



City of Elkins

Municipal Properties Committee Meeting

May 13, 2024
11:00 AM
401 Davis Avenue
Council Chamber, 2nd Floor

Charter Authority of the Municipal Properties Committee: Monitor and report to Council on the condition of and proposed plans for city buildings, real estate, and rights-of-way. Review and propose to Council capital investment in buildings, real estate, and associated infrastructure.

AGENDA

1. **Call to order and roll call**
2. **Public comment**
3. **Minutes**
 - a. Proposed minutes for the meeting of March 11, 2024
4. **Reports**
5. **New business**
 - a. Downtown sidewalks
 - b. City Hall parking lot
 - c. Proposed project for 11th Street sewer line relocation (including plans for bidding out)
6. **Announcements**
7. **Adjournment**



CITY OF ELKINS AGENDA ITEM REPORT

Meeting Date:	May 13, 2024
Section:	Minutes
Category:	Action Item
Agenda Item Name:	Proposed minutes for the meeting of March 11, 2024
Recommended By:	City Clerk
Summary:	Minutes proposed for the meeting of March 11
Fiscal Impact:	n/a
Recommendation:	Consider for approval
Attachments:	1. municipal properties - 2024_03_11 - minutes_proposed

MUNICIPAL PROPERTIES COMMITTEE REGULAR MEETING MINUTES

***401 Davis Avenue
City Hall, Council Chambers
March 11, 2024
11 a.m.***

Present were Committee Members: N. Bross-Fregonara (chair), D. Parker, and C. Kerns.

Also present were: Mike Kesecker (operations manager), Gerry Roberts (city attorney), Tracy Judy (treasurer), Steve Himes (fire chief), Travis Bennett (police chief), Melissa Washington (human resources), and Sutton Stokes (city clerk).

PUBLIC COMMENT

There was no public comment.

MINUTES

Kerns **MOVED APPROVAL OF THE MINUTES OF THE MEETING OF FEBRUARY 12, 2024.** The motion carried.

NEW BUSINESS

Regarding the proposed elimination of the no-parking zone on South Davis just south of the Davis Avenue Bridge (in front of the Riverview Apartments), the Police Chief, Fire Chief, and Operations Manager all agreed that this no-parking zone should not be eliminated, due to safety concerns. No action was taken on this request.

Kerns **MOVED RECOMMENDING COUNCIL APPROVAL OF THE ELIMINATION OF THE NO-PARKING ZONE ON SOUTH DAVIS IN FRONT OF THE FORMER T-MART, FOLLOWING STANDARD PRACTICES TO PRESERVE TURNING ROOM FOR LARGE VEHICLES AT THE INTERSECTION.** The motion carried.

Kerns **MOVED RECOMMENDING COUNCIL APPROVAL OF A LEASE ARRANGEMENT WITH TYGART HOTEL FOR RESERVED LOADING/UNLOADING ON DAVIS AVENUE AT A RATE OF \$840/YEAR.** The motion carried.

Kerns **MOVED RECOMMENDING DEVELOPING AN ORDINANCE CREATING A TIF ADVISORY COMMITTEE, REFERRED TO THE RULES & ORDINANCE COMMITTEE.** The motion carried.

Heather Biola presented information about a \$20,500 SHPO grant being applied for by the Kump Education Center. The grant would fund roof and other repairs. There is a 50/50 match

requirement that the Kump Trust will provide, with no expected financial impact on any city fund. Bross-Fregonara presented information about a covenant that will be required to be signed by the mayor after grant award.

An update about plans for new monuments at the All-Veterans Park was provided in the meeting packet.

Bennett presented information about the need to restrict access in the parking lot adjacent to the EPD entrance to EPD personnel and vehicles only. Kesecker and Bennett will create a plan and report back to the committee.

Bross-Fregonara **MOVED RECOMMENDING COUNCIL APPROVAL OF A PROPOSAL TO DESIGNATE THE POLICE DEPARTMENT OFFICE AS THE PAIGE MARSTILLER / ROBERT LILLY MEMORIAL POLICE STATION.** The motion carried.

The meeting adjourned at 12:36 p.m.

The foregoing minutes were approved at the meeting of _____.

Name & Title

Signature



CITY OF ELKINS AGENDA ITEM REPORT

Meeting Date:	May 13, 2024
Section:	New business
Category:	Action Item
Agenda Item Name:	Downtown sidewalks
Recommended By:	Councilor Bross-Fregonara
Summary:	Discussion of funding sidewalk repairs.
Fiscal Impact:	TBD
Recommendation:	Consider options for funding sidewalk repairs for possible referral to the Finance Committee, recommendation to council, or other steps as appropriate
Attachments:	None



CITY OF ELKINS AGENDA ITEM REPORT

Meeting Date:	May 13, 2024
Section:	New business
Category:	Action Item
Agenda Item Name:	City Hall parking lot
Recommended By:	Police Chief
Summary:	Concerning the public parking area in the City Hall parking lot, EPD requests guidance and the formulation of rules concerning the purpose of such parking, any limitations that should be imposed, etc.
Fiscal Impact:	TBD
Recommendation:	Deliberate concerning what is needed and recommend next steps, possibly for referral to Rules & Ordinances
Attachments:	None



CITY OF ELKINS AGENDA ITEM REPORT

Meeting Date:	May 13, 2024
Section:	New business
Category:	Action Item
Agenda Item Name:	Proposed project for 11th Street sewer line relocation (including plans for bidding out)
Recommended By:	Chief Wastewater Operator
Summary:	The city property on Eleventh Street (former Street Department garage) is highly desirable for commercial uses in terms of location but saleability is hampered by the existence of a large sewer main under the property. There is in hand a proposal from Civil & Environmental Consultants, Inc. to move the line. Via Resolution 1735 (attached), council has already authorized the use of Financial Stabilization Account funds if needed, although it appears that state economic development funds may be available for some or all of the project cost. The next step is to recommend to council that this project be bid out.
Fiscal Impact:	The total cost of the project is \$130,000.
Recommendation:	Consider for recommendation to council of next steps as determined at this meeting
Attachments:	1. R-1735 Approving Financial Stabilization Account Funds for Relocation of Sewer Line Near Eleventh Street 2. 20240508 11 St. Relocation OPCC -ER UPDATE 5-10-2023 3. 342-544_11th_Sanitary Sewer_Relocation_contract documents_combined 4. 20240509_342-544_Elkins Sewer Line Replacement

IN THE COMMON COUNCIL OF THE CITY OF ELKINS, WV

A RESOLUTION OF COMMON COUNCIL

(#1735)
March 7, 2024

***Approving Financial Stabilization Account Funds for
Relocation of Sewer Line Near Eleventh Street***

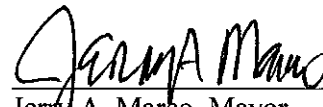
WHEREAS, the City of Elkins has previously prepared and submitted its General Fund Budget for the Fiscal Year 2024; and,

WHEREAS, included in the FY23 budget is Fund 003 (Financial Stabilization); and

WHEREAS, the Finance Committee has recommended the use of money from Fund 003 to pay for the relocation of a sewer line under city-owned property near Eleventh Street, at a cost of \$147,000;

NOW, THEREFORE, BE IT RESOLVED, THAT:

The Common Council of the City of Elkins hereby approves the use of funds from the Financial Stabilization Account (003) to pay \$147,000 for the relocation of a sewer line under city-owned property near Eleventh Street.



Jerry A. Marco, Mayor

Attest:



Sutton R. Stokes, City Clerk

City of Elkins
11th. Street Sanitary Sewer Relocation
CEC Project # 342-544

Engineer's Opinion of Probable Construction Cost

Prepared by: Erasmo Rizo, Checked by: Steve Buchanan
Prepared: May 10, 2024



Civil & Environmental Consultants, Inc.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization/Demobilization	1	LS	\$10,000.00	\$ 10,000.00
2	Erosion and Sediment Control Measures/Seed and Mulch	1	LS	\$1,000.00	\$ 1,000.00
3	Install New ASTM 18" F679 PS 115 PVC (9'-12')	285	LF	\$250.00	\$ 71,250.00
4	4' Sanitary Sewer Manhole - Straddle	2	EA	\$10,000.00	\$ 20,000.00
5	4' Sanitary Sewer Manhole - Standard	1	EA	\$7,500.00	\$ 7,500.00
6	Install New 6" PVC Sanitary Sewer Lateral and connection	10	LF	\$70.00	\$ 700.00
7	6" Sanitary Sewer Cleanout	1	EA	\$750.00	\$ 750.00
8	Cut & Plug Existing Sewer Pipe-Grout	210	LF	\$30.00	\$ 6,300.00
9	Temporary Bypass Pumping	1	LS	\$2,000.00	\$ 2,000.00
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
Subtotal					\$ 119,500.00
10% Pre-Bid Construction Contingency					\$ 11,950.00
Total					\$ 131,450.00
Use					\$ 132,000.00

CONTRACT DOCUMENTS

11TH STREET SANITARY SEWER RELOCATION

**Prepared For.
CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA**

**Prepared By:
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
BRIDGEPORT, WEST VIRGINIA**

CEC Project 342-544

MAY 2024



Civil & Environmental Consultants, Inc.

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

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BIDDING REQUIREMENTS

AFB	Advertisement for Bids
C-200	Instructions to Bidders
Addendum	Form of Addendum
BOR	Bid Opening Requirements
C-410	Bid Form

FUNDING AGENCY REQUIREMENTS (NOT APPLICABLE)

CWSRF Disadvantaged Business Enterprise (DBE) Utilization.
WVDEP State Revolving Fund Subcontracting Tracking
Davis Bacon Contract Requirements
Davis Bacon Wage Rates
American Iron and Steel Requirement
Site Posters

CONDITIONS OF WORK

C-510	Notice of Award
C-520	Agreement
C-550	Notice to Proceed
C-610	Performance Bond
C-615	Payment Bond
C-620	Contractor's Application for Payment
C-625	Certificate of Substantial Completion
	Punch List
C-700	General Conditions
C-800	Supplementary General Conditions
	Attachment "A" Affidavit
	Attachment "B" Project Sign (NOT APPLICABLE)
	Attachment "C" Abnormal Weather Conditions (Monthly Calculation Sheet)
C-940	Work Change Directive
C-941	Change Order
	Change Order Memorandum
C-942	Field Order
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TECHNICAL SPECIFICATIONS

DIVISION 1

Section 011000	Summary
Section 012000	Price and Payment Procedures
Section 012500	Substitution Procedures
Section 013000	Administrative Requirements
Section 013233	Photographic Documentation
Section 013300	Submittal Procedures
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Section 016000	Product Requirements
Section 017000	Execution and Closeout Requirements
Section 017419	Construction Waste Management and Disposal

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Section 31110	Clearing, Grubbing, and Restoration
Section 312316.13	Trenching
Section 312319	Dewatering

DIVISION 32

Section 321216.11	Concrete Resurfacing, Crushed Stone Resurfacing, and Asphalt Paving
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DIVISION 33

Section 330505.36	Vacuum Testing
Section 330505.41	Air Testing
Section 330505.43	Mandrel Testing
Section 330561.11	Precast Concrete Manholes
Section 333111	Public Sanitary Sewerage Gravity Piping

PERMITS

(NONE)

DRAWINGS SEPARATELY INDEXED AND BOUND

BIDDING REQUIREMENTS

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
VACUUM TRUCK DUMPING STATION**

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the **CITY OF ELKINS** for the **11TH STREET SANITARY SEWER RELOCATION** project until **TIME AM/PM** (NOTE TO PREPARER - IN THE AFTERNOON WHEN POSSIBLE.), local prevailing time, on **WEEKDAY, MONTH DAY, YEAR** (NOTE TO PREPARER – NOT ON MONDAY OR FRIDAY OR THE DAY FOLLOWING A HOLIDAY.) at **ELKINS CITY HALL, 401 DAVIS AVENUE, ELKINS, WV 26241** at which time bids will be publicly opened and read aloud.

All work summarized below shall be substantially complete within **SIXTY (60)** calendar days after the date when the Contract Times commence to run and completed and ready for final payment within **NINETY (90)** days after the date when the Contract Times commence to run. Liquidated damages shall be **\$1,000** per day.

The approximate quantities of work may include approximately 290 LF of 16” sanitary sewer, three (3) manholes, and related appurtenances.

Contract Documents for the project may be examined at the following locations:

Civil & Environmental Consultants, Inc. (CEC)
120 Genesis Boulevard
Bridgeport, WV 26330
Attention: Steve Buchanan, sbuchanan@cecinc.com, 304-841-2733.

**CITY OF ELKINS
401 DAVIS AVENUE
ELKINS, WV 26241**

Contractors Association of West Virginia
2114 Kanawha Boulevard East
Charleston, WV 25311
(NOTE TO PREPARER – CONTACT THE ASSOCIATION VIA
PLANROOM@CAWV.ORG OR (304) 342-1166 TO AVOID OR MINIMIZE
CONFLICTS IN SCHEDULING PRE-BID CONFERENCE DATE AND BID
OPENING DATE WITH OTHER PROJECTS IN THE STATE.)

A complete set of the Contract Documents may be obtained from CEC, upon a nonrefundable payment of **NINETY DOLLARS (\$90.00)** plus thirty dollars (\$30) if mailed. Portable document files (PDF) of the Contract Documents are also available for **FORTY DOLLARS (\$40.00)**.

A two (2) envelope bid system will be used. Each Bid shall be submitted in a sealed envelope (Envelope No. 1, marked "BID ENCLOSED") which shall contain all documents required in the Bid Opening Requirements Checklist and a separate sealed envelope (Envelope No. 2, marked "BID PROPOSAL") containing the completed and signed Bid Form.

Envelope No. 1 will be opened first, and the items required in the Bid Opening Requirements Checklist shall be reviewed. If the reviewed documents are found to be in order, Envelope No. 2 containing the Bid Form will be opened and publicly read aloud.

If Envelope No. 1 does not include all the items on the Bid Opening Requirement Checklist or if any items are determined not to be in order, then Envelope No. 2 containing the Bid Form may be returned to the Bidder unopened. At that time, the Owner may declare the Bidder non-responsive.

All Bidders are required to have a West Virginia Contractor's License as per Section §30-42-12 of the West Virginia Code. The license classification shall be appropriate for the work for which the bid is prepared. The bidder's license number shall be included in the first envelope as part of the Bid Opening Requirements. All subcontractor(s) shall furnish their contractors' license number(s) to the prime contractor prior to the award of the contract.

Bids shall be accompanied by a certified check or bid bond payable to **CITY OF ELKINS** in an amount equal to five percent (5%) of the base bid.

Any contract or contracts awarded under this Advertisement For Bids are expected to be funded in part by grants and loans from the following: **LOCAL FUNDING**. Neither the United States, the State of West Virginia, nor any of their departments, agencies or employees are or will be a party to this Advertisement For Bids or any resulting contract.

PROSPECTIVE BIDDERS SHOULD NOTE THAT THIS CONTRACT MAY INCLUDE THE FOLLOWING CRITICAL REQUIREMENTS AS IDENTIFIED IN THE CONTRACT DOCUMENTS:

NONDISCRIMINATION IN EMPLOYMENT

Bidders on this work will be required to comply with the President's Executive Order No. 11246. The requirements for Bidders and Contractors under this order are explained in the Contract.

DRUG FREE WORKPLACE CONFORMANCE

Contractor is required to provide the Drug Free Workplace Certification in accordance with WV Code 21-ID-5. West Virginia Code 21-ID-5 provides that any solicitation for a public improvement construction contract requires each vendor that submits a bid for the work to submit at the same time an affidavit of compliance with the bid. The enclosed drug-free workplace affidavit must be signed and submitted in the first envelope as evidence of the vendor's compliance with the provisions of article 1D, Chapter 21 of the West Virginia Code. Failure to submit the

signed drug-free workplace affidavit in the first envelope shall result in disqualification of such bid.

A **NON-MANDATORY** pre-bid conference will be conducted at **TIME AM/PM, local prevailing time, on WEEKDAY, MONTH DAY, YEAR,** at **LOCATION, FULL ADDRESS.** Attendance of the pre-bid conference **is highly encouraged but is not mandatory.** (NOTE TO PREPARER – USE NON-MANDATORY UNLESS OWNER OR FUNDING AGENCY REQUIRES MANDATORY. SCHEDULE PRE-BID CONFERENCE A MINIMUM OF TEN (10) DAYS (PREFERABLY 14 DAYS) BEFORE BID OPENING DATE.)

All questions must be submitted to CEC in writing by **TIME AM/PM, local prevailing time, on WEEKDAY, MONTH DAY, YEAR.** (NOTE TO PREPARER – SEVEN (7) DAYS PRIOR TO BID OPENING TO AGREE WITH INSTRUCTION TO BIDDERS ARTICLE 7 AND THE WVIJDC REQUIREMENT THAT ALL ADDENDA BE RECEIVED BY PLAN HOLDERS A MINIMUM OF FIVE (5) DAYS PRIOR TO BID OPENING.)

THE CITY OF ELKINS reserves the right to reject any or all bids. A bidder may not withdraw the Bid for a period of ninety (90) days after the opening of bids.

This Advertisement is issued by:

OWNER CITY OF ELKINS

BY JERRY A. MARCO

TITLE MAYOR

DATE _____

(NOTE TO PREPARER - ALLOW A MINIMUM OF THIRTY (30) DAYS BETWEEN THE FIRST ADVERTISEMENT DATE AND THE BID OPENING DATE.)

END OF ADVERTISEMENT FOR BIDS

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Bidding Documents shall include the Bidding Requirements, Conditions of Work, Technical Specifications, Drawings, and Addenda.
- 2.02 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the Advertisement for Bids.
- 2.03 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.04 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within seven (7) days of Owner's request, Bidder shall submit written evidence establishing its qualifications such as financial data, previous experience, and present commitments and the following additional information:
- A. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding the Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER’S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
 - 1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.

- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions Article 7.12.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

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

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – NON-MANDATORY PRE-BID CONFERENCE

- 6.01 A pre-Bid conference will be held at the time and location stated in the Advertisement for Bids. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven (7) days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five (5) percent of Bidder's maximum Bid price (the base bid plus all additive alternates or the base bid without deductive alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within fifteen (15) days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until sixty (60) days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven (7) days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

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

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least fifteen (15) days prior to the date for receipt of Bids. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.
- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.
- 11.03 If an award is made, Contractor shall be allowed to submit proposed substitutes and “or-equals” in accordance with the General Conditions.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five (5) days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work:

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s

Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
 - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership’s address for receiving notices shall be shown.
- 13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm’s address for receiving notices shall be shown.
- 13.05 A Bid by an individual shall show the Bidder’s name and address for receiving notices.
- 13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture’s address for receiving notices shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID

14.01 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity” (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 An unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the Advertisement for Bids and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid shall be addressed to Owner at address in Article 1.01 of Bid Form, unless stated otherwise.
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within twenty four (24) hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement for Bids and, unless obviously non-responsive, read aloud publicly. An abstract of the Bids will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within fifteen (15) days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten (10) days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together

with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – SALES AND USE TAXES

- 22.01 Owner is exempt from West Virginia state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. – To be provided to successful Bidder.). Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

ARTICLE 23 – WAGE RATE REQUIREMENTS

- 23.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5 (b) apply.

ARTICLE 24 – CONTRACTOR’S LICENSE

- 24.01 All Bidders are required to have a West Virginia Contractor’s License as per Section §30-42-12 of the West Virginia Code. The license classification shall be appropriate for the work for which the bid is prepared. The bidder’s license number shall be included in the first envelope as part of the Bid Opening Requirements. All subcontractor(s) shall furnish their contractors’ license number(s) to the prime contractor prior to the award of the contract.

ARTICLE 25 – WORKER’S COMPENSATION INSURANCE

- 25.01 The Contractor shall carry full coverage of Worker’s Compensation insurance during the life of the Contract. If the Contractor’s Insurance does not cover the employees of sub-contractors, such sub-contractors shall provide insurance coverage for their employees. The Contractor shall furnish the Owner with certificates of overage for their employees, both his/her own and his/her sub-contractors, employed on the project.

ARTICLE 26 – PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

- 26.01 The Contractor must take out and maintain during the life of the Contract General Liability Insurance in the amount outlined in the Supplementary Conditions. In each, Civil & Environmental Consultants, Inc. (CEC), the Owner, and the Project Administrator are to be named insured on the policy provided.

ARTICLE 27 – AMERICAN IRON AND STEEL REQUIREMENT (NOT APPLICABLE)

- 27.01 P.L. 113-76, Consolidated Appropriations Act, 2014 (Act) includes and “American Iron and Steel (AIS)” requirement in Section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works.

ARTICLE 28 – DISADVANTAGED BUSINESS ENTERPRISES (NOT APPLICABLE)

- 28.01 The Contractor must fully Comply with the Disadvantaged Business Enterprises, and Affirmative Action Requirements, as identified in the contract documents.
- 28.02 The Contractor agrees to make “positive efforts” to subcontract a portion of the total value of the contract to Disadvantaged Business Enterprises. This shall be done in compliance with the six (6) affirmative steps as outlined in 40 CFR 33.240. Failure to demonstrate positive efforts to do so may lead to rejection of bids. For this program, the term “subcontract” includes all construction,

modification, and service work contracted for by the bidder in the execution of the work under this contract.

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

CEC Project 342-544

ADDENDUM #

FULL DATE

This Addendum is issued to clarify, correct, supplement, and/or change the Contract Documents consisting of Bidding Requirements, Funding Agency Requirements, Conditions of Work, Technical Specifications, Permits, and Drawings for the above-referenced project. It is also issued to document materials and equipment that have been proposed “as equal: or “substitute” in accordance with Article 11 of the Instructions to Bidders, to update wage rate requirements if any and as required, and to provide written responses to questions.

Receipt of all Addenda shall be acknowledged by the Bidder in the Bid Opening Requirements as well as the Bid Form.

Attention is directed to the fact that while certain sections, pages, and/or sheets are referenced in this Addendum, all clarifications, corrections, supplements, and/or changes shall be applicable to all other sections, pages, and/or sheets.

A Non-Mandatory Pre-Bid Conference was conducted for this project. The sign in sheet is attached to document those in attendance. [\(NOTE TO PREPARER – USE THIS PARAGRAPH FOR FIRST ADDENDUM ONLY.\)](#)

A. BIDDING REQUIREMENTS

1.

2.

3.

B. FUNDING AGENCY REQUIREMENTS

1.

2.

3.

C. CONDITIONS OF WORK

1.

2.

3.

D. TECHNICAL SPECIFICATIONS

1.

2.

3.

E. PERMITS

1.

2.

3.

F. DRAWINGS

1. XX

2. XX

3. XX+

G. "AS EQUAL" OR "SUBSTITUTE" CONSIDERATIONS

1. In accordance with Article 11 of the Instructions to Bidders, the following materials and/or equipment have been proposed "as equal" or "substitute" and are hereby **accepted** as such.

- a. Material or equipment.
- b. Material or equipment.
- c. Material or equipment.

2. In accordance with Article 11 of the Instructions to Bidders, the following materials and/or equipment have been proposed "as equal" or "substitute" and are hereby **rejected** as such.

- a. Material or equipment.
- b. Material or equipment.
- c. Material or equipment.

H. REPORT ON UPDATES TO DAVIS BACON WAGE RATES: NOT APPLICABLE.

I. QUESTIONS AND RESPONSES

1. QUESTION:

RESPONSE:

2. QUESTION:

RESPONSE:

Addendum #
CEC Project 342-544
Page 4
Date

3. QUESTION:

RESPONSE:

4. QUESTION:

RESPONSE:

5. QUESTION:

RESPONSE:

6. QUESTION:

RESPONSE:

7. QUESTION:

RESPONSE:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

(PE Sign and Seal)

Name

Name, PE

Enclosures: Pre-Bid Conference Sign-In Sheet (NOTE TO PREPARER – PROVIDE THIS ATTACHMENT ON FIRST ADDENDUM ONLY.)

(NOTE TO PREPARER – DATE ALL ATTACHMENTS AND IDENTIFY THE ADDENDUM NUMBER FOR WHICH THE ATTACHMENT IS PROVIDED.)

**CITY OF ELKINS
RANDOLPH COUNTY, WV
11TH STREET SANITARY SEWER RELOCATION**

BID OPENING REQUIREMENTS CHECKLIST

A two (2) envelope bid system will be used. Each Bid shall be submitted in a sealed envelope (Envelope No. 1, marked “BID ENCLOSED”) which shall contain all documents required in this Bid Opening Requirements Checklist and a separate sealed envelope (Envelope No. 2, marked “BID PROPOSAL”) containing the completed and signed Bid Form.

Envelope No. 1 will be opened first, and the items required in this Bid Opening Requirements Checklist shall be reviewed. If the reviewed documents are found to be in order, Envelope No. 2 containing the Bid Form will be opened and publicly read aloud.

If Envelope No. 1 does not include all of the items on the Bid Opening Requirement Checklist or if any items are determined not to be in order, then Envelope No. 2 containing the Bid Form may be returned to the Bidder unopened. At that time, the Owner may declare the Bidder non-responsive.

ITEM	DESCRIPTION	CHECK
1	BID SUBMITTED ON TIME	
2	BID BOND (SAMPLE BOR-2&3)	
3	CERTIFICATION OF RECEIPT OF ALL ADDENDA (BOR-4)	
4	CERTIFICATION OF NON-SEGREGATED FACILITIES (BOR-5)	
5	CERTIFICATION OF EQUAL EMPLOYMENT OPPORTUNITY (BOR-6)	
6	WEST VIRGINIA CODE §21-1D-5 DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT (BOR-7)	

BID BOND

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

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

OWNER

ADDRESS

CITY, WV ZIP CODE

BID

Bid Due Date:

Description: PROJECT NAME

BOND

Bond Number:

Date:

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

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

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

CERTIFICATION OF RECEIPT OF ALL ADDENDA

Bidder acknowledges receipt of all Addenda as follows:

Addendum Number _____	Dated _____
Addendum Number _____	Dated _____
Addendum Number _____	Dated _____
Addendum Number _____	Dated _____

Signature

Name and Title of Signer (Printed)

Date

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

CERTIFICATION OF NON-SEGREGATED FACILITIES

(Applicable to contracts, subcontracts, and agreements with Applicants who are themselves performing federally assisted construction contracts, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause.)

By the submission of this bid, the bidder, offerer, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offerer, applicant, or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this means any waiting rooms, work areas, restrooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation and entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to award of subcontractors exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause; that he will retain such certifications in his files, and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods).

Signature

Name and Title of Signer (Printed)

Date

NOTE: The penalty for making false statement in offers is prescribed in 18 U.S.C. 1001.



State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5

STATE OF WEST VIRGINIA,

COUNTY OF _____, TO-WIT:

I, _____, after being first duly sworn, depose and state as follows:

1. I am an employee of _____; and,
(Company Name)
2. I do hereby attest that _____
(Company Name)

maintains a written plan for a drug-free workplace policy and that such plan and policy are in compliance with **West Virginia Code §21-1D**.

The above statements are sworn to under the penalty of perjury.

Printed Name: _____

Signature: _____

Title: _____

Company Name: _____

Date: _____

Taken, subscribed and sworn to before me this _____ day of _____.

By Commission expires _____

(Seal)

(Notary Public)

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

**CITY OF ELKINS
401 DAVIS AVENUE
ELKINS, WV 26241**

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

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for ninety (90) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

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

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

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions,

especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

BID SCHEDULE

NOTE: BIDS shall include all applicable taxes and fees.

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

LUMP SUM BID

(Words)

(Figures)

NOTE: BIDS shall include all applicable taxes and fees.

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

METHOD OF AWARD

If the lowest total bid submitted by a qualified, responsive, responsible Bidder does not exceed the amount of funds then estimated by the Owner, as available to finance the contract, the construction contract may be awarded. If such bids exceed such amount, the Owner may reject all bids.

The Owner may award the contract on the Total Bid submitted by a qualified, responsive, responsible Bidder less the amount(s) of the Deductive Alternate(s) subtracted in numerical order, as listed in the contract to produce the lowest bid within the funds available for financing.

- A. Unit prices have been computed in accordance with paragraph 13.03.A of the General Conditions.
- B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

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

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Bid Opening Requirements

ARTICLE 8 – DEFINED TERMS

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

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature]

[Printed name]

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature]

[Printed name]

Title:

Submittal Date:

Address for giving notices:

Telephone Number:

Fax Number:

Contact Name and e-mail address:

Bidder's License No.:

(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

CONDITIONS OF WORK

NOTICE OF AWARD

Date of Issuance:

Owner:

Engineer: Civil & Environmental Consultants, Inc.

Project:

Bidder:

Bidder's Address:

Owner's Contract No.:

Engineer's Project No.:

Contract Name:

TO BIDDER:

You are notified that Owner has accepted your Bid dated [] for the above Contract, and that you are the Successful Bidder and are awarded the Contract.

The Contract Price of the awarded Contract is \$ []:

Four [4] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

Drawings will be delivered separately from the other Contract Documents.

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

1. Deliver to Owner four (4) counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security (Performance and Payment Bonds) and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten (10) days after you comply with the above conditions, Owner will return to you one (1) fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: _____

Authorized Signature

By: _____

Title: _____

Copy: Civil & Environmental Consultants, Inc.

**AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between City of Elkins (“Owner”) and
____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

11TH STREET SANITARY SEWER RELOCATION

ARTICLE 2 – THE PROJECT

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

11TH STREET SANITARY SEWER RELOCATION

ARTICLE 3 – ENGINEER

- 3.01 The part of the Project that pertains to the Work has been designed by Civil & Environmental Consultants, Inc.
- 3.02 The Owner has retained Civil & Environmental Consultants, Inc. (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

- 4.01 *Time of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Days*
- A. The Work will be substantially completed within **60** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **90** days after the date when the Contract Times commence to run.
- 4.03 *Liquidated Damages*
- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any

extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner **\$1,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$1,000.00** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

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

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 30th* day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. 90 percent of Work completed (with the balance being retainage).
 - b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 100 percent of

Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

*Unless adjusted at the Pre-Construction Conference.

6.03 *Final Payment*

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

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due shall bear interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
 - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 - G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 - H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 - I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
1. This Agreement (pages 1 to 6, inclusive).
 2. Performance bond (pages C-610-1 to C-610-3, inclusive).
 3. Payment bond (pages C-615-1 to C-615-3, inclusive).
 4. Other bonds.
 - a. _____ (pages _____ to _____, inclusive).
 5. General Conditions (pages C-700-1 to C-700-69, inclusive).
 6. Supplementary Conditions (pages C-800-1 to C-800-12, inclusive).
 7. Specifications as listed in the Contents of the Technical Specifications.
 8. Drawings As Noted in the Drawings.
 9. Addenda (numbers _____ to _____, inclusive).
 10. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages C-410-1 to C-410-7, inclusive).
 11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

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

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except

to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *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.

10.04 *Severability*

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

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on **MONTH DATE, YEAR** (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

City of Elkins

By: Jerry A. Marco

By:

Title: Mayor

Title:

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

Attest:

Attest:

Title:

Title:

Address for giving notices:

Address for giving notices:

City of Elkins

401 Davis Avenue

Elkins, WV 26241

License No.:
(where applicable)

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

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

NOTICE TO PROCEED

Owner:	Owner	Owner's Contract No.:
Contractor:		Contractor's Project No.:
Engineer:	Civil & Environmental Consultants, Inc.	Engineer's Project No.:
Project:		Contract Name:

Effective Date of Contract: MONTH, DATE,
YEAR

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **MONTH DATE, YEAR.** [see Paragraph 4.01 of the General Conditions]

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the number of days to achieve Substantial Completion is **60, and the number of days to achieve readiness for final payment is 90.** (NOTE TO PREPARER – COORDINATE WITH ADVERTISEMENT FOR BIDS AND AGREEMENT.)

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

Complete a WV811 utility locate call.

Owner:	_____

By:	_____
Title:	_____
Date Issued:	_____
Copy:	Civil & Environmental Consultants, Inc.

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

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

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint ventures. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working

or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

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

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper

payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

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

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

16. Modifications to this Bond are as follows: Not applicable.

PAYMENT BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description (name and location):

BOND

Bond Number:

Date (not earlier than the Effective Date of the Agreement of the Construction Contract):

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
- 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone

under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. **Definitions**

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be

asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

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

18. Modifications to this Bond are as follows: Not Applicable.

Application Period:		Application Date:
To (Owner):	From (Contractor):	Via (Engineer): Civil & Environmental Consultants, Inc. (CEC)
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

**Application For Payment
Change Order Summary**

Approved Change Orders			1. ORIGINAL CONTRACT PRICE.....	\$	
Number	Additions	Deductions	2. Net change by Change Orders.....	\$	
			3. Current Contract Price (Line 1 ± 2).....	\$	
			4. TOTAL COMPLETED AND STORED TO DATE		
			(Column F total on Progress Estimates).....	\$	
			5. RETAINAGE:		
			a. X Work Completed.....	\$	
			b. X Stored Material.....	\$	
			c. Total Retainage (Line 5.a + Line 5.b).....	\$	
			6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....	\$	
			7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$	
			8. AMOUNT DUE THIS APPLICATION.....	\$	
			9. BALANCE TO FINISH, PLUS RETAINAGE		
			(Column G total on Progress Estimates + Line 5.c above).....	\$	
TOTALS					
NET CHANGE BY					
CHANGE ORDERS					

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature

By:

Date:

EJCDC® C-620 Contractor's Application for Payment

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____
(Engineer) (Date)

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is approved by: _____
(Owner) (Date)

Approved by: _____
Funding or Financing Entity (if applicable) (Date)

Progress Estimate - Lump Sum Work

Contractor's Application

[illegible]

Progress Estimate - Unit Price Work

Contractor's Application

[illegible]

Stored Material Summary

Contractor's Application

[illegible]

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Contractor: Engineer: Civil & Environmental Consultants, Inc. Project:	Owner's Contract No.: Contractor's Project No.: Engineer's Project No.: Contract Name:
--	---

This [preliminary] [final] Certificate of Substantial Completion applies to:

☐ All Work
 ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities:

☐ None
☐ As follows

Amendments to Contractor's responsibilities:

☐ None
☐ As follows:

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

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

EXECUTED BY ENGINEER: By: _____ (Authorized Signature)	RECEIVED: By: _____ Owner (Authorized Signature)	RECEIVED: By: _____ Contractor (Authorized Signature)
Title: _____ Date: _____	Title: _____ Date: _____	Title: _____ Date: _____



**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

CEC PROJECT 342-544

PUNCH LIST

ATTACHMENT TO CERTIFICATE OF SUBSTANTIAL COMPLETION

- 1. Submit “red line” drawings.**
- 2.
- 3.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

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

with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws

and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.

35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.

45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
 1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or

- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).

E. *Furnish, Install, Perform, Provide:*

- 1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
- 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
- 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
- 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

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

2.02 *Copies of Documents*

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

2.03 *Before Starting Construction*

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

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or

association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

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

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall

take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

- a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

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

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

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

4.02 *Starting the Work*

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

4.03 *Reference Points*

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

4.04 *Progress Schedule*

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

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. abnormal weather conditions;
 - 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

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

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances,

construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

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

1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
3. Technical Data contained in such reports and drawings.

- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

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

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:

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

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

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
 - 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or

study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is

required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Possible Price and Times Adjustments:*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not

Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and

payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.

- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and

endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

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

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).

3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.

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

otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.

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

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

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

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

3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
 5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through

Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.

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

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.

- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

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

7.02 *Labor; Working Hours*

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

7.03 *Services, Materials, and Equipment*

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

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
- b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor.

Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.

- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights

held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

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

7.08 *Permits*

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

7.09 *Taxes*

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

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the

officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

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

7.11 *Record Documents*

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

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect

them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

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

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

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

B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other

data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
 7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
 8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or

8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.

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

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

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

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the

Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.

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

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

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

9.03 *Furnish Data*

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

9.04 *Pay When Due*

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

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

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

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

9.06 *Insurance*

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

9.07 *Change Orders*

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

9.08 *Inspections, Tests, and Approvals*

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

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

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

9.11 *Evidence of Financial Arrangements*

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

9.12 *Safety Programs*

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

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

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

10.05 *Shop Drawings, Change Orders and Payments*

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

10.06 *Determinations for Unit Price Work*

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

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

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

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

11.01 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

1. *Change Orders:*

- a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
- b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

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

11.02 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change

Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

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

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
 - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;

- c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
- d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
 - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price

adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.

2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

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

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to,

salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or

for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of

any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

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

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.

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

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

14.01 *Access to Work*

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

14.02 *Tests, Inspections, and Approvals*

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

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

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

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior

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

14.05 *Uncovering Work*

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

14.06 *Owner May Stop the Work*

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

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be

accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. Payment Becomes Due:

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

E. Reductions in Payment by Owner:

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

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

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a

separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

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

15.06 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;

- c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. Engineer's Review of Application and Acceptance:

- 1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

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

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

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

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

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

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Headings*

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

Supplementary Conditions

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

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 *Defined Terms*

SC-1.01. Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

Geotechnical Baseline Report (GBR) — The interpretive report prepared by or for Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR's own terms. The GBR is a Contract Document.

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

SC-1.01.A.8 Add the following language at the end of the last sentence of Paragraph 1.01.A.8:
The Change Order form to be used on this Project is EJCDC C-941.

SC-1.01.A.48 Add the following language at the end of the last sentence of Paragraph 1.01.A.48:
A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.

SC-1.01.A.49 Add the following new Paragraph after Paragraph 1.01.A.48:
Abnormal Weather Conditions – Conditions of extreme or unusual weather for a given region, elevation, or season as determined by the Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 Delivery of Bonds and Evidence of Insurance

SC-2.01 Delete Paragraphs 2.01 B. and C. in their entirety and insert the following in their place:

- B. Evidence of Contractor’s Insurance:** When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- C. Evidence of Owner’s Insurance:** After receipt from Contractor of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner under Article 6 (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

SC-2.02 Copies of Documents

SC-2.06.B. Delete Paragraph 2.06.B and replace it with the term “Deleted.”

ARTICLE 4 - COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 Commencement of Contract Times; Notice to Proceed

SC-4.01.A. Amend the last sentence of Paragraph 4.01.A by striking out the following words:
In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening of the thirtieth day after the Effective Date of the contractor, whichever date is earlier.

SC-4.05 Delays in Contractor’s Progress

SC-4.05.C2. Amend Paragraph 4.05.C.2 by striking out the follow text: “abnormal weather conditions;” and inserting the following text:
“Abnormal Weather Conditions;”

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

SC-5.03 Subsurface and Physical Conditions

SC 5.03 Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

- A.** No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC-5.06 Hazardous Environmental Conditions

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**

ARTICLE 6 – BONDS AND INSURANCE

SC-6.02 Insurance—General Provisions

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

- 1. Contractor may obtain worker’s compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker’s compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker’s compensation insurance for similar projects by the state within the last 12 months.**

SC-6.03 Contractor’s Insurance

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

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

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

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman’s):	<u>Statutory</u>
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ <u>N/A</u>
Bodily injury by disease, aggregate	\$ <u>N/A</u>

Employer’s Liability:

Bodily injury, each accident	\$ <u>500,000</u>
Bodily injury by disease, each employee	\$ <u>500,000</u>
Bodily injury/disease aggregate	\$ <u>500,000</u>

**For work performed in monopolistic states,
stop-gap liability coverage shall be endorsed to
either the worker’s compensation or
commercial general liability policy with a
minimum limit of:**

\$ N/A

- | | |
|---------------------------------------|------------------|
| Foreign voluntary worker compensation | <u>Statutory</u> |
|---------------------------------------|------------------|
2. **Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:**
- | | |
|---|---------------------|
| General Aggregate | \$ <u>2,000,000</u> |
| Products - Completed Operations Aggregate | \$ <u>2,000,000</u> |
| Personal and Advertising Injury | \$ <u>1,000,000</u> |
| Each Occurrence (Bodily Injury and Property Damage) | \$ <u>1,000,000</u> |
3. **Automobile Liability under Paragraph 6.03.D. of the General Conditions:**
- Bodily Injury:**
- | | |
|---------------|---------------------|
| Each person | \$ <u>1,000,000</u> |
| Each accident | \$ <u>1,000,000</u> |
- Property Damage:**
- | | |
|---------------|---------------------|
| Each accident | \$ <u>1,000,000</u> |
|---------------|---------------------|
- [or]*
- | | |
|--------------------------|---------------------|
| Combined Single Limit of | \$ <u>1,000,000</u> |
|--------------------------|---------------------|
4. **Excess or Umbrella Liability:**
- | | |
|-------------------|---------------------|
| Per Occurrence | \$ <u>3,000,000</u> |
| General Aggregate | \$ <u>3,000,000</u> |
5. **Contractor's Pollution Liability:**
- | | |
|-------------------|---------------|
| Each Occurrence | \$ <u>N/A</u> |
| General Aggregate | \$ <u>N/A</u> |
- ☒ If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract
6. **Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following:** Funding agency and Project Administrator.

7. Contractor's Professional Liability:

Each Claim	\$ <u>N/A</u>
Annual Aggregate	\$ <u>N/A</u>

SC-6.05 Property Insurance

SC-6.05.A.1 Add the following new subparagraph after subparagraph 6.05.A.1:

- a.** In addition to Owner, Contractor, and all Subcontractors, include as insureds the following:

Engineer

Project Administrator

SC-6.05.A. Add the following to the list of items in Paragraph 6.05.A, as numbered items:

- 15.** include for the benefit of Owner loss of profits and soft cost coverage including, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, plus attorneys fees and engineering or other consultants' fees, if not otherwise covered;
- 16.** include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
 - a.** None
 - b.** None
- 17.** include by express endorsement coverage of damage to Contractor's equipment.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02 Labor; Working Hours

SC-7.02.B. Amend the first and second sentences of Paragraph 7.02.B to state "...all Work at the Site shall be performed during regular working hours, 6:00 a.m. through 6:00 p.m. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday."

SC-7.06 Concerning Subcontractors, Suppliers, and Others

SC-7.06.A Amend Paragraph 7.06.A by adding the following text to the end of the Paragraph: The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

SC-7.06.B Delete paragraph 7.06.B in its entirety and insert the following in its place:

"Deleted"

SC-7.06.E Amend the second sentence of Paragraph 7.06.E by striking out "Owner may also require Contractor to retain specific replacements; provided, however, that".

SC 7.09 Add a new paragraph immediately after Paragraph 7.09.A:

- B.** If the Owner is a public entity, Owner is exempt from payment of sales and compensating use taxes of the State of West Virginia and of cities and counties thereof on all materials to be incorporated into the Work.
1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 2. Contractor may be required to pay taxes when purchasing supplies and material, and subsequently be reimbursed through the State Tax Department.
 3. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-7.12 Insert the following after the second sentence of Paragraph 7.12.C:

The following Owner safety programs are applicable to the Work: As Provided by Owner.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

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

- B.** The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
1. **General:** RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 2. **Schedules:** Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 3. **Conferences and Meetings:** Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
 4. **Liaison:**
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.

- b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
- 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
- 6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- 10. Records:
 - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site,

- weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
11. Reports:
- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
 - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
 - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
14. Completion:
- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
 - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.

- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.
- C. The RPR shall not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).
 - 2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor’s work.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
 - 8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11 - Amending the Contract Documents; Changes in the Work

SC-11.07.C Add the following new Paragraph after Paragraph 11.07.B:

All Contract Change Orders must be concurred in by Agency before they are effective.

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

SC-13.01 Cost of the Work

SC 13.01.B.5.c Delete Paragraph 13.01.B.5.c in its entirety and insert the following in its place:

- c. **Construction Equipment and Machinery:**
 - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in rate books generally recognized as the

industry standard for said equipment and machinery. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include 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, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

SC-13.02 Allowances

**SC-13.02.C Delete Paragraph 13.02.C in its entirety and insert the following in its place:
[Deleted]**

SC-13.03 Unit Price Work

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

- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:**
- 1. if the extended price of a particular item of Unit Price Work amounts to 5% (percent) or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25% (percent) from the estimated quantity of such item indicated in the Agreement; and**
 - 2. if there is no corresponding adjustment with respect to any other item of Work; and**
 - 3. if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price.**

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC-15.01 Progress Payments

- SC-15.01.B Amend the second sentence of Paragraph 15.01.B.1 by striking out the following text: “a bill of sale, invoice, or other.”**
- SC-15.01.B.2 The Affidavit for Payment is provided in Attachment “A” to these Supplementary Conditions. This Document shall be completed with every Pay Application (beginning at the Second Pay Application,) unless EJCDC C-620 is used and includes the Contractor’s Certification.**
- SC-15.01.B.3 Add the following language at the end of paragraph 15.01.B.3:
No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.**

SC-15.01.B.4 The Application for Payment form to be used on this Project is EJCDC C-620. The Agency must approve all Applications for Payment before payment is made.

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

The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will be due thirty (30) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the contractor.

SC-15.02 Contractor's Warranty of Title

SC-15.02.A Amend Paragraph 15.02.A by striking out the following text: "no later than seven days after the time of payment by Owner" and insert "no later than the time of payment by Owner."

SC-15.03 Substantial Completion

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

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

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES - [DELETED]

ARTICLE 18 – MISCELLANEOUS

SC-18.09 Permits

SC 18.09 Add the following:

- A. The permits obtained by the Engineer on behalf of the Owner and by the Owner are included in these Contract Documents and Detailed Specifications. It shall be the responsibility of the Contractor to adhere to all of the requirements of these permits. Failure to do so may result in fines and/or penalties by/from the agencies having jurisdiction. Such fines shall be solely the responsibility of the Contractor.
- B. All other permits and licenses shall be the responsibility of the Contractor.
- C. The Owner will pay all West Virginia Division of Highways bonding and inspection fees.
- D. The Owner will pay all utility service and connection fees unless otherwise indicated in the Drawings.

SC-18.10 Warranty Period

SC 18.10 Add the following:

- A. The Contractor shall warrant and guarantee that all Work under this Contract shall not be defective for a period of one (1) year from the date of final acceptance by the Owner.**
- B. Other product specific warranties may be required under other Sections of these Specifications.**

SC-18.11 Existing Utilities

SC 18.11 Add the following:

- A. All underground and above ground utilities depicted in the Drawings are shown at approximate locations based on the best available information. Exact locations, depths, materials, and sizes of all existing and/or private utilities shall be verified in the field by the Contractor with a representative of the appropriate public and/or private entity.**
- B. The Contractor shall notify West Virginia 811 at 1-800-245-4848 or 811 or WV811.com and shall have all utilities marked in the project area prior to commencing excavation.**
- C. There shall be no additional compensation for the inconvenience or delay resulting from having to work around existing facilities either shown in the Drawings or not shown in the Drawings and discovered during construction.**

SC-18.12 Project Sign (NOT APPLICABLE)

SC 18.12 Add the following:

- A. The Contractor shall provide and install a project sign in accordance with the detail provided as Attachment “B” to these Supplementary Conditions.**
- B. The project sign shall be approved by the Engineer prior to fabrication and installation.**
- C. The location of the project sign shall be as directed by the Owner.**
- D. The Contractor shall maintain the project sign until project acceptance by the Owner.**

SC-18.13 Abnormal Weather Conditions Monthly Calculation Sheet

SC 18.13 Add the following:

- A. The Abnormal Weather Conditions Monthly Calculation Sheet is provided in Attachment “C” to these Supplementary Conditions. It shall be completed, signed, and attached to and submitted with each and every Application for Payment whether Abnormal Weather Condition days are experienced or not.**
- B. No Application for Payment will be considered without inclusion of the Abnormal Weather Conditions Monthly Calculation Sheet.**

SC-18.14 Required Federal-Aid Contract Provisions

**ATTACHMENT “A”
AFFIDAVIT**

AFFIDAVIT

STATE OF _____,
COUNTY OF _____, TO WIT:

This day personally appeared before the undersigned, a Notary Public in and for the County and State aforesaid, _____, who after being first duly sworn on his solemn oath, states as follows:

1. My name is _____. I am the _____ of _____
2. This Affidavit is submitted with Partial Pay Estimate #____ application for payment, for payment under Contract #____, _____, between _____ and _____.
3. Pursuant to Article 15.01.B.2 of the General Conditions of said Contract # ____, I hereby certify that all previous progress payments received on account of the Work (as defined in said Contract # ____) have been applied on account to discharge the legitimate obligations of _____ associated with prior applications for payment.

And further affiant sayeth naught.

Taken, subscribed and sworn to before me this _____ day of _____, 20__

NOTARY PUBLIC

My commission expires:

**ATTACHMENT “B” – PROJECT SIGN
(NOT APPLICABLE)**

**ATTACHMENT “C”
ABNORMAL WEATHER CONDITIONS
(MONTHLY CALCULATION SHEET)**

ABNORMAL WEATHER CONDITIONS (MONTHLY CALCULATION SHEET)

This Monthly Calculation Sheet shall be completed and provided by the General Contractor with each Periodic Pay Estimate, regardless of whether a claim for additional contract time due to "Abnormal Weather Conditions" is made or not.

Periodic Pay Estimate Dates: From _____ Through _____

Claims for "Abnormal Weather Condition" days must meet the following requirements:

1. Claims shall be consistent with the definition of the term "Abnormal Weather Conditions" as defined in Supplemental Conditions Article SC-1.01.A.49.
2. Claims shall be consistent with the definition of the term "Day" as defined in General Conditions Article 1.02.C.1; furthermore, a claim for a "Day" shall be further defined as a day in which no work was conducted in that specific twenty-four (24) hour period by either the General Contractor or any General Contractor's Sub-Contractors.

NUMBER OF DAYS CLAIMED

Anticipated allowable days due to "Abnormal Weather Conditions" have been determined by climatology data in and around the project area and previous projects constructed in the project area.

ANTICIPATED ALLOWABLE DAYS

Less 4 Days

The total number of days being claimed by the General Contractor shall be the numbers of days claimed minus the number of anticipated allowable days. There will not be a decrease in contract construction time if the General Contractor loses less than the anticipated allowable days of work per month.

TOTAL NUMBER OF DAYS REQUESTED

APPROVAL SIGNATURES:

OWNER:

CONTRACTOR:

ENGINEER:

FUNDING AGENCY:

Work Change Directive No. _____

Date of Issuance:	Effective Date:
Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Civil & Environmental Consultants, Inc.	Engineer's Project No.:
Project:	Contract Name:

Contractor is directed to proceed promptly with the following change(s):

Item No.	Description

Attachments: *[List documents supporting change]*

Purpose of Work Change Directive:

Authorization for Work described herein to proceed on the basis of Cost of the Work due to:

- ☐ Nonagreement of pricing of proposed change.
- ☐ Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and/or Contract Time.

Estimated change in Contract Price and Contract Times:

Contract Price \$ _____ (increase/decrease) Contract Time _____ (increase/decrease)
days

Recommended for Approval by Engineer:	Date:
Authorized for Owner by:	Date:
Received for Contractor by:	Date:
Received by Funding Agency (if applicable):	Date:

Change Order No. _____

Date of Issuance:	Effective Date:
Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Civil & Environmental Consultants, Inc.	Engineer's Project No.:
Project:	Contract Name:

The Contract is modified as follows upon execution of this Change Order:
Description:

Attachments: Change Order Memorandum and Contractor's Price Proposal

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: _____ Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized)	By: _____ Contractor (Authorized)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____



**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

CEC PROJECT 342-544

MEMORANDUM

ATTACHMENT TO CHANGE ORDER NO. [REDACTED]

ENGINEER'S DETAILED DESCRIPTION OF CHANGE ORDER

Field Order No. _____

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer: Civil & Environmental Consultants, Inc.

Engineer's Project No.:

Project:

Contract Name:

Attention:

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and submit a Change Proposal before proceeding with this Work.

Reference:

Specification(s)

Drawing(s) / Detail(s)

Description:

Attachments:

Engineer:

Receipt Acknowledged by Contractor:

Date:

Copy to Owner

Change Order No. _____ Memorandum
CEC Project 342-544
Page 2
Date _____

CONTRACTOR'S PRICE PROPOSAL: ATTACHED.

CHANGE IN CONTRACT PRICE: SEE CHANGE ORDER.

CHANGE IN CONTRACT TIMES: SEE CHANGE ORDER.

SIGNATURES: SEE CHANGE ORDER.

**CITY OF ELKINS
RANDOLPH COUNTY, WEST VIRGINIA
11TH STREET SANITARY SEWER RELOCATION**

PROGRESS MEETING NO. [REDACTED] NOTES

TIME, DAY, DATE

CEC Project 342-544

**Call-In # [REDACTED]
Meeting ID # [REDACTED]**

Project Information

Notice to Proceed Date	Month, Date, Year
Substantial Completion Date	Month, Date, Year
Final Completion Date	Month, Date, Year

Claimed Inclement Weather Days

Claims are to be submitted with each pay application whether weather days are claimed or not.

- [REDACTED] weather days claimed.

Construction Percent Complete Based on Pay Application

PRIOR WORK COMPLETED	WORK COMPLETED THIS PERIOD	WORK COMPLETED TO DATE	CONTRACT VALUE WITH CHANGE ORDER(S)	PERCENTAGE COMPLETED TO DATE
\$	\$	\$	\$	

Residential Project Representation is at \$XXX which is XX% of the \$XXX inspection budget.

Work Completed This Period:

- A. WORK
- B. WORK
- C. WORK
- D. WORK
- E. WORK
- F. WORK

Anticipated Work Next Period:

- A. WORK
- B. WORK
- C. WORK
- D. WORK
- E. WORK
- F. WORK

Discussion Items

- A. ITEM
- B. ITEM
- C. ITEM
- D. ITEM
- E. ITEM
- F. ITEM

Action Items

- A. ITEM
- B. ITEM
- C. ITEM
- D. ITEM
- E. ITEM
- F. ITEM

CONTACT LIST			
Name	Representing	Phone #	Email Address

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Contract description.
3. Work by Owner or others.
4. Owner-furnished products.
5. Contractor's use of Site and Premises
6. Future work.
7. Work sequence.
8. Work restrictions.
9. Owner occupancy.
10. Specification conventions.

1.2 PROJECT INFORMATION

A. Name: Indicated on Drawings.

1. Project Location: Indicated on Drawings.

B. Owner: Indicated on Drawings.

1. Owner's Representative: Indicated on Drawings.

C. Project Engineer: Civil & Environmental Consultants, Inc.

1. Engineer's Representative: Indicated on Drawings and/or to be determined after Bidding period.

1.3 CONTRACT DESCRIPTION

- A. Unless otherwise indicated, the Project includes all work, materials, products, and equipment identified in the Drawings, Specifications, and Bid Form and all work, materials, products, and equipment incidental thereto.
- B. Work of separate Contract(s), if any, is identified in the Drawings. Coordinate work with other Contracts.

1.4 WORK BY OWNER OR OTHERS

- A. Items not in contract (NIC), if any, are identified in the Drawings.

- B. Items and Contracts by others, if any, are identified in the Drawings.
- C. Owner will remove and retain possession of items identified in the Drawings.
- D. Remove and deliver to Owner items identified in the Drawings.

1.5 OWNER-FURNISHED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples to Contractor.
 - 2. Arrange and pay for delivery to Site.
 - 3. Upon delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
 - 1. Review Owner-reviewed Shop Drawings, Product Data, and Samples.
 - 2. Receive and unload products at Site; inspect for completeness or damage jointly with Owner.
 - 3. Repair or replace items damaged after receipt.
 - 4. Handle, store, install, and finish products.
- C. Items furnished by Owner for installation by Contractor, if any, are identified in the Drawings. All other materials shall be furnished and installed by the Contractor.

1.6 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Unless otherwise noted in the Drawings, the Contractor shall have full use of Project Site and premises for construction operations during construction period. Contractor's use of Project Site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Do not disturb portions of Project Site beyond areas in which the Work is indicated.

1.7 FUTURE WORK

- A. Future Work Not Part of this Contract is identified as "future" in the drawings.

1.8 WORK SEQUENCE

- A. The Sequence of Construction is indicated in the Drawings. Coordinate work with other Contractor(s), if any, and Owner.

1.9 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction (AHJ).
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions, and only after arranging for temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than five (5) days in advance of proposed utility interruptions.
 - 2. Obtain Owner's permission before proceeding with utility interruptions.

1.10 OWNER OCCUPANCY

- A. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- B. Schedule Work to accommodate Owner occupancy.

1.11 SPECIFICATION CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
 - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 - PRODUCTS - Not Used
PART 3 - EXECUTION - Not Used

END OF SECTION 011000

SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Cash allowances.
- B. Schedule of Values.
- C. Application for Payment.
- D. Measurement and Payment

1.2 CASH ALLOWANCES (If provided in the Bid Form)

- A. Costs Included in Cash Allowances: Cost of product to Contractor or Subcontractor, less applicable trade discounts; delivery to Site and applicable taxes unless stated otherwise in Allowance Schedule.
- B. Costs Not Included in Cash Allowances but Included in Contract Sum/Price: Product handling at Site including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing unless stated otherwise in Allowance Schedule.
- C. Engineer Responsibilities:
 - 1. Consult with Contractor for consideration and selection of products suppliers and installers.
 - 2. Select products in consultation with Owner and transmit decision to Contractor.
 - 3. Prepare Change Order.
- D. Contractor Responsibilities:
 - 1. Assist Engineer in selection of products, suppliers, and installers.
 - 2. Obtain proposals from suppliers and installers and offer recommendations.
 - 3. Upon notification of selection by Engineer, execute purchase agreement with designated supplier and installer.
 - 4. Arrange for and process Shop Drawings, Product Data, and Samples. Arrange for delivery.
 - 5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- E. Differences in costs will be adjusted by Change Order.
- F. Allowance Schedule: If provided in and as per the Bid Form
- G. Differences in cost between allowance(s) and actual cost(s) will be adjusted by Change Order.

1.3 SCHEDULE OF VALUES (As required for Lump Sum Project or Bid Item Breakdown on Unit Price Project)

- A. Submit printed schedule on Progress Estimate schedule on EJCDC C-620.
- B. Submit Schedule of Values within fifteen (15) days after date established in Notice to Proceed.
- C. Format for Lump Sum Project: Use Table of Contents of this Project Manual. Identify each line item with number and title of major Specification Section.
- D. Revise schedule to list approved Change Orders with each Application for Payment.

1.4 APPLICATION FOR PAYMENT

- A. Submit six (6) executed copies of each Application for Payment on EJCDC C-620 - Contractor's Application for Payment unless otherwise agreed upon by the Project Administrator and/or Funding Agency.
- B. Submit six (6) copies of executed copies of Abnormal Weather Conditions forms regardless if any days are claimed or not unless otherwise agreed upon by the Project Administrator and/or Funding Agency.
- C. If required in the Contract Documents, submit six (6) American Iron and Steel Qualifying and De Minimis Materials List unless otherwise agreed upon by the Project Administrator and/or Funding Agency.
- D. Payment Period: Submit at intervals stipulated in the Agreement or as determined at the Preconstruction meeting

1.5 MEASUREMENT AND PAYMENT

- A. Take measurements and compute quantities. Engineer will verify measurements and quantities.
- B. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Actual quantities provided shall determine payment.
- C. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application, or installation of item of the Work; overhead and profit.
- D. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.
- E. Measurement of Quantities:
 - 1. Weigh Scales: Inspected, tested, and certified by state in which work is being performed or state of origin of materials within past year.
 - 2. Platform Scales: Of sufficient size and capacity to accommodate conveying vehicle.

3. Metering Devices: Inspected, tested, and certified by state in which work is being performed or state of origin of materials within past year.
4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
5. Measurement by Volume: Measured by cubic dimension using mean length, width, and height or thickness.
6. Measurement by Area: Measured by square dimension using mean length and width or radius.
7. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.

F. Payment

THIS PROJECT WILL BE PAID FOR ON A LUMP SUM BASIS.

PART 2 - PRODUCTS - Not Used
PART 3 - EXECUTION - Not Used

END OF SECTION 012000

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance.
- B. Product options.
- C. Product substitution procedures.

1.2 REFERENCED SECTION(S)

- A. Section 016000 - Product Requirements

1.3 QUALITY ASSURANCE

- A. Contract is based on products and standards established in Contract Documents with consideration of proposed substitutions in accordance with the Instruction to Bidders and other Sections during the Bidding period and in accordance with this Section after Notice to Proceed.
- B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.
- C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Owner.

1.4 PRODUCT OPTIONS

- A. See Section 016000 - Product Requirements.

1.5 PRODUCT SUBSTITUTION PROCEDURES

- A. The Instructions to Bidders and other Sections specify time restrictions for submitting requests for substitutions during Bidding period.
- B. Engineer will consider requests for other substitutions only within 30 days after date of Notice to Proceed.
- C. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- D. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:

1. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
 3. Reference to Article and Paragraph numbers in Specification Section.
 4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
 5. Changes required in other Work.
 6. Availability of maintenance service and source of replacement parts as applicable.
 7. Certified test data to show compliance with performance characteristics specified.
 8. Samples when applicable or requested.
 9. Other information as necessary to assist Engineer's evaluation.
- E. A request constitutes a representation that Bidder or Contractor:
1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 2. Will provide same warranty for substitution as for specified product.
 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
 6. Will reimburse Owner and Engineer for review or redesign services associated with reapproval by authorities having jurisdiction.
- F. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request or when acceptance will require revision to Contract Documents.
- G. Substitution Submittal Procedure:
1. Submit requests for substitutions with transmittal form for each substitution request.
 2. Submit PDF requests for substitution via email to the Engineer. Limit each request to one proposed substitution.
 3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
 4. Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 012500

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Coordination and Project conditions.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Closeout meeting.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify that utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practical; place runs parallel with lines of building. Use spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
 - 1. Coordination Drawings: Prepare as required to coordinate all portions of Work. Show relationship and integration of different construction elements that require coordination during fabrication or installation to fit in space provided or to function as intended. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are important.
- D. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.
- E. In finished areas, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.
- G. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. Engineer will schedule and preside over meeting after Notice of Award.
- B. Attendance Required: Contractor, Owner, Engineer, Resident Project Representative, Funding Agency as appropriate, Project Administrator as appropriate, affected utility companies, and appropriate governmental agency representatives.
- C. Minimum Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of products, schedule of values, and Progress Schedule.
 - 5. Designation of personnel representing all parties.
 - 6. Communication procedures.
 - 7. Procedures and processing of requests for interpretations, field decisions, field orders, submittals, substitutions, Applications for Payments, proposal request, Change Orders, and Contract closeout procedures.
 - 8. Scheduling.
 - 9. Critical Work sequencing.
 - 10. Scheduling activities of other parties, if necessary.
- D. Engineer: Record minutes and distribute copies by email or fax to participants within two (2) days after meeting, to all parties at the meeting and all of those affected by decisions made.

1.4 PROGRESS MEETINGS

- A. Engineer will schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
- C. Attendance Required: Contractor's Job Superintendent, Engineer, Owner, Funding Agency as appropriate, Project Administrator as appropriate and any others as appropriate to agenda topics for each meeting.
- D. Minimum Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems impeding planned progress.
 - 5. Review of submittal schedule and status of submittals.
 - 6. Review of off-Site fabrication and delivery schedules.
 - 7. Maintenance of Progress Schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.

10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on Progress Schedule and coordination.
 13. Other business relating to Work.
- E. Engineer: Record minutes and distribute copies by email or fax to participants within two (2) days after meeting, to all parties at the meeting and all of those affected by decisions made.

1.5 CLOSEOUT MEETING

- A. Engineer will schedule and preside over meeting.
- B. Attendance Required: Contractor, Owner, Engineer, Resident Project Representative, Funding Agency as appropriate, Project Administrator as appropriate, affected utility companies, and appropriate governmental agency representatives.
- C. Minimum Agenda:
1. Start-up of facilities and systems.
 2. Operations and maintenance manuals.
 3. Testing, adjusting, and balancing.
 4. System demonstration and observation.
 5. Operation and maintenance instructions for Owner's personnel.
 6. Contractor's inspection of Work.
 7. Contractor's preparation of an initial "punch list."
 8. Procedure to request Engineer inspection to determine date of Substantial Completion.
 9. Completion time for correcting deficiencies.
 10. Inspections by authorities having jurisdiction.
 11. Certificate of Occupancy and transfer of insurance responsibilities.
 12. Partial release of retainage.
 13. Final cleaning.
 14. Preparation for final inspection.
 15. Closeout Submittals:
 - a. Project record documents.
 - b. Operating and maintenance documents.
 - c. Operating and maintenance materials.
 - d. Affidavits.
 16. Final Application for Payment.
 17. Contractor's demobilization of Site.
 18. Maintenance.
- D. Engineer: Record minutes and distribute copies by email or fax to participants within two (2) days after meeting, to all parties at the meeting and all of those affected by decisions made.

PART 2 - PRODUCTS - Not Used
PART 3 - EXECUTION – Not Used

END OF SECTION 013000

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction video recordings.
 - 2. Demonstration and Instruction video recordings.

1.2 INFORMATIONAL SUBMITTALS

- A. Video Recordings: Submit video recordings within fifteen (15) days of recording. Submit preconstruction video recordings at least fifteen (15) days prior to starting construction.
 - 1. Submit six (6) copies of video recordings on CD-ROM or thumb drive. Include copy of key plan indicating each video's location and direction.
 - 2. Identification: With each submittal, provide the following information on file metadata tag or on web-based project software site:
 - a. Name of Project.
 - b. Name and address of photographer.
 - c. Name of Engineer.
 - d. Name of Contractor.
 - e. Name(s) and contact information of presenter(s) (for Demonstration and Instruction video recordings).
 - f. Date video recording was recorded.
 - g. Description of vantage point, indicating location, and direction (by compass point).

1.3 QUALITY ASSURANCE

- A. Video Recording Photographer Qualifications: An individual who has been regularly engaged as a professional videographer of construction projects for not less than three (3) years.

1.4 FORMATS AND MEDIA

- A. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of ten (10) megapixels and capable of recording in full high-definition mode with vibration-reduction technology. Provide supplemental lighting in low light levels or backlit conditions.
- B. Metadata: Record accurate date and time (and GPS location data, if available) from camera.
- C. File Names: Name media files with date, project area, and demonstration/instruction (as applicable) and sequential numbering suffix.

1.5 PRECONSTRUCTION VIDEO RECORDINGS

- A. Video Recording Photographer: Engage a qualified videographer to record construction video recordings.
- B. Narration: Describe scenes and areas of concern on video recording by audio narration by microphone while and/or dubbing audio narration off-site after video recording is recorded. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, and direction (by compass point).
 - 1. Confirm the date and time at beginning and end of recording.
 - 2. Begin each video recording with name of Project, Contractor's name, videographer's name, and Project location.
- C. Video record all areas that may be affected by the construction including, but not limited to, the construction area, adjacent areas, staging and storage areas, borrow areas, and access roads. The preconstruction video recordings will provide the baseline information of conditions prior to the start of construction in the event that claims of damage from the construction are made.

1.6 DEMONSTRATION AND INSTRUCTION VIDEO RECORDINGS

- A. Video Recording Photographer: Engage a qualified videographer to record Demonstration and Instruction video recordings.
- B. Narration: Confirm that the presenter's voice will be audible in the final video recording. Provide and employ the use of a microphone as required. At each change in location, describe vantage point, location, and direction (by compass point).
 - 1. Confirm the date and time at beginning and end of recording.
 - 2. Begin each video recording with name of Project, Contractor's name, presenters' name(s), videographer's name, and location.
- C. Video record all demonstrations and instructions provided by the Contractor, vendors, and suppliers to the Project Owner. These recordings shall become an integral part of the Operations and Maintenance Manual.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Definitions.
- B. Submittal procedures.
- C. Construction progress schedules.
- D. Proposed product list.
- E. Product data.
- F. Use of electronic CAD files of Project Drawings.
- G. Shop Drawings.
- H. Samples.
- I. Other submittals.
- J. Design data.
- K. Test reports.
- L. Certificates.
- M. Manufacturer's instructions.
- N. Manufacturer's field reports.
- O. Erection Drawings.
- P. Photographic Documentation.
- Q. Contractor review.
- R. Engineer review.

1.2 REFERENCED SECTION(S)

- A. Section 013233 – Photographic Documentation.
- B. Section 017000 - Execution and Closeout Requirements

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.
- B. Informational Submittals: Written and graphic information and physical Samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer-accepted form.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project and submit electronic submittals via email as PDF electronic files. Coordinate submission of related items.
- F. For each submittal for review, allow fifteen (15) days excluding delivery time to and from Contractor.
- G. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- H. Allow space on submittals for Contractor and Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized nor processed.
- L. Incomplete Submittals: Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.5 CONSTRUCTION PROGRESS SCHEDULES

- A. Comply with General Conditions.

1.6 PROPOSED PRODUCT LIST

- A. Within fifteen (15) days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.7 PRODUCT DATA

- A. Product Data: Action Submittal: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit electronic submittals via email as PDF electronic files.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 017000 - Execution and Closeout Requirements.

1.8 ELECTRONIC CAD FILES OF PROJECT DRAWINGS

- A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.
- B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:
 - 1. Use of files is solely at receiver's risk. Engineer does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information on electronic media and that in Contract Documents, notify Engineer of discrepancy and use information in hard-copy Drawings and Specifications.
 - 2. CAD files do not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
 - 3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.
 - 4. Receiver shall not hold Engineer responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.

5. Receiver shall understand that even though Engineer has computer virus scanning software to detect presence of computer viruses, there is no guarantee that computer viruses are not present in files or in electronic media.
6. Receiver shall not hold Engineer responsible for such viruses or their consequences, and shall hold Engineer harmless against costs, losses, or damage caused by presence of computer virus in files or media.

1.9 SHOP DRAWINGS

- A. Shop Drawings: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 1. Include signed and sealed calculations to support design.
 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- D. Submit electronic submittals via email as PDF electronic files.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 017000 - Execution and Closeout Requirements.

1.10 SAMPLES

- A. Samples: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Samples for Selection as Specified in Product Sections:
 1. Submit to Engineer for aesthetic, color, and finish selection.
 2. Submit Samples of finishes, textures, and patterns for Engineer selection.
- C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.
- D. Include identification on each Sample, with full Project information.
- E. Submit number of Samples specified in individual Specification Sections; Engineer will retain two Samples.
- F. Reviewed Samples that may be used in the Work are indicated in individual Specification Sections.

- G. Samples will not be used for testing purposes unless specifically stated in Specification Section.
- H. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 017000 - Execution and Closeout Requirements.

1.11 OTHER SUBMITTALS

- A. Closeout Submittals: Comply with Section 017000 - Execution and Closeout Requirements.
- B. Informational Submittal: Submit data for Engineer's knowledge as Contract administrator or for Owner.
- C. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.12 TEST REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge.
- B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.13 CERTIFICATES

- A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product but must be acceptable to Engineer.

1.14 MANUFACTURER'S INSTRUCTIONS

- A. Informational Submittal: Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Engineer in quantities specified for Product Data.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.15 MANUFACTURER'S FIELD REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit report within fifteen (15) days of observation to Engineer for information.
- C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.16 ERECTION DRAWINGS

- A. Informational Submittal: Submit Drawings for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

1.17 PHOTOGRAPHIC DOCUMENTATION

- A. Submit Preconstruction and Demonstration and Instruction Video Recordings in accordance with Section 013233 – Photographic Documentation, if applicable.

1.18 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.
- B. Contractor: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Engineer.

1.19 ENGINEER REVIEW

- A. Do not make "mass submittals" to Engineer. "Mass submittals" are defined as six (6) or more submittals or items in one day or twenty (20) or more submittals or items in one week. If "mass submittals" are received, Engineer's review time stated above will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner and Contractor.
- B. Informational submittals and other similar data are for Engineer's information, do not require Engineer's responsive action, and will not be reviewed or returned with comment.
- C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
- D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order, Field Order, or Construction/Work Change Directive.
- E. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality control.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Testing and inspection services.
- F. Manufacturers' field services.

1.2 REFERENCED SECTION(S)

- A. Section 013300 – Submittal Procedures

1.3 QUALITY CONTROL

- A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- C. Perform Work using persons qualified to produce required and specified quality.
- D. Products, materials, and equipment may be subject to inspection by Engineer and Owner at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.
- E. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

- B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.5 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
- C. Obtain copies of standards and maintain on Site when required by product Specification Sections.
- D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.6 LABELING

- A. Attach label from agency approved by authorities having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
- B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.
- C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.7 TESTING AND INSPECTION SERVICES

- A. Employ and pay for services of an independent testing agency or laboratory acceptable to Owner to perform specified testing.
 - 1. Before starting Work, submit testing laboratory name, address, and telephone number, and names of full-time responsible officer.

2. Submit copy of report of laboratory facilities' inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of deficiencies reported by inspection.
- B. Testing, inspections, and source quality control may occur on or off Project Site. Perform off-Site testing as required by Engineer or Owner.
- C. Reports shall be submitted by independent firm to Engineer, Contractor, and authorities having jurisdiction, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
1. Submit final report indicating correction of Work previously reported as noncompliant.
- D. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.
- E. Agency Responsibilities:
1. Test Samples of mixes submitted by Contractor.
 2. Provide qualified personnel at Site. Cooperate with Engineer and Contractor in performance of services.
 3. Perform indicated sampling and testing of products according to specified standards.
 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 5. Promptly notify Engineer and Contractor of observed irregularities or nonconformance of Work or products.
 6. Perform additional tests required by Engineer.
- F. Agency Reports: After each test, promptly submit report to Engineer, Contractor, and authorities having jurisdiction. When requested by Engineer, provide interpretation of test results. Include the following:
1. Date issued.
 2. Project title and number.
 3. Name of inspector.
 4. Date and time of sampling or inspection.
 5. Identification of product and Specification Section.
 6. Location in Project.
 7. Type of inspection or test.
 8. Date of test.
 9. Results of tests.
 10. Conformance with Contract Documents.
- G. Limits on Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency or laboratory may not approve or accept any portion of the Work.
 3. Agency or laboratory may not assume duties of Contractor.
 4. Agency or laboratory has no authority to stop the Work.

1.8 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, startup of equipment, testing, adjusting, and balancing of equipment, and commission as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer in advance of required observations. Observer is subject to approval of Engineer.
- C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Refer to Section 013300 - Submittal Procedures, "Manufacturer's Field Reports" Article.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 014000

SECTION 015700 - TRAFFIC CONTROL
PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The Work consists of furnishing, erecting and maintaining temporary barricades, signs, flaggers, lights, road surfaces, detours and other safeguards necessary to protect life, health and safety of the public during performance of Project Work along all private and public rights-of-way.

1.2 REFERENCE STANDARDS

- A. The latest edition of the following reference standards shall be adhered to by the Contractor:

U.S. Department of Transportation, Federal Highway Administration: Manual on Uniform Traffic Control Devices (MUTCD), Part VI, "Work Zone Traffic Control Standards and Guidelines", Current Edition. Copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.
- B. All current publications and requirements of Authorities having jurisdiction.

1.3 QUALITY ASSURANCE

- A. Codes and Standards: Perform all Work in temporary traffic control in compliance with applicable requirements of governing agencies having jurisdiction.

1.4 JOB COORDINATION

- A. Contractor shall be responsible for coordination of all construction to offer the least possible obstruction and inconvenience to the public and shall have under construction no greater length or amount of Work than can be prosecuted properly with due regards to the rights of the public. The Contractor shall not open up sections of Work and leave them unfinished but shall finish Work in process insofar as practicable.
- B. Traffic controls shall be kept in operation unless otherwise directed for the benefit of the traveling public during progress of the Work. Signs and other traffic control devices damaged or lost by the Contractor shall be replaced or repaired by the Contractor at no cost to the Owner.
- C. Existing street lighting systems shall be kept in operation during progress of the Work.

1.5 NOTIFICATIONS

- A. 48-hour Notification to the Authorities having jurisdiction regarding Work performed shall be in such detail as to give the time of commencement and completion of Work, schedule of operations, routes of detours, etc.

1.6 CONSTRUCTION AND MAINTENANCE OF DETOURS

- A. The Contractor shall construct, maintain in a safe condition, keep open to traffic, and remove detours that will accommodate diverted traffic during construction.

1.7 SUBMITTALS

- A. The Contractor shall submit copies of the Traffic Control Plan to the Authorities having jurisdiction for review and approval.

PART 2 - PRODUCTS

2.1 SPECIAL SIGNS

- A. Signs with special or non-standard messages shall properly convey information to the motorist. The Contractor shall be responsible for installing and maintaining these signs. Signs shall be in accordance with the requirements of the standards referenced in this Section.

PART 3 - EXECUTION

3.1 TRAFFIC MAINTENANCE

- A. The Contractor shall take all necessary measures to maintain a normal flow of vehicles, to prevent accidents, and to protect the Work throughout the construction stages until completion of the Work. The Contractor shall make the necessary arrangements to reroute traffic, provide and maintain barriers, cones, guards, barricades, and construction warning and regulatory signs. All regulatory devices provided by the Contractor shall be suitable for nighttime operation. The Contractor shall take effective measures necessary to protect all other portions of the Work during construction on weekdays, weekends, and holidays and until completion. This includes providing and maintaining all barricades lights, construction signs, guards, temporary crossovers, and flaggers in accordance with the standards referenced in this Section. Contractor shall inspect traffic control every weekend to determine if all barrier cones, guards, barricades, construction warning and regulatory signs are standing upright and warning lights are functioning properly.

3.2 SAFETY

- A. The Contractor shall provide safeguards, safety devices and protective equipment, and take any other needed actions, on its own responsibility or as the Engineer may determine reasonably necessary, to protect life, health and safety of the public and to protect property in connection with the performance of Work covered by the Contract.
- B. The Contractor shall provide such flaggers, signs and other devices, and shall erect and maintain all barricades, guards, standard construction signs, warning signs and detour signs, as are necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations.

- C. Where flaggers are employed by the Contractor to safeguard traffic, the flaggers' equipment shall be in accordance with the referenced standards.
- D. Any standard signs as well as any other signs prescribed by the Engineer necessary for the Work shall be furnished by the Contractor. The Contractor shall erect signs on posts and supports, and maintain them at its own expense in a neat and presentable condition, until the necessity for them has ceased. When the need for any signs has ceased, the Contractor, upon approval by the Engineer, shall take down such signs. All control signs necessary for nighttime traffic control, or remaining in place during the night, shall be fully reflectorized.
- E. The Contractor shall patrol traffic control areas and reset all disturbed signs and traffic control devices immediately. All non-applicable signs shall be removed or covered during periods not needed.
- F. Upon failure of the Contractor to provide immediately such flaggers and provide, erect, maintain, and remove such barricades and lights, and erect, maintain, and remove standard signs when ordered to do so by the Engineer, the Engineer shall be at liberty, without further notice to the Contractor and the Contractor's Surety, to provide the necessary flaggers, to provide, erect, maintain, and remove barricades and lights, and to erect, maintain, and remove standard signs and deduct all of the costs thereof from any payments due or coming due the Contractor.
- G. The Contractor shall be responsible for providing adequate flaggers, barricades, lights and signs for protection of the Work and the public at all times regardless of whether or not such flaggers, barricades, lights and signs are ordered by the Engineer, and the Contractor and the Contractor's Surety shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.
- H. In the event any traffic signal or beacon is made inoperative by or at request of the Contractor, the Contractor shall, at no cost to the Owner, provide a uniformed flagger(s) or suitable traffic control device(s) for control and movement of traffic during the time that the signal or beacon is inoperative. The types of traffic control devices used shall be subject to review and acceptance by the Engineer.

END OF SECTION 015700

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.

1.2 REFERENCE SECTION(S)

- A. Section 012500 - Substitution Procedures.

1.3 PRODUCTS

- A. At minimum, comply with specified requirements and reference standards.
- B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
- C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
- D. Do not use materials and equipment removed from existing premises except as specifically permitted by Contract Documents.
- E. Furnish interchangeable components from same manufacturer for components being replaced.

1.4 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products according to manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.5 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products according to manufacturer's instructions.
- B. Store products with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
- D. For exterior storage of fabricated products, place products on sloped supports aboveground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Products complying with specified reference standards or description.
- B. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit Request for Substitution for any manufacturer not named, according to Section 012500 - Substitution Procedures.

PART 2 - PRODUCTS – Not Used
PART 3 - EXECUTION - Not Used

END OF SECTION 016000

SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Field engineering.
- B. Closeout procedures.
- C. Starting of systems.
- D. Demonstration and instructions.
- E. Testing, adjusting, and balancing.
- F. Project record documents.
- G. Operation and maintenance data.
- H. Manual for equipment and systems.
- I. Spare parts and maintenance products.
- J. Product warranties and product bonds.

1.2 REFERENCED SECTIONS

- A. Section 013300 - Submittal Procedures

1.3 FIELD ENGINEERING

- A. Engineer shall provide limited construction surveying and information to the Contractor.
 - 1. The Engineer shall provide project benchmarks and/or control points (survey control) as designated on Drawings. After establishing the survey control, it shall be the Contractor's responsibility to maintain the surveying control.
 - 2. The Engineer shall perform construction stakeout one time for the facilities to be constructed. The Contractor shall maintain and protect the provided stakeout.
 - 3. The Contractor shall notify the Engineer of any discrepancies discovered.
- B. Control datum for survey is indicated on Drawings.
- C. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.4 CLOSEOUT PROCEDURES

- A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:
1. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified in compliance with this Section.
 2. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
 3. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
 4. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
 5. Make final change-over of locks eliminating construction master-key system and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
 6. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
 7. Perform final cleaning according to this Section.
- B. Substantial Completion Inspection:
1. When Contractor considers Work to be substantially complete, submit to Engineer:
 - a. Written certificate that Work, or designated portion, is substantially complete.
 - b. List of items to be completed or corrected (initial punch list).
 2. Within seven days after receipt of request for Substantial Completion, Engineer will make inspection to determine whether Work or designated portion is substantially complete.
 3. Should Engineer determine that Work is not substantially complete:
 - a. Engineer will promptly notify Contractor in writing, stating reasons for its opinion.
 - b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Engineer.
 - c. Engineer will reinspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Engineer's inspection.
 4. When Engineer finds that Work is substantially complete, Engineer will:
 - a. Prepare Certificate of Substantial Completion. Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified and amended by Engineer and Owner (final punch list).
 - b. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in Certificate.
 5. After Work is substantially complete, Contractor shall:

- a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
 - b. Complete Work listed for completion or correction within time period stipulated.
- C. Prerequisites for Final Completion: Complete following items before requesting final acceptance and final payment.
 - 1. When Contractor considers Work to be complete, submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been examined for compliance with Contract Documents.
 - c. Work has been completed according to Contract Documents.
 - d. Work is completed and ready for final inspection.
 - 2. Submittals: Submit following:
 - a. Final punch list indicating all items have been completed or corrected.
 - b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
 - d. Accounting statement for final changes to Contract Sum.
 - e. Submittal of all required documents of authorities having jurisdiction including, but not limited to, and as applicable the following:
 - i. Release by Claimant(s) or Waiver of Liens from all suppliers, subcontractors, and all persons employed in connection with the Contract as well as a letter listing all suppliers and subcontractors utilized on the project.
 - ii. Affidavit of Payment regarding previous progress payments.
 - iii. Contractor's Record Drawings, O&M Manuals, and Test Reports.
 - iv. Certification of insurance continuation for final payment and one year afterward.
 - v. Consent of Surety as to Final Payment.
 - vi. Release from any other authorities having jurisdiction including divisions of highways or departments of transportation.
 - f. Engineer will request the state tax release to verify tax payment and will have prepared any necessary letters accepting the Work on behalf of the Engineer and Owner.
 - 3. Perform final cleaning for Contractor-soiled areas according to this Section.
- D. Final Completion Inspection:
 - 1. Within seven days after receipt of request for final inspection, Engineer will make inspection to determine whether Work or designated portion is complete.
 - 2. Should Engineer consider Work to be incomplete or defective:
 - a. Engineer will promptly notify Contractor in writing, listing incomplete or defective Work.

- b. Contractor shall remedy stated deficiencies and send second written request to Engineer that Work is complete.
- c. Engineer will reinspect Work.
- d. Redo and Inspection of Deficient Work: Repeated until Work passes Engineer's inspection.

1.5 STARTING OF SYSTEMS

- A. Coordinate schedule for startup of various equipment and systems.
- B. Notify Engineer seven days prior to startup of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify that tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute startup under supervision of manufacturer's representative or Contractors' personnel according to manufacturer's instructions.
- G. When specified in individual Specification Sections, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation prior to startup and will supervise placing equipment or system in operation.
- H. Submit a written report according to Section 013300 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.6 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel.
- B. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- C. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- E. Required instruction time for each item of equipment and system is specified in individual Specification Sections.

1.7 TESTING, ADJUSTING, AND BALANCING

- A. Owner will appoint, employ, and pay for services of independent firm to perform testing, adjusting, and balancing, if and as required,
- B. Reports will be submitted by independent firm to Engineer indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.

1.8 PROJECT RECORD DOCUMENTS

- A. Maintain on Site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, product data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates used.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows as applicable:
 - 1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
 - 2. Include locations of concealed elements of the Work.
 - 3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components that are parallel to utilities.
 - 4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
 - 5. Identify and locate existing buried or concealed items encountered during Project.
 - 6. Measured depths of foundations in relation to finish first floor datum.
 - 7. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 8. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 9. Field changes of dimension and detail.

10. Details not on original Drawings.

G. Submit marked-up paper copy documents to Engineer with claim for final Application for Payment.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11-inch text pages, three D side ring or capacity expansion binders with durable plastic or cloth covers. Submit to Engineer with claim for final Application for Payment
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project", and subject matter of binder when multiple binders are required.
- C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- E. Contents: Prepare table of contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system or process flow and subdivided by Specification Section, as applicable. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Include the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - g. Safety precautions to be taken when operating and maintaining or working near equipment.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop Drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Originals of warranties and bonds.

1.10 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual Specification Sections.
- B. Deliver to Project Site and place in location as directed by Owner; obtain receipt prior to final payment.

1.11 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. This sub Section is applicable to extended transferable warranties beyond the one year warranty required in the Supplemental General Conditions.
- B. Obtain warranties and bonds executed in triplicate by responsible Subcontractors, suppliers, and manufacturers within ten days after completion of applicable item of Work.
- C. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.
- D. Verify documents are in proper form, contain full information, and are notarized.
- E. Co-execute submittals when required.
- F. Include table of contents and assemble in three D side ring binder with durable plastic or cloth cover.
- G. Submit prior to final Application for Payment.
- H. Time of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten days after date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION – Not Used.

END OF SECTION 017000

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- E. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until installation.
 - 4. Protect items from damage during transport and storage.
 - 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

3.2 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials except for woody materials from Site Clearing which may be burned with permission on authorities having jurisdiction.
- C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 311100 – CLEARING, GRUBBING, AND RESTORATION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Scope of Work: This Section includes the following:

1. Clearing and grubbing.
2. Restoration.
3. Protection of designated trees and vegetation.
4. Private fence considerations.

1.2 DEFINITIONS

- A. Clearing is defined as the removal of trees, brush, down timber, rotten wood, rubbish, any other vegetation, rocks, boulders, fences, walls, posts, guard rail, signs, and any other and all obstructions interfering with the proposed Work at or above original ground elevation, not designated to be protected.
- B. Grubbing is defined as the removal of below ground level stumps, roots, stubs, brush, and other organic material.
- C. Restoration, whether temporary or permanent, is defined as the repair of the area disturbed by the Work to its original condition or better. It includes, but is not limited to, the re-installation of fences, walls, posts, guard rail, signs, and any other and all obstructions interfering with the proposed Work after the Work has been performed. It includes the removal of any and all Erosion and Sedimentation Controls when they are no longer necessary for their intended uses. It also includes removal of any and all Subsurface Feature Temporary Identification Markers where a detail for such is provided in the Drawings.

1.3 JOB CONDITIONS

- A. Conduct clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from Authorities having jurisdiction.
- B. Provide protection necessary to prevent damage to existing improvements to the greatest extent possible.
- C. All trees within temporary construction easement limits with roots that may be damaged by the Work shall be cleared (and grubbed if so specified) unless the property owner indicates in writing that certain trees are to remain and that the property owner will assume all responsibilities for removal of the trees in the future. Any such letter shall be submitted to the Engineer for the record.

PART 2 - EXECUTION

2.1 PREPARATION

- A. Identify and protect benchmarks, property corners, and existing utilities.

- B. When a private fence encroaches on the Work area, provide temporary fencing in advance of the clearing operations. Carefully remove the existing fence, in whole or in part as required, and neatly stockpile the materials. Using the stockpile materials and other materials provided by the Contractor, re-install the permanent fence within one (1) week after performing that section of the Work.

2.2 LANDSCAPE REMOVAL

- A. Clear trees, shrubs, grass and other vegetation, improvements, or obstructions as required to permit access and installation of the new construction. The limits of clearing shall be within the public rights-of-way provided by permit of the Authorities having jurisdiction or within the rights-of-way obtained by the Owner for the purposes of the project.
- B. Grubbing, where required in the Drawings or necessary for the proposed Work, shall be carried to a depth of 18 inches below existing ground. Where grubbing is not required to allow for construction, the stumps may be cut flush to the ground elevation.

2.3 PROTECTION OF EXISTING TREES AND VEGETATION

- A. Protect existing trees and other vegetation indicated to remain in place against unnecessary cutting, breaking, or skinning of roots; skinning or bruising of bark; and smothering of trees by stockpiling construction materials or excavated materials.
- B. Provide temporary guards to protect trees and vegetation to remain standing.
- C. Repair tree or shrub bark, trunk, limbs, and roots by properly dressing, cutting, tracing, and painting affected areas with an approved arboriculture method and material. Make repairs no longer than two (2) working days after the damage occurs.

2.4 BURNING

- A. No burning will be permitted unless otherwise noted or permitted by Authorities having jurisdiction. If permitted, copies of the burning permits shall be provided by the Contractor to the Engineer and Owner.

2.5 DISPOSAL

- A. All trees, shrubs, plants, and other materials removed shall become the property of the Contractor and shall be removed from the Site, unless otherwise designated. Dispose of in accordance with all applicable laws.

2.6 CHIPPING / SHREDDING

- A. Woody material may be chipped/shredded and used for erosion and sediment controls during construction.

2.7 RESTORATION

- A. Unless otherwise agreeable to the Engineer, temporarily restore all disturbed areas the same day of the completion of the Work in the disturbed area to maintain safe and operational conditions. Temporary restoration may include, but not be limited to, mulching in vegetated areas and crushed stone in graveled, paved, or concrete areas.
- B. Perform permanent restoration within one (1) week of completion of the Work in the disturbed area unless otherwise agreeable to the Engineer. Perform and maintain temporary restoration
- C. Under no circumstances shall graveled, paved, or concrete areas be left unrestored below grade, either temporarily or permanently.

END OF SECTION 311100

SECTION 312316.13 - TRENCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Preparation.
2. Trenching.
3. Sheet piling and Shoring.
4. Backfilling.
5. Dewatering.

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials

1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-inch) Drop.

B. ASTM International

1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³).
2. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³).
4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
5. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
6. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

1.4 SUBMITTALS

- A. Section 013300 - Submittal Procedures.

- B. Excavation Protection Plan: For sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.
- C. Product Data: Submit data for geotextile fabric indicating fabric and construction.
- D. **The Soils Testing Laboratory engaged by and paid for by the Contractor shall submit testing results directly to the Engineer.**

1.5 QUALITY ASSURANCE

- A. Testing Agency: **Compaction testing shall be performed by a Soils Testing Laboratory engaged by and paid for by the Contractor.**
- B. Perform Work in accordance with the local and state Authorities having jurisdiction.

1.6 JOB CONDITIONS

- A. **All excavation shall be unclassified regardless of the materials encountered. No additional payment for rock or an unsuitable material will be made. No additional payment for dewatering and/or shoring will be made.**

1.7 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.8 COORDINATION

- A. Section 013000 - Administrative Requirements.
- B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 - EXECUTION

2.1 LINES AND GRADES

- A. Lay pipes to lines and grades indicated on Drawings.
 - 1. Engineer reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades for gravity line work.

2.2 PREPARATION

- A. Contact WV 811 and Local Utility Companies no less than two (2) business days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns, rock outcropping and other features remaining as portion of final landscaping.
- D. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.
- F. Control of Traffic
 - 1. Refer to Section 015700 - Traffic Control.
- G. Cutting Paved Surfaces
 - 1. Make cuts in paved surfaces with an appropriate saw cut in a neat uniform fashion forming straight lines parallel with the centerline of the trench. Cut offsets at right angles to the centerline of the trench.
 - 2. Protect edges of cut pavements during excavation to prevent raveling or breaking; square edges prior to pavement replacement.

2.3 TRENCHING

- A. **All excavation shall be unclassified regardless of the materials encountered. No additional payment for rock or an unsuitable material will be made. No additional payment for dewatering and/or shoring will be made.**
- B. Remove and dispose of lumped subsoil, boulders, and rock not meeting back fill requirements. Perform excavation within 24 inches of existing utility service in accordance with utility's requirements.
- C. Do not advance open trench more than 200 feet ahead of installed pipe.
- D. Cut trenches to width indicated on the Trench Detail(s) in the Drawings. Remove water or materials that interfere with Work.
- E. Excavate trenches to depth indicated in the Trench Detail(s) in the Drawings.
- F. Provide uniform and continuous bearing and support for bedding material and pipe.
- G. Do not interfere with 45 degree bearing splay of foundations.

- H. When Project conditions permit, slope side walls of excavation starting 2 feet above top of pipe. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this Section.
- I. When subsurface materials at bottom of trench are loose or soft, notify Engineer, and request instructions.
- J. Cut out soft areas of subgrade not capable of compaction in place. Backfill with subsoil material and compact to density equal to or greater than requirements for subsequent backfill material.
- K. Trim excavation: Hand trim for bell and spigot pipe joints. Remove loose matter.
- L. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Engineer.
- M. Remove excess subsoil, not intended for reuse, from Site.

2.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 3 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Withdraw shoring, bracing and sheeting as backfilling proceeds unless otherwise directed by Engineer.

2.5 BACKFILLING

- A. Backfill trenches to contours and elevations with approved excavated material or approved subsoil material.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Maintain optimum moisture content of fill materials to attain required compaction density.
- D. Furnish and place bedding as shown in the Trench Detail(s) in the Drawings. Backfill trenches as per the Trench Detail(s) in the Drawings. Place backfill over bedding in maximum lifts of eight inches (8") unless otherwise required by Authorities having jurisdiction. Tamp in place. Compact to 95 percent of maximum dry density as per ASTM D698 or 100 percent of the surrounding ground density
- E. Lift Thickness Limitations: Submit a list of the compaction equipment to be utilized on the Project, the recommendations of the equipment manufacturer as to the maximum lift thickness which can be placed, and the method of compaction to be used with this equipment to achieve the required compaction. In no case shall maximum lift thickness placed exceed previously specified. However, if the equipment manufacturer's lift thickness recommendation is followed

and the specified compaction is not obtained, the Contractor shall, at his own expense, remove, replace, and retest as many times as is required to obtain the specified compaction.

- F. Installation of Magnetic Marking/Warning Tape: A magnetic marking/warning tape shall be incorporated into the backfill of the pipe trenches. This tape shall be at least 6 inches wide and located 12 inches to 18 inches below the final surface and directly above the center of the pipe line. Color code as follows:

Red – Electric
Yellow – Gas
Orange – Telephone
Blue - Water
Green - Sewer

2.6 DEWATERING

- A. Prevent surface water and subsurface or ground water from flowing into excavations and flooding the Project Site and surrounding area. Positive drainage of fills shall be maintained at all times.
- B. All excavations shall be free of water. Do not allow water to accumulate in excavations. Remove water from excavations to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from the Site.
- C. Convey water removed from excavations and rainwater to collecting ponds or to run-off areas. Do not use trench excavations for Site utilities as temporary drainage ditches or collecting ponds.
- D. Install, operate, and maintain appropriate erosion and sediment control measures to treat pumped water.

2.7 TOLERANCES

- A. Top Surface of Backfilling Under Paved Areas: ± 1 inch from required elevations.
- B. Top Surface of General Backfilling: ± 1 inch from required elevations.

2.8 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D1557.
- B. Perform in place compaction tests in accordance with the following:
1. Density Tests: ASTM D1556, ASTM D2167, or ASTM D2922.
 2. Moisture Tests: ASTM D3017.

- C. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.
- D. Frequency of Tests: Compaction tests will be conducted at least one (1) per every 500 linear feet of trench or as required by Authorities having jurisdiction with at least one (1) test per lift, and one (1) test for each structure or as necessary to insure proper compaction.

2.9 PROTECTION OF FINISHED WORK

- A. Reshape and re-compact fills subjected to vehicular traffic during construction.

PART 3 - EXECUTION (Not Used)

END OF SECTION 312316.13

SECTION 312319 - DEWATERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Construction dewatering.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect existing adjacent buildings, structures, and improvements from damage caused by dewatering operations.
- B. Protect and maintain temporary erosion and sedimentation controls.

3.2 SURFACE WATER CONTROL SYSTEM

- A. Provide ditches, berms, and other devices to divert and drain surface water from excavation area.
- B. Control and remove unanticipated water seepage into excavation.

3.3 OPERATION

- A. Operate dewatering system continuously until backfilling is complete.
- B. Conduct daily observation of dewatering system and monitoring system. Make required repairs and perform scheduled maintenance.
- C. Modify dewatering and surface water control systems when operation causes or threatens to cause damage to new construction, existing Site improvements, and adjacent property.

- D. Do not discontinue dewatering operations without Engineer's approval.

3.4 FIELD QUALITY CONTROL

- A. Survey-Work Benchmarks: Resurvey benchmarks regularly during dewatering and maintain an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Engineer if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.

END OF SECTION 312319

SECTION 321216.11 – CONCRETE RESURFACING, CRUSHED STONE RESURFACING, AND ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Concrete Resurfacing.
 - 2. Crushed Stone Resurfacing.
 - 3. Hot-Mix Asphalt.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For each concrete and/or paving material.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Concrete and paving-mix Manufacturer(s) registered with and approved by the Department of Transportation or Division of Highways of the state in which the work is to be performed.
- B. Comply with materials, workmanship, and other applicable requirements of the Standard Specifications of Department of Transportation or Division of Highways of the state in which the work is to be performed, Edition as of the Advertisement for Bids date.
 - 1. Measurement and payment provisions and safety program submittals included in those Standard Specifications do not apply to this Section.
 - 2. Section 012000 - Measurement and Payment Procedures are applicable.
 - 3. Price adjustments for fuel and/or asphalt will not be made.
- C. **Testing Agency: Compaction testing shall be performed by a Testing Laboratory engaged by and paid for by the Contractor.**

PART 2 - PRODUCTS

- 2.1 Materials required or described in the Drawings, other Specification Section(s) and/or Pay Item(s) as specified the Standard Specifications of Department of Transportation or Division of Highways of the state in which the work is to be performed, Edition as of the Advertisement for Bids date.

PART 3 - EXECUTION

3.1 TEMPORARY PAVING

- A. Place temporary paving and/or crushed stone backfill to grade immediately upon completion of trench backfilling.
- B. Shape and compact subgrade material, then place and compact crushed stone base course to the required thickness.
- C. Place temporary paving material. Compact to two-inch (2") minimum thickness with trench roller having minimum 300 pounds per inch-width of compaction roll.
- D. Continuously maintain temporary paving and/or crushed stone backfill as directed by the Engineer to maintain safe travelling conditions for pedestrians, bicycles, and vehicles.

3.2 PERMANENT PAVING

- A. Trim existing paving to remove damaged areas. Neatly saw cut straight joint lines and right angle offsets.
- B. Remove temporary paving material. Construct permanent base and wearing courses to the required compacted thicknesses shown in the Drawing(s).
- C. Maintain permanent paving as directed by the Engineer throughout the Contract maintenance period.

3.3 PATCHING

- A. Asphalt Pavement: Neatly saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Compact existing unbound-aggregate base course to form new subgrade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 - 1. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into perimeter of adjacent sound pavement, unless otherwise

- indicated. Cut excavation faces vertically. Compact existing unbound-aggregate base course to form new subgrade.
 2. Neatly saw cut the concrete in straight lines and at right angles to offsets.
 3. Install required rebar, stone, and wire mesh as shown in the Drawings.
 4. Screed concrete evenly with existing concrete surfaces and finish new concrete to match existing.
 5. Clean all leftover and spilled concrete from job Site to leave a clean, neat finish.
 6. Protect wet concrete from damage of impressions.
- C. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 - 0.15 gallon per square yard.
1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Placing Patch Material: Fill excavated pavement areas with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.4 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

3.5 PLACING HOT-MIX ASPHALT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross-section, and thickness when compacted.
1. Spread mix at a minimum temperature of 250 degrees F.
 2. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.6 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
1. Clean contact surfaces and apply tack coat to joints.

2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
3. Offset transverse joints, in successive courses, a minimum of 24 inches.
4. Construct transverse joints at each point where paver ends a day's Work and resumes Work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

3.7 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 1. Complete compaction before mix temperature cools to 185 degrees F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent or greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.8 FIELD QUALITY CONTROL

- A. **Testing Agency: Compaction testing shall be performed by a Testing Laboratory engaged by and paid for by the Contractor.**
- B. Frequency of Tests: Compaction tests will be conducted at least one (1) per every 500 linear feet of trench or as required by Authorities having jurisdiction with at least one (1) test per lift.
- C. Replace and compact hot-mix asphalt where core tests were taken.

- D. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 321216

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Vacuum testing.

1.2 SUBMITTALS

- A. Product Data:
 - 1. Vacuum testing.
 - 2. List of test equipment.
 - 3. Testing sequence schedule.
 - 4. Provisions for disposal of flushing and test water.
 - 5. Certification of test gage calibration.
- B. Product Test Reports: For each manhole, for tests performed by qualified testing agency.
- C. Qualifications Statement: For testing agency.

1.3 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Company specializing in performing Work of this Section with minimum three (3) years' documented experience.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 VACUUM TESTING

- A. Equipment:
 - 1. Vacuum pump.
 - 2. Vacuum line.
 - 3. Vacuum Tester Base:
 - a. Compression band seal.
 - b. Outlet port.
 - 4. Shutoff valve.
 - 5. Stopwatch.
 - 6. Plugs.
 - 7. Vacuum Gage: Calibrated to 0.1 in. Hg (0.34 kPa).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify that manholes are ready for testing.
- C. Verify that manholes are backfilled.
- D. Proceed with testing only after unsatisfactory conditions have been corrected.

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Manhole Testing:
 - 1. Repair both outside and inside of joint to ensure permanent seal.
 - 2. Test manholes with manhole frame set in place.
 - 3. Vacuum Testing:
 - a. Comply with ASTM C1244 (C1244M).
 - b. Plug pipe openings; securely brace plugs and pipe.
 - c. Inflate compression band to create seal between vacuum base and structure.
 - d. Connect vacuum pump to outlet port with valve open, then draw vacuum to 10 in. Hg (33.8 kPa).
 - e. Close valve.
 - f. Manhole Test Duration in Seconds:
 - 1) Manhole Diameter of 4 Feet (1.2 m): 60.
 - 2) Manhole Diameter of 5 Feet (1.5 m): 75.
 - 3) Manhole Diameter of 6 Feet (1.8 m): 90.
 - g. Record vacuum drop during test period.
 - h. If vacuum drop is greater than 1 in. Hg (3.4 kPa) during testing period, repair and retest manhole.
 - i. If vacuum drop of 1 in. Hg (3.4 kPa) does not occur during test period, manhole is acceptable; discontinue testing.
 - j. If vacuum test fails to meet 1-in. Hg (3.4-kPa) drop in specified time after repair, repair and retest manhole.
 - 4. If unsatisfactory testing results are achieved, repair manhole and retest until result meets criteria.
 - 5. Repair visible leaks regardless of quantity of leakage.
- C. Prepare test and inspection reports.

END OF SECTION 330505.36

SECTION 330505.41 - AIR TESTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Air testing equipment.
- B. Applicable locations for air testing: New sewer lines without service lateral re-connections.

1.2 SUBMITTALS

- A. Product Data:
 - 1. Air testing equipment.
 - 2. Testing procedures.
 - 3. List of test equipment.
 - 4. Testing sequence schedule.
 - 5. Provisions for disposal of flushing and test water.
 - 6. Certification of test gage calibration.
- B. Product Test Reports: For piping, for tests performed by qualified testing agency.
- C. Qualifications Statement: For testing agency.

1.3 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Company specializing in performing Work of this Section with minimum three (3) years' documented experience.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 AIR TESTING EQUIPMENT

- A. Air compressor.
- B. Air supply line.
- C. Shutoff valves.
- D. Pressure regulator.

- E. Pressure relief valve.
- F. Stopwatch.
- G. Plugs.
- H. Pressure Gage: Calibrated to 0.1 psi (0.69 kPa).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify that piping is ready for testing.
- C. Verify that trenches are backfilled.
- D. Proceed with testing only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Lamping:
 - 1. Lamp gravity piping after flushing and cleaning.
 - 2. Perform lamping operation by shining light at one end of each pipe section between manholes.
 - 3. Observe light at other end.
 - 4. Pipe not installed with uniform line and grade will be rejected.
 - 5. Remove and reinstall rejected pipe sections.
 - 6. Clean and lamp until pipe section is installed to uniform line and grade.
- B. Plugs:
 - 1. Plug outlets, wye branches, and laterals.
 - 2. Brace plugs to resist test pressures.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Low-Pressure Air Testing:
 - 1. Test each reach of gravity sewer piping between manholes.
 - 2. Introduce air pressure slowly to approximately 4 psig (28 kPa).
 - 3. Determine ground water elevation above spring line of piping.

4. For every foot (0.3 m) of ground water above spring line of piping, increase starting air test pressure by 0.43 psi (3.0 kPa).
5. Do not increase pressure above 10 psig (69 kPa).
6. Allow pressure to stabilize for at least five minutes.
7. Adjust pressure to 3.5 psig (24 kPa) or to increased test pressure as determined above when ground water is present.
8. Do not make allowance for laterals.
9. Minimum Testing Duration in Minutes Per 100 Feet (30 m):
 - a. Pipe Size 3 Inches (75 mm): 0.2.
 - b. Pipe Size 4 Inches (100 mm): 0.3.
 - c. Pipe Size 6 Inches (150 mm): 0.7.
 - d. Pipe Size 8 Inches (200 mm): 1.2.
 - e. Pipe Size 10 Inches (250 mm): 1.5.
 - f. Pipe Size 12 Inches (300 mm): 1.8.
 - g. Pipe Size 15 Inches (375 mm): 2.1.
 - h. Pipe Size 18 Inches (450 mm): 2.4.
 - i. Pipe Size 21 Inches (525 mm): 3.0.
 - j. Pipe Size 24 Inches (600 mm): 3.6.
 - k. Pipe Size 27 Inches (675 mm): 4.2.
 - l. Pipe Size 30 Inches (750 mm): 4.8.
 - m. Pipe Size 33 Inches (825 mm): 5.4.
 - n. Pipe Size 36 Inches (900 mm): 6.0.
10. Record drop in pressure during testing period.
11. If air pressure drops more than 1.0 psi (6.89 kPa) during testing period, piping has failed.
12. If 1.0-psi (6.89-kPa) air pressure drop has not occurred during testing period, piping is acceptable; discontinue testing.
13. If piping fails, test reach of piping in incremental stages until leaks are isolated, repair leaks, and retest entire reach between manholes.
14. If unsatisfactory testing results are achieved, make necessary repairs and retest until result meets criteria.
15. Repair visible leaks regardless of quantity of leakage.

C. Prepare test and inspection reports.

END OF SECTION 330505.41

SECTION 330505.43 - MANDREL TESTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Deflection testing equipment.

1.2 SUBMITTALS

- A. Product Data:
 - 1. Deflection testing.
 - 2. Testing procedures.
 - 3. List of test equipment.
 - 4. Testing sequence schedule.
 - 5. Provisions for disposal of flushing and test water.
 - 6. Certification of test gage calibration.
 - 7. Deflection mandrel drawings and calculations.
- B. Product Test Reports: For piping, for tests performed by qualified testing agency.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 DEFLECTION TESTING EQUIPMENT

- A. Properly sized rigid ball or "go, no go" mandrel.
- B. Pull/retrieval ropes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions installation tolerances and other conditions affecting performance of the Work.
- B. Verify that piping is ready for testing.
- C. Verify that trenches are backfilled.

- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Lamping:

1. Lamp gravity piping after flushing and cleaning.
2. Perform lamping operation by shining light at one end of each pipe section between manholes.
3. Observe light at other end.
4. Pipe not installed with uniform line and grade will be rejected.
5. Remove and reinstall rejected pipe sections.
6. Clean and lamp until pipe section is installed to uniform line and grade.

B. Plugs:

1. Plug outlets, wye branches, and laterals.
2. Brace plugs to resist test pressures.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Deflection Testing of Plastic Sewer Piping:

1. Perform vertical ring deflection testing on PVC and ABS sewer piping after backfilling has been in place for at least 30 days, but not longer than 12 months.
2. Allowable maximum deflection for installed plastic sewer pipe is no greater than five percent of original vertical internal diameter.
3. Perform deflection testing using properly sized rigid ball or "go, no go" mandrel.
4. Rigid Ball or Mandrel Diameter:
 - a. Not less than 95 percent of base or average ID of pipe.
 - b. Pipe Diameter: Comply with ASTM D2122.
5. Perform testing without mechanical pulling devices.
6. Locate, excavate, replace, and retest piping that exceeds allowable deflection.

C. Prepare test and inspection reports.

END OF SECTION 330505.43

SECTION 330561.11 – PRECAST CONCRETE MANHOLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Precast Concrete manholes.
2. Grout
3. Frames and covers.
4. Riser rings.

B. Referenced Sections:

1. Section 330505.36 "Vacuum Testing."
2. Section 040516 "Masonry Grouting."

1.2 SUBMITTALS

A. Product Data:

1. Precast Concrete manholes.
2. Grout
3. Frames and covers.
4. Riser rings.

B. Shop Drawings:

1. Indicate structure elevations.
2. Indicate sizes and elevations of piping.

C. Qualifications Statement: For manufacturer.

1.3 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of manholes and connections, and record invert elevations.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Company specializing in manufacturing products specified in this Section with minimum three (3) years' experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- B. Handling: Comply with precast concrete manufacturer instructions for unloading and moving precast manholes and drainage structures.
- C. Storage:
 - 1. Store materials according to manufacturer instructions.
 - 2. Store precast concrete manholes and drainage structures to prevent damage to Owner's property or other public or private property.
 - 3. Repair property damaged from materials storage.
- D. Protection:
 - 1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
 - 2. Provide additional protection according to manufacturer instructions.

1.6 FIELD CONDITIONS

- A. Maintain materials and surround air temperature to a minimum of 40 degrees F prior to, during, and forty-eight (48) hours after the completion of masonry work,
- B. Cold Weather Requirements: Comply with ACI 530/530.1.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Perform Work according to:
 - 1. West Virginia Department of Transportation Division of Highways (Standard Specifications Roads and Bridges, edition as of Bid Date) Section 605 or as specified herein, whichever requirements are more stringent.

2.2 PRECAST CONCRETE MANHOLES

- A. Reinforced Precast Concrete Manhole Sections:
 - 1. Comply with ASTM C478.
 - 2. Gaskets: Comply with ASTM C923.
 - 3. Joints:
 - a. Comply with ASTM C913.
 - b. Maximum Leakage: 0.025 gal. per hour per foot of joint at 3 feet of head.

B. Grout for Manhole Inverts:

1. Grout: As specified in Section 040516 "Masonry Grouting."

C. Shaft and Cone Top Sections:

1. Pipe Sections: Reinforced pre-cast concrete.
2. Joints:
 - a. Lipped male/female.
 - b. Dry.

D. Clear Inside Dimensions:

1. As indicated on Drawings.

E. Design Depth:

1. As indicated on Drawings.

F. Clear Cover Opening:

1. As indicated on Drawings.

G. Pipe Entry: Furnish openings as indicated on Drawings.

H. Structure Joint Gaskets:

1. Comply with ASTM C361.
2. Material: Rubber.

2.3 FRAMES AND COVERS

A. Manufacturers:

1. East Jordan Company (EJ).
2. Neenah Foundry Company.

B. Cast iron.

C. Comply with ASTM A48/A48M, Class 30B and/or AASHTO M306.

D. Lid:

1. Bearing Surface: Machined flat.
2. Configuration: Removable.
3. Security: Boltable.

E. Cover Design: Waterproof.

F. Live-Load Rating: Heavy duty for traffic loading.

G. Furnish sealing gasket.

2.4 RISER RINGS

H. Manufacturers:

1. East Jordan Company (EJ).
2. Neenah Foundry Company.

I. Riser Rings:

1. Thickness of 4 to 6 Inches (100 to 150 mm):
 - a. Precast concrete.
 - b. Comply with ASTM C478.
2. Thickness Less Than 4 Inches (100 mm):
 - a. Cast iron.
 - b. Comply with AASHTO M306.

2.5 ACCESSORIES

- A. Steps: ASTM C478, OSHA STD 1910.24(b), and as indicated on Drawings.
- B. Joint Sealant: Comply with ASTM C990.
- C. Fasteners: Stainless steel; ASTM F593.

2.6 FINISHES

- A. Bituminous Exterior Manhole Coating: 10 mil minimum thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine ground areas for suitable conditions where concrete manholes will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Mark each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers as indicated on Drawings to indicate its intended use.

- B. Coordinate placement of inlet and outlet pipe.
- C. Do not install manholes where Site conditions induce loads exceeding structural capacity of manholes or structures.
- D. Inspect precast concrete manholes immediately prior to placement in excavation to verify that they are internally clean and free from damage; remove and replace damaged units.

3.3 INSTALLATION OF PRECAST CONCRETE MANHOLES

- A. Conduct operations not to interfere with, interrupt, damage, destroy, or endanger integrity of surface structures or utilities in immediate or adjacent areas.
- B. Correct over-excavation with aggregate shown on Drawings unless otherwise directed by Engineer.
- C. Remove large stones or other hard matter impeding consistent backfilling or compaction.
- D. Protect manhole from damage or displacement while backfilling operation is in progress.
- E. Excavating:
 - 1. Provide clearance around sidewalls of manhole for construction operations.
 - 2. If ground water is encountered, prevent accumulation of water in excavations; place manhole in dry trench. Dewater as necessary.
 - 3. Where possibility exists of watertight manhole becoming buoyant in flooded excavation, anchor manhole to avoid flotation as approved by Engineer.
- F. Base and Alignment:
 - 1. Install manholes supported at proper grade and alignment as indicated on Drawings.
 - 2. Grout base of shaft sections to achieve slope to exit piping, trowel smooth, and contour to form continuous drainage channel as indicated on Drawings.
 - 3. Place manhole plumb and level, to correct dimensions and elevations.
- G. Attachments:
 - 1. Set cover frames and covers level to correct elevations without tipping.
- H. Backfilling: In accordance with requirements for trenching.
- I. Precast Concrete Manholes:
 - 1. Lift precast components at lifting points designated by manufacturer.
 - 2. When lowering manholes into excavations and joining pipe to units, take precautions to ensure that interior of pipeline and structure remains clean.
 - 3. Assembly:
 - a. Assemble multi-section manholes and structures by lowering each section into excavation.
 - b. Install rubber gasket joints between precast sections according to manufacturer recommendations.

- c. Lower, set level, and firmly position base section before placing additional sections.
 - 4. Remove foreign materials from joint surfaces and verify that sealing materials are placed properly.
 - 5. Maintain alignment between sections by using guide devices affixed to lower section.
 - 6. Joint sealing materials may be installed on Site or at manufacturer's plant.
 - 7. Verify that installed manholes meet required alignment and grade.
 - 8. Remove knockouts or cut structure to receive piping without creating openings larger than required to receive pipe; fill annular spaces with mortar.
 - 9. Cut pipe flush with interior of structure.
 - 10. Shape inverts through manhole as indicated on Drawings.
- J. Sanitary Manhole Interior Drop Connections: As indicated on Drawings.
- K. Castings:
- 1. Set frames as indicated on Drawings.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Tests and Inspections:
 - 1. Concrete Manhole Sections: As specified in Section 330505.36 "Vacuum Testing".
 - 2. Concrete manholes will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION 330561

SECTION 333111 - PUBLIC SANITARY SEWERAGE GRAVITY PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sanitary sewerage piping.
2. Connection to existing manholes.
3. Wye branches and tees.
4. Sanitary laterals.

B. Referenced Sections:

1. Section 013330 - Submittal Procedures.
2. Section 014000 - Quality Requirements
3. Section 016000 - Product Requirements.
4. Section 017000 - Execution and Closeout Requirements: Requirements.
5. Section 312316.13 – Trenching
6. Section 330505.41 - Air Testing
7. Section 330505.43 - Mandrel Testing
8. Section 330561 - Concrete Manholes.

1.2 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. American Water Works Association:

1. AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings.
2. AWWA C105 - Polyethylene Encasement for Ductile-Iron Pipe Systems.
3. AWWA C110 - Ductile-Iron and Gray-Iron Fittings.
4. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
5. AWWA C150 - Thickness Design of Ductile-Iron Pipe.
6. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast.
7. AWWA C153 - Ductile-Iron Compact Fittings.

C. ASTM International:

1. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM C14 - Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe.

4. ASTM C14M - Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe (Metric).
5. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
6. ASTM C76M - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (Metric).
7. ASTM C443 - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
8. ASTM C443M - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets (Metric).
9. ASTM C564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
10. ASTM C923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
11. ASTM C923M - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals (Metric).
12. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
13. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
14. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
15. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings.
16. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
17. ASTM D2466 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
18. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems.
19. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
20. ASTM D2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.
21. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings.
22. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
23. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
24. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

1.3 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit manufacturer catalog cuts information indicating proposed materials, accessories, details, and construction information.

- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- D. Test and Evaluation Reports: Submit reports indicating field tests made and results obtained.
- E. Manufacturer Instructions:
 - 1. Indicate any special procedures required to install specified products.
- F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

1.4 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record invert elevations and actual locations of pipe runs, connections, manholes, and cleanouts.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Storage:
 - 1. Store materials according to manufacturer instructions.
 - 2. Store valves in shipping containers with labeling in place.
- D. Protection:
 - 1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
 - 2. Block individual and stockpiled pipe lengths to prevent moving.
 - 3. Provide additional protection according to manufacturer instructions.

1.6 EXISTING CONDITIONS

- A. Field Measurements:
 - 1. Verify field measurements prior to fabrication.
 - 2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 SANITARY SEWERAGE PIPING

- A. Ductile-Iron Pipe as indicated in Drawings and/or Bid Form.
1. Comply with AWWA C150 or AWWA C151.
 2. Minimum Special Thickness Class: 52 unless otherwise indicated in Drawings or Bid Form.
 3. End Connections: Bell and spigot.
 4. Asphaltic Outside Coating as indicated in the Drawings and/or Bid Form:
 - a. Type: Asphaltic.
 - b. Minimum Uniform Thickness: 1 mil.
 - c. Comply with AWWA C151.
 - d. Use with or without polyethylene encasement or V-Bio ® enhanced polyethylene encasement as indicated Trench Detail in the Drawings and/or Bid Form
 - e. Repair damaged coating in accordance with manufacturer's recommendations.
 5. Zinc Outside Coating as indicated in the Drawings and/or Bid Form:
 - a. Comply with ISO 8179-1, Ductile Iron Pipes – External Zinc-based Coating-Part 1: Metallic Zinc with Finishing Layer (ISO 2004).
 - b. Use only in conjunction with V-Bio ® enhanced polyethylene encasement.
 - c. Repair damaged coating in accordance with manufacturer's recommendations.
 6. Inside Lining as indicated in the Drawings and/or Bid Form:
 - a. Double thickness cement mortar lined.
 - b. Comply with AWWA C104.
 - c. Repair damaged lining in accordance with manufacturer's recommendations.
 7. Inside Ceramic Epoxy Lining as indicated in the Drawings and/or Bid Form:
 - a. Induron Protecto 401™ or approved equal.
 - b. Repair damaged lining in accordance with manufacturer's recommendations.
 8. Polyethylene Encasement as indicated in Trench Detail in Drawings and/or Bid Form: Comply with AWWA C105. Install and repair in accordance with manufacturer's recommendations.
 9. V-Bio ® Enhanced Polyethylene Encasement as indicated Trench Detail in the Drawings and/or Bid Form. Comply with AWWA C105. Color: Green. Install and repair in accordance with manufacturer's recommendations.
 10. Fittings:
 - a. Material: Ductile iron.
 - b. Comply with AWWA C153 or AWWA C110.
 - c. Outside coating, inside lining, and polyethylene encasement shall match ductile iron pipe.
 11. Joints:
 - a. Rubber gasket joint devices.
 - b. Comply with AWWA C111.

- c. Comply with ASTM C443.
- B. Plastic Pipe 15" in diameter or less as indicated in Drawings and/or Bid Form:
 - 1. Material: PVC.
 - 2. Comply with ASTM D3034, SDR as indicated in Drawings and/or Bid Form.
 - 3. Inside Nominal Diameter: As indicated in Drawings and/or Bid Form.
 - 4. End Connections: Bell-and-spigot style, with rubber-ring-sealed gasket joint.
 - 5. Fittings: PVC.
 - 6. Joints:
 - a. Watertight joints complying with ASTM D3212.
 - b. Elastomeric gaskets complying with ASTM F477.
- C. Plastic Pipe 18" in diameter to 60" in diameter as indicated in Drawings and/or Bid Form:
 - 1. Material: PVC.
 - 2. Comply with ASTM F679, PS as indicated in Drawings and/or Bid Form.
 - 3. Inside Nominal Diameter: As indicated in Drawings and/or Bid Form.
 - 4. End Connections: Bell-and-spigot style, with rubber-ring-sealed gasket joint.
 - 5. Fittings: PVC.
 - 6. Joints:
 - a. Watertight joints complying with ASTM D3212.
 - b. Elastomeric gaskets complying with ASTM F477.

2.2 MANHOLES

- A. As specified in Section 330561 - Concrete Manholes.

2.3 FLEXIBLE COUPLINGS

- A. Manufacturers:
 - 1. Fernco Inc.
 - 2. Romac Industries, Inc.
 - 3. Or Approved Equal.

2.4 FLEXIBLE PIPE BOOTS FOR MANHOLE PIPE ENTRANCES (CONNECTION TO NEW MANHOLE)

- A. Description:
 - 1. Material: EPDM.
 - 2. Comply with ASTM C923.
 - 3. Attachment: Series-300 stainless-steel clamp and hardware.
 - 4. Install in accordance with manufacturer's recommendations.

- B. Manufacturers:
 - 1. Alok Products, Inc. Z-Lok Cast In Boot Connector.
 - 2. Or approved equal.

2.5 FLEXIBLE PIPE BOOTS FOR MANHOLE PIPE ENTRANCES (CONNECTION TO EXISTING CONCRETE MANHOLE)

- A. Description:
 - 1. Material: EPDM.
 - 2. Comply with ASTM C923.
 - 3. Attachment: Series-300 stainless-steel clamp and hardware.
 - 4. Install in accordance with manufacturer's recommendations.
- B. Manufacturers:
 - 1. Trelleborg Sealing Profiles Sweden AB Kor-N-Seal ®.
 - 2. Or approved equal.

2.6 FLEXIBLE PIPE BOOTS FOR MANHOLE PIPE ENTRANCES (CONNECTION TO EXISTING CONCRETE MANHOLE)

- A. Description:
 - 1. Material: EPDM.
 - 2. Attachment: 316 stainless-steel bolts and nuts.
 - 3. Install in accordance with manufacturer's recommendations.
- B. Manufacturers:
 - 1. Link-Seal ®.
 - 2. Or approved equal.

2.7 CONCRETE ANCHORS

- A. Concrete:
 - 1. West Virginia Division of Highways Class B.
- B. Steel Reinforcement: ASTM A615 Grade 60 deformed. Overlap any spliced longitudinal steel a minimum of 30 diameters. Provide a minimum of three inches (3") from all outside edges or surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.

- B. Verify that trench is ready to receive Work of this Section.
- C. Verify that excavations, dimensions, and elevations are as indicated on Drawings.

3.2 PREPARATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation preparation.
- B. Correct over-excavation with bedding shown in the Trench Detail in the Drawings.
- C. Remove large stones or other hard materials that could damage pipe or impede consistent backfilling or compaction.
- D. Protect and support existing sewer lines, utilities, and appurtenances.
- E. Utilities:
 - 1. Maintain profiles of utilities.
 - 2. Coordinate with other utilities to eliminate interference.
 - 3. Notify Engineer if crossing conflicts occur.

3.3 INSTALLATION

- A. Bedding:
 - 1. Excavate pipe trench to lines and grades as indicated on Drawings.
 - 2. Dewater excavations to maintain dry conditions and to preserve final grades at bottom of excavation.
 - 3. Provide sheeting and shoring as required.
- B. Piping:
 - 1. Lay pipe to slope gradients as indicated on Drawings.
 - 2. Begin at downstream end of system and progress upstream.
 - 3. Bedding: As indicated on Drawings.
 - 4. Lay bell-and-spigot pipe with bells upstream.
 - 5. Polyethylene Pipe Encasement: Comply with AWWA C105, Method A or B.
 - 6. Backfill and compact as specified in Section 312316.13 - Trenching.
 - 7. Do not displace or damage pipe when compacting.
- C. Manholes: As specified in Section 330561 - Concrete Manholes.
- D. Connections to Existing Manholes:
 - 1. Drilling:
 - a. Core drill existing manhole to clean opening.
 - b. Use of pneumatic hammers, chipping guns, and sledge hammers are not permitted.

2. Install Kor-N-Seal ® or Link-Seal ® or approved equal in accordance with manufacturer's recommendations.
3. Prevent construction debris from entering existing sewer line when making connection.

E. Wye Branches and Tees:

1. Concurrent with pipe-laying operations, install wye branches and pipe tees at locations indicated on Drawings or at locations that best serve existing laterals.
2. Use standard fittings of same material and joint type as sewer main.
3. Maintain minimum five-foot (5') separation distance between wye connection and manhole.
4. Use saddle wye or tee with stainless-steel clamps for taps into existing piping.
5. Mount saddles with solvent cement or gasket and secure with metal bands.
6. Lay out holes with template, and cut holes with mechanical cutter.

F. Sanitary Laterals:

1. Construct laterals from wye branch to terminal point at right-of-way. Reconnect any existing laterals.
2. Where depth of main pipeline warrants, construct riser-type laterals from wye branch.
3. Minimum Depth of Cover over Piping: As per Trench Detail in Drawings.
4. Minimum Separation Distance between Laterals: Five feet (5').
5. Install watertight plug, braced to withstand pipeline test pressure thrust, at termination of lateral.
6. Marker Stake: As per Details in Drawings.

G. Backfilling: As specified in Section 312316.13 – Trenching.

3.4 TOLERANCES

- A. Section 014000 - Quality Requirements: Requirements for tolerances.
- B. Maximum Variation from Indicated Slope: No more than 0.10% flatter than slope indicated.

3.5 FIELD QUALITY CONTROL

A. Testing:

1. If tests indicate that Work does not meet specified requirements, remove Work, replace, and retest.
2. Pipe Testing:
 - a. Pressure Testing: As specified in Section 330505.41 - Air Testing.
 - b. Deflection Testing: As specified in Section 330505.43 - Mandrel Testing.
3. Compaction Testing as per Section 312316.13 - Trenching.

3.6 PROTECTION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.
- C. Cap open ends of piping during periods of Work stoppage.

END OF SECTION 333111

**PERMITS
(NONE)**



VICINITY MAP

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
2023 GENERAL HIGHWAY MAP
SCALE: 1" = 1 MILE



OWNER/TEAM INFORMATION

CIVIL ENGINEER & LAND SURVEYOR

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
120 GENESIS BOULEVARD
BRIDGEPORT, WV 26330
PH: (304) 933-3119
CELL: (304) 841-2733
FX: (304) 933-3327
CONTACTS: STEVEN V. BUCHANAN, PE

OWNER

CITY OF ELKINS
401 DAVIS AVENUE
ELKINS, WV 26241
PH: (304) 636-1122
CONTACT: WHITNEY HYMES (WASTEWATER SYSTEM CHIEF OPERATOR-CLASS IV)
MARK HARTLEY (WASTEWATER COLLECTION DEPARTMENT SUPERVISOR)
PH: (304) 636-2058
THOMAS HOWELL (ASSISTANT WASTEWATER SYSTEM CHIEF OPERATOR - CLASS III)

UTILITY COMPANIES

SANITARY SEWER SERVICE

CITY OF ELKINS
401 DAVIS AVENUE
ELKINS, WV 26241
PH: (304) 636-1122
CONTACT: WHITNEY HYMES (WASTEWATER SYSTEM CHIEF OPERATOR-CLASS IV)
MARK HARTLEY (WASTEWATER COLLECTION DEPARTMENT SUPERVISOR)
PH: (304) 636-2058
THOMAS HOWELL (ASSISTANT WASTEWATER SYSTEM CHIEF OPERATOR - CLASS III)

WATER SERVICE

CITY OF ELKINS
401 DAVIS AVENUE
ELKINS, WV 26241
PH: (681) 298-5200
FAX: (304) 637-7309
CONTACT: WES LAMBERT (PUBLIC WATER SYSTEM CHIEF OPERATOR & MANAGER)
ERIC HINER (WATER SYSTEM TECHNICIAN SUPERVISOR)

INTERNET SERVICE

CITYNET LLC
100 CITYNET DRIVE
BRIDGEPORT, WEST VIRGINIA 26330
PH: 1 (800) 881-2638
FAX: (304) 848-5410
GAS SERVICE

GAS SERVICE

MOUNTAINEER GAS COMPANY
PO BOX 5201
CHARLESTON, WEST VIRGINIA 25361
PH: 1 (800) 834-2070

ELECTRIC SERVICE

FIRST ENERGY CORPORATION
5404 EVANS ROAD
ERIE, PENNSYLVANIA 16509
CONTACT: NICK BARMAN
PH: (814) 868-8840

TELEPHONE SERVICE

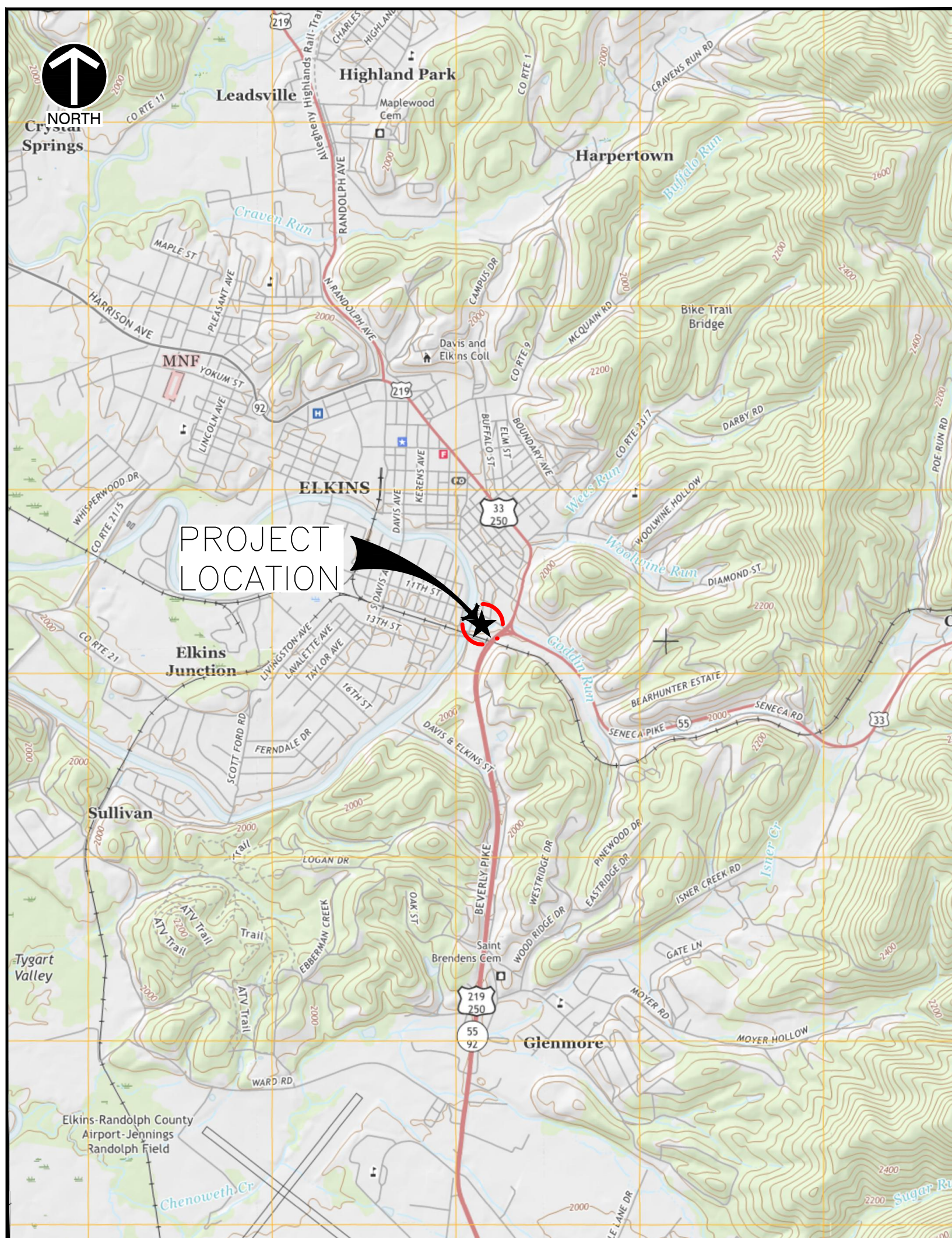
FRONTIER COMMUNICATIONS
120 APPALACHIAN DRIVE
BECKLEY, WEST VIRGINIA 25802
CONTACT: LEIGH VREDEVELD
PH: (304) 250-0682
CELL: (304) 877-8866
FAX: (304) 255-9514

WEST VIRGINIA 811

1-800-245-4848
CONFIRMATION NUMBER:
2408733600

WVDOH DISTRICT 8

WEST VIRGINIA DIVISION OF HIGHWAYS
US 219 NORTH
ELKINS, WV 26241
CONTACT: KEVIN LEWIS (UTILITY COORDINATOR)
PH: 304-630-0062



PROJECT AREA MAP

ELKINS
7.5 MIN QUADRANGLE



SHEET INDEX	
DRAWING #	SHEET TITLE
C000	COVER SHEET
C001	GENERAL NOTES AND LEGEND
C500	PLAN VIEW
C600	PROFILE
C800	GENERAL DETAILS
C801	GENERAL DETAILS
C900	EROSION & SEDIMENT CONTROL DETAILS

[illegible]

120 Genesis Boulevard
Bridgeport, WV 26330
Ph: 304.933.3119
www.cecinc.com



Civil & Environmental
Consultants, Inc.

**CITY OF ELKINS
11TH STREET SANITARY
SEWER REPLACEMENT
RANDOLPH COUNTY
WEST VIRGINIA**



PROJECT LOCATION

COVER SHEET

DATE:	MAY 2024	DRAWN BY:	CMC
DWG SCALE:	AS NOTED	CHECKED BY:	ER
PROJECT NO:		342-544	

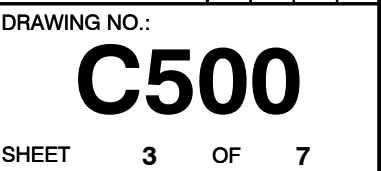
DRAWING NO.:

C000

SHEET 1 OF 1

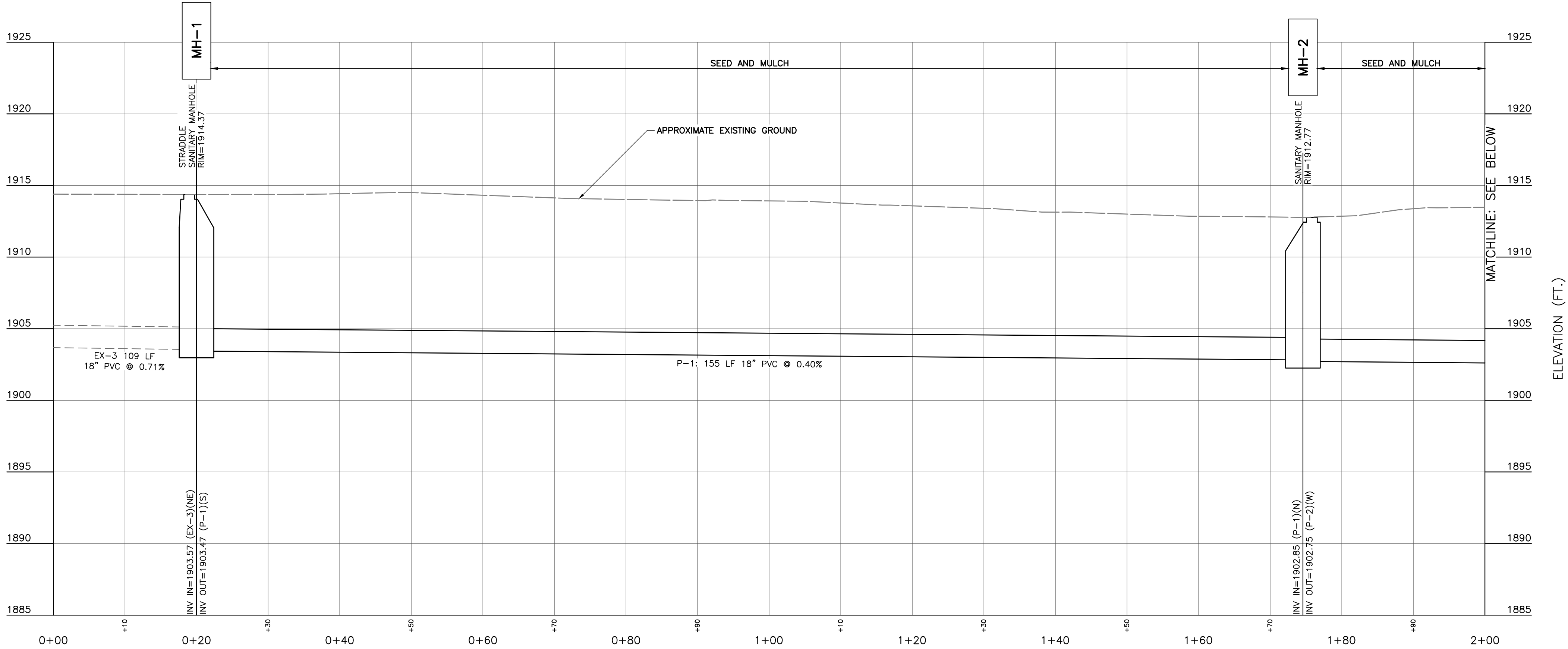
NOTICE: PLANS HAVE BEEN CREATED ON ANSI D (22" X 34") SHEETS. FOR REDUCTIONS, REFER TO GRAPHIC SCALE. THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES. INFORMATION MAY BE LOST IN COPYING AND/OR GRAY SCALE PLOTTING.

STEVEN V. BUCHANAN, PE #11060



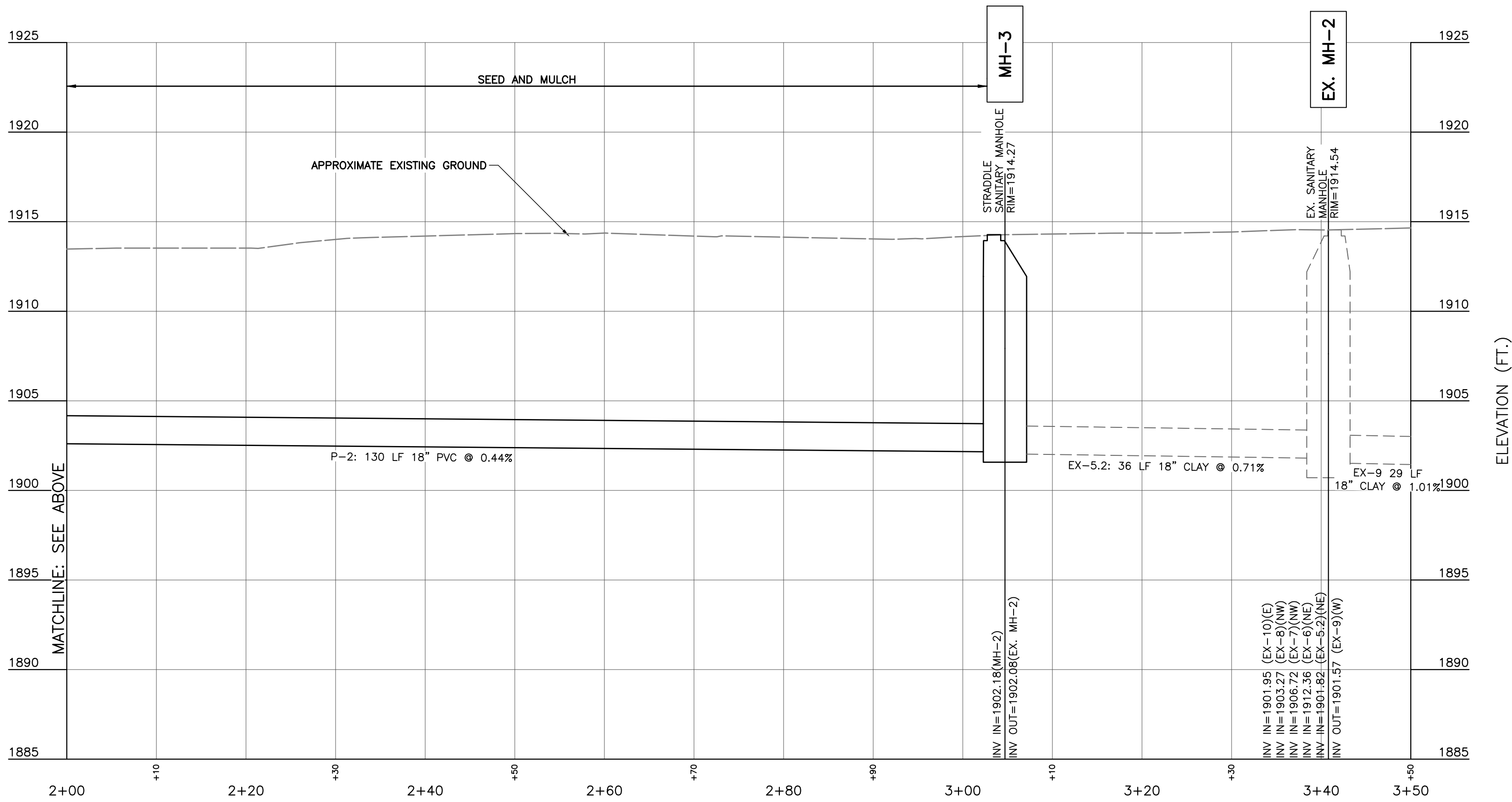
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ELEVATION (FT.)

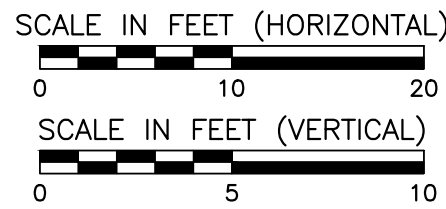


ELKINS SEWER LINE REPLACEMENT PROFILE
STATION 0+00 TO 2+00

ELEVATION (FT.)



ELKINS SEWER LINE REPLACEMENT PROFILE
STATION 2+00 TO 3+50



SUBMITTAL RECORD	NO	DATE	DESCRIPTION
CITY OF ELKINS 11TH STREET SANITARY SEWER REPLACEMENT RANDOLPH COUNTY WEST VIRGINIA	120 Genesis Boulevard Bridgeport, WV 26330 Ph: 304.933.3119 www.cecinc.com		
	 Civil & Environmental Consultants, Inc.		
	PROFILE		
	DATE:	MAY 2024	DRAWN BY:
	DWG SCALE:	N/A	CHECKED BY:
PROJECT NO:	342-544	SVB	
APPROVED BY:			
DRAWING NO:	C600		
SHEET	4	OF 7	

P:\340-000\342-544-C900\DWG\C901\SEWER LINE REPLACEMENT\342544-C901-C900.dwg[3400] LS:5/9/2024 - 3:31 PM - LP: 5/9/2024 3:31 PM

