractor shall utilize valve boxes in all valve installations. In cases where a valve manhole is required, the contractor must request, in writing, and establish justification as such and the Engineer shall notify, in writing, of the authorization to use, if such is granted.

Manhole frames and covers shall be of the size shown on the plans and shall conform to the appropriate "Material Specifications". The manhole frame shall be completely wrapped in a concrete wrap extending from the top of the cone to the top of the frame.

Manhole frames shall be set in a full bed of mortar. The Top of MH frames and covers shall be installed flush with finished pavement grade or finished lawn grade in unpaved areas, or 6" below road grade in gravel roads.

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Openings for pipe inlets or outlets shall be provided in such precast units at the locations required, and shall be true to form and approximately one (1) inch larger in diameter than the outside of the pipe to provide for a mortar seal. The openings around all pipe shall be completely sealed using non-shrink cement mortar grout.

Manholes shall be provided for all valves 10 inches and larger and for 8 inch valves in paved area. All manholes shall be constructed as shown on the standard detail sheet.

L. Bedding and Backfilling

1. General

Bedding and backfill shall be in accordance with MDOT Standard Plan Trench Detail G (R-83 Series).

IV. TESTING OF WATER MAINS

A. Hydrostatic Test

1. General

Within a reasonable length of time following pipe laying, the Contractor shall complete all work necessary to perform hydrostatic testing. Where feasible, the water main shall be tested in Sections 2500 to 3000 feet in length. The Contractor shall provide at his expense all labor, supervision, pumps, measuring devices, power, and potable water necessary for conducting the hydrostatic tests. The Contractor shall be responsible for conducting preliminary hydrostatic tests on his water mains to insure that they will sustain the required test pressures. All leaks and defects discovered during preliminary testing shall be repaired and the water mains retested. Immediately after the water mains have passed such preliminary tests, the Contractor shall contact and notify the Owner of the day, date, and time of the final hydrostatic test which shall be performed in the presence of the Owner.

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2. Preparation

After the pipe has been laid and backfilled as specified, the Contractor shall fill the line, or a valved section thereof, with potable water in such a manner as to expel all air from the pipe. This may be done through fire hydrants or through corporation stops installed by the Contractor as necessary to accomplish the expulsion of all air. At the close of the test, all taps shall be satisfactorily plugged with brass plugs.

If a meter is not available to measure the volume of water, the Contractor shall pay for a minimum of five times the volume of the pipe installed or as otherwise determined by the Owner.

Use of potable water for leakage testing, disinfection, or testing shall be transmitted through a City of Alpena approved backflow prevention device per the City's cross connection control program. The Engineer shall authorize equipment prior to usage.

3. Test

All pipe laid under this contract shall be subjected to a hydrostatic pressure of 150 psi at the elevation of the highest point in the water main tested. The duration of the test shall be at least two hours, or such additional time as may be necessary to establish that the condition of the piping installation is satisfactory. Any cracked or defective pipe, fittings, valves or hydrants shall be removed and replaced with sound material at the Contractor's expense and the test repeated to the satisfaction of the Engineer and Owner.

4. Leakage

Leakage is defined as the quantity of potable water that must be supplied into a newly laid pipe, or valved section thereof, in order to maintain the specified test pressure. No pipe line installed will be accepted until the total leakage measured over the two hour period is less than required by the AWWA C600 Standard. All visible leaks must be corrected.

Should any test of pipe installed disclose leakage greater than that specified above, the Contractor shall, at his own expense, locate and



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repair the points that show evidence of leakage and repeat the test until the leakage is within the specified allowance.

**B. Chlorination**

After satisfactory hydrostatic tests are obtained, the new water main shall be chlorinated. The disinfection shall be in accordance with the most current version of *AWWA Standards C651 and C655*. Bacteriological samples must be collected from “every 1,200 feet of new water main, plus one set from the end and at least one set from each branch.” Also, *Final Flushing* from the same standard shall be followed to ensure the heavily chlorinated water does not harm the environment during flushing.

Granular chlorine or chlorine tablets shall be applied at points in accordance with AWWA Standard C651.

A slow flow of potable water shall be introduced into the main near the point of chlorine injection at a rate such that the resulting chlorine/potable water mixture will be at least 50 parts per million. An open discharge shall be maintained at the far end of the main and the introduction of chlorine solution and potable water shall continue at a constant rate until the potable water discharging at the far end shall be 50 parts per million.

As the main is filled with chlorinated potable water, each available outlet shall be tested to see that the 50 parts per million is obtained at each outlet. The chlorine treated potable water shall remain at least 24 hours and at the end of that time the chlorine residual at test points shall be at least 10 ppm. If the chlorine residual shall be less than 10 ppm at the end of 24 hours, further application shall be made and the retention period repeated until the required 10 ppm residual is obtained.

Following chlorination, all heavily chlorinated potable water shall be thoroughly flushed from the main until the replacement potable water is of the same chemical and bacteriological quality as the potable water source.

The Owner will collect potable water samples in sterile bottles containing sodium thiosulphate for bacteriological analyses. Bacteriological analysis shall be made by a State of Michigan certified laboratory and acceptable tests are negative for bacteria and as otherwise defined by AWWA C651 and

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EGLE regulations. If the samples show safe results on consecutive samples collected 24 hours apart, the new pipe line is ready to be placed in service.

V. RESTORATION OF DISTURBED FACILITIES

A. General

All protection and restoration shall be included in the water main construction unless modified by other project specifications.

VI. METHOD OF PAYMENT

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Removal of existing water main, fittings, valves, and other appurtenances that are in the same trench as the proposed water main is required, and **shall not** be paid for separately.

These specifications include the following pay items. Additional water items may appear in the plans that may not be listed here but are governed by this specification:

<u>Pay Item</u>	<u>Unit</u>
Water Main, DI, __ inch, Tr Det ____, Modified	Foot
Water Main, Rem, _____	Foot
Gate Valve and Box, __ inch, Modified	Each
Valve, Pressure Reducing, __ inch	Each
Bend, DI, __ degree, __ inch	Each
Cross, DI, __ inch x __ inch	Each
Cap, DI, __ inch	Each
Plug, DI, __ inch	Each
Reducer, DI, __ inch x __ inch	Each
Solid Sleeve, DI, __ inch	Each
Tee, DI, __ inch x __ inch	Each
Fittings Not Shown on Plans	Each
Fire Hydrant Assembly	Each
Fire Hydrant Assembly, Rem	Each
Water Service	Each
Connect to Existing Water Service	Each
Testing and Chlorination	Each
Connect to Existing Water Main	Each
Water Investigation	Each

# City of Alpena Special Provision for Water Main Installation

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**CITY OF ALPENA FIRE HYDRANT AND RESTRAINT**

FIRE HYDRANTS MUST MEET OR EXCEED THE REQUIREMENTS OF UNDERWRITER LABORATORIES STANDARD UL 246 AND AWWA STANDARD C502 FOR DRY BARREL FIRE HYDRANTS. ALL HYDRANTS SUPPLIED MUST HAVE THE "U.L." INSIGNA CAST ON THE HYDRANT UPPER TRAFFIC STANDPIPE.

HYDRANTS SHALL BE EQUIPPED WITH TWO 2½" HOSE NOZZLES AND ONE 4" PUMPER NOZZLE WITH NST THREADS OR AS THE PLANS SPECIFY.

ALL HYDRANTS MUST BE SUPPLIED WITH A 24" IN LENGTH FLUTED UPPER TRAFFIC STANDPIPE AND ONE FIBERGLASS HYDRANT FLAG FOR IMPROVED WINTER VISIBILITY.

BRASS NOZZLES MUST BE DESIGNED WITH BRASS LUGS AND ORING GASKET AS THE MEANS TO FORM A PRESSURE TIGHT COMPRESSION FIT WHEN ATTACHED TO THE HYDRANT BONNET. (NO THREADED IN NOZZLES ALLOWED). HYDRANTS SHALL BE SIZED FOR A BURY DEPTH OF 6' 6" FT. OR AS PLANS SPECIFY, WITH A 6" MECHANICAL JOINT INLET COMPLYING WITH ANSI A21.11. AS JOINT RESTRAINT, ALL FIRE HYDRANTS SHALL USE EBAA IRON MEGA LUGS ON HYDRANT SHOE, BOTH SIDES OF VALVES AND ON BRANCH OF MJ TEE.

HYDRANTS MUST HAVE TWO TRAFFIC BREAKAWAY FLANGES WITH A GALVANIZED STEEL BREAKABLE STEM COUPLING LOCATED NEAR THE GROUND LINE TO MINIMIZE BARREL AND STEM DAMAGE FROM TRAFFIC IMPACT. THE OPERATING STEM MUST BE AT LEAST ¼" IN DIAMETER.

HYDRANT OPERATING NUT MUST BE SOLID BRASS AND ATTACHED TO OPERATING STEM UTILIZING A STANDARD ACME THREAD AT 5 T.P.I. (OPEN LEFT). LUBRICATION OF THE OPERATING NUT MUST BE DESIGNED TO USE FOOD GRADE GREASE ONLY. NO OIL BATH OPERATING ASSEMBLY DESIGNS ALLOWED. NO V THREADS ALLOWED FOR OPERATING STEM OR NUT. FIRE HYDRANT BOTTOM BRASS DRIP SHUT OFF MUST BE ATTACHED TO THE 1 ¼" OPERATING STEM BY MEANS OF A ⅜" DIAMETER STAINLESS STEEL DRIVE LOCK PIN. BOTTOM BRASS DRIP SHUT OFF MUST BE OF A HEAVYDUTY DESIGN TO ENABLE REMOVAL BY MEANS OF A STEM DRIVE SEAT WRENCH TOOL.

ALL FIRE HYDRANTS SHALL OPEN LEFT (COUNTER CLOCKWISE) WITH A ¼" POINT TO FLAT OPERATING NUT. THE COLOR OF THE HYDRANTS SHALL BE RED.

HYDRANT BARRELS MUST HAVE AN INSIDE DIAMETER OF AT LEAST 8 INCHES. THE MAIN VALVE SHALL BE FORMED OF SPECIALLY MOLDED RUBBER. THE VALVE ASSEMBLIES, INCLUDING SEAT AND GUIDES, SHALL BE BRASS AND MUST BE THREADED INTO A BRASS LINER IN THE HYDRANT SHOE. FIRE HYDRANT BARRELS BELOW GRADE (LOWER STANDPIPE) MUST BE MADE OF DUCTILE IRON.

ALL FIRE HYDRANTS SUPPLIED SHALL BE EAST JORDAN IRON WORKS MODEL 5BR250 WATERMASTER OR EQUAL.

**CITY OF ALPENA RESILIENT WEDGE GATE VALVE**

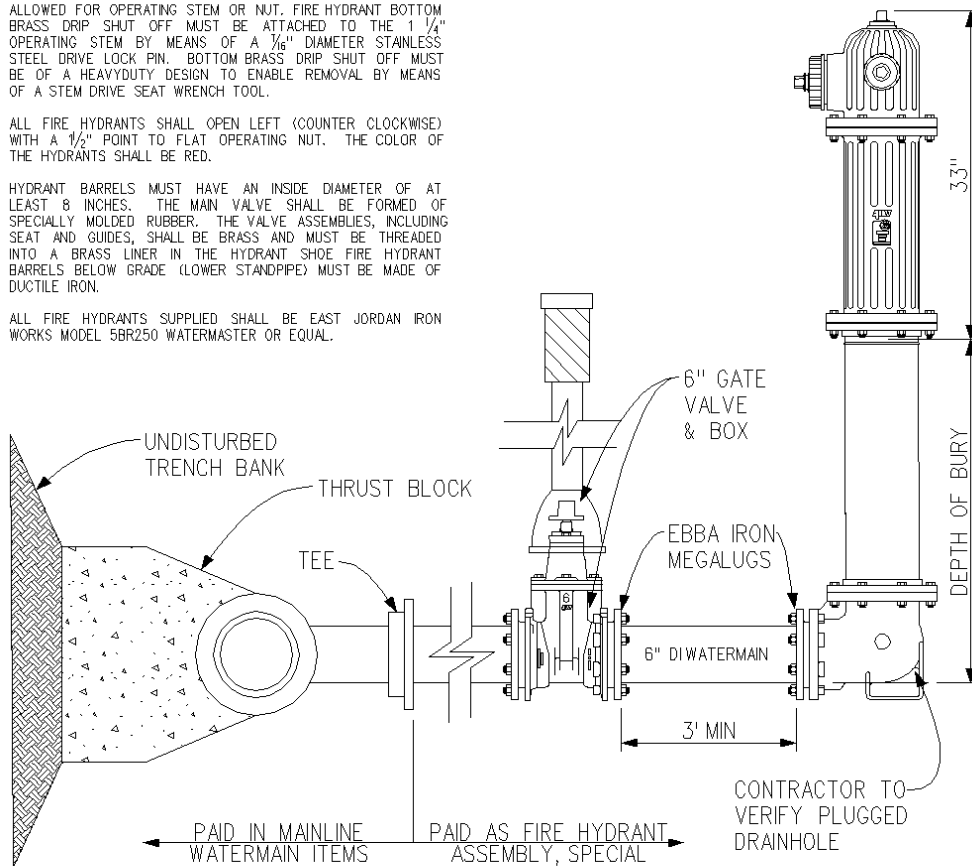
VALVES SHALL BE RESILIENT WEDGE TYPES RATED FOR 250 P.S.I. COLD WATER WORKING PRESSURE. VALVE PERFORMANCE SHALL MEET OR EXCEED THE REQUIREMENTS OF ANSI/AWWA C508 WITH THE BODY AND BONNET MEETING THE WALL THICKNESS REQUIREMENTS OF ANSI/AWWA C153. VALVES SHALL MEET THE REQUIREMENTS OF UNDERWRITERS LABORATORIES STANDARD 262.

VALVE BODY, BONNET, SEAL PLATE, AND WEDGE CASTING SHALL BE CONSTRUCTED OF DUCTILE IRON IN ACCORDANCE WITH ASTM A536. THE WEDGE CASTING SHALL BE 100% ENCAPSULATED WITH NITRILE RUBBER. NO EPOXY COATING IS ALLOWED IN WEDGE. THIS RUBBER SHALL BE PERMANENTLY BONDED TO THE DUCTILE IRON WEDGE CASTING AND SHALL MEET ASTM D429 TESTS FOR RUBBER TO METAL BONDING.

THE STEM AND STEM NUT SHALL BE MADE FROM HIGH STRENGTH MANGANESE BRONZE, UNS ALLOY C86700. THRUST WASHERS SHALL BE LOCATED ABOVE AND BELOW THE THRUST COLLAR OF THE STEM AND SHALL BE STAINLESS STEEL. THERE SHALL BE TWO ORING SEALS IN THE SEAL PLATE, WHICH SHALL BE REPLACEABLE WITH THE VALVE IN THE FULL OPEN POSITION AT RATED WORKING PRESSURE. ALL GASKETS SHALL BE ORING SEALS. ORINGS SET IN A CARTRIDGE SHALL NOT BE ALLOWED. THE BODY, BONNET, AND SEAL PLATE SHALL BE EPOXY COATED IN ACCORDANCE WITH NSI/AWWA C550.

VALVES SHALL HAVE LAYING LENGTHS AND CLEAR WATERWAY OPENINGS FOR MECHANICAL JOINT VALVES AS LISTED BELOW:

VALVE SIZE	LAYING LENGTH	WATERWAY DIAMETER
4"	4 5/8"	4 3/8"
6"	5"	6 3/8"
8"	5 1/4"	8 3/8"
10"	6 3/4"	10 3/8"
12"	8"	12 3/8"
16"		16 3/8"



## FIRE HYDRANT ASSEMBLY

City of Alpena  
Special Provision  
for  
**Dewatering**

**ALP**

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**01/17**

**a. Description.** This work shall consist of all labor, equipment and materials to furnish, install, operate, and remove a dewatering system to remove surface and ground water to facilitate the installation of utilities and sub-surface items as described by the plan drawings and specifications.

**b. Materials.** The contractor shall supply and maintain adequate dewatering equipment to remove and dispose of excess surface and ground water from the construction influence area for the duration of the construction project. Equipment can be, but is not limited to, a well point system connected to a manifold or other reliable pump system. Other dewatering systems shall have prior approval before being implemented. The use of stone or gravel and open trench pumping for dewatering shall be included in the pricing for installation of major items of work and will not be paid for as “Dewatering System, Trench”.

**c. Construction.** Contractor shall describe and receive approval for a system plan from the Engineer prior to the implementation of the dewatering system. This plan shall include an inventory of the equipment to be utilized, an outline of how the system shall be operated, and a contingency plan for standby equipment to allow for limited downtime of the dewatering system, if needed.

Ground water shall be lowered and controlled to a level below the installation of the items of work being performed in a dry, sound trench. Contractor shall construct the system to limit the amount of surface water infiltrating the trench as all times. All dewatering operations shall be conducted to prevent damage or obstruction to adjacent structures, facilities, roads, pathways and existing utilities.

Non contaminated water collected from dewatering shall be disposed of into the city storm system. Contractor shall comply with all soil erosion and sedimentation controls to prevent sediment infiltrating the storm system as outlined in Section 208 of the 2012 Standard Specifications for Construction. Disposal of any contaminated ground water will be at the direction of the Engineer. Price adjustments for this circumstance shall be addressed in additional pay items as needed.

Contractor shall ensure that all dewatering operations and equipment complies with all jurisdictional applicable laws, ordinances and regulations including, but not limited to, noise and soil erosion.

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for  
**Dewatering**

**ALP**

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**d. Measurement and Payment.** The completed work of all labor, equipment and materials to furnish, install, operate, and remove a dewatering system will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Dewatering System, Trench	Foot

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Special Provision  
For  
**Maintaining Traffic**

**ALP**

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**03/14**

**a. General** - Traffic shall be maintained according to Section 812 of the 2012 MDOT Standard Specifications for Construction, including any Supplemental Specifications, and as specified herein. The Contractor shall notify the Engineer a minimum of 72 hours prior to the implementation of any road closures.

Traffic shall not be maintained for the duration of the construction project. Contractor shall work to ensure minimum pedestrian traffic can be maintained at all times and property owners, business customers and emergency vehicles shall be assured of access to their property.

The City of Alpena, and/or Contract Maintenance Agencies may perform maintenance work within or adjacent to the Construction Influence Area (CIA). These maintenance crews will coordinate their operations with the Engineer to minimize the interference to the Contractor.

No additional payment will be made to the Contractor for the joint use of the traffic control items.

All work areas shall be closed to traffic during construction activities unless otherwise directed by the Engineer.

**b. Construction Influence Area (CIA)** - The construction influence area (CIA) shall consist of the width of the project right-of-way of **Second Avenue from Fletcher Street to Hueber**, and a sufficient distance on intersecting roads and streets, to warn motorists of the construction ahead.

**c. Traffic Control Devices** - All signs, barricades, warning lights and other traffic control devices shall be in accordance with the 2009 Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

**d. Measurement and Payment** - Unless specifically identified on the Plans or in the Proposal as pay items, the furnishing, installing, maintaining, lighting, moving and removing of such temporary signs and barricades adjacent to the work as the construction operations may require, the maintaining of local traffic, and including the temporary signs specified herein, shall be included in the payment for "Minor Traf Devices"

Payment for "Barricade, Type III, High Intensity, Lighted, Oper", includes payment for operation, maintenance and/or replacement of damaged portions of the barricade, including boards and lights. If a barricade is damaged by a vehicle other than the Contractor's, Subcontractor's, or Supplier's vehicle or equipment to such an extent that total replacement

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**Maintaining Traffic**

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of the barricade is necessary, as determined by the Engineer, payment will be made at the contract unit price for "Barricade, Type III, High Intensity, Lighted, Furn."

The completed work as measured for Maintaining Traffic will be paid for at the contract unit prices for the following contract items (pay items), for furnishing all materials and all work specified herein:

<b>Contract Item (Pay Item)</b>	<b>Pay Unit</b>
Flag Control	Lump Sum
Minor Traf Devices	Lump Sum
Plastic Drum, High Intensity, Lighted, Furn	Each
Plastic Drum, High Intensity, Lighted, Oper	Each
Barricade, Type III, High Intensity, Lighted, Furn	Each
Barricade, Type III, High Intensity, Lighted, Oper	Each
Sign, Type B, Temporary, Furn	Square Foot
Sign, Type B, Temporary, Oper	Square Foot



City of Alpena  
**Notice to Bidders**  
**Coordination Clause**

**ALP**

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**03/24**

It is the intent of the City to award the Contract for this project at the April 15 City Council Meeting.

A preconstruction meeting will be held at Alpena City Hall in the Council Chamber on Wednesday, April 17, 2024 at 10:00 am.

As several blocks of this project are within our Downtown District, the city requests a progress schedule showing durations of significant construction in this area of the project. At no time shall the Downtown District be under substantial construction (must be base course hard surfaced and ADA accessible pedestrian walkways) between Memorial Day and Labor Day.

The following dates/festivals shall be considered for the projects and no substantial construction shall take place in the Downtown District during these times without prior authorization from the engineer.

- Alpena Flower Fest – June 7-9, 2024
- Fourth of July – July 4-7, 2024 (Parade route goes down Fletcher)
- Festival of Sails – July 26-28, 2024
- Chili Chowder Cookoff – October 5 or 12, 2024
- Witches Night Out - October 18, 2024
- Downtown Trick or Treat – October 25, 2024

Contractor should also be aware that All Saints School at the intersection of Oldfield and Second will be in session until June 7, 2024.

Contractors shall notify the City at least one week prior to the beginning of each subproject to allow for proper notification of the public and affected property owners.

The following will subsections have been established for this project to facilitate temporary water service:

Fletcher to Miller Street (within the Downtown District)  
Miller to Clark Street (up to Lake Street within the Downtown District)  
Clark to Spratt Street  
Spratt to Hueber Street

Top Course shall be installed in single passes.

Substantial completion including top course shall be November 1, 2024. All work will be completed prior to June 1, 2025.

CITY OF ALPENA

**NOTICE TO BIDDERS  
UTILITY COORDINATION**

**ALP**

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**08/22**

The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.07 of the 2012 MDOT Standard Specifications for Construction. In addition, for the protection of the underground utilities, the contractor shall follow the requirements in Section 107.12 of the 2012 MDOT Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon Section 109.03 of the 2012 MDOT Standard Specifications for Construction.

For protection of underground utilities and in conformance with Public Act 53, the contractor shall dial 1-800-482-7171 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the contractor of the responsibility of notifying utility owners who may not be a part of the "Miss Dig" alert system.

Public Utilities

The following Public Utilities have facilities located within the right-of-way. This list is for informational purposes only and is not meant to be an exhaustive list of Public Utilities located within the right-of-way.

**City of Alpena Electric & Fiber**

Thunder Bay Electric  
1693 M-32 West  
Alpena, MI 49707  
Attn: Tim Modrzyński  
989-354-2840

**City of Alpena Water & Sewer**

Veolia  
210 Harbor Drive  
Alpena, MI 49707  
Attn: Mike Collins  
989-354-1400

**Electricity**

Alpena Power Company  
401 N 9th Ave  
Alpena, MI 49707  
Attn: Jon Bullis  
989-657-5471

**Cable & Fiber**

Charter Communications  
345 S State St  
P.O. Box 339  
Oscoda, MI 48750  
Attn: Steve Kolnowski  
989-671-7243

**Natural Gas**

DTE Energy Company  
1250 Michcon Lane  
PO Box 279  
Kalkaska, MI 49646  
Contact: Matt Logan  
231-258-3785

**Fiber & Telephone**

Frontier Communications  
3840 US 23 North  
Alpena, MI 49707  
989-356-8281

**Fiber**

Merit Network, Inc.  
4273 58th Street  
Holland, MI 49422  
Contact: Ken Lopez  
616-393-0132

City of Alpena  
**Notice to Bidders**  
**Utility Coordination**

**ALP**

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**02/19**

The owners of existing service facilities that are within grading or structure limits will move them to locations designated by the Engineer or will remove them entirely from the street Right-of-Way. Owners of Public Utilities will not be required by the City to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

The utility companies for this project may do utility relocation work. It is anticipated that the utilities will complete any relocation work during the early stages of the project and that no delay will be experienced to the Contractor's operation due to utility work.

During the course of construction, the contractor may encounter both overhead and underground utilities. The names and phone numbers of the utility company representatives will be available at the preconstruction meeting.

Special Coordination/Considerations

**City Water and Sewer Contractor** will need one week's notice prior to implement a temporary water system. At no point shall the existing water system be discontinued until all appropriate testing has been completed on the temporary water system and the City contractor has given the go ahead for the system to be discontinued.

Additionally, in order to prevent large areas of temporary water to be installed at one time, contractor shall work with the City and its contractor to preplan proper sized shut down and temporary water service areas. This could include installing valves at intersections, testing and chlorinating intersections to allow for new connection points and assistance with installing the temporary system with the City contractor. The Contractor shall also work in a manner which will prevent damage to the temporary water system and cause disruption of service to customers.

**Natural Gas Utility** has indicated the need to coordinate with the contractor to install new infrastructure within the Right of Way in coordination with this project.

**City Electrical Contractor** shall be responsible for the removal and replacement of the existing Pedestrian and Street fixtures within the construction influence. This work will take place between Fletcher and Lake Streets. Contractor shall notify the City and the above noted contractor two weeks in advance of the beginning of construction for the existing fixtures to be removed. During the construction, the contractor will need to coordinate with the City electrical contractor for the reinstallation of the fixtures. This work will include, but is not limited to the installation of electrical conduit behind the proposed curblin and installation of new light bases prior to or in coordination with sidewalk installation.