

PROJECT MANUAL

Boone County Regional Sewer District Lift Station Upgrades Rocheport Trailside Lift Station

BCRSD Project #09-2025
Cochran Project No. 25-10224

October 2025

Presented to:

Boone County Regional Sewer District



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cochraneng.com



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INVITATION FOR BIDS

Sealed bids for the Lift Station Upgrades (hereinafter "Project") will be received by Boone County Regional Sewer District, 1314 North 7th Street, Columbia, MO 65201 until 2:00 pm CST, on Thursday, November 13, 2025. The bids will be publicly opened and read aloud at 2:00 pm CST, on Thursday, November 13, 2025, at the Sewer District's office.

The Scope of Work includes complete removal and replacement of the wet well and valve vault piping, fittings and lift station accessories; removal of the wet well top and attachment of a pre-cast wet well extension; construction of a platform and accessories and work described in the Project Manual, or reasonably inferable therefrom.

Information and Bidding Documents for the Project can be found at the following designated website:

<https://www.adsplanroom.net>

Bidding Documents may be viewed at no cost. Hardcopies or downloads may be obtained from the designated website for a non-refundable fee. Prospective Bidders are required to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

A bid security in the amount of five percent (5%) of the bid amount must accompany each bid, in accordance with the Instructions to Bidders.

A prebid meeting will be held on Wednesday, November 5, 2025, at 2:00 pm at the Rocheport City Hall, 703 1st Street Rocheport, MO 65279. A virtual option will be available by e-mailing bcrsd@bcrsd.com and requesting the meeting link.

The Boone County Regional Sewer District anticipates issuing notice to proceed after the November 18th Board Meeting, and a contract must be signed by the end of the calendar year.

The wage rates applicable to this project have been predetermined as required by law and are set forth in this specification. When Federal wage rates are applicable and included, this contract is subject to the "Work Hours Act of 1962," (P.L. 87-581: 76 Stat. 357) and implementing regulations.

Effective January 1, 2009, and pursuant to RSMo 285.530 (1), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri. The successful bidder must submit a sworn affidavit and documentation affirming the business entity's enrollment and participation in the federal work authorization program and that all of its employees working for the contracted services are not illegal immigrants.

Upon signing the contract, the successful contractor and any subcontractor performing the work shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees.

The Boone County Regional Sewer District hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

THE OWNER INTENDS TO AWARD THE CONTRACT TO THE MOST RESPONSIVE, RESPONSIBLE BIDDER SUBMITTING THE LOWEST BID. THE OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS, AND TO WAIVE ANY IRREGULARITIES IN THE BEST INTEREST OF THE OWNER.

INSTRUCTIONS TO BIDDERS

ARTICLE 1

DEFINITIONS

1.1 **Bidding Documents** include the Invitation to Bid, Instructions to Bidders, the Bid Form and the proposed Contract Documents including any Addenda issued prior to receipt of Bids. The **Contract Documents** proposed for the Work consists of the Owner-Contractor Agreement, State Wage Determination, Non-Collusion Affidavit, Performance and Payment Bond, the Specifications, the Drawings, the Construction Schedule, all Addenda, and all Modifications.

1.2 All definitions set forth in the General Conditions of Owner-Contractor Agreement or in other Contract Documents are applicable to the Bidding Documents.

1.3 **Addenda** are written or graphic instruments issued prior to the execution of the Owner-Contractor Agreement, which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.4 A **Bid** is a complete and properly signed proposal to do the Work, or a designated portion thereof, for the sums stipulated therein, submitted in accordance with the Bidding Documents.

1.5 The **Base Bid** is the sum stated in the bid for which the bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in alternate bids.

1.6 An **Alternate Bid** is an amount stated in the bid to be considered in addition to the Base Bid if the corresponding Change in the Work, as described in the Bidding Documents, is accepted.

1.7 A **Unit Price** is an amount stated in the bid as a price per unit of measurement for materials or services as described in the Bidding Documents or in the proposed Contract Documents.

1.8 A **Bidder** is a person or entity who submits a bid.

1.9 A **Sub-Bidder** is a person or entity who submits a bid to a bidder for materials or labor for a portion of the Work.

ARTICLE 2

BIDDER'S REPRESENTATIONS

2.1 Each bidder by making his bid represents and warrants that:

2.1.1 He has read and understands the Bidding Documents and his bid is made in accordance therewith.

2.1.2 He has visited and carefully examined the site of the Work, and has familiarized himself with and satisfied himself of the following:

1. the nature and location of the Work;
2. the character, quality and quantity of materials to be encountered;
3. the character and quantity of equipment and facilities needed prior to and during performance of the Work;
4. the local conditions under which the Work is to be performed, including the availability of necessary labor;
5. the requirements for maintaining existing facilities in continuous service, if necessary or required.

2.1.3 He has correlated his examination and observations with the requirements of the proposed Contract Documents.

2.1.4 His bid is based upon the materials, products, systems and equipment required by the Bidding Documents.

ARTICLE 3

BIDDING DOCUMENTS

3.1 COPIES

3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Invitation to Bid in the number and for the deposit sum, if any, stated therein.

3.1.2 Each bidder shall use a complete set of Bidding Documents in preparing his bid.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 Bidders shall promptly notify the Owner in writing of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

3.2.2 Bidders may request clarification or interpretation of the Bidding Documents by making a written request which shall reach the Owner at least seven (7) days prior to the date for receipt of bids.

3.2.3 Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding on the Owner, and bidders shall not rely upon such interpretations, corrections and changes.

3.2.4 If the Owner determines that clarification of the terms and conditions of the Bidding Documents is necessary, an Addendum will be made available to all bidders setting forth such clarification.

3.3 SUBSTITUTIONS

3.3.1 The materials, products, systems and equipment described in the Bidding Documents establish a minimum standard of required function, dimension, appearance and quality which must be met by any proposed substitution.

3.3.2 No substitution of the materials, products, systems and equipment described in the Bidding Documents will be considered prior to receipt of bids unless written request for approval has been received by the Owner at least ten (10) days prior to the date for receipt of bids. Each such request shall include the name of the material, product, system or equipment for which substitution will be made and a complete description of the proposed substitute including drawings, costs, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, products, systems or equipment or other work that incorporation of the substitute would require shall be included in each such request. The Owner, in its sole discretion, may approve or disapprove the proposed substitute.

3.3.3 If the Owner approves any proposed substitution prior to receipt of bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

3.3.4 No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

3.4 ADDENDA

3.4.1 Addenda will be mailed or delivered to all who are known by the Owner to have received a complete set of Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 Prior to submitting his bid, each bidder shall ascertain that he has received all Addenda issued, and he shall acknowledge receipt of all such Addenda in his bid.

ARTICLE 4**BIDDING PROCEDURE****4.1 FORM AND STYLE OF BIDS**

4.1.1 Attached to the Contract Documents is a separate, complete set of Bid Forms to be signed and submitted as the Bidder's formal bid. To be considered, a bid shall be properly completed using these Bid Forms.

4.1.2 All blanks on the Bid Form shall be filled in by typewriter or manually in ink.

4.1.3 Where so indicated by the make-up of the Bid Form, dollar amounts shall be expressed in both words and figures and in case of discrepancy between the two, the amount written in words shall govern.

4.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the bid.

4.1.5 Where two or more bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of his bid security, state his refusal to accept award of less than the combination of bids if he so stipulates. The Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

4.1.6 Each copy of the bid shall include the legal name of the Bidder and a statement that the Bidder is a sole proprietor, a partnership, a corporation, or some other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the bidder to a contract. A bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

4.1.7 The Owner shall not be responsible in any way for any costs or expenses related to the preparation or submission of any bid.

4.1.8 In the case of discrepancy between unit pricing and extended price or total bid, the unit pricing shall govern.

4.2 BID SECURITY

4.2.1 Each bid shall be accompanied by a certified check or bank draft on a responsible solvent Missouri bank, or a satisfactory bid bond executed by the bidder and an acceptable Surety company, naming the Owner as Oblige, in the amount of not less than five percent (5%) of the Base bid plus the greatest of the Alternate bids ("Bid Security"). If the bidder fails to enter into a Contract with the Owner on the terms stated in his bid, or fails to furnish Performance and Payment Bonds as required by the Contract Documents, the amount of the Bid Security shall be forfeited to the Owner as liquidated damages, not as a penalty.

4.2.2 The Owner will have the right to retain the Bid Security of bidders to whom an award is being considered until either, (a) the Owner-Contractor Agreement has been executed and the Performance and Payment Bonds have been furnished, (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

4.3 SUBMISSION OF BIDS

4.3.1 Bidders must complete and submit with their bids the "Non-Collusion Affidavit" included with the Bid Form and 5% Bid Security. Bidders shall also complete and submit the following:

1. a designation of the Work, item by item, including the related dollar amount and total dollar amount, to be performed by the bidder with his own forces;
2. the proprietary names and the suppliers of principal items or systems of materials and equipment proposed for the Work;
3. "Subcontractor Approval Form" for each and every proposed Subcontractor, or other persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

4.3.2 All copies of the bid, the Bid Security and any other documents required to be submitted with the bid shall be enclosed in a sealed envelope identified "SEALED BID ENCLOSED" on the face thereof. The envelope shall be addressed and delivered to the Owner and shall be identified with the project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the bid is sent by mail, the sealed

envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

4.3.3 Bids shall be deposited at the designated location prior to the time and date for receipt of bids indicated in the Invitation to Bid or any extension thereof made by an Addendum. Bids received after the time and date for receipt of bids will be returned unopened.

4.3.4 The bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids.

4.4 MODIFICATION OR WITHDRAWAL OF BID

4.4.1 A bid may not be modified, withdrawn or cancelled by the bidder within sixty (60) days following the time and date designated for the receipt of bids, and each bidder so agrees in submitting his bid.

4.4.2 Prior to the time and date designated for receipt of bids, any bid submitted may be modified or withdrawn by notice to the party receiving bids at the place designated for receipt of bids. Such notice shall be in writing over the signature of the bidder.

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

4.4.4 The amount of the Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

ARTICLE 5

CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

5.1.1 Unless stated otherwise in the Invitation to Bid, the properly identified bids received on time will be opened publicly and will be read aloud.

5.2 REJECTION OF BIDS

5.2.1 The Owner shall have the right to reject any or all bids, to reject a bid not accompanied by the Bid Security or by other data required by the Bidding Documents, to reject a bid which is in any way incomplete or irregular, and to rebid the Work at a later date, if all bids are rejected.

5.3 ACCEPTANCE OF BID (AWARD)

5.3.1 The Owner may make any investigation of a bidder as it deems necessary to determine that the bidder is responsible and properly qualified to perform the Work. Bidders shall furnish information regarding their qualifications upon the reasonable request of the Owner. The Owner reserves the right to reject any bid if the evidence submitted by, or other investigation of, the bidder fails to satisfy the Owner that, in the Owner's opinion, the bidder has the proper qualifications to perform the Work in accordance with the Contract.

5.3.2 It is the intent of the Owner to award the Contract to the lowest responsive, responsible bidder provided the bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available.

5.3.3 The Owner shall have the right to accept alternates and to determine the low bidder on the basis of the sum of the base bid and the alternates accepted.

ARTICLE 6**POST BID INFORMATION****6.1 SUBMITTALS**

6.1.1 The bidder will be required to establish, to the satisfaction of the Owner, the reliability and responsibility of the persons or entities proposed to furnish and perform the Work.

6.1.2 Prior to the award of the Contract, the Owner will notify the bidder in writing if the Owner, after due investigation, objects to any such person or entity proposed by the bidder pursuant to Subparagraph 4.3.1 above. If the Owner objects to any such proposed person or entity, the bidder may, at his option, (1) withdraw his bid, or (2) submit an acceptable substitute person or entity with no adjustment in his bid price.

6.1.3 Persons and entities proposed by the bidder and to whom the Owner has made no objection under the provisions of Subparagraph 6.1.2 must be used on the Work for which they were proposed and shall not be changed except with the prior written consent of the Owner.

ARTICLE 7**AWARD OF CONTRACT**

7.1 Following receipt, to the satisfaction of the Owner, of all information required under Paragraph 6.1 above, the Owner shall mail to the successful bidder the Notice of Award of the Contract.

7.2 Within five (5) working days from the date of receipt of the Notice of Award, the successful bidder shall execute and deliver to the Owner the Contract Documents, and shall furnish the Bonds required by Paragraph 8.1 below and the Certificates of Insurance required by Subparagraph 10.1.3 of the General Conditions. In the event the successful bidder fails to execute and deliver the Contract Documents, the Bonds and the Certificates of Insurance as aforesaid, the Owner may, at its option, consider the bidder in default and award the Contract to another bidder, in which case the Bid Security of the defaulting bidder shall be forfeited to the Owner as liquidated damages, and not as a penalty.

7.3 The Contract, when executed, shall be deemed to include the entire agreement between the parties thereto, and the Bidder shall not claim any modification thereof resulting from any claimed representation or promise made at any time prior thereto by any officer, agency or employee of the Owner or by any other person.

ARTICLE 8**PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND****8.1 BOND REQUIREMENTS**

8.1.1 The successful bidder shall furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of the Contract, and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the Contract Sum as security for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract. The Surety shall be a company licensed to do business in the State of Missouri and shall be acceptable to the Owner. The Performance Bond and the Labor and Material Payment Bond may be in one or in separate instruments; however, if combined into one, the amount shall be for two hundred percent (200%) of the Contract Sum.

8.2 TIME OF DELIVERY AND FORM OF BONDS

8.2.1 The bidder shall deliver the required bonds to the Owner not later than the date of execution of the Owner-Contractor Agreement, or if the Work is to be commenced prior thereto in response to a Letter of Intent, the bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

8.2.2 The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the Surety to affix thereto a certified and current copy of his power of attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 FORM TO BE USED

9.1.1 Unless otherwise required in the Bidding Documents, the Owner-Contractor Agreement for the Work shall be in the form attached hereto.

(The remainder of this page is intentionally left blank.)

ARTICLE 10**BID FORM PROPOSAL**PROJECT NAME Lift Station Upgrades (Rocheport Trailside Lift Station)BID TIME 2:00PMPROJECT LOCATION Rocheport, MOBID DATE November 13, 2025

BIDDER NAME _____

TO: Boone County Regional Sewer District ("Owner")

In response to the Invitation for Bids for Project No. 25-10224, and in accordance with the Instructions to Bidders and other Bidding Documents, the undersigned Bidder declares that he has had an opportunity to examine the site of the Work and has carefully examined the Contract Documents therefore, including the Addenda identified below, and on the basis thereof, and being fully familiar with the local conditions affecting the Work, and upon written notice of award of contract, acknowledges and agrees to provide all labor, material, equipment, tools, management and supervision, safety and technical services, insurance, bonds and incidentals necessary or required for the faithful performance of the Contract Work in accordance with the above-referenced documents in a safe, timely and workmanlike manner for the following Base Bid Price:

BASE BID: _____ Dollars (\$ _____)
(Amount in Words)

The Base Bid amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Mobilization/Demobilization/Start-Up/Permits/Bonds	LS	1		
2	Pre-Cast Wet Well Riser	LS	1		
3	Lift Station Platform	LS	1		
4	Lift Station Mechanical Rehabilitation	LS	1		
5	Bypass Pumping	LS	1		
6	8-Foot-Tall Wood Fence	LF	57		
7	Finish Grading and Seeding	LS	1		
Total Base Bid:					

Bid Addition No. 1 amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Wet Well Epoxy Coating	LS	1		
Total Alternate No. 1 Base Bid:					

Bid Addition No. 2 amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Pump & Base Elbow Replacement	LS	1		
Total Alternate No. 2 Base Bid:					

SOLID ROCK EXCAVATION

1. Class "B" excavation not exceeding 5 cu. yd. for any and all construction items. \$ _____ /Yd³
2. Class "B" excavation ranging from 5 cu. yd. to 15 cu. yd. for any and all construction items. \$ _____ /Yd³
3. Class "B" excavation exceeding 15 cu. yd. for any and all construction items. \$ _____ /Yd³

By submitting this Bid, the Bidder agrees to waive any claim it has or may have against the Owner or Engineer, and their respective employees, arising out of or in connection with the administration, evaluation or recommendation of any bid(s).

Addenda

The undersigned Bidder acknowledges the following Addenda, if any:

Addendum No.: _____ dated _____ pages _____

Addendum No.: _____ dated _____ pages _____

Addendum No.: _____ dated _____ pages _____

Addendum No.: _____ dated _____ pages _____

Acknowledgements

Bidder understands that Owner reserves the right to reject any and all bids and to waive any informality in the bidding.

The Bidder agrees that this Bid shall be valid and may not be withdrawn for a period of sixty (60) days after the scheduled closing time for receiving bids.

Within five (5) working days after receipt of written notice of award of contract, Bidder will execute and deliver to the Owner the formal Owner-Contractor Agreement included in the Bid Package, and deliver to the Owner the surety bond or bonds as required by the Contract Documents.

The Bid Security attached hereto, in the sum of _____ Dollars (\$ _____) shall become the property of the Owner in the event that the Owner-Contractor Agreement and the Bond(s) are not executed and delivered to the Owner within the time set forth above, as liquidated damages (and not as a penalty) for the delay and additional expense to the Owner caused thereby.

(Signature)

(Print Name)

(Company Name)

(Address)

(Telephone Number)

(Seal - If bid by Corporation)

SUBCONTRACTOR APPROVAL FORM

This report must accompany and be part of the sealed Bid Proposal.

1. Name of Bidder: _____

2. Address Bidder: _____

City State Zip Phone

3. The above-named Bidder intends to subcontract for materials, services, supplies, specialty contractors, etc., in the following fashion:

<u>Names and Addresses of Subcontractor Which the Contractor Anticipates Utilizing</u>	<u>Nature of Participation</u>	<u>\$ Value of Subcontractor</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

A. Total of Above _____

B. Total Bid Amount _____

Subcontractor Utilization as a % of Total Bid Amount: $(A/B \times 100)$ _____

Name-Authorized Officer of Bidder

Signature-Office Bidder

Date

NON-COLLUSION AFFIDAVIT

STATE OF _____

COUNTY OF _____

_____, being first duly sworn, deposes and says that he is _____ *(sole owner, partner, president, secretary, etc.) of _____, the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder had not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or any one else to put in a sham bid, or that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with any one to fix the bid price of said bidder or of any other bidder, or to fix any overhead, profit or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or any one interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder had not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

SIGNED:

Title

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

Notary Public

Notary Seal

**AFFIDAVIT OF COMPLIANCE
ANTI-DISCRIMINATION AGAINST ISRAEL ACT**

Affidavit of Compliance with Section 34.600 RSMo for Contracts over \$100,000 or for Contractors with Ten (10) or more employees:

I, _____ [Contractor Agent], being duly sworn, attest and state, under penalty of perjury, as follows:

1. I am employed by _____ [Contractor] and serve as
the _____ [Position with Contractor].

2. I hereby affirm that _____ [Contractor]:

- a) is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel; or
- b) is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel; or
- c) is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from persons or entities doing business in the State of Israel.

Further Affiant Sayeth Not.

[Contractor Agent]

STATE OF MISSOURI)
) ss.
 COUNTY)

Subscribed and sworn to me, a notary public, this _____ day of _____, 2025.

Notary Public

My commission expires: _____

SUBCONTRACTOR CERTIFICATION REGARDING AFFIRMATIVE ACTION

Project: _____

Job No. _____

Route: _____

County: _____

Certification Regarding Affirmative Action and Equal Opportunity: The bidder (prospective prime contractor) or proposed subcontractor certifies:

1. Affirmative Action Program: That it has developed and has on file at each of its establishments affirmative action programs pursuant to 41 CFR Part 60-2.
2. Equal Opportunity Clause: That it has participated in a previous contract or subcontract subject to the equal opportunity clause set forth in 41 CFR part 69-1.4 and executive order no. 11246.
3. Compliance Reports: That it has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs and his designate, or the Equal Employment Opportunity Commission, all reports due under the applicable filing requirements contained in 41 CFR Part 60-1.

If the test of the certification above is incorrect, the bidder or subcontractor making the certification shall correct it below:

NOTE: This certification applies to and must be executed by each bidder (prospective prime contractor) or proposed subcontractor if its proposed contract or subcontract on this project will equal or exceed \$10,000 or that contractor or subcontractor has contracts or subcontracts on federally assisted project in any 12-month period which have or can reasonably be expected to have, an aggregate total value exceeding \$10,000 41 CFR Part 60-1.5(a)(1). It is a duty and contract obligation of the prime contractor to insure that each of its subcontractors, which meet this criterion, executes and submits to the commission this certification also.

Company

By: _____

Title: _____

Date: _____

NOTICE TO BIDDERS REGARDING STATE IMMIGRATION LAW

Effective January 1, 2009 and pursuant to RSMo 285.530 (1), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

<http://oa.mo.gov/purch/vendorinfo/employ.pdf>
<http://www.moga.mo.gov/statutes/C200-299/2850000530.HTM>

Pursuant to 285.530 RSMo, the bidder must affirm its enrollment and participation in a federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by:

- submitting a completed, notarized copy of WORKER ELIGIBILITY VERIFICATION AFFIDAVIT (attached),
- submitting a completed, notarized copy of the SIGNATURE AND IDENTITY OF BIDDER (attached) and,
- providing documentation affirming the bidder's enrollment and participation in a federal work authorization program (see below) with respect to the employees proposed to work in connection with the services requested herein.

E-Verify is an example of a federal work authorization program. Acceptable enrollment and participation documentation consists of completed copy of the E-Verify Memorandum of Understanding (MOU). For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is available at http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm.

The contractor understands and agrees that by signing the RFB document or contract they certify that:

- The contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal and state laws. This includes but is not limited to the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and INA Section 274A.
- If the contractor is found to be in violation of this requirement or the applicable state, federal and local laws and regulations, and if the State of Missouri has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States, the state shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the contractor from doing business with the state.
- The contractor agrees to fully cooperate with any audit or investigation from federal, state or local law enforcement agencies.
- The contractor shall maintain enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services included herein.

SIGNATURE AND IDENTITY OF BIDDER

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Bidder, (2) each partner or joint venture (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole contractor) he is the agent of, and duly authorized in writing to sign for the Bidder or Bidders; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a

() sole individual () partnership () joint venture
() corporation, incorporated under laws of state of _____

Dated _____

Name of individual, all partners, or joint ventures:

Address of each:

_____	_____
_____	_____
_____	_____
_____	_____

doing business under the name of:

Address of principal place of business in Missouri

(If using a fictitious name, show
this name above in addition
to legal names)

(If a corporation, show its name above)

ATTEST: (SEAL)

Secretary Title

NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint ventures, or corporation, with the legal address shown, and REGISTRATION OF FICTITIOUS NAME filed with the Secretary of State, as required by Sections 417.200 to 417.230, RS Mo. If the Bidder is a CORPORATION NOT ORGANIZED UNDER THE LAWS OF MISSOURI, it shall procure a CERTIFICATE OF AUTHORITY TO DO BUSINESS IN MISSOURI, as required by Section 351.570 and following, RS Mo.

WORKER ELIGIBILITY VERIFICATION AFFIDAVIT

(for joint ventures, a separate affidavit is required for each business entity)

STATE OF _____)

) ss

COUNTY OF _____)

On this _____ day of _____, 20_____, before me appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, deposed as follows:

My name is _____, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities:

I am the _____ of _____, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this business entity.

I hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, and the aforementioned business entity shall participate in said program with respect to all employees working in connection to work under the within contract agreement. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.

In addition, I hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection to work under the within contract agreement, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).

I am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 through 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

I acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

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

Notary Public

My commission expires: _____



Company ID Number:



**THE E-VERIFY
MEMORANDUM OF UNDERSTANDING
FOR E-VERIFY EMPLOYER AGENTS**

**ARTICLE I
PURPOSE AND AUTHORITY**

The parties to this agreement are the Department of Homeland Security (DHS) and _____ (E-Verify Employer Agent). The purpose of this agreement is to set forth terms and conditions which the E-Verify Employer Agent will follow while participating in E-Verify.

E-Verify is a program that electronically confirms an employee's eligibility to work in the United States after completion of Form I-9, Employment Eligibility Verification (Form I-9). This Memorandum of Understanding (MOU) explains certain features of the E-Verify program and describes specific responsibilities of the E-Verify Employer Agent, the Employer, DHS, and the Social Security Administration (SSA).

The Employer is not a party to this MOU; however, this MOU contains a section titled Responsibilities of the Employer. This section is provided to inform E-Verify Employer Agents acting on behalf of the Employer of the responsibilities and obligations their clients are required to meet. The Employer is bound by these responsibilities through signing a separate MOU during their enrollment as a client of the E-Verify Employer Agent. The E-Verify program requires an initial agreement between DHS and the E-Verify Employer Agent as part of the enrollment process. After agreeing to the MOU as set forth herein, completing the tutorial, and obtaining access to E-Verify as an E-Verify Employer Agent, the E-Verify Employer Agent will be given an opportunity to add a client once logged into E-Verify. All parties, including the Employer, will then be required to sign and submit a separate MOU to E-Verify. The responsibilities of the parties remain the same in each MOU.

Authority for the E-Verify program is found in Title IV, Subtitle A, of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. 104-208, 110 Stat. 3009, as amended (8 U.S.C. § 1324a note). The Federal Acquisition Regulation (FAR) Subpart 22.18, "Employment Eligibility Verification" and Executive Order 12989, as amended, provide authority for Federal contractors and subcontractors (Federal contractor) to use E-Verify to verify the employment eligibility of certain employees working on Federal contracts.

**ARTICLE II
RESPONSIBILITIES**

A. RESPONSIBILITIES OF E-VERIFY EMPLOYER AGENT

1. The E-Verify Employer Agent agrees to provide to the SSA and DHS the names, titles, addresses, and telephone numbers of the E-Verify Employer Agent representatives who will be accessing



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information under E-Verify and shall update them as needed to keep them current.

2. The E-Verify Employer Agent agrees to become familiar with and comply with the E-Verify User Manual and provide a copy of the most current version of the E-Verify User Manual to the Employer so that the Employer can become familiar with and comply with E-Verify policy and procedures. The E-Verify Employer Agent agrees to obtain a revised E-Verify User Manual as it becomes available and to provide a copy of the revised version to the Employer no later than 30 days after the manual becomes available.

3. The E-Verify Employer Agent agrees that any person accessing E-Verify on its behalf is trained on the most recent E-Verify policy and procedures.

4. The E-Verify Employer Agent agrees that any E-Verify Employer Agent Representative who will perform employment verification cases will complete the E-Verify Tutorial before that individual initiates any cases.

a. The E-Verify Employer Agent agrees that all E-Verify Employer Agent representatives will take the refresher tutorials initiated by the E-Verify program as a condition of continued use of E-Verify, including any tutorials for Federal contractors, if any of the Employers represented by the E-Verify Employer Agent is a Federal contractor.

b. Failure to complete a refresher tutorial will prevent the E-Verify Employer Agent and Employer from continued use of E-Verify.

5. The E-Verify Employer Agent agrees to grant E-Verify access only to current employees who need E-Verify access. The E-Verify Employer Agent must promptly terminate an employee's E-Verify access if the employee is separated from the company or no longer needs access to E-Verify.

6. The E-Verify Employer Agent agrees to obtain the necessary equipment to use E-Verify as required by the E-Verify rules and regulations as modified from time to time.

7. The E-Verify Employer Agent agrees to, consistent with applicable laws, regulations, and policies, commit sufficient personnel and resources to meet the requirements of this MOU.

8. The E-Verify Employer Agent agrees to provide its clients with training on E-Verify processes, policies, and procedures. The E-Verify Employer Agent also agrees to provide its clients with ongoing E-Verify training as needed. E-Verify is not responsible for providing training to clients of E-Verify Employer Agents.

9. The E-Verify Employer Agent agrees to provide the Employer with the notices described in Article II.B.1 below.

10. The E-Verify Employer Agent agrees to create E-Verify cases for the Employer it represents in accordance with the E-Verify Manual, the E-Verify Web-Based Tutorial and all other published E-Verify rules and procedures. The E-Verify Employer Agent will create E-Verify cases using information provided by the Employer and will immediately communicate the response back to the Employer. If E-Verify is temporarily unavailable, the three-day time period will be extended until it is again operational in order to accommodate the E-Verify Employer Agent's attempting, in good faith, to



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make inquiries on behalf of the Employer during the period of unavailability.

11. When the E-Verify Employer Agent receives notice from a client company that it has received a contract with the FAR clause, then the E-Verify Employer Agent must update the company's E-Verify profile within 30 days of the contract award date.

12. If data is transmitted between the E-Verify Employer Agent and its client, then the E-Verify Employer Agent agrees to protect personally identifiable information during transmission to and from the E-Verify Employer Agent.

13. The E-Verify Employer Agent agrees to notify DHS immediately in the event of a breach of personal information. Breaches are defined as loss of control or unauthorized access to E-Verify personal data. All suspected or confirmed breaches should be reported by calling 1-888-464-4218 or via email at E-Verify@dhs.gov. Please use "Privacy Incident – Password" in the subject line of your email when sending a breach report to E-Verify.

14. The E-Verify Employer Agent agrees to fully cooperate with DHS and SSA in their compliance monitoring and evaluation of E-Verify, including permitting DHS, SSA, their contractors and other agents, upon reasonable notice, to review Forms I-9, employment records, and all records pertaining to the E-Verify Employer Agent's use of E-Verify, and to interview it and its employees regarding the use of E-Verify, and to respond in a timely and accurate manner to DHS requests for information relating to their participation in E-Verify.

15. The E-Verify Employer Agent shall not make any false or unauthorized claims or references about its participation in E-Verify on its website, in advertising materials, or other media. The E-Verify Employer Agent shall not describe its services as federally-approved, federally-certified, or federally-recognized, or use language with a similar intent on its website or other materials provided to the public. Entering into this MOU does not mean that E-Verify endorses or authorizes your E-Verify Employer Agent services and any claim to that effect is false.

16. The E-Verify Employer Agent shall not state in its website or other public documents that any language used therein has been provided or approved by DHS, USCIS or the Verification Division, without first obtaining the prior written consent of DHS.

17. The E-Verify Employer Agent agrees that E-Verify trademarks and logos may be used only under license by DHS/USCIS (see M-795 (Web)) and, other than pursuant to the specific terms of such license, may not be used in any manner that might imply that the E-Verify Employer Agent's services, products, websites, or publications are sponsored by, endorsed by, licensed by, or affiliated with DHS, USCIS, or E-Verify.

18. The E-Verify Employer Agent understands that if it uses E-Verify procedures for any purpose other than as authorized by this MOU, the E-Verify Employer Agent may be subject to appropriate legal action and termination of its participation in E-Verify according to this MOU.

B. RESPONSIBILITIES OF THE EMPLOYER

The E-Verify Employer Agent shall ensure that the E-Verify Employer Agent and the Employers represented by the E-Verify Employer Agent carry out the following responsibilities. It is the E-Verify

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Employer Agent's responsibility to ensure that its clients are in compliance with all E-Verify policies and procedures.

1. The Employer agrees to display the following notices supplied by DHS in a prominent place that is clearly visible to prospective employees and all employees who are to be verified through the system:
 - a. Notice of E-Verify Participation
 - b. Notice of Right to Work
2. The Employer agrees to provide to the SSA and DHS the names, titles, addresses, and telephone numbers of the Employer representatives to be contacted about E-Verify. The Employer also agrees to keep such information current by providing updated information to SSA and DHS whenever the representatives' contact information changes.
3. The Employer shall become familiar with and comply with the most recent version of the E-Verify User Manual. The Employer will obtain the E-Verify User Manual from the E-Verify Employer Agent.
4. The Employer agrees to comply with current Form I-9 procedures, with two exceptions:
 - a. If an employee presents a "List B" identity document, the Employer agrees to only accept "List B" documents that contain a photo. (List B documents identified in 8 C.F.R. § 274a.2(b)(1)(B)) can be presented during the Form I-9 process to establish identity.) If an employee objects to the photo requirement for religious reasons, the Employer should contact E-Verify at 1-888-464-4218.
 - b. If an employee presents a DHS Form I-551 (Permanent Resident Card), Form I-766 (Employment Authorization Document), or U.S. Passport or Passport Card to complete Form I-9, the Employer agrees to make a photocopy of the document and to retain the photocopy with the employee's Form I-9. The Employer will use the photocopy to verify the photo and to assist DHS with its review of photo mismatches that employees contest. DHS may in the future designate other documents that activate the photo screening tool.

Note: Subject only to the exceptions noted previously in this paragraph, employees still retain the right to present any List A, or List B and List C, document(s) to complete the Form I-9.

5. The Employer agrees to record the case verification number on the employee's Form I-9 or to print the screen containing the case verification number and attach it to the employee's Form I-9.
6. The Employer agrees that, although it participates in E-Verify, the Employer has a responsibility to complete, retain, and make available for inspection Forms I-9 that relate to its employees, or from other requirements of applicable regulations or laws, including the obligation to comply with the antidiscrimination requirements of section 274B of the INA with respect to Form I-9 procedures.
 - a. The following modified requirements are the only exceptions to an Employer's obligation to not employ unauthorized workers and comply with the anti-discrimination provision of the INA: (1) List B identity documents must have photos, as described in paragraph 4 above; (2) When an Employer confirms the identity and employment eligibility of newly hired employee using E-Verify procedures, the Employer establishes a rebuttable presumption that it has not violated section 274A(a)(1)(A) of the Immigration and Nationality Act (INA) with respect to the hiring of that employee; (3) If the Employer receives a final nonconfirmation for an employee, but continues to employ that person,

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the Employer must notify DHS and the Employer is subject to a civil money penalty between \$550 and \$1,100 for each failure to notify DHS of continued employment following a final nonconfirmation; (4) If the Employer continues to employ an employee after receiving a final nonconfirmation, then the Employer is subject to a rebuttable presumption that it has knowingly employed an unauthorized alien in violation of section 274A(a)(1)(A); and (5) no E-Verify participant is civilly or criminally liable under any law for any action taken in good faith based on information provided through the E-Verify.

b. DHS reserves the right to conduct Form I-9 compliance inspections, as well as any other enforcement or compliance activity authorized by law, including site visits, to ensure proper use of E-Verify.

7. The Employer is strictly prohibited from creating an E-Verify case before the employee has been hired, meaning that a firm offer of employment was extended and accepted and Form I-9 was completed. The Employer agrees to create an E-Verify case for new employees within three Employer business days after each employee has been hired (after both Sections 1 and 2 of Form I-9 have been completed), and to complete as many steps of the E-Verify process as are necessary according to the E-Verify User Manual. If E-Verify is temporarily unavailable, the three-day time period will be extended until it is again operational in order to accommodate the Employer's attempting, in good faith, to make inquiries during the period of unavailability.

8. The Employer agrees not to use E-Verify for pre-employment screening of job applicants, in support of any unlawful employment practice, or for any other use that this MOU or the E-Verify User Manual does not authorize.

9. The Employer must use E-Verify (through its E-Verify Employer Agent) for all new employees. The Employer will not verify selectively and will not verify employees hired before the effective date of this MOU. Employers who are Federal contractors may qualify for exceptions to this requirement as described in Article II.B of this MOU.

10. The Employer agrees to follow appropriate procedures (see Article III below) regarding tentative nonconfirmations. The Employer must promptly notify employees in private of the finding and provide them with the notice and letter containing information specific to the employee's E-Verify case. The Employer agrees to provide both the English and the translated notice and letter for employees with limited English proficiency to employees. The Employer agrees to provide written referral instructions to employees and instruct affected employees to bring the English copy of the letter to the SSA. The Employer must allow employees to contest the finding, and not take adverse action against employees if they choose to contest the finding, while their case is still pending. Further, when employees contest a tentative nonconfirmation based upon a photo mismatch, the Employer must take additional steps (see Article III.B below) to contact DHS with information necessary to resolve the challenge.

11. The Employer agrees not to take any adverse action against an employee based upon the employee's perceived employment eligibility status while SSA or DHS is processing the verification request unless the Employer obtains knowledge (as defined in 8 C.F.R. § 274a.1(l)) that the employee is not work authorized. The Employer understands that an initial inability of the SSA or DHS automated verification system to verify work authorization, a tentative nonconfirmation, a case in continuance (indicating the need for additional time for the government to resolve a case), or the finding of a photo



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mismatch, does not establish, and should not be interpreted as, evidence that the employee is not work authorized. In any of such cases, the employee must be provided a full and fair opportunity to contest the finding, and if he or she does so, the employee may not be terminated or suffer any adverse employment consequences based upon the employee's perceived employment eligibility status (including denying, reducing, or extending work hours, delaying or preventing training, requiring an employee to work in poorer conditions, withholding pay, refusing to assign the employee to a Federal contract or other assignment, or otherwise assuming that he or she is unauthorized to work) until and unless secondary verification by SSA or DHS has been completed and a final nonconfirmation has been issued. If the employee does not choose to contest a tentative nonconfirmation or a photo mismatch or if a secondary verification is completed and a final nonconfirmation is issued, then the Employer can find the employee is not work authorized and terminate the employee's employment. Employers or employees with questions about a final nonconfirmation may call E-Verify at 1-888-464-4218 (customer service) or 1-888-897-7781 (worker hotline).

12. The Employer agrees to comply with Title VII of the Civil Rights Act of 1964 and section 274B of the INA as applicable by not discriminating unlawfully against any individual in hiring, firing, employment eligibility verification, or recruitment or referral practices because of his or her national origin or citizenship status, or by committing discriminatory documentary practices. The Employer understands that such illegal practices can include selective verification or use of E-Verify except as provided in part D below, or discharging or refusing to hire employees because they appear or sound "foreign" or have received tentative nonconfirmations. The Employer further understands that any violation of the immigration-related unfair employment practices provisions in section 274B of the INA could subject the Employer to civil penalties, back pay awards, and other sanctions, and violations of Title VII could subject the Employer to back pay awards, compensatory and punitive damages. Violations of either section 274B of the INA or Title VII may also lead to the termination of its participation in E-Verify. If the Employer has any questions relating to the anti-discrimination provision, it should contact OSC at 1-800-255-8155 or 1-800-237-2515 (TDD).

13. The Employer agrees that it will use the information it receives from E-Verify (through its E-Verify Employer Agent) only to confirm the employment eligibility of employees as authorized by this MOU. The Employer agrees that it will safeguard this information, and means of access to it (such as PINS and passwords), to ensure that it is not used for any other purpose and as necessary to protect its confidentiality, including ensuring that it is not disseminated to any person other than employees of the Employer who are authorized to perform the Employer's responsibilities under this MOU, except for such dissemination as may be authorized in advance by SSA or DHS for legitimate purposes.

14. The Employer agrees to notify DHS immediately in the event of a breach of personal information. Breaches are defined as loss of control or unauthorized access to E-Verify personal data. All suspected or confirmed breaches should be reported by calling 1-888-464-4218 or via email at E-Verify@dhs.gov. Please use "Privacy Incident – Password" in the subject line of your email when sending a breach report to E-Verify.

15. The Employer acknowledges that the information it receives through the E-Verify Employer Agent from SSA is governed by the Privacy Act (5 U.S.C. § 552a(i)(1) and (3)) and the Social Security Act (42 U.S.C. 1306(a)). Any person who obtains this information under false pretenses or uses it for any purpose other than as provided for in this MOU may be subject to criminal penalties.



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16. The Employer agrees to cooperate with DHS and SSA in their compliance monitoring and evaluation of E-Verify (whether directly or through their E-Verify Employer Agent), which includes permitting DHS, SSA, their contractors and other agents, upon reasonable notice, to review Forms I-9 and other employment records and to interview it and its employees regarding the Employer's use of E-Verify, and to respond in a prompt and accurate manner to DHS requests for information relating to their participation in E-Verify.

17. The Employer shall not make any false or unauthorized claims or references about its participation in E-Verify on its website, in advertising materials, or other media. The Employer shall not describe its services as federally-approved, federally-certified, or federally-recognized, or use language with a similar intent on its website or other materials provided to the public. Entering into this MOU does not mean that E-Verify endorses or authorizes your E-Verify services and any claim to that effect is false.

18. The Employer shall not state in its website or other public documents that any language used therein has been provided or approved by DHS, USCIS or the Verification Division, without first obtaining the prior written consent of DHS.

19. The Employer agrees that E-Verify trademarks and logos may be used only under license by DHS/USCIS (see [M-795 \(Web\)](#)) and, other than pursuant to the specific terms of such license, may not be used in any manner that might imply that the Employer's services, products, websites, or publications are sponsored by, endorsed by, licensed by, or affiliated with DHS, USCIS, or E-Verify.

20. The Employer understands that if it uses E-Verify procedures for any purpose other than as authorized by this MOU, the Employer may be subject to appropriate legal action and termination of its participation in E-Verify according to this MOU.

C. RESPONSIBILITIES OF FEDERAL CONTRACTORS

The E-Verify Employer Agent shall ensure that the E-Verify Employer Agent and the Employers represented by the E-Verify Employer Agent carry out the following responsibilities if the Employer is a federal contractor or becomes a Federal contractor. The E-Verify Employer Agent should instruct the client to keep the E-Verify Employer Agent informed about any changes or updates related to federal contracts. It is the E-Verify Employer Agent's responsibility to ensure that its clients are in compliance with all E-Verify policies and procedures.

1. If the Employer is a Federal contractor with the FAR E-Verify clause subject to the employment verification terms in Subpart 22.18 of the FAR, it will become familiar with and comply with the most current version of the E-Verify User Manual for Federal Contractors as well as the E-Verify Supplemental Guide for Federal Contractors.

2. In addition to the responsibilities of every employer outlined in this MOU, the Employer understands that if it is a Federal contractor subject to the employment verification terms in Subpart 22.18 of the FAR it must verify the employment eligibility of any "employee assigned to the contract" (as defined in FAR 22.1801). Once an employee has been verified through E-Verify by the Employer, the Employer may not reverify the employee through E-Verify.

a. An Employer that is not enrolled in E-Verify as a Federal contractor at the time of a contract award must enroll as a Federal contractor in the E-Verify program within 30 calendar days of



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contract award and, within 90 days of enrollment, begin to verify employment eligibility of new hires using E-Verify. The Employer must verify those employees who are working in the United States, whether or not they are assigned to the contract. Once the Employer begins verifying new hires, such verification of new hires must be initiated within three business days after the hire date. Once enrolled in E-Verify as a Federal contractor, the Employer must begin verification of employees assigned to the contract within 90 calendar days after the date of enrollment or within 30 days of an employee's assignment to the contract, whichever date is later.

b. Employers enrolled in E-Verify as a Federal contractor for 90 days or more at the time of a contract award must use E-Verify to begin verification of employment eligibility for new hires of the Employer who are working in the United States, whether or not assigned to the contract, within three business days after the date of hire. If the Employer is enrolled in E-Verify as a Federal contractor for 90 calendar days or less at the time of contract award, the Employer must, within 90 days of enrollment, begin to use E-Verify to initiate verification of new hires of the contractor who are working in the United States, whether or not assigned to the contract. Such verification of new hires must be initiated within three business days after the date of hire. An Employer enrolled as a Federal contractor in E-Verify must begin verification of each employee assigned to the contract within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever is later.

c. Federal contractors that are institutions of higher education (as defined at 20 U.S.C. 1001(a)), state or local governments, governments of Federally recognized Indian tribes, or sureties performing under a takeover agreement entered into with a Federal agency under a performance bond may choose to only verify new and existing employees assigned to the Federal contract. Such Federal contractors may, however, elect to verify all new hires, and/or all existing employees hired after November 6, 1986. Employers in this category must begin verification of employees assigned to the contract within 90 calendar days after the date of enrollment or within 30 days of an employee's assignment to the contract, whichever date is later.

d. Upon enrollment, Employers who are Federal contractors may elect to verify employment eligibility of all existing employees working in the United States who were hired after November 6, 1986, instead of verifying only those employees assigned to a covered Federal contract. After enrollment, Employers must elect to verify existing staff following DHS procedures and begin E-Verify verification of all existing employees within 180 days after the election.

e. The Employer may use a previously completed Form I-9 as the basis for creating an E-Verify case for an employee assigned to a contract as long as:

- i. That Form I-9 is complete (including the SSN) and complies with Article II.B.6,
- ii. The employee's work authorization has not expired, and
- iii. The Employer has reviewed the Form I-9 information either in person or in communications with the employee to ensure that the employee's Section 1, Form I-9 attestation has not changed (including, but not limited to, a lawful permanent resident alien having become a naturalized U.S. citizen).

f. The Employer shall complete a new Form I-9 consistent with Article II.A.6 or update the previous Form I-9 to provide the necessary information if:

- i. The Employer cannot determine that Form I-9 complies with Article II.A.6,



Company ID Number:

- ii. The employee's basis for work authorization as attested in Section 1 has expired or changed, or
- iii. The Form I-9 contains no SSN or is otherwise incomplete.

Note: If Section 1 of the Form I-9 is otherwise valid and up-to-date and the form otherwise complies with Article II.C.5, but reflects documentation (such as a U.S. passport or Form I-551) that expired after completing Form I-9, the Employer shall not require the production of additional documentation, or use the photo screening tool described in Article II.A.5, subject to any additional or superseding instructions that may be provided on this subject in the E-Verify User Manual.

- g. The Employer agrees not to require a second verification using E-Verify of any assigned employee who has previously been verified as a newly hired employee under this MOU or to authorize verification of any existing employee by any Employer that is not a Federal contractor based on this Article.

3. The Employer understands that if it is a Federal contractor, its compliance with this MOU is a performance requirement under the terms of the Federal contract or subcontract, and the Employer consents to the release of information relating to compliance with its verification responsibilities under this MOU to contracting officers or other officials authorized to review the Employer's compliance with Federal contracting requirements.

D. RESPONSIBILITIES OF SSA

1. SSA agrees to allow DHS to compare data provided by the Employer (through the E-Verify Employer Agent) against SSA's database. SSA sends DHS confirmation that the data sent either matches or does not match the information in SSA's database.
2. SSA agrees to safeguard the information the Employer provides (through the E-Verify Employer Agent) through E-Verify procedures. SSA also agrees to limit access to such information, as is appropriate by law, to individuals responsible for the verification of Social Security numbers or responsible for evaluation of E-Verify or such other persons or entities who may be authorized by SSA as governed by the Privacy Act (5 U.S.C. § 552a), the Social Security Act (42 U.S.C. 1306(a)), and SSA regulations (20 CFR Part 401).
3. SSA agrees to provide case results from its database within three Federal Government work days of the initial inquiry. E-Verify provides the information to the E-Verify Employer Agent.
4. SSA agrees to update SSA records as necessary if the employee who contests the SSA tentative nonconfirmation visits an SSA field office and provides the required evidence. If the employee visits an SSA field office within the eight Federal Government work days from the date of referral to SSA, SSA agrees to update SSA records, if appropriate, within the eight-day period unless SSA determines that more than eight days may be necessary. In such cases, SSA will provide additional instructions to the employee. If the employee does not visit SSA in the time allowed, E-Verify may provide a final nonconfirmation to the E-Verify Employer Agent.

Note: If an Employer experiences technical problems, or has a policy question, the employer should contact E-Verify at 1-888-464-4218.



Company ID Number:

E. RESPONSIBILITIES OF DHS

1. DHS agrees to provide the Employer with selected data from DHS databases to enable the Employer (through the E-Verify Employer Agent) to conduct, to the extent authorized by this MOU
 - a. Automated verification checks on alien employees by electronic means, and
 - b. Photo verification checks (when available) on employees.
2. DHS agrees to assist the E-Verify Employer Agent with operational problems associated with its participation in E-Verify. DHS agrees to provide the E-Verify Employer Agent names, titles, addresses, and telephone numbers of DHS representatives to be contacted during the E-Verify process.
3. DHS agrees to provide to the E-Verify Employer Agent with access to E-Verify training materials as well as an E-Verify User Manual that contain instructions on E-Verify policies, procedures, and requirements for both SSA and DHS, including restrictions on the use of E-Verify.
4. DHS agrees to train E-Verify Employer Agents on all important changes made to E-Verify through the use of mandatory refresher tutorials and updates to the E-Verify User Manual. Even without changes to E-Verify, DHS reserves the right to require E-Verify Employer Agents to take mandatory refresher tutorials.
5. DHS agrees to provide to the Employer (through the E-Verify Employer Agent) a notice, which indicates the Employer's participation in E-Verify. DHS also agrees to provide to the Employer anti-discrimination notices issued by the Office of Special Counsel for Immigration-Related Unfair Employment Practices (OSC), Civil Rights Division, U.S. Department of Justice.
6. DHS agrees to issue each of the E-Verify Employer Agent's E-Verify users a unique user identification number and password that permits them to log in to E-Verify.
7. DHS agrees to safeguard the information the Employer provides (through the E-Verify Employer Agent), and to limit access to such information to individuals responsible for the verification process, for evaluation of E-Verify, or to such other persons or entities as may be authorized by applicable law. Information will be used only to verify the accuracy of Social Security numbers and employment eligibility, to enforce the INA and Federal criminal laws, and to administer Federal contracting requirements.
8. DHS agrees to provide a means of automated verification that provides (in conjunction with SSA verification procedures) confirmation or tentative nonconfirmation of employees' employment eligibility within three Federal Government work days of the initial inquiry.
9. DHS agrees to provide a means of secondary verification (including updating DHS records) for employees who contest DHS tentative nonconfirmations and photo mismatch tentative nonconfirmations. This provides final confirmation or nonconfirmation of the employees' employment eligibility within 10 Federal Government work days of the date of referral to DHS, unless DHS determines that more than 10 days may be necessary. In such cases, DHS will provide additional verification instructions.



Company ID Number:



ARTICLE III

REFERRAL OF INDIVIDUALS TO SSA AND DHS

The E-Verify Employer Agent shall ensure that the E-Verify Employer Agent and the Employers represented by the E-Verify Employer Agent carry out the following responsibilities. It is the E-Verify Employer Agent's responsibility to ensure that its clients are in compliance with all E-Verify policies and procedures.

A. REFERRAL TO SSA

1. If the Employer receives a tentative nonconfirmation issued by SSA, the Employer must print the tentative nonconfirmation notice as directed by E-Verify. The Employer must promptly notify employees in private of the finding and provide them with the notice and letter containing information specific to the employee's E-Verify case. The Employer also agrees to provide both the English and the translated notice and letter for employees with limited English proficiency to employees. The Employer agrees to provide written referral instructions to employees and instruct affected employees to bring the English copy of the letter to the SSA. The Employer must allow employees to contest the finding, and not take adverse action against employees if they choose to contest the finding, while their case is still pending.
2. The Employer agrees to obtain the employee's response about whether he or she will contest the tentative nonconfirmation as soon as possible after the Employer receives the tentative nonconfirmation. Only the employee may determine whether he or she will contest the tentative nonconfirmation.
3. After a tentative nonconfirmation, the Employer will refer employees to SSA field offices only as directed by E-Verify. The Employer must record the case verification number, review the employee information submitted to E-Verify to identify any errors, and find out whether the employee contests the tentative nonconfirmation. The Employer will transmit the Social Security number, or any other corrected employee information that SSA requests, to SSA for verification again if this review indicates a need to do so.
4. The Employer will instruct the employee to visit an SSA office within eight Federal Government work days. SSA will electronically transmit the result of the referral to the Employer (through the E-Verify Employer Agent) within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary.
5. While waiting for case results, the Employer agrees to check the E-Verify system regularly for case updates.
6. The Employer agrees not to ask the employee to obtain a printout from the Social Security Administration number database (the Numident) or other written verification of the SSN from the SSA.

B. REFERRAL TO DHS

1. If the Employer receives a tentative nonconfirmation issued by DHS, the Employer must promptly notify employees in private of the finding and provide them with the notice and letter containing information specific to the employee's E-Verify case. The Employer also agrees to provide both the English and the translated notice and letter for employees with limited English proficiency to employees. The Employer must allow employees to contest the finding, and not take adverse action

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against employees if they choose to contest the finding, while their case is still pending.

2. The Employer agrees to obtain the employee's response about whether he or she will contest the tentative nonconfirmation as soon as possible after the Employer receives the tentative nonconfirmation. Only the employee may determine whether he or she will contest the tentative nonconfirmation.

3. The Employer agrees to refer individuals to DHS only when the employee chooses to contest a tentative nonconfirmation.

4. If the employee contests a tentative nonconfirmation issued by DHS, the Employer will instruct the employee to contact DHS through its toll-free hotline (as found on the referral letter) within eight Federal Government work days.

5. If the Employer finds a photo mismatch, the Employer must provide the photo mismatch tentative nonconfirmation notice and follow the instructions outlined in paragraph 1 of this section for tentative nonconfirmations, generally.

6. The Employer agrees that if an employee contests a tentative nonconfirmation based upon a photo mismatch, the Employer will send a copy of the employee's Form I-551, Form I-766, U.S. Passport, or passport card to DHS for review by:

- a. Scanning and uploading the document, or
- b. Sending a photocopy of the document by express mail (furnished and paid for by the employer).

7. The Employer understands that if it cannot determine whether there is a photo match/mismatch, the Employer must forward the employee's documentation to DHS as described in the preceding paragraph. The Employer agrees to resolve the case as specified by the DHS representative who will determine the photo match or mismatch.

8. DHS will electronically transmit the result of the referral to the Employer (through the E-Verify Employer Agent) within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary.

9. While waiting for case results, the Employer agrees to check the E-Verify system regularly for case updates.

ARTICLE IV SERVICE PROVISIONS

A. NO SERVICE FEES

1. SSA and DHS will not charge the Employer or the E-Verify Employer Agent for verification services performed under this MOU. The E-Verify Employer Agent is responsible for providing equipment needed to make inquiries. To access E-Verify, an E-Verify Employer Agent will need a personal computer with Internet access.



Company ID Number:



ARTICLE V MODIFICATION AND TERMINATION

A. MODIFICATION

1. This MOU is effective upon the signature of all parties and shall continue in effect for as long as the SSA and DHS operates the E-Verify program unless modified in writing by the mutual consent of all parties.
2. Any and all E-Verify system enhancements by DHS or SSA, including but not limited to E-Verify checking against additional data sources and instituting new verification policies or procedures, will be covered under this MOU and will not cause the need for a supplemental MOU that outlines these changes.

B. TERMINATION

1. The E-Verify Employer Agent may terminate this MOU and its participation in E-Verify at any time upon 30 days prior written notice to the other parties. In addition, any Employer represented by the E-Verify Employer Agent may voluntarily terminate its MOU upon giving DHS 30 days' written notice.
2. Notwithstanding Article V, part A of this MOU, DHS may terminate this MOU, and thereby the E-Verify Employer Agent's participation in E-Verify, with or without notice, at any time if deemed necessary because of the requirements of law or policy, or upon a determination by SSA or DHS that there has been a breach of system integrity or security by the E-Verify Employer Agent or the Employer, or a failure on the part of either party to comply with established E-Verify procedures and/or legal requirements. The Employer understands that if it is a Federal contractor, termination of this MOU by any party for any reason may negatively affect the performance of its contractual responsibilities. Similarly, the Employer understands that if it is in a state where E-Verify is mandatory, termination of this by any party MOU may negatively affect the Employer's business.
3. An E-Verify Employer Agent for an Employer that is a Federal contractor may terminate this MOU for that Employer when the Federal contract that requires its participation in E-Verify is terminated or completed. In such cases, the E-Verify Employer Agent must provide written notice to DHS. If the E-Verify Employer Agent fails to provide such notice, then that Employer will remain an E-Verify participant, will remain bound by the terms of this MOU that apply to non-Federal contractor participants, and will be required to use the E-Verify procedures to verify the employment eligibility of all newly hired employees.
4. The E-Verify Employer Agent agrees that E-Verify is not liable for any losses, financial or otherwise, if the E-Verify Employer Agent or the Employer is terminated from E-Verify.



Company ID Number:

**ARTICLE VI****PARTIES**

A. Some or all SSA and DHS responsibilities under this MOU may be performed by contractor(s), and SSA and DHS may adjust verification responsibilities between each other as necessary. By separate agreement with DHS, SSA has agreed to perform its responsibilities as described in this MOU.

B. Nothing in this MOU is intended, or should be construed, to create any right or benefit, substantive or procedural, enforceable at law by any third party against the United States, its agencies, officers, or employees, or against the E-Verify Employer Agent, its agents, officers, or employees.

C. The E-Verify Employer Agent may not assign, directly or indirectly, whether by operation of law, change of control or merger, all or any part of its rights or obligations under this MOU without the prior written consent of DHS, which consent shall not be unreasonably withheld or delayed. Any attempt to sublicense, assign, or transfer any of the rights, duties, or obligations herein is void.

D. Each party shall be solely responsible for defending any claim or action against it arising out of or related to E-Verify or this MOU, whether civil or criminal, and for any liability wherefrom, including (but not limited to) any dispute between the Employer and any other person or entity regarding the applicability of Section 403(d) of IIRIRA to any action taken or allegedly taken by the Employer.

E. The E-Verify Employer Agent understands that its participation in E-Verify is not confidential information and may be disclosed as authorized or required by law and DHS or SSA policy, including but not limited to, Congressional oversight, E-Verify publicity and media inquiries, determinations of compliance with Federal contractual requirements, and responses to inquiries under the Freedom of Information Act (FOIA).

F. The individuals whose signatures appear below represent that they are authorized to enter into this MOU on behalf of the E-Verify Employer Agent and DHS respectively. The E-Verify Employer Agent understands that any inaccurate statement, representation, data or other information provided to DHS may subject the Employer or the E-Verify Employer Agent, as the case may be, its subcontractors, its employees, or its representatives to: (1) prosecution for false statements pursuant to 18 U.S.C. 1001 and/or; (2) immediate termination of its MOU and/or; (3) possible debayment or suspension.

G. The foregoing constitutes the full agreement on this subject between DHS and the E-Verify Employer Agent.

If you have any questions, contact E-Verify at 1-888-464-4218.



Company ID Number:



Approved by:

E-Verify Employer Agent Employer	
Name (Please Type or Print)	Title
Signature	Date
Department of Homeland Security – Verification Division	
Name (Please Type or Print)	Title
Signature	Date



Company ID Number:

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	
Company Facility Address	
Company Alternate Address	
County or Parish	
Employer Identification Number	
North American Industry Classification Systems Code	
Parent Company	
Number of Employees	
Number of Sites Verified for	

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

THIS AGREEMENT is by and between Boone County Regional Sewer District (“Owner”) and
____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 - WORK

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

ARTICLE 2 - THE PROJECT

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

The Scope of Work includes complete removal and replacement of the wet well and valve vault piping, fittings and lift station accessories; removal of the wet well top and attachment of a pre-cast wet well extension; construction of a platform and accessories and work described in the Project Manual, or reasonably inferable therefrom.

ARTICLE 3 - ENGINEER

The part of the Project that pertains to the Work has been designed by Cochran.

The Owner has retained Cochran (“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

Time of the Essence

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.

Contract Times:

The Work will be substantially completed within 90 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 on or before May 15, 2026.

Liquidated Damages

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):

Substantial Completion: Contractor shall pay Owner **\$500.00** 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.

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

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:

For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

The Base Bid amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Mobilization/Demobilization/Start-Up/Permits/Bonds	LS	1		
2	Pre-Cast Wet Well Riser	LS	1		
3	Lift Station Platform	LS	1		
4	Lift Station Mechanical Rehabilitation	LS	1		
5	Bypass Pumping	LS	1		
6	8-Foot-Tall Wood Fence	LF	57		
7	Finish Grading and Seeding	LS	1		
Total Base Bid:					

Bid Addition No. 1 amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Wet Well Epoxy Coating	LS	1		
Total Alternate No. 1 Base Bid:					

Bid Addition No. 2 amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Pump & Base Elbow Replacement	LS	1		
Total Alternate No. 2 Base Bid:					

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment)
\$ _____.

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

ARTICLE 6 - PAYMENT PROCEDURES

Submittal and Processing of Payments

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.

Progress Payments; Retainage

Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 10th 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.

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

90 percent of Work completed (with the balance being retainage)

If the Work has been 75 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage

100 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

Upon Substantial Completion **of the entire construction to be provided under the Contract Documents**, 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 **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

Final Payment

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

All amounts not paid when due shall bear interest at the rate of **5** percent per annum.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

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

Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

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.

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

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.

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.

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.

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.

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.

The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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*Contents*

The Contract Documents consist of the following:

This Agreement (pages 1 to 7, inclusive).

Performance bond (pages PEB-1 to PEB-3, inclusive).

Payment bond (pages PAB-1 to PAB-3, inclusive).

General Conditions (pages 1 to 67, inclusive).

Supplementary Conditions (pages 1 to 15, inclusive).

Specifications as listed in the table of contents of the Project Manual.

Drawings (not attached but incorporated by reference) consisting of 6 sheets with each sheet bearing the following general title: Lift Station Upgrades Trailside Lift Station Boone County Regional Sewer District

Addenda (numbers to , inclusive).

Exhibits to this Agreement (enumerated as follows):

Contractor's Bid (pages to , inclusive).

The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

Notice to Proceed.

Work Change Directives.

Change Orders.

The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 9.

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

ARTICLE 10 - MISCELLANEOUS*Terms*

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

Assignment of Contract

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.

Successors and Assigns

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.

Severability

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.

Contractor's Certifications

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:

“corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

“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;

“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

“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.

Other Provisions

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 _____ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

Boone County Regional Sewer District

By: _____

By: _____

Title: _____

Title: _____

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

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

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.

PERFORMANCE BOND

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

CONTRACTOR (*Name and Address*):

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

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

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

Note: Provide execution by additional parties, such as joint venturers, if necessary.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract; or
 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.
5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:
 - 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
 - 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
 - 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.
6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.
7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.
8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond,

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

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

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

11. Definitions.

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

FOR INFORMATION ONLY – *(Name, Address and Telephone)*

Surety Agency or Broker:

Owner's Representative *(Engineer or other party)*:

PAYMENT BOND

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

CONTRACTOR (*Name and Address*):

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

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

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 (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: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
6. Reserved.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.
9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

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

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

15. Definitions

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

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

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

FOR INFORMATION ONLY – (*Name, Address, and Telephone*)

Surety Agency or Broker:

Owner's Representative (*Engineer or other*):

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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DEFINITIONS AND TERMINOLOGY

Defined Terms

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.

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.

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.

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.

Bid—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder—An individual or entity that submits a Bid to Owner.

Bidding Documents—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

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.

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.

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.

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.

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.

Contract—The entire and integrated written contract between the Owner and Contractor concerning the Work.

Contract Documents—Those items so designated in the Agreement, and which together comprise the Contract.

Contract Price—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .

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.

Contractor—The individual or entity with which Owner has contracted for performance of the Work.

Cost of the Work—See Paragraph 13.01 for definition.

Drawings—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

Effective Date of the Contract—The date, indicated in the Agreement, on which the Contract becomes effective.

Engineer—The individual or entity named as such in the Agreement.

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.

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.

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.

Liens—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

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.

Notice of Award—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Successful Bidder—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.

Supplementary Conditions—The part of the Contract that amends or supplements these General Conditions.

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.

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.

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.

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

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.

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.

Terminology

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.

Intent of Certain Terms or Adjectives:

The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

Day:

The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

Defective:

The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

does not conform to the Contract Documents; or

does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

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).

Furnish, Install, Perform, Provide:

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.

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.

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.

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.

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.

PRELIMINARY MATTERS

Delivery of Bonds and Evidence of Insurance

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.

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.

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.

Copies of Documents

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.

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.

Before Starting Construction

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:

- 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;
- a preliminary Schedule of Submittals; and
- 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.

Preconstruction Conference; Designation of Authorized Representatives

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.

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.

Initial Acceptance of Schedules

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.

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.

Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

Electronic Transmittals

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.

If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.

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.

DOCUMENTS: INTENT, REQUIREMENTS, REUSE

Intent

The Contract Documents are complementary; what is required by one is as binding as if required by all.

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.

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.

The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

Reference Standards

Standards Specifications, Codes, Laws and Regulations

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.

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.

Reporting and Resolving Discrepancies

Reporting Discrepancies:

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.

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.

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.

Resolving Discrepancies:

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:

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

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).

Requirements of the Contract Documents

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.

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.

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.

Reuse of Documents

Contractor and its Subcontractors and Suppliers shall not:

- 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

- 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.

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.

COMMENCEMENT AND PROGRESS OF THE WORK

Commencement of Contract Times; Notice to Proceed

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.

Starting the Work

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.

Reference Points

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.

Progress Schedule

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.

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.

Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.

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.

Delays in Contractor's Progress

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.

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.

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:

severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

abnormal weather conditions;

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

acts of war or terrorism.

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.

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.

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.

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.

AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

Availability of Lands

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.

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.

Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Use of Site and Other Areas

Limitation on Use of Site and Other Areas:

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.

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.

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.

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.

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.

Subsurface and Physical Conditions

Reports and Drawings: The Supplementary Conditions identify:

those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;

those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and

Technical Data contained in such reports and drawings.

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:

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

other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

Differing Subsurface or Physical Conditions

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

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

is of such a nature as to require a change in the Drawings or Specifications; or

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

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.

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.

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.

Possible Price and Times Adjustments:

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:

such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

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.

Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

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

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

Contractor failed to give the written notice as required by Paragraph 5.04.A.

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.

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.

Underground Facilities

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:

Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and

the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

reviewing and checking all information and data regarding existing Underground Facilities at the Site;

locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;

coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

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.

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.

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.

Possible Price and Times Adjustments:

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:

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;

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;

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

Contractor gave the notice required in Paragraph 5.05.B.

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.

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.

Hazardous Environmental Conditions at Site

Reports and Drawings: The Supplementary Conditions identify:

those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

Technical Data contained in such reports and drawings.

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:

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

other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

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.

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.

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.

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.

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.

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.

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.

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.

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.

BONDS AND INSURANCE

Performance, Payment, and Other Bonds

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.

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.

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.

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.

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.

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.

Insurance—General Provisions

Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.

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.

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.

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.

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.

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.

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.

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.

Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.

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.

Contractor's Insurance

Workers' Compensation: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:

claims under workers' compensation, disability benefits, and other similar employee benefit acts.

United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).

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).

Foreign voluntary worker compensation (if applicable).

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:

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

claims for damages insured by reasonably available personal injury liability coverage.

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.

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:

Products and completed operations coverage:

Such insurance shall be maintained for three years after final payment.

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.

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.

Broad form property damage coverage.

Severability of interest.

Underground, explosion, and collapse coverage.

Personal injury coverage.

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.

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.

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.

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.

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.

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.

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.

General provisions: The policies of insurance required by this Paragraph 6.03 shall:

include at least the specific coverages provided in this Article.

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.

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.

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.

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.

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.

Owner's Liability Insurance

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.

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.

Property Insurance

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:

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."

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.

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.

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

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).

extend to cover damage or loss to insured property while in transit.

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.

allow for the waiver of the insurer's subrogation rights, as set forth below.

provide primary coverage for all losses and damages caused by the perils or causes of loss covered.

not include a co-insurance clause.

include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.

include performance/hot testing and start-up.

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.

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.

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.

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.

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.

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.

Waiver of Rights

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.

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:

- 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

- 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.

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.

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.

Receipt and Application of Property Insurance Proceeds

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.

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.

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.

CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence

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.

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.

Labor; Working Hours

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.

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.

Services, Materials, and Equipment

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.

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.

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.

“Or Equals”

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.

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:

in the exercise of reasonable judgment Engineer determines that:

- it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
- 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;
- it has a proven record of performance and availability of responsive service; and
- it is not objectionable to Owner.

Contractor certifies that, if approved and incorporated into the Work:

- there will be no increase in cost to the Owner or increase in Contract Times; and
- it will conform substantially to the detailed requirements of the item named in the Contract Documents.

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

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.

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.

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.

Substitutes

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.

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.

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.

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: shall certify that the proposed substitute item will:

- perform adequately the functions and achieve the results called for by the general design,
- be similar in substance to that specified, and
- be suited to the same use as that specified.

will state:

- the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
- 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
- whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

will identify:

- all variations of the proposed substitute item from that specified, and
- available engineering, sales, maintenance, repair, and replacement services.

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.

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.

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

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.

Contractor's Expense: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

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.

Concerning Subcontractors, Suppliers, and Others

Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Nothing in the Contract Documents:

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

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.

Patent Fees and Royalties

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.

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.

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.

Permits

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

Taxes

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.

Laws and Regulations

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.

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.

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.

Record Documents

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.

Safety and Protection

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:

all persons on the Site or who may be affected by the Work;

all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

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.

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.

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.

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.

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).

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).

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.

Safety Representative

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.

Hazard Communication Programs

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.

Emergencies

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.

Shop Drawings, Samples, and Other Submittals

Shop Drawing and Sample Submittal Requirements:

Before submitting a Shop Drawing or Sample, Contractor shall have:

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

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.

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.

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.

Shop Drawings:

Contractor shall submit the number of copies required in the Specifications.

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.

Samples:

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

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.

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.

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.

Engineer's Review:

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.

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.

Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

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.

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.

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.

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.

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.

Resubmittal Procedures:

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.

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.

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.

Contractor's General Warranty and Guarantee

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.

Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

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

normal wear and tear under normal usage.

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:

observations by Engineer;

recommendation by Engineer or payment by Owner of any progress or final payment;

the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

use or occupancy of the Work or any part thereof by Owner;

any review and approval of a Shop Drawing or Sample submittal;

the issuance of a notice of acceptability by Engineer;

any inspection, test, or approval by others; or

any correction of defective Work by Owner.

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.

Indemnification

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.

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.

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:

the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

Delegation of Professional Design Services

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.

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.

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.

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.

Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

OTHER WORK AT THE SITE

Other Work

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.

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.

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.

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.

Coordination

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:

- the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
- an itemization of the specific matters to be covered by such authority and responsibility; and
- the extent of such authority and responsibilities.

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

Legal Relationships

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.

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.

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.

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.

OWNER'S RESPONSIBILITIES

Communications to Contractor

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

Replacement of Engineer

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.

Furnish Data

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

Pay When Due

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

Lands and Easements; Reports, Tests, and Drawings

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

Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

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.

Insurance

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

Change Orders

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

Inspections, Tests, and Approvals

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

Limitations on Owner's Responsibilities

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.

Undisclosed Hazardous Environmental Condition

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

Evidence of Financial Arrangements

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).

Safety Programs

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.

Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ENGINEER'S STATUS DURING CONSTRUCTION*Owner's Representative*

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.

Visits to Site

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.

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.

Project Representative

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.

Rejecting Defective Work

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

Shop Drawings, Change Orders and Payments

Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.

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.

Engineer's authority as to Change Orders is set forth in Article 11.

Engineer's authority as to Applications for Payment is set forth in Article 15.

Determinations for Unit Price Work

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

Decisions on Requirements of Contract Documents and Acceptability of Work

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.

Limitations on Engineer's Authority and Responsibilities

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.

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.

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.

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.

The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

Compliance with Safety Program

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.

AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

Amending and Supplementing Contract Documents

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

Change Orders:

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.

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.

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.

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.

Owner-Authorized Changes in the Work

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.

Unauthorized Changes in the Work

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.

Change of Contract Price

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.

An adjustment in the Contract Price will be determined as follows:

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

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

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).

Contractor's Fee: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:

a mutually acceptable fixed fee; or

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:

for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;

for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;

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;

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;

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

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.

Change of Contract Times

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.

An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

Change Proposals

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.

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.

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.

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.

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.

Execution of Change Orders

Owner and Contractor shall execute appropriate Change Orders covering:

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;

changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

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

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.

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.

Notification to Surety

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.

CLAIMS

Claims

Claims Process: The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:

Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and

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.

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.

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.

Mediation:

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.

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.

Owner and Contractor shall each pay one-half of the mediator's fees and costs.

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.

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.

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.

COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

Cost of the Work

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:

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

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.

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:

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.

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.

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.

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.

Supplemental costs including the following:

The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

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.

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.

Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

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.

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.

The cost of utilities, fuel, and sanitary facilities at the Site.

Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

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

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

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.

Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

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.

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.

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.

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.

Allowances

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.

Cash Allowances: Contractor agrees that:

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

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.

Contingency Allowance: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

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.

Unit Price Work

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.

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.

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.

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.

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:

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;

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

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.

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

Access to Work

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.

Tests, Inspections, and Approvals

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.

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.

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.

Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

by manufacturers of equipment furnished under the Contract Documents;

for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

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.

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.

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.

Defective Work

Contractor's Obligation: It is Contractor's obligation to assure that the Work is not defective.

Engineer's Authority: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

Notice of Defects: Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

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.

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.

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.

Acceptance of Defective Work

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.

Uncovering Work

Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

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.

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.

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.

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.

Owner May Stop the Work

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.

Owner May Correct Defective Work

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.

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.

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.

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.

PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

Progress Payments

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.

Applications for Payments:

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.

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.

The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

Review of Applications:

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.

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:

the Work has progressed to the point indicated;

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

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.

By recommending any such payment Engineer will not thereby be deemed to have represented that:

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

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.

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:

to supervise, direct, or control the Work, or

for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or

to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

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.

Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

the Work is defective, requiring correction or replacement;

the Contract Price has been reduced by Change Orders;

Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

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.

Payment Becomes Due:

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.

Reductions in Payment by Owner:

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:

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;

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;

Contractor has failed to provide and maintain required bonds or insurance;

Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

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;

the Work is defective, requiring correction or replacement;

Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

the Contract Price has been reduced by Change Orders;

an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;

liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

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;

there are other items entitling Owner to a set off against the amount recommended.

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.

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.

Contractor's Warranty of Title

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.

Substantial Completion

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.

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.

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.

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.

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.

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.

Partial Use or Occupancy

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:

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.

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.

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.

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.

Final Inspection

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.

Final Payment

Application for Payment:

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.

The final Application for Payment shall be accompanied (except as previously delivered) by:

all documentation called for in the Contract Documents;

consent of the surety, if any, to final payment;

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.

a list of all disputes that Contractor believes are unsettled; and

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.

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.

Engineer's Review of Application and Acceptance:

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.

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.

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.

Waiver of Claims

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.

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.

Correction Period

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:

correct the defective repairs to the Site or such other adjacent areas;

correct such defective Work;

if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

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.

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).

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.

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.

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.

SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work

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.

Owner May Terminate for Cause

The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

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);

Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

Contractor's repeated disregard of the authority of Owner or Engineer.

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:

declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and

enforce the rights available to Owner under any applicable performance bond.

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.

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.

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.

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.

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.

Owner May Terminate For Convenience

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):

- 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;

- 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

- other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

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.

Contractor May Stop Work or Terminate

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.

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.

FINAL RESOLUTION OF DISPUTES

Methods and Procedures

Disputes Subject to Final Resolution: The following disputed matters are subject to final resolution under the provisions of this Article:

A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.

Final Resolution of Disputes: For any dispute subject to resolution under this Article, Owner or Contractor may:

elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or

agree with the other party to submit the dispute to another dispute resolution process; or

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.

MISCELLANEOUS

Giving Notice

Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

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

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

Computation of Times

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.

Cumulative Remedies

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.

Limitation of Damages

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.

No Waiver

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.

Survival of Obligations

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.

Controlling Law

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

Headings

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

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

No suggested Supplementary Conditions in this Article.

ARTICLE 2—PRELIMINARY MATTERS

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 signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision. No provisions or requirements of the contract shall be construed as a waiver of any governmental or other immunity of the Owner, the City of Rocheport, Missouri, their officials or any of their employees in the course of their official duties.
- C. *Evidence of Owner's Insurance:* After receipt from Contractor of the signed 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 in this Contract (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision. No provisions or requirements of the contract shall be construed as a waiver of any governmental or other immunity of the Owner, the City of Rocheport, Missouri, their officials or any of their employees in the course of their official duties.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No suggested Supplementary Conditions in this Article.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**4.05 Delays in Contractor's Progress**

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. Weather-Related Delays

- a. If “abnormal weather conditions” as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.
- b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:
 - 1) Every workday on which one or more of the following conditions exist will be considered a “bad weather day”:
 - i) Total precipitation (as rain equivalent) occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds the regulatory threshold for land application of the lagoon residual under this project, if land application is used, but in no case equal to or exceeding one (1) inch of precipitation (as rain equivalent, based on the snow/rain conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this SC-4.05.C by reference.
 - ii) Ambient outdoor air temperature at any point in time between 7:00 a.m. and 7:00 p.m. is equal to or less than the following low temperature threshold: the regulatory threshold for land application of the lagoon residual under this project, if land application is used, but in no case equal to or less than 32 degrees Fahrenheit; or when the ground at the designated land application site(s) is frozen.
 - 2) Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by the National Weather Service weather monitoring station at the Columbia Regional Airport Station (KCOU).
 - 3) Contractor shall anticipate the number of foreseeable bad weather days per month indicated in the table in Exhibit A—Foreseeable Bad Weather Days.
 - 4) In each month, every bad weather day exceeding the number of foreseeable bad weather days established in the table in Exhibit A—Foreseeable Bad Weather Days will be considered as “abnormal weather conditions.” The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus

delayed were on Contractor's then-current Progress Schedule's critical path for the Project.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 Subsurface and Physical Conditions

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

- E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None		

- F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
None		

- G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at **[location]** during regular business hours, or may request copies from Engineer.

5.06 Hazardous Environmental Conditions

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None		

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any)

contained in such Drawings upon which Contractor may rely: **[If there are no such drawings, so indicate in the table]**

Drawings Title	Date of Drawings	Technical Data
None		

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Performance Bond Form:* The performance bond that Contractor furnishes shall be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition) or another form containing the same information and otherwise meeting all requirements herein.
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes shall be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition) or another form containing the same information and otherwise meeting all requirements herein.

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.

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following:
 1. The City of Rocheport, MO
- E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	\$3,448,710.00
Bodily injury by disease—aggregate	\$3,448,710.00
Employer's Liability	
Each accident	\$3,448,710.00
Each employee	\$3,448,710.00
Policy limit	\$3,448,710.00
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	\$3,448,710.00

- F. *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 claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Personal injury coverage.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.

5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
6. Any limitation or exclusion based on the nature of Contractor's work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$3,448,710.00
Products—Completed Operations Aggregate	\$3,448,710.00
Personal and Advertising Injury	\$3,448,710.00
Bodily Injury and Property Damage—Each Occurrence	\$3,448,710.00

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance 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 must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$3,448,710.00
Each Accident	\$3,448,710.00
Property Damage	
Each Accident	\$3,448,710.00
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$3,448,710.00

- K. *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. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$3,448,710.00
General Aggregate	\$3,448,710.00

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein.

- M. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor's Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	\$3,448,710.00
General Aggregate	\$3,448,710.00

- N. *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 must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	Policy limits of not less than:
Each Claim	\$3,448,710.00
Annual Aggregate	\$3,448,710.00

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04 in its entirety and insert the following in its place:

- A. Builder's risk and other property insurance is not required.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 8—OTHER WORK AT THE SITE

No suggested Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

9.13 *Owner's Site Representative*

- A. Owner will furnish an "Owner's Site Representative" to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner's Site Representative is not Engineer's consultant, agent, or employee.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION**10.03** *Resident Project Representative*

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

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

No suggested Supplementary Conditions in this Article.

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

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD**15.01** *Progress Payments*

SC-15.01 Replace Paragraph 15.03.D of the General Conditions with the following Paragraph 15.03.D:

- D. *Payment Becomes Due:* Thirty (30) days after presentation of the Contractor’s 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.

15.03 *Substantial Completion*

SC-15.03 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, will 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 this Article 15.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**16.02 *Owner May Terminate for Cause***

SC-16.02 Supplement Paragraph 16.02 of the General Conditions with the following provisions:

- H. *Termination for Default:* The Owner may terminate or suspend this Contract, in whole or in part, upon ten (10) days advance written notice if: (1) the Contractor breaches any duty, obligation, or service required pursuant to this Contract. If the Contract is terminated by the Owner pursuant to Contract or this Appendix, the Contractor shall be liable for damages, including any additional costs of procuring similar goods or services from another source. If the termination results from acts or omissions of the Contractor, including but not limited to misappropriation or nonperformance of required goods, the Contractor shall return to the Owner immediately any funds, misappropriated or unexpended, that have been paid to the Contractor by the Owner.

16.03 *Owner May Terminate for Convenience*

SC-16.03 Supplement Paragraph 16.03 of the General Conditions with the following provisions:

- C. *Termination for Convenience:* The Contract may be terminated by the Owner without cause, in whole or in part, at any time during the term specified in the Contract, by providing the other party thirty (30) calendar days advance written notice of the termination. The Contract may be suspended by the Owner without cause, in whole or in part, at any time during the term specified in the Contract, by providing the Contractor thirty (30) calendar days advance written notice of the suspension.

SC-16.05 Add the following new paragraph immediately after Paragraph 16.04.

16.05 *Termination for Non-Appropriation*

- A. If expected or actual funding is withdrawn, reduced, or limited in any way prior to the termination date set forth in the Contract, the Owner may, upon ten (10) days advance written notice to the Contractor, terminate or suspend this Contract in whole or in part. If the Contract is terminated or suspended as provided in this Section: (1) the Owner will be liable only for payment in accordance with the terms of this Contract for goods delivered prior to the effective date of termination or suspension; and (2) the Contractor shall be released from any obligation to provide such further goods pursuant to the Contract as are affected by the termination or suspension.

SC-16.06 Add the following new paragraph immediately after Paragraph 16.05.

16.06 *Non-Waiver of Rights*

- A. Nothing herein shall limit, waive, or extinguish any right or remedy provided by this Contract or by law or equity that either party may have if any of the obligations, terms, and conditions set forth in this Contract are breached by the other party.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES**17.01 Attorneys' Fees**

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

SC-18 Add the following new paragraphs immediately after Paragraph 8.10 of the General Conditions:

18.11 Equal Employment Opportunity

- A. The Contractor hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:
- B. During the performance of this Contract, the Contractor agrees as follows:
 - 1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - 2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - 3. The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not

otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

4. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 5. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 6. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 7. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
 8. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
- C. The Contractor further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the party so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.
- D. The Contractor agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor

such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

- E. The Contractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and sub-contractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the Contractor agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

18.12 *Contract Work Hours and Safety Standards Act*

- A. Where applicable, all contracts in excess of \$100,000 that involve the employment of mechanics or laborers shall include a provision for compliance with 40 U.S.C 3702 and 3704 of the Contract Work Hours and Safety Standards Act, as supplemented by the Department of Labor regulations (29 CFR part 5). Under Section 3702 of the Act, each Contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of forty (40) hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of forty (40) hours in the workweek. The requirements of 40 U.S.C. 3704 are applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

18.13 *Rights to Inventions Made Under a Contract or Agreement*

- A. If a Contractor wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401.

18.14 *Clean Air Act & Federal Water Pollution Control Act*

- A. Where applicable, all contracts for the purchase of goods in excess of \$150,000, Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401. Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251. Contractor agrees to report each violation of the Clean Air Act and the Water Pollution Control Act to Owner and understands that the Owner will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional

Office. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

18.15 *Suspension and Debarment*

- A. If this Contract is a covered transaction for purposes of federally funded grant requirements, the Contractor is required to verify that none of the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. Debarment status may be verified at <https://www.sam.gov>. By signing and submitting this Contract, the Contractor certifies as follows:
- B. The certification in this clause is a material representation of fact relied upon by Owner. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to Owner, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while performing this Contract and further agrees to include a provision requiring such compliance in its lower tier covered transactions.

18.16 *Byrd Anti-Lobbying Amendment*

- A. Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee or a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Contractor shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certifications to the awarding agency.

18.17 *Procurement of Recovered Materials*

- A. Where applicable, within the performance of this Contract involving the use of materials, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired. Contractor agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

18.18 *Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment*

- A. Contractor agrees to comply with all requirements of 2 CFR 200.216 regarding prohibition on certain telecommunications and video surveillance services or equipment. Contractor asserts that this Contract does not relate to such prohibited telecommunications and video surveillance services or equipment.

18.19 *Domestic Preference*

- A. Contractor should, to the greatest extent practicable under Federal award, provide a preference of the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products) pursuant with 2 CFR § 200.322. The requirements of this section

must be included in all subawards including all contracts and purchase orders for work or products under this award.

18.20 *Compliance with Law:*

- A. Comply with all applicable local, state, and federal laws and regulations, regardless of whether laws are specifically reference in the Agreement.

18.21 *Prevailing Wage:*

- A. Contractor agrees to pay not less than the prevailing hourly rate of wages to all of its workers performing work for the public use or benefit or that uses public funds under this Agreement, or, alternatively, as applicable, the public works contracting minimum wage. The prevailing hourly rate of wages shall be those as set out in the Wage Order attached to and made part of the Contract. Each worker shall be paid the locally prevailing wage or public works contracting minimum wage, as applicable, pursuant §§290.210 – 290.340, RSMo and pursuant to each workers' scope of work and in accordance with the occupational titles and work descriptions set forth in state regulation.
- B. Contractor agrees to keep full and accurate records of the names, occupations and crafts of every worker employed by it in connection with the Agreement, together with an accurate record of the number of hours worked by each worker and the actual wages paid for a period of one year following completion of the Work. Contractor shall provide these records at the end of each month during the Project. Contractor shall post a legible list of prevailing wage rates in a prominent and easily accessible place at the work site for the full time that any worker is on the job. Upon completion of the Project and prior to final payment, Contractor agrees to complete and certify in an affidavit stating that the Contractor has fully complied with the Missouri Prevailing Wage law.
- C. Contractor agrees to be responsible for payment of any penalty to the Owner of One Hundred Dollars (\$100) per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work performed under this Agreement by Contractor.

EXHIBIT A—FORESEEABLE BAD WEATHER DAYS

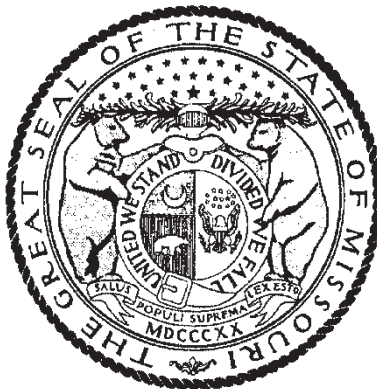
Month	Number of Foreseeable Bad Weather Days in Month Based on Precipitation as Rain Equivalent (inches) (1)	Ambient Outdoor Air Temperature (degrees F)
		Number of Foreseeable Bad Weather Days in Month Based on Low Temperature (7:00 a.m. to 7:00 p.m.)
January	3	25
February	3	20
March	3	7
April	3	0
May	3	0
June	3	0
July	3	0
August	3	0
September	3	0
October	3	1
November	3	7
December	3	20
Notes:		
1. Two inches of sleet equal one inch of rain. Five inches of wet, heavy snow equal one inch of rain. Fifteen inches of “dry” powder snow equals one inch of rain.		

MISSOURI PREVAILING WAGE

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



MIKE KEHOE, Governor

Annual Wage Order No. 32

Section 010
BOONE COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

Logan Hobbs, Director
Division of Labor Standards

Filed With Secretary of State: March 10, 2025

Last Date Objections May Be Filed: April 9, 2025

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	\$61.64
Boilermaker	\$34.21*
Bricklayer-Stone Mason	\$57.33
Carpenter	\$54.00
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	\$47.94
Plasterer	
Communication Technician	\$60.91
Electrician (Inside Wireman)	\$60.73
Electrician Outside Lineman	\$83.75
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	\$34.21*
Glazier	\$57.72
Ironworker	\$72.58
Laborer	\$45.36
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	\$63.31
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	\$67.29
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	\$43.55
Plumber	\$72.49
Pipe Fitter	
Roofer	\$56.44
Sheet Metal Worker	\$58.82
Sprinkler Fitter	\$69.16
Truck Driver	\$34.21*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in RSMo Section 290.210.

Heavy Construction Rates for
BOONE County

Section 010

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	\$67.38
Millwright	
Pile Driver	
Electrician (Outside Lineman)	\$83.75
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	\$53.59
General Laborer	
Skilled Laborer	
Operating Engineer	\$69.61
Group I	
Group II	
Group III	
Group IV	
Truck Driver	\$34.21*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

OVERTIME and HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, **"overtime work"** shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

JOB SPECIAL PROVISIONS

JOB SPECIAL PROVISIONS**A PRE-BID MEETING WILL BE HELD ON NOVEMBER 5, 2025
2:00 P.M. AT ROCHEPORT CITY HALL, 703 1ST STREET ROCHEPORT, MO 65279****A. GENERAL**

1. All material and work specified under this Contract shall be paid for as outlined and bid in the Bid Proposal. Work for each item shall include the furnishing and installation of all materials required for the completed workable project including all incidentals to complete the project as outlined in the Plans and Specifications.

B. MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES. All materials and items to be paid for on the basis of measurement shall be measured and determined by the Engineer in accordance with the Drawings and Specifications, or as authorized by the Owner.
2. Work or materials involved in lump sum payments will not be measured, but will be paid as described in the Project Drawings and Specifications.
3. Materials normally will be paid for on a volume basis. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before the weight basis of measurement of pay quantities will be used.
4. Material paid for by the ton shall be weighed on a certified public scale, and a certified copy of the weight ticket shall be furnished to the Engineer in evidence of the delivered weight of the material.
5. Trucks used to haul material being paid for by weight shall be weighed empty at such times as the Engineer directs. Each truck shall bear a plainly legible identification mark.
6. Full compensation for all expense involved in conforming to the above requirements for measuring and weighing materials shall be considered as included in the unit price paid for the material being measured or weighed, and no additional allowance will be made therefore.
7. LIMITATION ON PAY QUANTITIES. Quantities of materials wasted or disposed of in a manner not called for under the Contract, including rejected loads of material not unloaded from vehicles, material rejected after it has been placed, material placed outside of pay lines and material remaining on hand after completion of the work, will not be paid for and will not be included in the final pay quantities. No compensation will be allowed for disposing of rejected or excess material.
8. SCOPE OF PAYMENT. The Contractor shall accept the compensation as herein provided in full payment for furnishing all materials, labor, services, supervision, tools and equipment necessary to complete the Work; and for performing all Work contemplated and embraced under the contract; and for loss or damage arising from the nature of the Work or from the action of the elements, except as herein before provided; or from any unforeseen difficulties which may be encountered during the execution of the Work until the acceptance by the Owner; and for all risks of every description connected with the execution of the Work; and for all expenses incurred in consequent of the suspension or discontinuance of the Work as herein specified; and for completing the Work according to the Drawings and Specifications. The payment of any estimate or of any retained percentage shall not relieve the Contractor of any obligation to replace or to make good any defective Work or material.

C. BASIS OF PAYMENT**BASE BID**

1. MOBILIZATION/DEMOBILIZATION/START-UP/PERMITS/BONDS. This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment, and any other work incidental to complete this item including general conditions, mobilization, erosion control, demobilization, permit acquisition, and all other work described in the project manual and Construction Drawings reasonably inferable therefrom. Payment for this section shall be made on a lump sum basis per the price provided in the Bid Form Proposal.

2. **PRE-CAST WET WELL RISER.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment and any other work incidental to complete this item including excavation, demolition of the existing components and appurtenances specified, removal of the existing wet well top, pre-cast wet well section, pre-cast wet well top, wet well placement and attachment to existing concrete, hatch, vent, charcoal filter, mastic, gator wrap, wet well attachments, angle iron, hardware, hydro cement for conduit penetrations and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a lump sum basis per the price provided in the Bid Form Proposal.
3. **LIFT STATION PLATFORM.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment and any other work incidental to complete this item including removal of items specified, excavation, forming, rebar, placement, concrete piers, concrete repair, column, beams, brackets, connection plate, cap plate, base plate, toe plate, hardware, grates, guard rail, railing, post, grout, harness anchor point and connection, conduit attachment and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a lump sum basis per the price provided in the Bid Form Proposal.
4. **LIFT STATION MECHANICAL REHABILITATION.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment and any other work incidental to complete this item including demolition of specific components and appurtenances, storage and re-installation of existing pumps piping, excavation, granular backfill, locator wire, tracer tape, backfill, compaction, bends, tee, coupling, gate valves, check valves, guide rails, cable holder, floats, ductile iron piping, uni-flange, hardware, G3 boot system, grout, electrical conduit, wiring, junction box, sealing of electrical components from the wet well, connection to existing utilities, drain line, drain line gate valve, valve box, tie downs, concrete blocking, valve vault floor grout, trash basket, rails, connection to wet well and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a lump sum basis per the price provided in the Bid Form Proposal.
5. **BYPASS PUMPING.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment and any other work incidental to complete this item including plugging the system, collection location for pumping, bypass pump, piping, connection to the force main, and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a lump sum basis per the price provided in the Bid Form Proposal.
6. **8-FOOT-TALL WOOD FENCE.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment and any other work incidental to complete this item including removal of the existing fence, excavation, forming, concrete placement, post, bolts, washers, nuts, planks, runners, granular material, paint and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a unit basis per the price provided in the Bid Form Proposal.
7. **FINISHED GRADING AND SEEDING.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment and any other work incidental to complete this item including grading, seeding, mulch, straw, clean-up, restoration and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a lump sum basis per the price provided in the Bid Form Proposal.

BID ADDITION NO. 1

1. **BID ADDITION NO. 1 – WET WELL EPOXY COATING.** This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment, and any other work incidental to complete this item including bypass pumping equipment and piping, any cleaning or initial preparation of wet well, cementitious repair mortar, epoxy cementitious resurfacer, wet well epoxy coat liner and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a unit basis per the price provided in the Bid Form Proposal.

BID ADDITION NO. 2

1. BID ADDITION NO. 2 – PUMP & BASE ELBOW REPLACEMENT. This work shall be performed as specified and as shown on the Construction Drawings. This work shall include all materials, labor, tools, equipment, and any other work incidental to complete this item including bypass pumping equipment and piping, removal of existing pump and base elbow, pump, base elbow, hardware and all other work described in the project manual and Construction Drawings or reasonably inferable therefrom. Payment for this section shall be made on a unit basis per the price provided in the Bid Form Proposal.

SOLID TRENCH ROCK EXCAVATION.

This refers to all "Class "B" Excavation, as per specifications. Payment will be based on a unit price per cubic yard as outlined in the bid form proposal. Price will include excavation, equipment, labor, and all other items necessary for excavation. Trench rock excavation shall be defined as any material, which cannot be excavated by an excavator with an operating weight of at least 52,600 pounds and flywheel horsepower of at least 153 horsepower. Payment price will be based on total rock excavation for project; therefore, no payments will be made for said rock excavation until substantial completion of the project has occurred. This item refers to utility trench rock and rock encountered during structure foundation excavation only; as rock encountered during mass grading shall be considered unclassified and incidental to the project. Granular backfill and bedding shall be considered incidental to this item.

F. INCIDENTAL ITEMS

1. All items not listed above shall be considered incidental to the contract.
2. Contractor to provide all work and materials necessary to render the Work substantially complete.
3. Any Coordination with Boone Electric Company that may be necessary.
4. Construction Stakeout
5. Erosion Control
6. Lift Station Startup

TECHNICAL SPECIFICATIONS

SECTION 01100 - SUMMARY**PART 1 - GENERAL****1.1 SUMMARY**

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Work under other contracts.
 - 3. Use of premises.
 - 4. Owner's occupancy requirements.
 - 5. Specification formats and conventions.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Lift Station Upgrades (Rocheport Trailside Lift Station)
- B. Project Location: Rocheport, Missouri
- C. Owner: Boone County Regional Sewer District
- D. Engineer: Cochran, Union, Missouri
- E. Project will be constructed under a single prime contract.

1.3 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.4 USE OF PREMISES

- A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- C. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
 - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.5 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.
 - 1. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.
- B. 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. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100

SECTION 01330 - SUBMITTAL PROCEDURES**PART 1 - GENERAL****1.1 SUMMARY**

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. See Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.2 DEFINITIONS

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

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- C. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- D. Additional Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 - 1. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.

- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with specified referenced standards.
 - i. Testing by recognized testing agency.
 - 4. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Engineer will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale.
 - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Notation of coordination requirements.
 - j. Notation of dimensions established by field measurement.
 - k. Relationship to adjoining construction clearly indicated.
 - l. Seal and signature of professional engineer if specified.
 - m. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
 - 3. Number of Copies: Submit four opaque (bond) copies of each submittal. Engineer will return three copies.

- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Engineer will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Engineer will retain two Sample sets; remainder will be returned.
- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location.
1. Number of Copies: Submit three copies of product schedule or list, unless otherwise indicated. Engineer will return two copies.
- F. Submittals Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- G. Application for Payment: Comply with requirements specified in General Conditions.
- H. Schedule of Values: Comply with requirements specified in General Conditions.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Engineer will not return copies.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section "Quality Requirements."

- B. Coordination Drawings: Comply with requirements specified in Division 1 Section "Project Management and Coordination."
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- L. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section "Operation and Maintenance Data."
- Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

- R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- S. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Engineer.
 - 1. Engineer will not review submittals that include MSDSs and will return them for resubmittal.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Rejected.
 - 2. Revise and Resubmit.
 - 3. Exceptions Taken.
 - 4. No Exceptions Taken.
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01330

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS**PART 1 - GENERAL****1.1 SUMMARY**

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. See Division 2 Section "Dewatering" for disposal of ground water at Project site.

1.2 DEFINITIONS

- A. Permanent Enclosure: As determined by Engineer, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.3 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.

1.4 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS**2.1 TEMPORARY FACILITIES**

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
- C. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines. Comply with NFPA 241.
 - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 1 Section "Execution Requirements" for progress cleaning requirements.
- F. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- G. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- H. Temporary Use of Permanent Stairs: Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- C. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.
- E. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 1 Section "Closeout Procedures."

END OF SECTION 01500

SECTION 01770 - CLOSEOUT PROCEDURES**PART 1 - GENERAL****1.1 SUMMARY**

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.
- B. See Section 01781 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
- C. See Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems.
 - 9. Submit test/adjust/balance records.
 - 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 11. Advise Owner of changeover in heat and other utilities.
 - 12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 13. Complete final cleaning requirements, including touchup painting.
 - 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 - 1. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 WARRANTIES

- A. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- B. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove labels that are not permanent.
 - f. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

- 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - g. Replace parts subject to unusual operating conditions.
 - h. Leave Project clean and ready for use.
- B. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

SECTION 01781 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. See Divisions 2 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up Record Prints.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - 2. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 - 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. Note related Change Orders and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition,

protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 01781

SECTION 01782 - OPERATION AND MAINTENANCE DATA**PART 1 - GENERAL****1.1 SUMMARY**

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Emergency manuals.
 - 2. Operation manuals for systems, subsystems, and equipment.
 - 3. Maintenance manuals for the care and maintenance of products, materials, and finishes and systems and equipment.
- B. See Divisions 2 through 16 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

PART 2 - PRODUCTS**2.1 MANUALS, GENERAL**

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name, address, and telephone number of Contractor.
 - 6. Name and address of Architect.
 - 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
 - 1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in

the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
- B. Descriptions: Include the following:
 1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include start-up, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.3 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
 1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.

- D. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment:
- D. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions that detail essential maintenance procedures:
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component

incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

- E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
- F. Comply with Division 1 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01782

SECTION 02220 – SITE DEMOLITION**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Demolition as depicted on the Contract Drawings.

1.2 REGULATORY REQUIREMENTS

- A. Obtain required permits and licenses from appropriate authorities. Pay associated fees including disposal charges.
- B. Notify affected utility companies before starting work and comply with their requirements.
- C. Do not close or obstruct public or private roadways, sidewalks, or fire hydrants without appropriate permits or written authorization.
- D. Conform to applicable regulatory procedures when hazardous or contaminated materials are discovered.

1.3 SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of capped utilities and subsurface obstructions that will remain after demolition.

1.4 PROJECT CONDITIONS

- A. Blasting is prohibited. Rock excavation shall be by mechanical means only and shall be incidental to the contract.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION**3.1 PREPARATION**

- A. Provide, erect, and maintain erosion control devices, temporary barriers, and security devices at locations indicated on Construction Drawings.
- B. Protect existing landscaping materials, appurtenances, and structures, which are not to be demolished. Repair damage to existing items to remain caused by demolition operations.
- C. Prevent movement or settlement of adjacent structures. Provide bracing and shoring as necessary.
- D. Mark location of utilities. Protect and maintain in safe and operable condition utilities that are to remain. Prevent interruption of existing utility service to occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities as acceptable to governing authorities and Owner.
- E. Notify adjacent property owners of work that may affect their property, potential noise, utility outages, or other disruptions. Obtain written permission from adjacent property owners when demolition equipment will traverse, infringe upon, or limit access to their property. Coordinate notice with Owner.

3.2 GENERAL DEMOLITION REQUIREMENTS

- A. Conduct demolition to minimize interference with adjacent structures or pavements to remain.
- B. Cease operations immediately if adjacent structures appear to be in danger. Notify authority having jurisdiction. Do not resume operations until directed by authority.
- C. Conduct operations with minimum of interference to public or private access. Maintain ingress and egress at all times.
- D. Sprinkle work with water to minimize dust. Provide hoses and water connections for this purpose.
- E. Comply with governing regulations pertaining to environmental protection.
- F. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.

3.3 DEMOLITION

- A. Demolish site improvements designated to be removed as shown on the drawings. Site improvements shall include but not be limited to structures, retaining walls, foundations, pavements, curbs and gutters, drainage structures, utilities, storm sewer, signage or landscaping.
- B. Disconnect and cap or remove utilities to be abandoned as shown on the drawings.
- C. Fill or remove underground tanks, piping, and appurtenances as shown.
- D. Demolish concrete and masonry in small sections. Break up concrete slabs-on-grade that are 2-feet or more below proposed subgrade to permit moisture drainage. Remove slabs-on-grade and below grade construction within 2-feet of proposed subgrade.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove from site debris, rubbish, and other materials resulting from demolition operations. Leave areas of work in clean condition.
- B. No burning of any material, debris, or trash onsite or offsite will be allowed except when allowed by appropriate governing authority and Owner. If allowed as stated above, burning shall be performed in manner prescribed by governing authority. Attend burning materials until fires have burned out and have been completely extinguished.
- C. Transport materials removed from demolished structures with appropriate vehicles and dispose off-site to areas that are approved for disposal by governing authorities and appropriate property owners.

END OF SECTION 2300

SECTION 02230 - SITE CLEARING**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Cleaning site of debris, grass, trees, and other plant life in preparation for site or building earthwork.
 - 2. Protection of existing structures, trees, or vegetation indicated on the Construction Drawings to remain.

1.2 ENVIRONMENTAL REQUIREMENTS

- A. Construct temporary erosion control systems as shown on Construction Drawings to protect adjacent properties and water resources from erosion and sedimentation, or as directed by Owner, Engineer, or local or state authority.
- B. In event that sitework on this project will disturb 1 or more acres; Contractor shall not begin construction without "National Pollution Discharge Elimination System" (NPDES) permit governing discharge of storm water from site for entire construction period. NPDES permit requires SWPPP to be in place during construction.
- C. Contractor shall conduct storm water management practices in accordance with NPDES permit and shall enforce action taken or imposed by Federal or State agencies, including cost of fines, construction delays, and remedial actions resulting from Contractor's failure to comply with provisions of NPDES permit.

1.3 PROJECT CONDITIONS

- A. Conditions existing at time of inspection for bidding purposes will be maintained by Owner as reasonably practical.
- B. Access to adjacent properties by driveway/roadway will be maintained at all times during demolition, clearing, and construction.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION**3.1 PREPARATION**

- A. Identify existing plant life that is to remain and verify clearing limits are clearly tagged, identified, and marked in such manner as to ensure their protection throughout construction operations.

3.2 PROTECTION

- A. Locate, identify, and protect existing utilities that are to remain.
- B. Protect trees, plant growth, and features designated to remain as part of final landscaping.
- C. Conduct operations with minimum interference to public or private accesses and facilities. Maintain ingress and egress at all times and clean or sweep roadways daily as required by governing authority. Dust control shall be provided with sprinkling systems of equipment provided by Contractor.
- D. Protect benchmarks, property corners, and other survey monuments from damage or displacement. If marker needs to be removed it shall be referenced by a licensed land surveyor and replaced, as necessary, in kind.

- E. Provide traffic control as required, in accordance with the US Department of Transportation's "Manual on Uniform Traffic Control Devices" and applicable state highway department requirements.

3.3 EQUIPMENT

- A. Material shall be transported to and from the project site using well-maintained and operating vehicles. Transporting vehicles operating on site shall stay on designated haul roads and shall not endanger improvements by rutting, overloading, or pumping.

3.4 CLEARING

- A. Clear areas required for access to site and execution of work.
- B. Unless otherwise indicated on Construction Drawings, remove trees, shrubs, grass, other vegetation, improvements, or obstructions interfering with installation of new construction. Removal includes digging out stumps and roots. Depressions caused by clearing and grubbing operations shall be filled to subgrade elevation to avoid ponding of water. Satisfactory fill material shall be placed in accordance with Section 02300.
- C. Remove grass, plant life, stumps, and other construction debris from site to dump site that is suitable for handling such material according to state laws and regulations.
- D. Cut heavy growths of grass from areas before stripping and topsoil removal and remove cuttings with remainder of cleared vegetative material.

END OF SECTION 02230

SECTION 02300 - EARTHWORK**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes:
1. Trenching and backfilling for utilities.
 2. Dewatering.

1.2 QUALITY ASSURANCE

- A. An Independent Testing Laboratory (ITL), selected and paid for by the Owner, will be retained to perform construction testing on site.
1. The ITL shall prepare test reports that indicate test location, elevation data, and test results. Owner, Engineer, and Contractor shall be provided with copies of reports within 96 hours of time that test was performed. In event that test performed fails to meet Specifications, the independent testing laboratory shall notify Owner and Contractor immediately.
 2. Costs related to retesting due to failures shall be paid for by the Contractor at no additional expense to Owner. Contractor shall provide free access to site for testing activities.
 3. Quality assurance testing will be conducted in accordance with Paragraph "Field Testing" in Part 3 hereinafter.

1.3 DEFINITIONS

- A. Satisfactory Materials: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, SM, ML, CL, or a combination of these group symbols.
1. Fill material shall further conform to the plasticity index and liquid limits (PI and LL) specified in Paragraph FILLING hereinafter.
 2. Satisfactory materials shall be free of rock or gravel larger than allowed for fill or backfill material as specified hereinafter or as shown on the drawings.
 3. Satisfactory materials shall contain no debris, waste, frozen materials, vegetation, and other deleterious matter.
 4. The following table stipulates maximum allowable values for plasticity index (PI) and liquid limit (LL) of satisfactory materials to be used as fill in specified areas:

<u>Location</u>	<u>PI</u>	<u>LL</u>
All areas	15	45

- B. Unsatisfactory Materials: Materials which do not comply with the requirements for satisfactory materials are unsatisfactory.
1. Unsatisfactory materials also include man-made fills; trash; refuse; backfills from previous construction; and material classified as satisfactory materials which contains root and other organic matter or frozen material. The ITL shall be notified of any contaminated materials.
 2. Unsatisfactory materials also include satisfactory materials not maintained within 2 percent of optimum moisture content at time of compaction.
- C. Rock: Rock shall be as defined in Section 02318. Rock shall be incidental to site mass excavation and tank contract. Trench rock excavation is defined in Section 02510 and in this Section.

1.4 SUBMITTALS

- A. Submit name of each material supplier and specific type and source of each material. Change in source throughout project requires approval of Owner.
- B. Shop drawings or details pertaining to site utilities are not required unless required by regulatory authorities or unless uses of materials, methods, equipment, or procedures that are contrary to The

- Drawings or Specifications are proposed. Do not perform work until Owner has accepted required shop drawings.
- C. Submit certification that all material obtained from off-site sources complies with specification requirements.
 - D. Shop drawings or details pertaining to excavating and filling are not required unless otherwise shown on the Drawings or if contrary procedures to Construction Documents are proposed.
 - E. Contact utility companies and determine if additional easements will be required to complete project.

PART 2 - PRODUCTS

2.1 SOIL AND ROCK MATERIALS

- A. Trench Backfill: ASTM D 2321 unless otherwise specified or shown on the drawings.
- B. Bedding: Aggregate Type as indicated on the plans, or fine, clean, durable particles of sand or crushed stone. Crushed stone used for this purpose shall consist of materials passing a 1-inch sieve to dust.
- C. Fill and Backfill. Satisfactory materials excavated from the site.
- D. Imported Fill Material: Satisfactory material provided from offsite borrow areas when sufficient satisfactory materials are not available from required excavations.
- E. Drainage Fill: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2- inch sieve and 0 to 5 percent passing a No.8 sieve.
- F. Topsoil: Topsoil shall consist of stripping material excavated from the site. Topsoil shall consist of organic surficial soil found in depth of not more than 6-inches. Topsoil shall be as further defined in Section 02920 – Finish Grading and Seeding.

2.2 APPURTENANT MATERIALS

- A. Water Main Tracer Tape: Water main tracer tape shall be installed with all water main. The materials to be installed for this purpose shall consist of 3-inch wide tape made of bonded layer plastic with a metallic foil core. Tape splices shall be knotted to prevent tensile pressure on the splice. The material to be used for this service shall be "Terra Tape D" as manufactured by they Griffolyn Company of Houston, Texas, or approved equal. The metallic tape shall be colored to contrast with the soil and shall bear an imprint identifying the line below, such as; "Caution, Water Main Buried Below".

2.3 EQUIPMENT

- A. Transport off-site materials to project using well-maintained and operating vehicles. Once on site, transporting vehicles shall stay on designated haul roads and shall at no time endanger improvements by rutting, overloading, or pumping.

2.4 SOURCE QUALITY CONTROL

- A. Following tests shall be performed on each type of on-site or imported soil material used as compacted fill:
 - 1. Moisture and Density Relationship: ASTM D 698 or ASTM D 1557.
 - 2. Mechanical Analysis: AASHTO T 88 or ASTM D422.
 - 3. Plasticity Index: ASTM D 4318.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Identify required lines, levels, contours, datum, elevations, and grades necessary for construction as shown on the drawings.
- B. Notify utility companies to remove or relocate public utilities that are in conflict with proposed improvements.
- C. Protect plant life, lawns, fences, existing structures, sidewalks, paving, and curbs, unless otherwise noted on the drawings from excavating equipment and vehicular traffic.
- D. Protect benchmarks, property corners, and other survey monuments from damage or displacement. If marker needs to be removed it shall be referenced by licensed land surveyor and replaced, as necessary, by same.
- E. Remove from site, material encountered in grading operations that, in opinion of Owner or the Owner's Independent Testing Laboratory (ITL) is unsatisfactory material or undesirable for backfilling, subgrade, or foundation purposes. Dispose of in manner satisfactory to Owner and local governing agencies. Backfill areas with layers of satisfactory material and compact as specified herein.
- F. Locate and identify utilities that have previously been installed and protect from damage.
- G. Locate and identify existing utilities that are to remain and protect from damage.
- H. Maintain in operating condition existing utilities, previously installed utilities, and drainage systems encountered in utility installation. Repair surface or subsurface improvements shown on The Drawings.
- I. Verify location, size, elevation, and other pertinent data required making connections to existing utilities and drainage systems as indicated on The Drawings.
- J. Over excavate and properly prepare areas of subgrade that are not capable of supporting proposed systems.

3.2 DEWATERING

- A. General:
 - 1. Maintain site using accepted and professional methods consistent with current industry practice to eliminate water entering the excavation under hydrostatic head from the bottom or sides. Design system to prevent differential hydrostatic head, which would result in floating out soil particles in a manner, termed as a "quick" or "boiling" condition. System shall not be dependent solely upon sumps or pumping water from within the excavation where differential head would result in a quick condition, which would continue to worsen the integrity of the excavation's stability.
 - 2. Maintain site to prevent ground and surface water flow into the excavation and to allow Work to be installed in a dry condition.
 - 3. Control, by acceptable means, all water regardless of source. Contractor shall be responsible for disposal of the water.
 - 4. Confine discharge piping or ditches to available easement or to additional easement obtained by Contractor. Provide necessary permits or easement.
 - 5. Control groundwater in a manner that preserves strength of foundation soils, does not cause instability or raveling of excavation slopes, and does not result in damage to existing structures.
 - 6. Commence dewatering prior to any appearance of water in excavation and continue until Work is complete to the extent that no damage results from hydrostatic pressure, flotation, or other causes.
 - 7. Open pumping with sumps and ditches will be allowed provided it does not result in boils, loss of fines, softening of the ground, or instability of slopes.
 - 8. Control grading around excavations to prevent surface water from flowing into excavation areas.
 - 9. No additional payment will be made for any supplemental measures to control seepage, groundwater, or artesian head.

- B. Damages:
 - 1. Contractor shall be responsible for and shall repair any damage to work in place, other contractor's equipment, utilities, residences, highways, roads, railroads, private and municipal well systems, adjacent structures, natural resources, habitat, existing wells, and the excavation. Contractor responsibility shall also include, damage to the bottom due to heave and including but not limited to, removal and pumping out of the excavated area that may result from Contractor's negligence, inadequate or improper design and operation of the dewatering system, and any mechanical or electrical failure of the dewatering system.
 - 2. Remove subgrade materials rendered unsatisfactory by excessive wetting and replace with approved backfill material at no additional cost to the Owner.
- C. Maintaining Excavation in Dewatering Condition:
 - 1. Dewatering shall be a continuous operation. Interruptions due to power outages, or any other reason will not be permitted.
 - 2. Continuously maintain excavation in a dry condition with positive dewatering methods during preparation of subgrade, installation of pipe, and construction of structures until the critical period of construction or backfill is completed to prevent damage of subgrade support, piping, structure, side slopes, or adjacent facilities from flotation or other hydrostatic pressure imbalance.
 - 3. Provide standby equipment on site, installed, wired, and available for immediate operation if required to maintain dewatering on a continuous basis in the event any part of the system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, perform such work as may be required to restore damaged structures and foundation soils at no additional cost to Owner.
- D. System Removal: Upon completion of the work, remove dewatering equipment from the site, including related temporary electrical service.

3.3 TOPSOIL EXCAVATION

- A. Cut heavy growths of grass from areas before stripping and remove cuttings with remainder of cleared vegetative material.
- B. Strip topsoil to a depth of not less than 6 inches from areas that are to be filled, excavated, landscaped, or re-graded to such depth that it prevents intermingling with underlying subsoil or questionable material.
- C. Stockpile topsoil in storage piles in areas shown on The Drawings or where directed by Owner. Construct storage piles to freely drain surface water. Cover storage piles as required to prevent windblown dust. Dispose of unsuitable topsoil as specified for waste material, unless otherwise specified by Owner. Remove excess topsoil from site unless specifically noted otherwise on The Drawings.

3.4 GENERAL EXCAVATION

- A. Classification of Excavation:
 - 1. The contractor shall assure himself by site investigation or other necessary means that he is familiar with the type, quantity, quality, and character of excavation work to be performed. Excavation shall be considered Class "A" excavation, except as indicated in the Contract Documents.
 - 2. Rock (Class "B") Excavation is specified in Section 02318.
- B. The decision of the Engineer shall be final in determining the classification of excavation.
- C. When performing grading operations during periods of wet weather, provide adequate dewatering, drainage and ground water management to control moisture of soils.
- D. Shore, brace, and drain excavations as necessary to maintain excavation as safe, secure, and free of water at all times.

- E. Place satisfactory excavated material into project fill areas.
- F. Unsatisfactory excavated material shall be disposed of in manner and location that is acceptable to Owner and local governing agencies.
- G. Perform excavation using capable, well-maintained equipment and methods acceptable to Owner and local governing agencies.

3.5 TRENCHING EXCAVATION FOR UTILITIES

- A. Contact local utility companies before excavation begins. Dig trench at proper width and depth for laying pipe, conduit, or cable. Cut trench banks vertical, if possible, and remove stones from bottom of trench as necessary to avoid point-bearing. Over-excavate wet or unstable soil, if encountered, from trench bottom as necessary to provide suitable base for continuous and uniform bedding. Replace over-excavation with satisfactory material and dispose of unsatisfactory material.
 - 1. The Contractor shall bear the cost for any overexcavation not directed by the Engineer.
- B. Trench excavation sidewalls shall be sloped, shored, sheeted, braced, or otherwise supported by means of sufficient strength to protect workmen in accordance with applicable rules and regulations established for construction by the Department of Labor, Occupational Safety and Health Administration (OSHA), and by local ordinances. Lateral travel distance to exit ladder or steps shall not be greater than 25 feet in trenches 4 feet or deeper.
- C. Perform trench excavation as indicated on the Drawings for specified depths. During excavation, stockpile materials suitable for backfilling in orderly manner far enough from bank of trench to avoid overloading, slides, or cave-ins.
- D. Remove excavated materials not required or not satisfactory as backfill or embankments and waste off-site or at on-site locations approved by the Owner and in accordance with governing regulations. Dispose of structures discovered during excavation as specified in Section 02220.
- E. Prevent surface water from flowing into trenches or other excavations by temporary grading or other methods, as required. Remove accumulated water in trenches and other excavations as specified.
- F. Open cut excavation with trenching machine or backhoe. Where machines other than ladder or wheel-type trenching machines are used, do not use clods for backfill.
- G. Accurately grade trench bottom to provide uniform bearing and support for each section of pipe on bedding material at every point along entire length except where necessary to excavate for bell holes, proper sealing of pipe joints, or other required connections. Dig bell holes and depressions for joints after trench bottom has been graded. Dig no deeper, longer, or wider than needed to make joint connection properly.
- H. Trench width below top of pipe shall not be wider than 1 and 4/10 (1.4) times the nominal diameter of the pipe plus twelve (12) inches; or as designated by the owner.
- I. Trench depth requirements measured from finished grade or paved surface shall meet the following requirements or applicable codes and ordinances, whichever is more stringent:
 - 1. Water Mains: 42 inches to top of pipe barrel or 6 inches below frost line, established by local building official, whichever is deeper.
 - 2. Storm Sewer: Elevations and grades as indicated on the Drawings.
 - 3. Electrical Conduits: 24 inches minimum to top of conduit or as required by NEC 300-5, NEC 710-36 codes, or local utility company requirements, whichever is deeper.
 - 4. Telephone Conduits: 18 inches minimum to top of conduit, or as required by local utility company, whichever is deeper.

3.6 SUBGRADE PREPARATION

- A. Scarification and Compaction: Areas exposed by excavation or stripping and on which subgrade preparations are to be performed shall be scarified to minimum depth of 8 inches and compacted as specified hereinafter.
- B. Proofrolling: Subgrades shall be proofrolled to detect areas of insufficient compaction. Proofrolling shall be accomplished by making minimum of 2 complete passes with fully-loaded tandem-axle dump truck with a maximum weight of 20 tons, or approved equal, in each of 2 perpendicular directions while under the supervision and direction of the independent testing laboratory. Document and explain proofrolling inspection procedures and results in the laboratory inspection report. Areas of failure shall be excavated and recompact as specified herein. Continual failure areas shall be properly stabilized at no additional cost to Owner. Subgrade exposed longer than 48 hours or on which precipitation has occurred shall be re-proofrolled.

3.7 PIPE BEDDING

- A. Excavate trenches for pipe or conduit according to Drawings. Place bedding material according to Drawings, compact in bottom of trench, and shape to conform to lower portion of pipe barrel.

3.8 TRENCH BACKFILLING

- A. Materials used for trench backfill shall comply with requirements as specified herein.
- B. Backfill and compact in accordance with fill and compaction requirements in accordance with ASTM D 2321 unless otherwise shown on the drawings.
- C. Do not backfill trenches until required tests are performed and utility systems comply with and are accepted by applicable governing authorities.
- E. Backfill trenches to contours and elevations shown on the Drawings.
- F. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.

3.9 COMPACTION

- A. Compact as follows:

<u>Location</u>	<u>Percent of Maximum Laboratory Density ASTM D698</u>
Subgrade & Fill in All other Areas	95

- B. Maintain moisture content of not less than 1 percent below and not more than 3 percent above optimum moisture content of fill materials to attain required compaction density.
- C. Exercise proper caution when compacting immediately over top of pipes or conduits. Water jetting or flooding is not permitted as method of compaction.
- D. Corrective Measures for Non-Complying Compaction: Remove and recompact deficient areas until proper compaction is obtained. Continual failure areas shall be properly stabilized, at no additional cost to Owner.

3.10 MAINTENANCE OF SUBGRADE

- A. Verify finished subgrades to ensure proper elevation and conditions for construction above subgrade.
- B. Protect subgrade from excessive wheel loading during construction, including concrete trucks, dump trucks, and other construction equipment.

- C. Remove areas of finished subgrade found to have insufficient compaction density to depth necessary and replace in manner that will comply with compaction requirements by use of material with CBR equal to or better than that specified on the drawings. Surface of subgrade after compaction shall be firm, uniform, smooth, stable, and true to grade and cross-section.
- D. Construct temporary ditches and perform such grading as necessary to maintain positive drainage away from subgrade at all times.

3.11 BORROW AND SPOIL SITES

- A. Comply with NPDES and local erosion control permitting requirements for any and all on-site and off-site, disturbed spoil and borrow areas. Upon completion of spoil or borrow operations, clean up spoil or borrow areas in a neat and reasonable manner to the satisfaction of Owner or off-site property owner, if applicable.

3.12 FINISH GRADING

- A. Grade areas where finish grade elevations or contours are indicated on the Drawings, other than paved areas, including excavated areas, filled and transition areas, and landscaped areas. Graded areas shall be uniform and smooth, free from rock, debris, or irregular surface changes. Ground surfaces shall vary uniformly between indicated elevations. Grade finished ditches to allow for proper drainage without ponding and in manner that will minimize erosion potential. For topsoil, sodding, and seeding requirements refer to Section 02920 – Finish Grading and Seeding.
- B. Correct settled and eroded areas within 1 year after date of completion at no additional expense to Owner. Bring grades to proper elevation.

3.13 QUALITY ASSURANCE TESTING AND INSPECTION

- A. Responsibilities: Unless otherwise specified, quality control tests and inspection specified below will be conducted by the Owner's Independent Testing Laboratory (ITL) at no cost to the Contractor. The Contractor shall perform additional testing or inspection as considered necessary by the Contractor for assurance of quality control.
- B. Field testing, frequency, and methods may vary as determined by and between the Owner and the ITL.
- C. Work shall be performed by Qualified Inspector. Report of testing and inspection results shall be made upon the completion of testing.
- D. Classification of Materials: Perform test for classification of materials used and encountered during construction in accordance with ASTM D2488 and ASTM D2487.
- E. Laboratory Testing Of Materials: Perform laboratory testing of materials (Proctor, Sieve Analysis, Atterberg Limits, Consolidation Test, etc.) as specified.
- F. Field Density Tests.
 - 1. Areas of Construction Exclusive of Building Subgrade Areas: In cut areas, not less than 1 compaction test for every 10,000 sq. ft. In fill areas, same rate of testing for each 8-inch lift, measured loose.
 - 2. Utility Trench Backfill: Intervals not exceeding 200-feet of trench for first and every other 8-inch lift of compacted trench backfill.
 - 3. Test Method: In-place nuclear density, ASTM D 2922 (Method B-Direct Transmission).
- G. Corrective Measures For Non-Complying Compaction: Remove and recompact deficient areas until proper compaction is obtained at no additional expense to Owner. Adjust moisture content as necessary to conform to the requirements of this section.
- H. Observation and Inspection:
 - 1. Observe all subgrades/excavation bases below footings and slabs and verify design bearing capacity is achieved as required. Work shall be performed by a Qualified Inspector.

2. Observe and document presence of groundwater within excavations.
3. Verify cut and fill slopes as specified in the contract documents. Work shall be performed by a Qualified Inspector.

END OF SECTION 02300

SECTION 02318 - ROCK EXCAVATION (CLASS "B" EXCAVATION)**PART 1 - GENERAL****1.1 SUMMARY****A. Section Includes**

1. Removal including, drilling, blasting, and protection of rock excavation.

1.2 DEFINITIONS

- A. Rock Excavation: Removal of igneous, metamorphic, or sedimentary rock or stone, boulders over two cubic yards in volume in open areas and one cubic yard in volume in trenches; and masonry, concrete, or solid frozen soil that cannot be removed by an excavator with an operating weight of at least 52,600 pounds and flywheel horse power of at least 153 HP, by rippers or other mechanical methods and, therefore, requires drilling and blasting.

1. The excavation and disposal of all "Solid Rock Excavation" that is part of site excavation shall be considered incidental to the sitework grading.
2. If "Solid Rock Excavation" is required, the Engineer shall be notified prior to such rock excavation, and he must then visit the site and verify the necessity for excess "Rock Excavation," determine an estimated quantity and provide the Contractor written approval to proceed. In the event the estimated quantity is exceeded, the Engineer shall again be notified to establish a revised estimated quantity and authorize the Contractor to proceed. Payment for the authorized work shall be by a Change Order to the Contract.

- B. Trenches: Excavations having vertical sides whose depths exceed its width, made for storm water drainage, sanitary sewer, water, and gas pipes, electric, communications, and steam conduits, and related uses.

- C. Pay Width: Pay width for trench shall not be wider than 1-4/10 times the pipe diameter in inches plus 12 inches (1.4d" + 12").

1.3 SUBMITTALS

- A. Submit Blasting Plan prior to any blasting and Monitoring Reports to the Owner and Governing Agencies for review.

1.4 REGULATORY REQUIREMENTS

- A. Blasting will not be allowed.

1.5 SITE CONDITIONS

- A. Environmental Requirements: Determine environmental effects associated with proposed work and safeguard those concerns as regulated by law and local governing agencies by reasonable and practical methods.

- B. Existing Conditions: The Contractor shall be responsible for any and all damage and/or injury from the use of explosives. The Contractor shall save and hold harmless the Owner and Engineer from any and all claims from the use of explosives. Removal of materials of any nature by blasting shall be done in such a manner and at such times as to avoid damage affecting integrity of existing construction and damage to new or existing dwellings, structures and water wells in or adjacent to the area of the work. It shall be the Contractor's responsibility to determine the method of operation to ensure desired results and integrity of completed work. All damage caused by the Contractor's blasting operations shall be repaired to the full satisfaction of the Owner at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

NOT USED

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify site conditions and note subsurface conditions affecting work of this section.
- B. Identify required lines, levels, and elevations that will determine extent of proposed removals.

3.2 ROCK EXCAVATION

- A. Cut rock to form level bearing at bottom of footing and trench excavations. Remove shaled layers to provide sound and unshattered base for footings or foundations. Contractor shall consider reuse of excavated materials on site in accordance with Section 02300. If material cannot be utilized on site, dispose of material offsite.

3.3 ROCK BLASTING

- A. Blasting will not be allowed on the project.

3.4 ROCK CUT FACE EXCAVATION

NOT USED

3.5 ROCK TRAP

NOT USED

3.6 OVEREXCAVATION AND BACKFILL

- A. Over excavation which is required to remove unsuitable natural undisturbed bedrock weakened by weathering or other cause not inflicted by the Contractor shall be immediately reported to the Owner and performed as directed by the Owner, and the theoretical lines and grades will be adjusted accordingly. Material outside the excavation limits which are disturbed due to the fault or negligence of the Contractor or due to his failure to exercise sound construction practices, shall be either replaced by the Contractor with suitable materials (earth or concrete), or bolted, or both as directed, at no cost to the Owner.

END OF SECTION 02318

SECTION 02350 – EROSION CONTROL**PART 1 – GENERAL****1.1. SUMMARY**

- A. This work shall consist of furnishing, installing, maintaining and removing temporary pollution, erosion and sediment control measures; furnishing and placing permanent erosion control features; or a combination of both as shown on the plans or as directed by the Engineer.

1.2. SUBMITTALS

- A. Prior to the preconstruction conference and the start of construction, the Contractor shall submit schedules for the implementation of temporary and permanent erosion control work, as applicable, for construction operations. No work shall start until the erosion control schedules and methods of operations have been approved by the Engineer.

1.3. GENERAL CONSTRUCTION

- A. The Engineer may direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other bodies of water. Such work may involve the construction of temporary berms, dikes, dams, sediment basins and slope drains, and use of temporary mulches, seeding or other control devices or methods as necessary to control erosion and pollution.
- B. If the Engineer determines ditch checks, as shown on the plans, are not suitable due to site conditions, a combination of ditch checks and erosion control blankets or rock blankets shall be designed to effectively reduce flow velocities.
- C. The Contractor shall exercise effective management practices throughout the life of the project to control pollution. Pollutants such as chemicals, fuels, lubricants, bitumen, raw sewage or other harmful material shall not be discharged on or from the project. Temporary pollution control measures, such as storage and handling of petroleum products and other pollutants, shall be coordinated with temporary and permanent erosion control features specified in the contract to ensure economical, effective and continuous erosion and pollution control. These requirements will also apply to work within easements designated by the Owner.
- D. The Contractor shall incorporate all permanent erosion and pollution control features into the project at the earliest practical time. Temporary measures shall be used to correct conditions that develop during construction which were not foreseen during the design stage, that are needed prior to installation of permanent pollution control features, or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.
- E. Clearing and grubbing operations shall be scheduled and performed such that grading operations and erosion control features will follow immediately thereafter.
- F. Erosion from construction operations and pollution control measures shall not cause water pollution. In the event of conflict between these requirements and the pollution control laws, rules or regulations of other federal, state or local agencies, the more restrictive laws, rules or regulations will apply.
- G. Unless otherwise specified, or directed by the Engineer, all temporary erosion control measures shall be removed by the Contractor after permanent erosion control measures are established. All temporary erosion control measures shall be removed prior to acceptance of the project and before final payment.

1.4. TEMPORARY BERMS

- A. Temporary berms shall consist of graded material from within the project limits or any other suitable material approved by the Engineer and shall be constructed to the approximate dimensions shown on the plans.
- B. Type A Berms: shall be machine compacted with a minimum of one pass over the entire width of the berm.
- C. Type B Berms: shall be machine compacted with a minimum of three passes over the entire width of the

berm. Material removed from Type B berms shall be incorporated in the embankment when possible. The Contractor shall remove and dispose of any excess or unsuitable material to a location approved by the Engineer.

- D. Type A and Type B Berms. Temporary berms shall drain to a compacted outlet at a slope drain. On transverse berms, the top width of the berms may be wider and the sideslopes flatter to allow equipment to pass over these berms with minimal disruption.
- E. Type C Berms: shall be constructed of rock base material as approved by the Engineer. Vegetative mulch or an equivalent erosion control blanket shall be placed on the upslope side of the Type C berm. The vegetative mulch shall be placed in such a manner that the final compacted thickness is 2 inches. The straw layer or equivalent erosion control blanket shall be removed and replaced as directed by the Engineer.

1.5. TEMPORARY SLOPE DRAINS

- A. This work shall consist of constructing and maintaining temporary slope drains to carry water down slopes and to reduce erosion. The method selected shall be approved by the Engineer prior to construction.
- B. The Contractor shall provide temporary, impermeable slope drains to carry water or water with suspended solids down fill slopes until permanent erosion control measures are established. The Contractor shall provide temporary slope drains on fill slopes at approximately 500-foot intervals or as directed by the Engineer. All temporary slope drains shall be adequately anchored to the slope to prevent disruption of flow. Inlet ends shall be properly constructed to channel water into the temporary slope drain. Outlet ends shall have some means of dissipating the energy of the water to reduce erosion downstream. The Contractor shall restore the site of the slope drains to the satisfaction of the Engineer.

1.6. DITCH AND INLET CHECKS

- A. This work shall consist of constructing and maintaining temporary or permanent ditch and inlet checks, removing sediment deposits from these checks and disposing of the sediment at a location approved by the Engineer.
- B. Materials
 - 1. Posts: Wood, steel or synthetic posts may be used. Posts shall be of sufficient length, but no less than 4 feet, to ensure adequate embedment while fully supporting the silt fence and shall have sufficient strength to resist damage during installation and to support applied loads while in service.
 - 2. Support Fence: All geotextile silt fences shall be supported either externally by wire or other approved mesh to a height of at least 24 inches or by a suitably designed support system capable of keeping the material erect. Either method shall be strong enough to withstand applied loads.
- C. Type I Ditch Checks: shall be constructed of straw bales, silt fence or an approved alternative erosion control measure as specified in the contract. Type I ditch checks shall not be used where drainage areas exceed 3 acres or where ditch slopes exceed 10 percent. Type II ditch checks may be substituted for Type I ditch checks at the Contractor's expense. Straw bale and silt fence ditch checks shall be constructed as shown on the plans in accordance with the contract documents. Approved alternate Type I ditch checks shall be installed and maintained according to the manufacturer's recommendations.
- D. Ditch Checks: Approved alternate Type II ditch checks may be used as shown in the contract. Type II ditch checks shall not be used where drainage areas exceed 50 acres or where ditch slopes exceed 10 percent.
- E. Rock Ditch Checks: shall be constructed with clean rock. A minimum of 50 percent of the rock shall have a diameter of 6 inches or greater, with a maximum size of 12 inches. Silt fence or an equivalent filter fabric shall be placed beneath the rock ditch check as shown on the plans.
- F. Sand Bag Ditch Checks: Sand or rock for sand bags shall be a uniform granulation with a maximum aggregate size of 2 inches, shall be clean to allow percolation of water through the sand bag and shall meet the approval of the Engineer. Sand bags shall be of tightly woven burlap or other material that is sufficiently durable to remain intact for the time intended. Sand bags shall be filled approximately three-fourths full, shall be laid in horizontal courses, and successive courses shall break joints with preceding ones. The bags shall be packed against each other and tamped to provide a uniform surface.

- G. Drop Inlet Checks: Shall be constructed adjacent to the drop inlets as shown on the plans or as directed by the Engineer, as necessary to prevent sediment from entering the inlet. Material shall be in accordance with the requirements of the Type II Ditch Checks or as approved by the Engineer.
- H. Maintenance: The Contractor shall replace checks as directed by the Engineer. Periodic sediment removal shall include removal and disposal of sediment to a location where sediment will not erode into construction areas, streams or other bodies of water. The Contractor shall inspect the ditch checks for sediment accumulation after each storm event and shall remove the sediment when deposits reach approximately one-half the original height of the check. Alternate temporary erosion control methods shall be maintained in accordance with the manufacturer and as directed by the Engineer.

1.7. EROSION CONTROL BLANKET

- A. This work shall consist of furnishing and installing the erosion control blanket; including fine grading, blanket installation, stapling, and miscellaneous related work in accordance with these standard specifications, plan details and recommended manufactures instalment practices. This work shall include all necessary materials, labor and equipment for installation of a complete system.
- B. The erosion control blanket shall be used to prevent surface erosion and enhance revegetation. The erosion control blanket should contain coconut fibers for purpose of erosion control and revegetation. The blanket shall be suitable for the following:
 - 1. Slope protection
 - 2. Channel and ditch linings
 - 3. Culvert inlets and outfalls
- C. Performance Requirements:
 - 1. Erosion control blanket shall provide a temporary, biodegradable cover material to reduce slope and/or channel erosion and enhance revegetation. Erosion control blanket performance capabilities shall be determined by ASTM D 6459, "Determination of Erosion Control Blanket (ECB) Performance in Protecting Hillslopes from Rainfall-Induced Erosion", and ASTM D 6460, "Determination of Erosion Control Blanket (ECB) Performance in Protecting Earthen Channels from Stormwater-Induced Erosion".
- D. Blanket Requirements:
 - 1. Velocity: 10.0 ft/sec
 - 2. Unvegetative Shear Stress: 3.30 lb/sq. ft.
 - 3. Mass per Unit Area: 9.5 oz/sq. yd.
 - 4. Thickness: 0.30 inches
- E. Submittals: Submittals shall include complete design data, Product Data Sheets, Product Netting Information, SDS, Staple Pattern Guides, Installation Guidelines, Manufacturing Material Specifications, Manufacturing Certifications, and CAD details. In addition, the Manufacturer shall provide a test report providing data showing the performance capabilities of the erosion control blanket along with reference installations similar in size and scope to that specified for the project.
- F. Delivery, Storage and Handling:
 - 1. Erosion control blanket shall be furnished in rolls and wrapped with suitable material to protect against moisture intrusion and extended ultraviolet exposure prior to placement.
 - 2. Erosion control blanket shall be of consistent thickness with fibers distributed evenly over the entire area of the blanket.
 - 3. Erosion control blanket shall be free of defects and voids that would interfere with proper installation or impair performance.

4. Erosion control blanket shall be stored by the Contractor in a manner that protects them from damage by construction activities.
- G. Staples: The Contractor shall use the recommended staples/stakes of the chosen erosion control blanket manufacturer.
- H. High Velocity Channels: Contractor shall follow details shown on the plans in areas that are designated "High Velocity" on the plans.
- I. Execution:
1. Before placing erosion control blanket, the Contractor shall certify that the subgrade has been properly compacted, graded smooth, has no depressions, voids, soft or uncompacted areas, is free from obstructions such as tree roots, protruding stones or other foreign matter, and is seeded and fertilized according to project specifications. The Contractor shall not proceed until all unsatisfactory conditions have been remedied. By beginning construction, the Contractor signifies that the receding work is in conformance with this specification.
 2. Contractor shall fine grade the subgrade by hand dressing where necessary to remove local deviations.
 3. The Contractor shall install the erosion control blanket as directed by the owner's representative in accordance with manufacturer's Installation Guidelines, Staple Patter Guides, and plan details. The extent of the erosion control blanket shall consist of the ditch bottom and both side slopes to a maximum of 9 feet from ditch bottom and/or top of side slopes.
 4. Erosion control blanket shall be orientated in vertical strips and anchored with staples, as identified by the manufacturer's recommended installation practices. Adjacent strips shall be overlapped to allow for installation of a common row of staples that anchor through the nettings of both blankets. Horizontal joints between erosion control blankets shall be sufficiently overlapped with the uphill end on top for a common row of staples so that the staples anchor through the nettings of both blankets.
 5. Where exposed to overland sheet flow, a trench shall be located at the uphill termination. Erosion control blanket shall be stapled to the bottom of the trench. The trench shall be backfilled and compacted. Where feasible, the uphill end of the blanket shall be extended three feet over the crest of the slope.
 6. Slope erosion control blanket shall be overlapped by the channel erosion control blanket sufficiently for a common row of staples to anchor through the nettings of both blankets when terminating into a channel.
 7. Erosion control blankets in channels shall be installed parallel to the flow of water. The first roll shall be centered longitudinally in mid-channel and anchored with staples as identified in the manufacturer's recommended installation guidelines. Subsequent rolls shall follow from channel center outward and be overlapped to allow installation of a common row of staples so that the staples anchor through the nettings of both blankets.
 8. Successive lengths of erosion control blanket shall be overlapped sufficiently for a common row of staples with the upstream end on top. Staple the overlap across the end of each of the overlapping lengths so the staples anchor through the nettings of both blankets.
 9. A termination trench shall be located at the upstream termination. Erosion control blanket shall be stapled to the bottom of the trench. The trench shall be backfilled and compacted.
- J. Quality Assurance:
1. Erosion control blanket shall not be defective or damaged. Damaged or defective materials shall be replaced at no additional cost to the owner.
 2. Each individual erosion control blanket shall be inspected and weighed prior to packaging for conformance to manufacturer's specifications.

3. Every roll shall be visually inspected at time of delivery to site for damages and/or defective areas.

K. Clean Up

1. At the completion of this scope of work, Contractor shall remove from the job site and properly dispose of all remaining debris, waste materials, excess materials, and equipment required of or created by Contractor. Disposal of waste materials shall be solely the responsibility of the Contractor and shall be done in accordance with applicable waste disposal regulations.

1.8. SEDIMENT BASINS

- A. This work shall consist of constructing sediment basins as shown on the plans or as directed by the Engineer to detain sediment. This work shall also include disposal of excavated material, sediment and basin removal and site restoration.
- B. The area where a sediment basin is to be constructed shall be cleared of vegetation to enable sediment removal. The sediment basin shall be an excavated or dammed storage area with defined side slopes. Inlet and outlet areas shall be lined with rock riprap.
- C. The inlet of a sediment basin shall be constructed with a wide cross-section and a minimum grade to prevent turbulence and to allow deposition of soil particles. When the depth of sediment reaches one-half the original depth of the sediment basin in any part of the pool, all accumulation shall be removed.
- D. The Contractor shall dispose of accumulated sediment and excavated material removed during the construction of the sediment basin in locations where the material will not erode into the construction areas, streams or other bodies of water.
- E. Sediment basins shall remain in service until all disturbed areas draining into the structure have been satisfactorily stabilized. When use of a temporary sediment basin is to be discontinued, the Contractor shall remove any sediment and backfill, properly compact all excavations, restore the area to the existing ground's natural or intended condition, and sod.

1.9. SILT POND OVERFLOW

- A. Silt pond overflow shall be installed with erosion control fabric as shown on the plans. Berm to be constructed of clean shot rock limestone 4" to 8" in size.

1.10. TEMPORARY SEEDING AND MULCHING

- A. This work shall consist of furnishing and applying fertilizer, seed, vegetative mulch or other acceptable cover authorized by the Engineer. This work shall produce a quick ground cover to reduce erosion in disturbed areas expected to be redisturbed at a later date. Finish grading of areas will not be required. Hydraulic seeding and fertilizing will be permitted.
- B. Seeding and mulching shall be a continuous operation on all cut and fill slopes, excess material sites and borrow pits during the construction process. All disturbed areas shall be seeded and mulched as necessary to eliminate erosion.
- C. The Contractor shall provide permanent sodding as shown on the plans following temporary seeding.
- D. Temporary seeding mixtures of cereal grains shall be applied at a rate of 100 pounds per acre (110 kg/ha). All erodible seeded areas shall provide a minimum of 20 plants of the species planted per square foot on at least two random counts per acre in representative areas of the field. For areas with a large percentage of rock, the number of living plants shall be proportional to the percentage of erodible surface, as determined by the Engineer. The counts will be conducted 60 days after the species is planted.
- E. Fertilizer shall be applied at a rate of 40 pounds nitrogen (N) per acre.

1.11. SILT FENCE

- A. This work shall consist of furnishing, installing, maintaining, removing and disposing of a silt fence designed to remove suspended particles from sheet flow passing through the fence and to prevent sediment from polluting nearby streams or other bodies of water. At the Engineer's discretion, the location may be modified to fit field conditions. Such variations in quantity will not be considered as a change in work.
- B. Materials
 - 1. Posts: Wood, steel or synthetic posts may be used. Posts shall be of sufficient length, but no less than 4 feet, to ensure adequate embedment while fully supporting the silt fence and shall have sufficient strength to resist damage during installation and to support applied loads while in service.
 - 2. Support Fence: All geotextile silt fences shall be supported either externally by wire or other approved mesh to a height of at least 24 inches or by a suitably designed support system capable of keeping the material erect. Either method shall be strong enough to withstand applied loads.
 - 3. Prefabricated Fence: Prefabricated fence systems may be used if the systems meet all of the above material requirements.
- C. Straw Bales: The Contractor shall place bales at the bottom of embankment slopes or on the lower side of cleared areas to divert runoff and to detain sediment from sheet flow. When used to divert runoff or detain sediment, the bales shall be adequately anchored to withstand the applied load.
- D. Fabric Fence: The Contractor shall install silt fence as shown on the plans and at other locations directed by the Engineer. Fence construction shall be adequate to handle the stress from hydraulic and sediment loading. Fabric at the bottom of the fence shall be buried a minimum of 6 inches to prevent flow under the barrier. The trench shall be backfilled, and the soil compacted over the fabric. Fabric splices with a minimum 2-foot overlay shall be located only at a support post. Any installation method acceptable to the Engineer will be allowed as long as the effectiveness and intent of the silt fence is achieved.
- E. Post spacing shall not exceed 5 feet. Posts shall be driven a sufficient depth into the ground or placed on closer spacing as necessary to ensure adequate resistance to applied loads.
- F. The silt fence shall be fastened securely to the upslope side of the post. When wire support fence is used, the wire shall extend into the trench a minimum of 2 inches.
- G. Maintenance: The Contractor shall maintain the integrity of silt fences as long as the fences are necessary to contain sediment runoff. The Contractor shall inspect all silt fences immediately after each rainfall and at least daily during prolonged rainfalls. Any deficiencies shall be immediately corrected by the Contractor. In addition, the Contractor shall make a daily review of the silt fences in areas where construction activities have changed the natural contour and drainage runoff to ensure the silt fences are properly located for effectiveness. Where deficiencies exist, additional silt fences shall be installed as approved or directed by the Engineer.
- H. Sediment: The Contractor shall remove and dispose of sediment when accumulations reach approximately one-half the fence height, or sooner when directed by the Engineer. If required by heavy sediment loading, a second silt fence shall be installed as directed by the Engineer.
- I. Removal: The silt fence shall remain in place until removal is directed by the Engineer. Upon removal, the Contractor shall remove and dispose of any excess silt accumulation, grade and dress the area to the satisfaction of the Engineer, and establish vegetation on all bare areas in accordance with the contract requirements. The fence material shall remain the property of the Contractor.

1.12. TEMPORARY PIPE

- A. This work shall consist of installing and removing temporary pipe utilized to carry water under temporary roadways, silt fences, berms or other locations determined by the Engineer and to prevent the Contractor's equipment from coming in direct contact with water when crossing an active stream, intermittent streams created during heavy rainfalls or other bodies of water. Any pipe approved by the Engineer may be used.

- B. Installation of temporary pipe shall be in accordance with the specifications for permanent pipe and shall prevent water from causing erosion around the pipe. All backfill material for pipes shall be placed in 6-inch lifts and mechanically compacted. Compaction tests will not be required. Temporary pipe placed in intermittent or active streams shall be backfilled with clean rock.

1.13. TEMPORARY & PERMANENT EROSION CONTROL BLANKETS

- A. This work shall consist of furnishing and placing erosion control blankets on slopes or ditches for short-term or permanent protection of seeded areas at locations shown on the plans or as directed by the Engineer.
- B. Erosion control blankets shall be used as designated in the contract or as approved by the Engineer. The Contractor shall provide prequalified erosion control blankets of the class and type specified in the contract documents or as approved by the Engineer. Erosion control blankets shall be installed and maintained according to the manufacturer's recommendations.

1.14. TEMPORARY STREAM CROSSING

- A. This work shall consist of constructing a temporary stream crossing to facilitate the movement of equipment across a stream.
- B. The Contractor shall be responsible for the design, installation, maintenance and removal of the temporary stream crossing and any structures installed for the construction of the temporary stream crossing. Appropriate measures shall be taken to maintain near normal downstream flows and to minimize flooding upstream. The temporary stream crossing shall be constructed to permit the free movement of the stream's aquatic life.
- C. Prior to construction of the temporary stream crossing, all information shall be submitted to the Engineer as needed for the issuance or modification of the Corps of Engineer permit. The Contractor shall not begin construction on any temporary stream crossing without written permission from the Engineer.
- D. All approaches to the temporary stream crossing shall be maintained such that all storm water runoff is diverted to retention devices.
- E. When the temporary stream crossing is no longer needed, the crossing shall be removed as soon as possible and the area shall be restored to pre-project conditions or to the satisfaction of the Engineer.

1.15. GENERAL MAINTENANCE

- A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
- D. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

END OF SECTION 02350

SECTION 02411 - SELECTIVE STRUCTURE DEMOLITION**PART 1 - GENERAL****1.1 SUMMARY**

A. This Section includes the following:

1. Demolition and removal of selected site elements.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 SUBMITTALS

- A. Schedule of Selective Demolition Activities: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, interruption of utility services, use of elevator and stairs, and locations of temporary partitions and means of egress.
- B. Pre-demolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Comply with Division 01 Section "Photographic Documentation." Submit before Work begins.
- C. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.4 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Predemolition Conference: Conduct conference at Project site.

1.5 PROJECT CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Notify Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Owner will remove hazardous materials under a separate contract.

- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Engineer.
- D. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs.
 - 1. Comply with requirements specified in Division 01 Section "Photographic Documentation."
- E. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with utility companies.
 - 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems.
 - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 5. Dispose of demolished items and materials promptly.
 6. Lift Station structures to be rehabilitated shall be cleaned as indicated in these specifications, prior to new equipment installation.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Engineer, items may be removed to a suitable, protected storage location during selective demolition, and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.
- B. Lift Station structures to remain:

Light cleaning by use of Low Pressure Water Cleaning (LP WC) between 3,500 and 5,000 psi using a 0 degree rotating nozzle to remove all loose or failed coatings and any other surface contaminants such as mold, mildew, chalk, dirt, oil or grease. Pre-Treat any mold or mildew using 1 part bleach mixed with 3 parts clean potable water followed by a fresh water rinse. If all visible contaminants, dirt, oil, loose rust and other corrosion products, and grease have not been removed, Hand Tool Cleaning or Power Tool

Cleaning should be employed remove heavy deposits. All sludge, debris, and loose particles produced in the cleaning process shall be disposed of off-site legally and by a licensed professional.

END OF SECTION 02411

SECTION 02530 - SANITARY SEWER COLLECTION SYSTEM MATERIALS**PART 1 - GENERAL**

Materials for use at any location in the Sanitary Sewer system (extensions or existing) shall meet the requirements as set forth in the following Articles under this Section, or as noted and/or detailed on the project plans.

PART 2 – PIPE, PIPE JOINTS AND FITTINGS**2.1 GRAVITY SEWER**

NOT USED

2.2 FORCE MAINS**A. Ductile Iron Force Mains:**

1. Ductile Iron Pipe, Joints and Fittings: Pipe for use under this heading shall be Class 50. This material shall meet the following minimum physical strength requirements of; 60,000 psi. tensile, 42,000 psi. yield, and ten (10) percent maximum elongation. Each piece of pipe shall have the; weight, thickness, class manufacturer's mark, the year of manufacture, and the letters DI or word "DUCTILE" clearly stamped on the pipe. The pipe materials and construction shall be in accordance with all the requirements of ANSI Standard A21.51 (A.W.W.A. C-151-65). The pipe may be furnished with mechanical, push on, or flange joint ends as detailed on the plans or as required. Ductile iron piping shall be used for the discharge piping in the wet well, valve vault, and meter vault and shall transition to PVC force main piping as shown on the plans and matching the specifications in this section.
 - Mechanical Joint Pipe and Fittings: Pipe and fittings of this joint type shall be furnished complete with all glands, gaskets, tee head bolts, hex nuts, etc., all properly sized and manufactured for the required pipe and fitting sizes. All fittings and bends shall be constructed of cast or ductile iron. Materials for this service shall consist of durable, solid, cast or ductile iron meeting the minimum physical requirements of 18,000 psi. tensile strength and 40,000 psi. modulus of rupture. Fittings and bend items shall be designed and tested to permit a minimum working pressure of 250 psi. prior to being shipped from the factory. All mechanical joint fittings, bends, and joint accessory materials shall conform to ANSI Standard A21.10 and A 21.1.1.
 - Flanged Pipe and Fittings: Pipe for use with flanged ends shall be ductile iron as previously specified. Threads for the screwed-on flanges shall be designed in accordance with U.S.A. Standard B 2.1. Flanges for use shall be faced and drilled in accordance with U.S.A. Standard B 16.1, 125 lb. All joint and joint materials, shall be designed and tested for a minimum working pressure of 250 psi. Flanged branch fittings and bends shall meet or exceed the pipe and joint materials requirements. The flange joint bolt circle and drilled holes shall match those of U.S.A. Standard B 16.1, 125 lb. All pipe and fittings shall be furnished with the properly sized; bolts, nuts, and best quality, 1/8-inch thick rubber gaskets. The interior surface of all pipe and fittings shall be coated with an approved epoxy lining, factory applied.
 - Uni-Flange: Plain end pipe connections to flange shall be made using uni-flange UFA200-C-4.

PART 3 - MANHOLES**3.1 MANHOLES**

NOT USED

PART 4 – PIPE BEDDING

- 4.1 Materials to be used for this purpose shall consist of fine, clean, durable particles of crushed stone. Crushed stone used for this purpose shall consist of materials passing a 1-inch sieve to dust.

PART 5 – LIFT STATIONS**5.1 WET WELL MOUNTED LIFT STATIONS**

NOT USED

5.2 WET WELLS AND VAULTS

All pipe openings through the wet well walls shall be sealed with a resilient connector in accordance with ASTM C923. The connector shall provide a flexible and watertight seal between the pipe and wall opening.

The wet well shall contain stainless steel guide rails for the installation and removal of the pumps. There shall be provided stainless steel lifting chains and floats for control of the pumps as called for in Section 16200 and as recommended by the pump manufacturer. Floats shall be provided for the control of the pumps and alarms.

The wet well shall have a 4" minimum diameter Type 304 stainless steel air vent extending through the top slab. All vents shall have a charcoal filter at the end of the vent pipe. The filter shall be such that the filter material may be replaced without replacing the vent filter piping.

Structures shall be cleaned per specifications listed in Section 02411 – Selective Structure Demolition.

The interior of the wet well shall be epoxy seal coated per the following:

- a. Concrete surface shall be prepared in accordance with SSPC-SP13/NACE No. 6 Severe Service
- b. Cementitious repair mortar shall be used for structural repairs or surfaces repairs exceeding a depth ¼ inch in accordance with Manufacturer's written instructions.
- c. Series 218 MortarClad applied evenly at a minimum 1/16 inch thickness maximum ¼ inch to provide a continuous, void-free film.
- d. Tnemec Series 343 Perma-Shield H2S applied at 100-125 mils dry film thickness over the entire epoxy cementitious mortar surface.
- e. Tnemec Series 435 Perma-Glaze applied at 15-20 mils dry film thickness over the entire epoxy lining basecoat surface.

5.3 BASIN AND VAULTS ACCESS COVER

Aluminum basin access covers shall be provided with each basin assembly and sized according to the plans. Each cover shall have a hinged access opening properly sized for installation and removal of the wastewater pump, check valve assemblies, gate valves, and access to magnetic flow meter. The access cover shall have a minimum of two (2) hinges, and shall be constructed of non-skid, tread-plate aluminum with a minimum thickness of ¼-inch, capable of withstanding a live load of 300 LBS P.S.F. Doors shall open to 90° and automatically lock with stainless steel hold open arms with aluminum release handles. Doors shall close flush with the frame and rest on a built-in neoprene cushion/gasket. Lifting handle, hinges, and all fastening hardware shall be stainless steel. Unit shall lock with a stainless steel slam lock with removable key. Access covers shall be bolted to the basin with stainless steel cap screws, or embedded into the concrete with a continuous anchor system.

The wet well access hatch shall have an integral nut rail. The upper guide rail brackets and lifting chain hooks shall be mounted to the nut rail. Model and type of access cover shall be of type depicted on the plans.

PART 6 – PUMPS AND MOTORS

- 6.1 The pump head condition shall be 89 gpm at 55 feet TDH. Pumps and motors shall be one of the following manufactures: KSB, Flight or Sulzer

PART 7 – CONNECTION TO PRESENT SYSTEM

7.1 MATERIALS

- A. Materials to be used for connections to the present system shall be in accordance with the preceding Articles as applicable, under this Section of these specifications. Installation and testing of all items shall be in strict accordance with the following Section of these specifications. Under all circumstances, extreme care must be exercised when connecting to the present system. Foreign materials of whatever nature, must not be permitted to enter the system.
- B. The Contractor shall notify the District prior to connection so that proper notification to those affected may be provided. Where system segment shut-down is required, the actual shut-down is not to be done until all connection materials, equipment, and personnel are at the site, and the existing system point of connection has been exposed, thoroughly cleaned, and prepared for immediate installation of the connection materials. All personnel shall be thoroughly instructed as to the procedure to be followed and ready for work. All connections are then to be made in an efficient manner requiring the least amount of time and maximum amount of care.

PART 8 – HIGHWAY CROSSING MATERIALS

NOT USED

PART 9 – CONCRETE FOR PIPE ENCASEMENT AND/OR SUPPORT

NOT USED

PART 10 – POLYETHYLENE ENCASEMENT FOR DUCTILE IRON PIPE.

This Article covers materials for polyethylene encasement to be applied to underground installations of ductile iron pipe, fittings, valves, and other appurtenances.

Polyethylene film shall be manufactured of virgin polyethylene material conforming to the following requirements of A.S.T.M. Standard Specifications D-1248-78 for Polyethylene Plastics Molding and Extrusion Materials:

10.1 Raw material used to manufacture polyethylene film:

Type: 1

Class: A (natural) or B (black)

Grade: E-1

Flow rate: 0.4 maximum

Dielectric strength: Volume resistivity, minimum $\text{ohm-cm}^3=10^{15}$

10.2 Polyethylene film:

Tensile strength: 1200 psi (8.3 Mpa) minimum

Elongation: 300 percent minimum

Dielectric strength: 800 V/mil. (31.5 μm) thickness minimum

10.3 Thickness:

Polyethylene film shall have a minimum thickness of 0.008-in. (8 mil. or 200 μm). The minus tolerance on thickness shall not exceed 10 percent of the nominal thickness.

10.4 Tube size or sheet width:

Tube size or sheet width for each pipe diameter shall be as listed below.

Nominal Pipe Diameter (in.)	Minimum Polyethylene Width in. (cm)	
	Flat Tube	Sheet
4	16 (41)	32 (82)
6	20 (51)	40 (102)
8	24 (61)	48 (122)
10	27 (69)	54 (137)
12	30 (76)	60 (152)
14	34 (86)	68 (172)

16	37 (94)	74 (188)
24	41 (104)	82 (208)

PART 11 – SANITARY FORCE MAIN LOCATOR WIRE

Force main locator wire shall be installed with all force main, fittings, and valve installation. The material to be installed for this purpose shall consist of standard electric service wire, a single No. 12 U.L. approved copper wire of the solid type with insulation for 600 volts. Insulated wire for this service shall be provided in standard rolls of not less than five hundred (500) foot lengths.

- 11.1 Splices: Splices shall only be allowed where accessible. Buried splices will not be allowed.
- 11.2 Wire Contact: In order to make use of the wire for force main location purposes, a splice point shall be placed adjacent to a valve box location. The wire shall be brought to the ground surface at these locations so a power source can be connected. The wire shall run outside up alongside the valve box, then through a hole into the valve box just below ground level. The splice connector shall be left exposed at the top of the valve box at the wire contact locations. Wire contact points shall be provided at no more than 500-foot intervals, or where approved by the Engineer, on a case-by-case basis.

Force main locator wire installation shall be in accordance with applicable Articles of these specifications.

SANITARY SEWER COLLECTION SYSTEM INSTALLATION

PART 1 – GENERAL

- 1.1 Underground pipe construction shall be in accordance with the recommended practice as outlined by the pipe manufacturer.
- 1.2 All excavations shall be made to such depths and widths as will give ample room for building all structures, sewers, and appurtenances as detailed on the approved plans.
- 1.3 Clearing and grubbing the site of work, excavation of earth or other materials, sheeting and bracing, pumping and drainage, backfilling, rough grading, and cleaning up shall all be done as specified. In addition, all work maintaining or replacing existing fences, roadways, drives, lawns or structures disturbed by the work, safety precautions and other miscellaneous general work not specified under specific items is to be included in the work done under this section.

PART 2 - SITE AND WORK PREPARATION

- 2.1 Prior to starting the various installations, connections, and/or changes as required the contractor shall notify the District a minimum of twenty-four (24) hours prior to the start of construction. After so doing, the Contractor shall clear the route of all trees, shrubs, and other objects or materials which may directly interfere with the construction. All other utility companies or organizations shall be notified for location of their respective facilities prior to starting any work. All trees, shrubs, bushes, etc., which will not interfere with the construction shall be protected from damage. Work preparations shall include having all necessary material items, equipment, and an adequate labor force at the site in working condition, and completely instructed and prepared to perform the work to completion as required.

PAR 3 - DRAINAGE

- 3.1 The Contractor shall control the grading in the vicinity of the pipe trenches so that the surface of the ground will be properly sloped to prevent water from running into the excavated areas. Any water or other liquid wastes which accumulate in the excavated areas shall be promptly removed.

PART 4 - TRENCH EXCAVATION

- 4.1 Contractor shall perform all excavation necessary for or incidental to the proper installation and construction of the work shown and detailed on the drawings, or as directed by the Engineer. Excavation shall include the removal of trees, shrubs, paving, and undesirable materials. Excavation shall be done along the lines as staked, and indicated on the plans and shall be continuous without improper bends or kinks. Trenches shall be of sufficient width to provide a working space on each side of the materials being installed. During excavation, materials to be used for backfill shall be stock piled, in an orderly manner, a sufficient distance from the edge of the excavation to avoid overloading which might cause slides or cave-ins, and in such

manner so as not to interfere with public travel whenever possible. The contractor shall provide all barricades, lights, temporary crossing, warning signs, etc., that may be necessary to protect the public and the work from injury or damage.

- 4.2 Trenches for sewer main and appurtenances shall be excavated to a sufficient depth to obtain a minimum of thirty-six (36) inches of cover over the top of the pipe, except as otherwise required to make taps and connections to existing mains. All excavation shall be made so as to provide a continuous bearing for the barrel of the pipe. Holes of sufficient size shall be excavated to permit ample room for making joints. The bottom of trenches shall be free from rocks, clods, debris, and all other unsuitable materials, and shall consist of properly shaped earth, or tamped granular material as specified in the previous Section of the specifications. The Contractor shall take care not to excavate below grade except to remove undesirable material, or as directed by the Engineer.
- 4.3 Where rock is encountered in the trenching operation, the excavation shall be carried to a depth of four (4) inches below the pipe bottom depth assuming proper cover as specified under the preceding paragraph. Solid rock is hereby defined as such material which cannot be excavated by an excavator with an operating weight of at least 52,000 pounds and a flywheel horsepower of at least 155 horsepower. Where solid rock is encountered and it is necessary to drill and blast same, the Contractor shall provide all suitable equipment and personnel for carrying out the operation in a safe and sensible manner. The Contractor's Insurance shall include specific coverage for this and directly or indirectly related items.
- 4.4 When encountered, the Contractor shall strip from the solid rock areas all overlying earth in sections and shall then notify the Engineer for inspection and measurement. The Engineer may then take levels on the surface of the rock and adjacent ground level, or he may at his discretion, defer the measurement until after excavation is completed. In any event, the Contractor shall not refill any trench where rock is encountered until told to do so by the Engineer or his agent. The rock volume, using lengths and depths as measured in the field, shall be determined on the basis of using a foot trench width as depicted on the construction drawings. The Contractor will not be allowed payment for any rock claimed unless same has been measured as herein provided.'
- 4.5 Excess materials resulting from the rock excavations shall be spread over or adjacent to the trench area where acceptable, or shall be picked up and removed from the site for disposal at a suitable location. It may also be necessary to place a thin layer of earth over the rock backfill areas. This may be hauled in from a stockpile location. This earth layer must be of sufficient depth to support the growth of vegetation. All loose rock and debris shall be thoroughly cleaned up and disposed of. The excavated areas shall be left in a neat, clean, acceptable condition.

PART 5 - HANDLING OF MATERIALS

- 5.1 All pipe, fittings, valves, manholes and other accessories, shall be unloaded, stored rehandled, and installed by methods and in such a manner as to insure their final location in a sound and undamaged condition, conforming in all respects to specified requirements. Under no circumstances shall pipe, fittings, valves, manholes, or other accessories, be dropped to the ground, or otherwise subjected to possible damage from impact or shock. Such materials shall be loaded by lifting with machine or hoist, or by skidding,. Pipe handled on skidways shall not be skidded or rolled against other pipe. When pipe line materials at the site of the work, each piece shall be unloaded opposite, or as close as possible to the point of installation in order to avoid unnecessary rehandling.
- 5.2 Under all circumstances, all materials for use shall be handled in a workman-like manner, using the necessary manpower and equipment to perform the task in accordance with the manufacturer's recommendations.
 - A. Protection of Materials, Coatings, and/or Linings: All materials shall be handled in such manner that neither the coatings or the linings will be damaged. Hooks for insertion into the ends of the pipes, fittings, valves, manholes, and other accessories, shall have broad, well-padded contact surfaces, and shall be of such design and size that uniform support will be provided. Under most circumstances, damage to outside coatings are repairable, and the necessary repairs shall be properly made prior to installation. Damage to interior linings are not considered repairable, and therefore, the damaged item shall be replaced at the Contractors expense.
 - B. Handling Materials Into Trench: Proper equipment, tools, facilities, and methods satisfactory to the Engineer, shall be provided and used by the Contractor for the safe handling of all materials. Fittings,

valves, and other accessories shall be carefully lowered into the trench or excavation, piece to piece to protect coatings and linings. Under no circumstances shall any materials be dropped or dumped into the trench.

PART 6 - PIPE LAYING AND TRENCH BACKFILL

6.1 GENERAL

- A. Installation shall start at the downstream end of the project and shall proceed upstream. All pipe spigot ends shall face downstream and bell ends shall face upstream. Laying of the pipe shall commence immediately after the excavation is started, and the Contractor shall use every possible means to keep the completed pipe installation closely behind the trenching. The Engineer may stop the trenching when in his opinion, the trench is open too far in advance of the pipe laying operation. The Contractor may lay pipe in the best manner adapted to securing speed and good results.

6.2 PIPE JOINTS

- A. The Contractor shall have the necessary equipment and tools available for making the joints for the specific materials being used. In accordance with applicable items under the previous Section of these specifications, acceptable joints for the various pipe line and fitting materials are listed as follows:

- 1. Cast or Ductile Iron Pipe: Ring or flange joint with mechanical joint for fittings, valves, and adapters.

- 2. P.V.C. Pipe: Ring joint with necessary transition gaskets for connection to mechanical joint fittings, valves, and adapters.

- a. Pipe Joint Adapters: The Contractor shall provide the necessary adapters for all connection changes from ring-joint, slip, or mechanical joint to flanged joint as and where required.

All pipe spigot ends shall be visibly marked to fully "make-up" the joint. With exception of field cut pipe, all "make-up" marks shall be placed on the pipe at the factory. Field cut pipe shall be marked for full joint depth prior to insertion.

- 3. Installation: Mechanical joint restraint shall require conventional tools and installation procedures per AWWA C600, while retaining full mechanical joint deflection during assembly.

- a. Proper actuation of the gripping wedges shall be ensured with torque limiting twist off nuts.

6.3 PIPE CUTTING

- A. Cutting of pipe for closure pieces with installation of valves or fittings, or for any other reason, shall be done in a neat and workman-like manner without damage to the pipe or linings. The cutting operation shall leave a smooth cut end at right angles to the longitudinal axis of the pipe. The exterior surface of the cut end shall be beveled, and the interior surface shall be reamed or filed free of all rough edges and protrusions. All pipe cutting shall be done by saw or mechanical pipe cutters of an approved type. Upon completion of the cutting and trimming operation, the pipe end or ends shall be marked for "make-up" depth. Prior to insertion, the pipe shall be thoroughly cleaned of all foreign materials, including filing and cutting debris.

6.4 PIPE ALIGNMENT

- A. Pipe lines intended to be straight shall be laid straight. Deflections from a straight line shall not exceed the manufacturer's recommendations for joint deflections. Should the planned or specified alignment require deflections in excess of the maximum recommended for the type of pipe being installed, when using a standard pipe length within the limits of available space, then either shorter pipe sections, or additional bends shall be installed.

6.5 EXISTING UTILITIES

- A. Existing utilities shall be protected during the construction period. Where necessary, the existing utility shall be removed or temporarily relocated, and replaced upon completion of that phase of the work creating this requirement. Under all circumstances, the utility involved and the parties being affected by the disrupted service shall be notified in advance of the proposed operation. All changes and work shall be subject to the approval and acceptance of the utility involved and the Engineer.

6.6 QUALITY

- A. Damaged or unsound pipe, fittings, and accessories of whatever nature shall be rejected and removed from the work. All joints shall be made as previously specified. Each piece of pipe and all fittings, valves, etc., shall be checked and cleared of debris prior to being put in place. All gaskets shall be rechecked for operation and bolt tightness prior to installation. All open ends of pipe, fittings, etc., shall be carefully plugged or sealed at the end of each days work to prevent entrance of animals, water, and other foreign matter. All excavation shall be made to neat line and grade.

All personnel involved in any way with the work must be made aware of the fact that the work shall result in a first-class, professional job.

6.7 SANITARY FORCE MAIN TRACER TAPE INSTALLATION

The Contractor shall furnish all materials and install the force main tracer tape as specified in the previous Section of these specifications. The three (3) inch wide detectable tape shall be installed directly above the force main locations as the trench backfill progresses, to permit an earth cover of 12 to 18 inches over the tape. The tape material shall be installed in accordance with the manufacturer's recommendations. The tape is to be placed in a manner such that trench backfill settlement will not place an excessive tensile stress on the material.

6.8 SANITARY FORCE MAIN LOCATOR WIRE INSTALLATION

The Contractor shall furnish all materials and install the force main locator wire as specified under the previous Section of these specifications. The No. 12 insulated wire shall be placed under the force main at the bottom of the trench or wrapped around the force main. The wire shall be brought up alongside of a valve box. The wire shall be spliced at these locations using a standard plastic or rubberized wire connector. This will permit placing a power source on the wire for both directions in order to use same for locating the force main. The wire shall be wired to the valve box or post to retain its location. At no point will buried splices be allowed. The wire shall be loosely knotted at each splice location to prevent direct stress on the connection. The wire shall be laid slack in the trench so same will not be subject tensile stress as the trench is being backfilled.

Prior to final acceptance by Owner, Contractor shall demonstrate that the locator wire works to the satisfaction of the Owner and/or his representative.

6.9 TRENCH BACKFILL

- A. After placing the piping in the trench, the Contractor shall backfill under and around the pipe simultaneously filling and tamping on both sides with sufficient earth to firmly hold the pipe in position. Extreme care must be exercised with the backfill operations to ensure that no sizable stones or rocks come into contact with the pipe surfaces. After carefully placing and tamping the initial backfill in place to at least six (6) inches over the top of the pipe barrel, the remaining materials may be pushed into the trench. No boulders, broken pavement, or large pieces of blasted rock shall be used in the trench backfill. Any trench improperly bedded or backfilled shall be excavated, examined, and replaced at the Contractor's expense. All non-usable materials shall be picked up and removed from the site to an acceptable disposal location. Upon completion of the initial backfill, the backfill surface shall be neatly mounded to allow for settlement. As the work progresses and settlement occurs, the trenching surface shall continue to be graded and shaped so as to secure a final condition where no further settlement shall occur.
- B. In areas where pavement or permanent surfacing is removed and is to be replaced, the entire backfill shall be made using fine crushed stone placed in six (6) inch layers and compacted to a maximum density.
- C. Initial clean-up, in accordance with Article 14 shall occur as the trench backfill operation proceeds. Before final acceptance of the work is made, the Contractor shall travel the lines with the Engineer, and any settlement or unsightly areas shall be repaired or corrected as directed. Upon acceptance, the Contractor shall proceed with the final clean-up, grading, and seeding operation, in accordance with Article 15 this Section of the specifications.

PART 7 – SERVICE LINE WYE INSTALLATION

NOT USED

PART 8 – MANHOLE INSTALLATION

NOT USED

PART 9 – LIFT STATION INSTALLATION

Lift Station parts shall be installed as shown on the plans.

A 2-inch stainless steel double guide rail system shall be provided for each pump base. Float bracket and floats switches shall be installed. Contractor to confirm existing float elevations prior to demolition and set new floats to the same elevation.

PART 10 – GRINDER PUMP STATION INSTALLATION

NOT USED

PART 11 – WORK ADJACENT TO AND/OR CROSSING STATE OF COUNTY HIGHWAYS

NOT USED

PART 12 – TESTING OF GRAVITY SEWERS

NOT USED

PART 13 – TESTING OF FORCE MAINS**13.1 General**

- A. Sufficient backfill shall be placed prior to fillings with water and filed testing to prevent lifting of the pipe. When local conditions require that the trenches be backfilled immediately after the pipe has been laid, the testing may be carried out after backfilling has been completed.
- B. At least seven (7) days shall elapse after the last concrete thrust blocking has been cast with normal (Type 1) Portland cement. This elapsed time may be reduced to three (3) days with the use of high-early strength (Type 111) Portland cement.

13.2 Procedure

- A. The following procedure is based on the assumption that the pressure and leakage test will be performed at the same time. Separate tests may be made if approved by the Owner. If separate tests are made, the pressure test shall be made first, the duration of the pressure test may be reduced to one (1) hour and the test pressure for the leakage test may be reduced to the maximum working pressure that will occur on that last portion of the line. Each section of the pipeline shall be slowly filled with water and all air expelled by means of taps at high points. The specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Owner. The test pressure shall be maintained by additional pumpage if necessary for the specified time during which all exposed pipe, fittings, valves, and hydrants shall be carefully examined. All effective elements shall be repaired or removed and replaced and the test repeated until all visible leakage has been stopped and the allowable leakage requirements have been met.

13.3 HYDROSTATIC TESTS

- A. A two (2) hour test shall be made on each segment of the water lines between end points at a test pressure of at least 50% in excess of normal maximum operating pressure, not to exceed 200 psi. The test pressure shall be determined by the District and suitable gauges for checking same shall be supplied and connected by the Contractor. A gate valve or pressure relief valves shall be supplied and connected by the Contractor. A gate valve or pressure relief fitting shall be placed at each end of the segment being tested unless otherwise directed. Allowable pressure drop during the two (2) hour test shall be limited to 3% of the test pressure.
- B. Any leaks evident at the surface shall be uncovered, repaired, and/or replaced. All leaking joints shall be tightened, or remade, or replaced, and re-tested. All pipe, fittings, valves, or other accessories found defective under this test shall be removed and replaced at the Contractors expense.

13.4 ALLOWABLE LEAKAGE

- A. The Contractor shall furnish the gauges and measuring device for the leakage test, pump, pipe, connections and all other necessary apparatus, and shall furnish the necessary assistance to conduct the test. The duration of each leakage test shall be two (2) hours and during the test the main shall be subjected to the pressure required above or as specified in the purchaser's addendum to this standard. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe or any valved section thereof to maintain the specified leakage test pressure after the pipe has been filled with water and the air in the pipeline has been expelled. No installation will be accepted if the leakage is greater than that determined by the formula:

$$\frac{L}{7,400} = \frac{ND\sqrt{P}}{P + 50 \text{ psi}}$$

L is the allowable leakage in gallons per hour; N is the number of joints in the length of pipeline tested; D is the nominal diameter of the pipe in inches; and P is the average test pressure during the leakage test in pounds per square inch gauge.

PART 14 – INITIAL CLEAN UP, GRADING, AND REPLACEMENT

The Contractor shall provide the necessary labor and equipment to permit initial clean up as the sewer main is being installed. Immediately following trench backfill, all areas disturbed by excavation shall be graded to conform to the adjacent ground levels. Earth shall be neatly mounded over the trench location. All debris, of whatever nature, due to the sewer main and service installation, shall be picked up and disposed of. All walks, driveways, roads, streets, etc., shall be replaced to original condition.

PART 15 – FINAL CLEAN UP, FINISH GRADING, SEEDING, AND STRAW

Following completion of the various routes and initial trench settlement, the Contractor shall go over the routes and clean-up all remaining debris. Following completion of the final clean up, all areas in any way disturbed by the installation shall be graded to conform to the adjacent ground areas. After final grading, the graded areas shall be seeded and covered with straw. In areas of rock excavation, it will be necessary to place a four inch layer of earth over the exposed areas to form a seed bed for vegetation. The earth shall be applied as part of the final grading operation.

PART 16 – GUARANTEE

The Contractor shall guarantee all materials and workmanship in any way involved with this project for a period of one year from the date of final acceptance. Date of final acceptance is hereby defined as being the date on which the Board of Directors accepts the improvements.

END OF SECTION 02530

SECTION 02920 - FINISH GRADING AND SEEDING**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes: Seeding.

1.2 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.
- E. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of grass seed.
 - 1. Certification of each seed mixture for turf grass sod.
- C. Product certificates.
- D. Planting Schedule: Indicating anticipated planting dates for each type of planting.

1.4 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
 - 1. Report suitability of topsoil for lawn growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

1.5 MAINTENANCE SERVICE

- A. Initial Lawn Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
 - 1. Seeded Lawns: 60 days from date of Substantial Completion.
 - a. When initial maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.

PART 2 PRODUCTS**2.1 SEED**

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with United States Department of Agriculture Rules and Regulations under the Federal Seed Act. for purity and germination tolerances.

B. Seed Species: State-certified seed of grass species, as follows:

1. Proportioned by weight as follows:
 - a. 20% Adventure Fescue
 - b. 20% Jaguar IV Fescue
 - c. 20% Olympic Fescue
 - d. 20% Arid Fescue
 - e. 20% Regal Perennial

2.2 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
- B. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
- C. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient.

2.3 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 1. Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.
- B. Perlite: Horticultural perlite, soil amendment grade.
- C. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- D. Sand: Clean, washed, natural or manufactured, free of toxic materials.

2.4 ORGANIC SOIL AMENDMENTS

- A. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
- B. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.

2.5 FERTILIZER

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
- B. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
- C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
- D. Composition: 12 percent nitrogen, 12 percent phosphoric acid, and 10 percent potash, by weight.

2.6 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

PART 3 - EXECUTION

3.1 LAWN PREPARATION

- A. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- B. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
- C. Spread planting soil mix to a depth of 4 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- E. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Before planting, restore areas if eroded or otherwise disturbed after finish grading.

3.2 SEEDING

- A. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
- B. Sow seed at a total rate of 7 to 8 lb./1000 square feet or 350 lb./acre.
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
- E. Anchor straw mulch by crimping into soil with suitable mechanical equipment.

3.3 LAWN MAINTENANCE

- A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.
- B. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings.

3.4 SATISFACTORY LAWNS

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any and bare spots not exceeding 5 by 5 inches.
- B. Use specified materials to reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

END SECTION 02920

SECTION 03300 - CAST-IN-PLACE CONCRETE**PART 1 - GENERAL****1.1 SUMMARY**

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
- B. See Division 2 Section "Earthwork" for drainage fill under slabs-on-grade.
- C. See Section 03050 for Crystalline Waterproofing Additive.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For steel reinforcement.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301, "Specification for Structural Concrete," Sections 1 through 5.
 - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- C. Preinstallation Conference: Conduct conference at Project site.

PART 2 - PRODUCTS**2.1 FORM-FACING MATERIALS**

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.
- C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.

- D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I or II.
- B. Normal-Weight Aggregates: ASTM C 33, graded, 3/4-inch nominal maximum coarse-aggregate size.
 - 1. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Water: ASTM C 94/C 94M and potable.
- D. Air-Entraining Admixture: ASTM C 260.
- E. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
 - 7. Waterproofing Admixture: See Section 03050.
 - A. Storage structure walls and slab
 - B. Lift station wet well walls, footing and top slab

2.4 WATERSTOPS

- A. PVC Waterstops: CE CRD-C 572 with factory-installed metal eyelets for embedding in concrete to prevent passage of fluids through joints. Factory fabricated corners, intersections, and directional changes.
 - 1. Manufacturers:
 - a. Bometals, Inc.
 - b. Greenstreak
 - c. Meadows, W.R., Inc.
 - d. Murphy, Paul Plastics Co.
 - e. Progress Unlimited, Inc.
- B. Self-Expanding Butyl Strip Waterstops: Manufactured rectangular or trapezoidal strip, butyl rubber with sodium bentonite or other hydrophilic polymers, for adhesive bonding to concrete, 3/4 x 1 inch.
 - 1. Products:
 - a. Colloid Environmental Technologies Company; Volclay Waterstop-RX
 - b. Concrete sealants, Inc.; Conseal CS-231
 - c. Greenstreak; Swellstop
 - d. Henry Company, Sealants Division; Hydro-Flex
 - e. JP Specialties, Inc.; Earthshield Type 20
 - f. Progress Unlimited, Inc.; Superstop
 - g. TCMirallDRI; Mirastop

2.5 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
- F. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.6 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

2.7 CONCRETE MIXTURES

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
- B. Proportion normal-weight concrete mixture as follows:
 - 1. Minimum Compressive Strength: 4000 psi at 28 days.
 - 2. Maximum Water-Cementitious Materials Ratio: 0.40.
 - 3. Slump Limit: 4 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
 - 4. Air Content: 6 percent, plus or minus 1.0 percent.
 - 5. Air Content: Do not allow air content of troweled finished floors to exceed 2.5 percent.

2.8 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.9 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.
 - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork according to ACI 301 to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.4 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

3.5 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
 - 1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
- C. Cold-Weather Placement: Comply with ACI 306.1.
- D. Hot-Weather Placement: Comply with ACI 301.

3.6 FINISHING FORMED SURFACES

- A. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
- B. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.7 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.8 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

3.9 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
 - 1. Testing Services: Tests shall be performed according to ACI 301.

END OF SECTION 03300

SECTION 09960 - CORROSION AND INFILTRATION PROTECTION LINING**PART 1 - GENERAL****1.01 SUMMARY**

- A.** This section covers work, materials and equipment required to install a monolithic multi-layer/component concrete manhole – wet-well lining system to provide infiltration and corrosion protection.
- B.** This section includes procedures for surface preparation, cleaning, application and testing.

1.02 SUBMITTALS

- A.** Submit technical data sheets on each product used, including ASTM test results indicating the product conforms to and is suitable for its intended use per these specifications.
- B.** Material Safety Data Sheets (MSDS) for each product used.
- C.** Submit technical data sheets and project specific data for repair materials to be top coated with the coating products including application, cure time and surface preparation.
- D.** Provide samples of the cured system including stepped samples showing stages of multi-layer/component applications.
- E.** Applicator Qualifications:
 - 1. Manufacturer and Contractor specializing in the performance of work specified in this section with a minimum of three (3) years documented experience and 3,000 vertical feet of application.
 - 2. Five (5) references of municipal sanitary sewer projects successfully performed within the past three years for projects similar in size and scope.

1.03 QUALITY ASSURANCE

- A.** Coating material shall be produced in an ISO 9001 certified facility.
- B.** Furnish materials of quality required by ASTM standards or other approved standards and specification.
- C.** Coating products shall be capable of being installed and curing properly within the specified environments. Coating products shall be resistant to all forms of chemical or bacteriological attack found in municipal sanitary sewer systems and capable of adhering to the substrates and repair products.
- D.** Coating products must have been tested by and passed ASTM G210-13 Severe Wastewater Analysis Testing (SWAT).
- E.** Repair product(s) shall be fully compatible with coating product(s) including ability to bond effectively to the host substrate and coating product(s) forming a composite system.
- F.** Contractor shall utilize equipment for the spray application of the coating product(s) which has been approved by the coating product manufacturer; and, Contractor shall have received training on the operation and maintenance of said equipment from the coating product manufacturer.
- G.** Contractor shall be trained by, or have their training approved and certified by, the coating product manufacturer for the handling, mixing, application and inspection of the coating product(s) to be used

as specified herein.

- H.** Contractor shall be trained in the use of testing or inspection instrumentation and knowledgeable of the proper use, preparation and installation of the coating products to be used as specified herein.
- I.** Provide guarantee against defective materials and workmanship in accordance with the requirements of these specifications.

1.04 DELIVERY, STORAGE AND HANDLING

- A.** Delivery and Handling: Prevent moisture damage and contamination of materials during delivery and handling.
- B.** Storage: Store materials in undamaged condition with seals and labels intact as packaged by the manufacturer.
 - 1. Liquid products shall be protected from freezing while being stored.

1.05 DEFINITIONS:

- A.** Cleaning: Removal of sand, dirt, roots, grease and all other solid or semi-solid material from the structures as required for proper application of patching and coating products.
- B.** Faults: Leaking joints, cracks, breaks or other imperfections in the structure.

1.06 JOB CONDITIONS

- A.** Environmental Requirements:
 - 1. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the Manufacturer. Do not apply the products of this Section to frozen surfaces.
 - 2. Do not apply coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the Manufacturer.
- B.** Protection:
 - 1. Public Safety: If public safety is endangered during the progress of the rehabilitation work, provide adequate protective measures to protect public pedestrian and vehicular traffic on streets and walkways.
 - a. Signs, signals and barricades used shall conform to requirements of Federal, State and Local laws, rules, regulations, precautions, orders, and decrees.
 - 2. Existing Facilities Protection: Protect existing structures from damage due to operations associated with work of this Section.
 - 3. Personnel Protection: It is the responsibility of the Contractor to provide appropriate protective measures to ensure that chemicals are under the control of the Contractor at all times and are not available to unauthorized personnel or animals.

1.07 WARRANTY

- A.** Manufacturer and Applicator warrant the liner system against failure for a period of 10 years. "Failure" will be deemed to have occurred if the protective lining fails to prevent the internal deterioration or corrosion of the structure or prevent groundwater infiltration. If any such failure occurs within 10 years of initial completion of work on a structure, the damage will be repaired at no cost to the Owner. "Failure" does not include damage resulting from mechanical or chemical abuse

or act of God. Mechanical or chemical abuse means exposing the lined surfaces of the structure to any mechanical force or chemical substance not customarily present.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with requirements, manufacturers that may be used include:

1. OBIC, LLC.

2.02 PROTECTIVE LINING SYSTEM MATERIALS

A. The protective lining system shall be a multi-layer/component protective lining system, OBIC including:

1. Polyurea Adhesion Coating
2. Polymer Surfacer Layer
3. Final Polyurea Armor Layer

2.03 LINER SYSTEM ARMOR LAYER

A. 100% solids, no volatile organic compound (VOC), moisture tolerant, elastomeric polyurea coating to provide infiltration and corrosion protection. Material shall be capable of curing properly given the project site conditions and temperatures conforming to the following minimum physical requirements:

<u>Property</u>	<u>Value</u>
Hardness, D-2240	D 48
Tensile strength, D-412	3315 psi
100% Modulus, D-412	1668 psi
200% Modulus, D-412	1960 psi
300% Modulus, D-412	2650 psi
Tear resistance/DIE-C, D-624	417 pli
Ultimate elongation, D-412	395 %
Taber Abrasion, mg loss CS17	15 mg loss
Flexibility, 1/8" mandrel	Pass
ASTM G210-13 SWAT	Pass

2.04 LINER SYSTEM SURFACER LAYER

A. 100% solids, no volatile organic compound (VOC), moisture tolerant, elastomeric polyurethane coating to provide infiltration and corrosion protection. Material shall be capable of curing properly given the project site conditions and temperatures conforming to the following minimum physical requirements:

<u>Product Type</u>	<u>Value</u>
Density (ASTM D – 1622	6-8 pcf
Compressive Strength 1"	130-180 psi
Closed Cell Content	> 94%
Water Absorption	< 0.03 lbs/sqft
Maximum Service Temp	180 deg
Viscosity (A side) @ 72 deg F	675 cps
Viscosity (B side) @ 72 deg F	200 cps

PART 3 - EXECUTION**3.01 SURFACE PREPARATION**

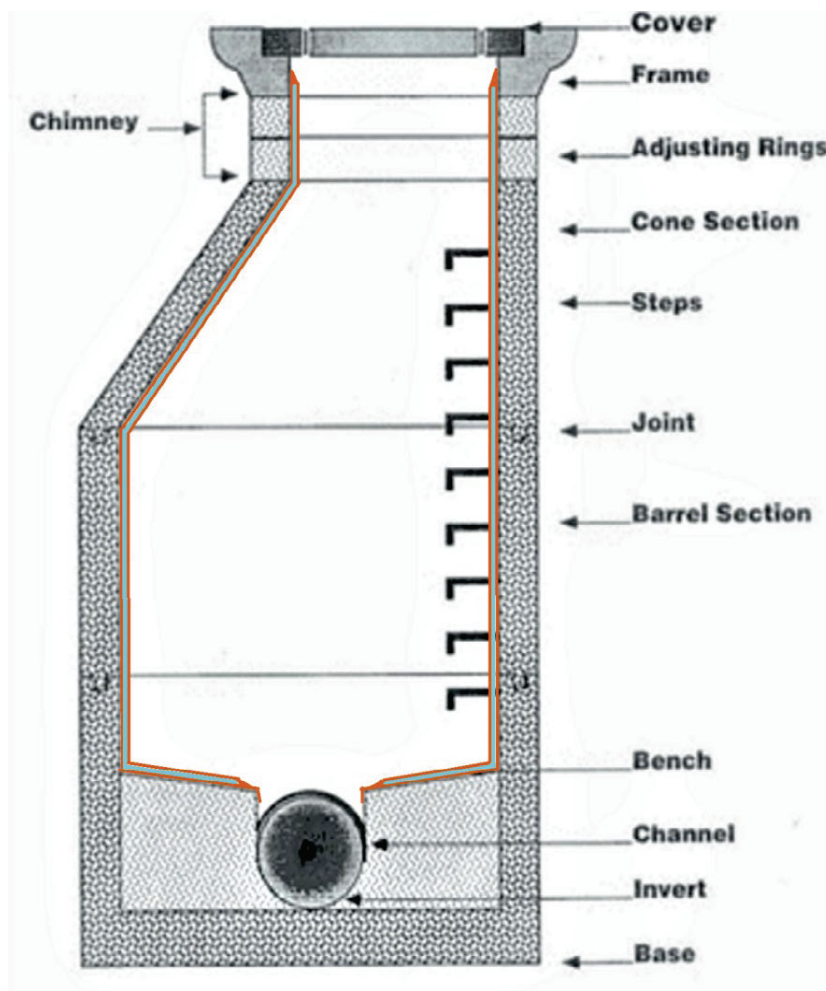
- A.** Conduct surface preparation program to include monitoring of atmosphere for hydrogen sulfide, methane, low oxygen or other gases, approved flow control equipment, and surface preparation equipment.
- B.** Surface preparation methods may include high pressure water cleaning, hydro blasting, abrasive blasting, grinding, detergent water cleaning and shall be suited to provide a surface compatible for installation of the liner system.
- C.** Surface preparation method shall produce a cleaned, abraded and sound surface with no evidence of laitance, loose concrete, brick or mortar, contaminants or debris, and shall display a surface profile suitable for application of liner system.
- D.** After the defects in the structure are identified, repair all leaks with a chemical or hydraulic sealant designed for use in field sealing of ground water. Severe cracks shall be "repaired with a urethane-based chemical" sealant. Product to be utilized shall be as approved by owner/engineer prior to installation. Repairs to exposed rebar, defective pipe penetrations or inverts, etc. shall be repaired utilizing non-shrink grout or approved alternative method.

3.02 REPAIR MATERIALS

- A.** Repair materials shall be used to fill voids, structurally reinforce and/or rebuild surfaces. Repair materials shall be compatible with the polyurea coating and shall be applied in accordance with the manufacturer's recommendations.
- B.** Subject to compliance with the polyurea coating manufacturer's requirements, the following products shall be acceptable as compatible repair base coat materials for polyurea top coating:
 - 1. A hydraulic cement and/or plug shall be used to stop active infiltration. The hydraulic cement and plug shall be suitable for the polyurea top coating, and shall be approved by the polyurea coating manufacturer.
 - 2. Hydrophobic and/or Hydrophilic polyurethane chemical grouts used to stop active infiltration. The chemical grouts shall be suitable for the polyurea top coating, and shall be approved by the polyurea coating manufacturer.

3.03 MATERIAL INSTALLATION

- A.** Application procedures shall conform to recommendations of the manufacturer, including materials handling, mixing, environmental controls during application, safety and spray equipment.
- B.** Spray equipment shall be specifically designed to accurately ratio and apply the liner system.
- C.** Application of multi-layer/component liner system shall be in strict accordance with manufacturer's recommendation. Final installation shall be a minimum of ½" (500 mils).
 - 1. Adhesion Layer (not intended to fill small voids)
 - 2. Surfacer Layer (intended to fill voids, bug holes)
 - 3. Armor Layer



3.04 INSPECTION

- A.** Final liner system shall be completely free of pinholes or voids. Liner thickness shall be the minimum value as described herein (500 mils).
- B.** Due to the fast gel and set time of the material, thickness of the application can be verified by awl point depth checks into the surfacer component and physical removal of a small area of the polyurea material. Repair of the test areas to be done immediately after the test.
- C.** High Voltage Holiday Detection may be used to inspect for pinholes or breaches in the liner system installation.
- D.** Visual inspection shall be made by the Owner/Engineer. Any deficiencies in the finished liner system shall be marked and repaired according to the procedures set forth by Manufacturer.
- E.** The manhole/wetwell may be returned to full operational service after the final inspection has taken place.

END OF SECTION

SECTION 16100 – ELECTRICAL**PART 1 - GENERAL****1.1 WORK INCLUDED**

- A. The work covered by this section of the specification consists of providing all the materials, labor, equipment, and services necessary for a complete electrical installation as specified herein. Work in this section includes, but is not necessarily limited to the following items:
1. All conduits, wire, and outlet boxes
 2. Junction Box

1.2 CODES

- A. All electrical work shall be done in strict accordance with the latest edition of the National Electrical Code and all regulations, laws, and ordinances which may be applicable. Electrical Contractor shall obtain and pay for all permits and inspection fees required for his work.

1.3 ELECTRICAL SERVICE

- A. Electrical service shall be supplied underground at 240 volt, single phase, three wire.
- B. The Contractor shall obtain from the Utility Company and pay all charges for the proper size meter cabinet to hold the required meters. He shall mount the cabinet and/or meters and make necessary wiring connections as directed by Utility.

1.4 GROUNDING SYSTEM

- A. Furnish and install a grounding system including all fittings, clamps, conduit, and wire of the proper size to make ground connections between all apparatus, neutral bus, conduits, etc. and the incoming water service as required by the latest edition of the National Electrical Code, and according to the requirement of the local Utility Company.

1.5 FIELD CONDITIONS AND MEASUREMENTS

- A. The Contractor shall visit the site of the work and familiarize himself with all available information concerning the nature of the structural excavations, and the location conditions bearing on transportation, handling, and storage of materials. The Contractor shall make his own estimate of the facilities needed and difficulties attending the execution of the contract including local conditions, availability of labor, uncertainties of weather, transportation, and other contingencies. In no event will the Engineer assume any responsibility whatsoever for any interpretation, deduction, or conclusion drawn from the examination of the site. Failure of the contractor to acquaint himself with all available information concerning these conditions will not relieve him of responsibility for estimating the difficulties and costs or successfully performing his work.
- B. The Contractor shall verify in the field, all measurements necessary for his work and shall assume responsibility for their accuracy.

PART 2 – PRODUCTS**2.1 CONDUIT**

- A. In general, unless noted otherwise, conduit shall be "Thinwall" electrical metallic tubing. Tubing shall be welded cold rolled steel, galvanized with coated interior.

2.2 WIRE AND CABLE

- A. Supplied pump leads and communication cables.

2.3 JUNCTION BOX

- A. Provide a NEMA 3R rated box.
- B. Junction box shall be located between the lift station control panel and the wet well.
- C. Function of junction box shall be float cables and pump power cables between the wet well and control panel.
- D. The conduit connection the junction box and control panel shall be sealed air tight to prevent gases from entering the control panel.

PART 3 – EXECUTION

3.1 POWER AND CONTROL WIRING

- A. The Contractor shall consult the heating, ventilation, air conditioning, plumbing, and electrical drawings, and specifications for the number and type of all motors, controls, and starting equipment which will be furnished under these headings. The Contractor shall connect all motors and controls, and all temperature controls, complete and ready for operation.

3.2 TEMPORARY POWER

- A. If necessary, the Contractor shall arrange with the local Utility Company for temporary service necessary for construction purposes. Furnish, install and maintain the temporary power system on a pole furnished by General Contractor, and consisting of service, panelboard, grounding system and receptacle outlets required on pole. General Contractor shall pay for all metered charges by the Utility. The Electrical Contractor shall provide and maintain throughout the construction period temporary lighting to meet all OSHA requirements.

3.3 SEISMIC RESTRAINS ON ELECTRICAL EQUIPMENT

- A. All electrical equipment shall be provided with seismic restraining services as required by local building Codes. Contractor shall have local building office review each piece of equipment when installed and the Contractor shall install all required tie down, anchors, straps or other devices required.

3.4 CONNECTION OF TRADE EQUIPMENT

- A. When equipment arrives on-site this contractor shall help unload, uncrate, assemble, set in place, install and electrically connect all equipment complete and ready for operations as required by all local area work rules and regulations.
- B. The Contractor is to pull feeders indicated for equipment, but is to wait for arrival of equipment to install device. Once equipment arrives, then a device can be installed that matches cord/cap requirements.

3.5 GUARANTEE

Contractor guarantees by his acceptance of the contract, that all work installed will be free from any and all defects in workmanship and/or materials and that all apparatus will develop capacities and characteristics specified, and that if, during the period of one year from date of certificate of completion and acceptance of work, any such defects in workmanship, materials, or performance appear, he will, without cost to the Owner, remedy such defects within a reasonable time to be specified in the notice from the Engineer. In default thereof, Owner may have such work done and charge cost to this contractor.

3.6 INSTALLATION OF CONDUIT AND WIRE

- A. Conduits shall be continuous from outlet to outlet and from outlet to cabinets, junction or pull boxes, and shall enter and be secured to all boxes in such a manner that each system shall be electrically continuous from services to all outlets. Terminals of Heavywall conduits shall be furnished with double

lock nuts and bushings. Thinwall box connectors and couplings shall be raintight. Pressure indent type of thinwall box connectors and couplings shall not be acceptable. Bushings on Heavywall conduits larger than 1 1/4" shall be plastic reinforced with metal.

- B. In general, all conduits shall be run concealed, unless indicated otherwise to be run exposed. Exposed conduit shall be installed perpendicular or parallel to building walls. Where more than one exposed conduit in a conduit bank changes direction, all bends shall be concentric. Conduits concealed inside floors, walls, or ceilings shall be run to clear depressions in floors, walls, ducts, plumbing, or heating pipes. This contractor shall consult all other trades' drawings to ascertain where conflicts will occur.
- C. Conduit shall be supported on approved types of galvanized brackets, ceiling trapeze or pipe straps of hangers secured by means of toggle bolts on hollow masonry, expansion bolts in concrete or bricks, machine screws on metal surfaces, or wood screws on wood construction. Nails shall not be used as a means of fastening boxes or conduits. Perforated flat steel straps shall not be used for supporting conduits.
- D. Taps and splices will not be permitted in either feeders or branch circuits except at outlets or accessible junction boxes.

3.7 CLEAN UP

- A. The Contractor shall have all electrical rubbish and debris removed to a location on the premises as directed by the Owner. The Owner shall remove all rubbish and debris from the premises.

All electrical equipment and materials installed by the Contractor shall be thoroughly cleaned and ready for use upon completion of the work.

3.8 TESTING

- A. The entire system shall be tested, demonstrated, and explained to such persons as the Owner and Engineer shall designate.
- B. The Contractor will be required to make the following checks, and tests with his instruments as required:
 - 1. Test to make sure that accidental grounds do not exist on any portion of the system before energizing the circuits.
 - 1. Motors shall be checked for proper direction of rotation and corrected if necessary.
 - 2. Grounds shall be checked and the resistance to ground shall not be more than outlined in the National Electrical Code.

END OF SECTION 16100

SECTION 16112 - INSTRUMENTATION**PART 1 - GENERAL****1.1 DESCRIPTION OF WORK**

The Contractor shall provide and install all hardware, labor, materials, and equipment required to provide fully functioning equipment, in strict accordance with the requirements of these plans and specifications.

1.2 QUALITY ASSURANCE**A. Submittal Documentation:**

Complete submittals shall be provided to the Engineer/Owner for review and approval prior to purchasing of equipment or equipment fabrication. Submittal data shall include the following:

B. Product Data:

Included in the submittal package shall be data sheets of all equipment used in the control panel, as listed in the bill of materials.

C. Warranty:

Warranty shall be for a period of 1 year commencing upon successful completion of startup. Warranty includes parts and labor for all equipment/services provided against defects in material and workmanship.

PART 2 - EQUIPMENT**A. Float Switch**

1. Provide float switches as required, for installation by the contractor. Float switches shall be the direct acting single pole mercury switch type encapsulated by an air filled chemical resistant polypropylene casing with a built in or external weight and a suitable electrical cable capable of suspending the switch.
2. Float switch shall be enclosed mercury switch as manufactured by Anchor-Scientific, or approved equal.
3. A float shall be provided for the following functions:
 - a. High Level
 - b. Lag Pump On
 - c. Pump On
 - d. Pump Off

B. Accessory Equipment

1. Float Switch Support Bracket
Stainless steel bracket(s) with hooks shall be provided for suspending the float switches and submersible transducer. The bracket shall be attached with stainless steel expansion anchors and hardware.
2. Strain Relief Devices
Stainless steel strain relief devices shall be installed on all pump power and control cables such that the cables are properly supported and that stress on the cable at the connection to the motor is minimal. A stainless steel strain relief device shall be installed on each float and submersible transducer cable.

PART 3 - INSTALLATION

- A. Equipment shall be installed per manufacturer's written instructions. Complete installation of equipment listed above, including but not limited to communication cables and conduits. Holes should only be punched in bottom of enclosures for conduit entry, etc., where applicable, so as to prevent water from entering enclosure. Where bottom entry is not possible, conduit installation shall be made water-tight by threaded openings and/or gasketed hubs.

- B. All equipment shall be stored be protected against damage at all times. Equipment shall be stored in a clean, dry environment with temperature and humidity within the range as specified by the controller manufacturer.
- C. Installer's Qualifications
 - 1. The contractor shall have been continuously involved in the installation of municipal freshwater/wastewater systems for at least five (5) years, and shall furnish the names and address of at least three (3) existing operating installations with similar equipment within a 150 mile radius of the project site.
 - 2. The contractor shall be bonded, and insured.
- D. Clean-up
 - 1. Upon completion, project site shall be cleaned up and left free of all "junk" electrical equipment (wire, conduit, unistrut, etc.). Enclosure shall be wiped free of any mud or other debris. Work area shall be left in a professional manner, presentable to the owner.

END OF SECTION 16112

APPENDIX A

ARPA Plans and Specifications Drop-in Requirements

Equal Employment Opportunity and Nondiscrimination in Employment – 41 CFR 60-4; E.O. 11246: 41 CFR 60-4 published April 7, 1978 and amended October 3, 1980, requires that the ARPA funding applicant and selected bidders comply with Executive Order 11246 for bids, contracts, and subcontracts for all federally assisted construction contracts exceeding \$10,000. The specifications explain the requirements for bidders and contractors under E.O. 11246.

- Bidders please see document titled “Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)”

Contracting with Small and Minority Businesses, Women’s Business Enterprises, and Labor Surplus Area Firms – 2 CFR 200.321; E.O. 11625 and 12138: Prior to awarding contracts, the ARPA funding applicant and any contractor awarding subcontracts must take the following affirmative steps in accordance with 2 CFR 200.321:

- a. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - b. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
 - d. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
 - e. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce;
- Bidders please also see Missouri Executive Order 15-06

Employment of Unauthorized Aliens Prohibited – §285.530 RSMo: Pursuant to §285.530.1, RSMo, the contractor assures that it, as well as its subcontractors, does not knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the State of Missouri, and shall affirm, by sworn affidavit and provision of documentation, its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Further, the contractor assures that it, as well as its subcontractor shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

In accordance with §285.525 to 285.550, RSMo a general contractor or subcontractor of any tier shall not be liable when such contractor or subcontractor contracts with its direct subcontractor who violates subsection 1 of §285.530, RSMo if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 1 of §285.530, RSMo and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor’s employees are lawfully present in the United States.

- The selected contractor(s) must complete the “Business Entity Certification, Enrollment Documentation, and Affidavit of Work Authorization” form.
- In addition, the selected contractor(s) must enroll in the federal E-verify system, provide supporting documentation of enrollment, and provide verification documentation for enrollment in the Federal E-Verify system.

Contract Work Hours and Safety Standards Act – 40 U.S.C. 327-330: The contractor(s) and subcontractor(s) shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327–330) as supplemented by Department of Labor regulations (29 CFR part 5).

OSHA Training – §292.675, RSMo: Any person signing a contract to work on the construction of public works for any public body shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the Missouri Department of Labor and Industrial Relations which is at least as stringent as an approved OSHA program. All employees are required to complete the program within sixty days of beginning work on such construction project.

Debarment and Suspension – 2 CFR 180; E.O. 12549: The Code of Federal Regulations at Title 2, Part 180, prohibits participation in federally funded contracts by persons excluded or disqualified from doing business with

ARPA Specifications Requirements

the federal government. Bidders are responsible for advising the Owner if they are excluded or disqualified, and to check whether subcontractors they intend to use are excluded or disqualified. All tiers of subcontractors have the same responsibility to notify the one for which they are providing services if they are excluded or disqualified, and to check the status of any subcontractors they intend to use. Status can be checked on the System for Award Management (SAM) located on the Internet at <https://www.sam.gov/SAM/>. All subcontracts at any tier should include this language.

- The selected bidders must complete the “Certification Regarding Debarment and Suspension” form.

Small Business Act – P.L. 100-590: Prior to awarding contracts, the ARPA funding applicant and any contractor awarding subcontracts must take the following affirmative steps in accordance with Section 129 of Public Law 100-590, Small Business Administration Reauthorization and Amendment Act of 1988:

- a. Placing Small Business in Rural Areas (SBRA) on solicitation lists;
- b. Ensuring that SBRAs are solicited whenever they are potential sources;
- c. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by SBRAs;
- d. Establishing delivery schedules, where the requirements of work will permit which would encourage participation by SBRAs; and
- e. Utilizing the services of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce, as appropriate.

Award of Contract – 2 CFR 200.320(b)(1)(ii)(D): The applicant will award the contract to the lowest responsive, responsible bidder. The contract must be for a firm fixed-price.

The contract award will be awarded only to responsible contractors possessing the ability to perform successfully, which will be determined by considering such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

Central Contractor Registration – P.L. 109-282: In accordance with the Federal Funding Accountability Act of 2006, the contractor assures that it, as well as its subcontractor(s), shall register in the System for Award Management (SAM).

SAM is the Official U.S. Government system that consolidated the capabilities of Central Contractor Registration (CCR)/FedReg, Online Representations and Certifications Application (ORCA), and Excluded Parties List System (EPLS). There is NO fee to register for this site. If you had an active record in CCR, you have an active record in SAM. You do not need to do anything in SAM at this time, unless a change in your business circumstances requires updates to your Entity record(s) in order for you to be paid or receive an award, or you need to renew your Entity(s) prior to its expiration. To update or renew your Entity records(s) in SAM, you will need to create a SAM User Account located on the Internet at <https://www.sam.gov> and link it to your migrated Entity records. You will need a user account to search for registered entities in SAM.

If the prime contractor is not currently registered in SAM, they are required to do so, as their status will be checked in SAM using the Unique Entity Identifier (UEI) provided by SAM.

Privity of Contract: The Missouri Department of Natural Resources, its divisions, nor its employees are or will be a party to the contract(s) at any tier.

Protests – 2 CFR 200.318(k): Neither the U.S. Department of Treasury nor the Missouri Department of Natural Resources will be involved in protest(s) and their resolution.

Domestic Products Procurement Law – §§34.350 - 34.359 RSMo: All manufactured goods or commodities used or supplied in the performance of any contract or subcontract awarded on this project shall be manufactured, assembled or produced in the United States, unless obtaining American-made products would increase the cost of the contract by more than ten percent (10%). In accordance with §34.350 through 34.359 RSMo, a waiver may be requested from the owner.

- The selected bidders must complete the “Domestic Products Procurement Act – §§34.350 - 34.359 RSMo Certification” form.

ARPA Specifications Requirements

Anti-Lobbying Act – P.L. 101-121: Sub-recipients who request or receive from the grant recipient a sub-grant, contract, or sub-contract exceeding \$100,000, at any tier under a federal grant shall comply with the Anti-Lobbying Act, Section 319 of Public Law 101-121, and file an Anti-Lobbying Certification form, and the Disclosure of Lobbying Activities form, if required, to the next tier above.

- Selected bidders must complete one of the following forms:
 - If the selected bidder lobbied on the behalf of this project, the contractor will complete the “Disclosure of Lobbying Activities” form.
 - If the selected bidder did not lobby on the behalf of this project, the contractor will complete the “Certification Regarding Lobbying” form.

Record Retention – 2 CFR 200.334; §109.255 RSMo: The contractor(s) and sub-contractor(s) shall retain all project related records for three years after final payment(s) and all other pending matters are closed. An extended period of record retention may be required per the Local Record Retention Schedules created by the Local Records Board as authorized by §109.255 RSMo.

Access to Construction Site and Contract Records: The contractor shall provide access to the project site and project records by, the Missouri State Auditor, the Missouri Department of Natural Resources, the USEPA, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

Payment Provisions – §8.260 RSMo; §8.960 RSMo: The owner shall make payment to the contractor in accordance with §8.260 and §8.960 RSMo. Retainage can be no more than 5%.

False Claims Act – 31 USC §3729: The contractor(s) and sub-contractor(s)s, if required by future OMB guidance, shall promptly refer to the State of Missouri or other appropriate Inspector General any credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity or similar misconduct involving those funds.

Clean Air Act - 42 U.S.C. 7506(C): The contractor(s) and sub-contractor(s) shall comply with the Clean Air Act.

Clean Water Act - 33 U.S.C. 1368: The contractor(s) and sub-contractor(s) shall comply with the Clean Water Act.

Energy Efficiency Requirements – Energy Policy and Conservation Act (P.L.94-163, 89 Stat. 871): The contractor(s) and sub-contractor(s) shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163, 89 Stat. 871).

Recycled Materials – U.S.C. 6962 (RCRA Section 6002): In accordance with Section 6002 of the Resource Conservation and Recovery Act (RCRA), preference shall be given to the procurement of specific products containing recycled materials identified in guidelines developed by the USEPA. Current guidelines are contained in 40 CFR Part 247-254.

Historical and Archaeological – P.L. 93-291: If during the course of construction evidence of deposits of historical or archaeological interest is found, the contractor shall cease operations affecting the find and shall notify the owner who shall notify the Missouri Department of Natural Resources and the Director, Division of State Parks, P.O. Box 176, Jefferson City, Missouri 65102-0176, Telephone (573) 751-2479. The contractor shall halt any further disturbances of the deposits until notified by the owner that they may proceed. The owner will issue a notice to proceed only after the state official has surveyed the find and made a determination to the Missouri Department of Natural Resources and the owner. Compensation to the contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the specifications.

Prohibition on certain telecommunications and video surveillance services or equipment Certification – 2 CFR 200.216: In accordance with 2 CFR 200.216, recipients and sub-recipients are prohibited from obligating

ARPA Specifications Requirements

or expending loan or grant funds to procure or obtain, extend or renew a contract to procure or obtain, or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

Anti-Discrimination Against Israel Act – §34.600 RSMo; In compliance with §34.600 RSMo, the contracting company certifies that it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel; companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel; or persons or entities doing business in the State of Israel, in accordance with §34.600, RSMo. Any contract that fails to comply with the provisions of this section shall be void against public policy.

- This provision does not apply to contracts with a total potential value of less than one hundred thousand dollars or to contractors with fewer than ten employees.

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)**

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the FEDERAL REGISTER in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and training programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than once month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment sources, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory affect by continually monitoring all personnel and employment related activities to ensure that

the EEO policy and the Contractor's obligations under these Specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications providing that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these Specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these Specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligation under these Specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these Specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these Specifications, the Director shall proceed in accordance with 41-CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for minority participation for each trade	Goals for female participation in each trade
All years	2%	4.0%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

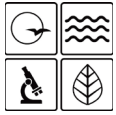
3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

Participation Goals for Minority Contractors per the
October 2019 Department of Labor OFCCP - Technical Assistance Guide

Missouri Counties

Adair	4.0	Howard.....	4.0	Ray	12.7
Andrew.....	3.2	Howell.....	2.3	Reynolds	11.4
Atchison	10.0	Iron.....	11.4	Ripley.....	11.4
Audrain	4.0	Jackson.....	12.7	St. Charles	14.7
Barry	2.3	Jasper.....	2.3	St. Clair	14.7
Barton.....	2.3	Jefferson.....	14.7	St. Francois	11.4
Bates.....	10.0	Johnson	10.0	Ste. Genevieve	11.4
Benton	10.0	Knox.....	4.0	St. Louis	14.7
Bollinger	11.4	Laclede.....	2.3	St. Louis City	14.7
Boone	4.0	Lafayette	10.0	Saline.....	10.0
Buchanan.....	3.2	Lawrence.....	2.3	Schuyler	4.0
Butler.....	11.4	Lewis.....	3.1	Scotland.....	4.0
Caldwell	10.0	Lincoln	11.4	Scott	11.4
Callaway	4.0	Linn	4.0	Shannon.....	2.3
Camden	4.0	Livingston	10.0	Shelby	4.0
Cape Girardeau	11.4	McDonald	2.3	Stoddard	11.4
Carroll	10.0	Macon	4.0	Stone	2.3
Carter.....	11.4	Madison.....	11.4	Sullivan	4.0
Cass	12.7	Maries	11.4	Taney.....	2.3
Cedar	2.3	Marion.....	2.4	Texas	2.3
Chariton.....	4.0	Mercer	10.0	Vernon.....	2.3
Christian.....	2.0	Miller.....	4.0	Warren.....	11.4
Clark.....	3.4	Mississippi	11.4	Washington	11.4
Clay	12.7	Moniteau	4.0	Wayne	11.4
Clinton.....	10.0	Monroe.....	4.0	Webster	2.3
Cole	4.0	Montgomery.....	11.4	Worth	10.0
Cooper.....	4.0	Morgan.....	4.0	Wright	2.3
Crawford	11.4	New Madrid	26.5		
Dade	2.3	Newton.....	2.3		
Dallas	2.3	Nodaway	10.0		
Daviess.....	10.0	Oregon.....	2.3		
De Kalb	10.0	Osage.....	4.0		
Dent.....	11.4	Ozark.....	2.3		
Douglas	2.3	Pemiscot.....	26.5		
Dunklin	26.5	Perry.....	11.4		
Franklin	14.7	Pettis.....	10.0		
Gasconade	11.4	Phelps.....	11.4		
Gentry	10.0	Pike	3.1		
Greene	2.0	Platte	12.7		
Grundy	10.0	Polk	2.3		
Harrison.....	10.0	Pulaski.....	2.3		
Henry.....	10.0	Putnam	4.0		
Hickory	2.3	Ralls	3.1		
Holt	10.0	Randolph.....	4.0		



Certification Regarding Debarment and Suspension

Applicant Name: _____

Project Name: _____

Project No.: _____ SAM.gov UEI No.: _____

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any governmental (federal, state, or local) entity;
- b) Have not within a three-year period preceding this certification been convicted of or had a civil judgment rendered against them for:
 - 1) Commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction;
 - 2) Violation of federal or state antitrust statutes relating to the submission of offers; or
 - 3) Commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with, commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- d) Have not, within a three-year period preceding this certification, had one or more public transactions (federal, state, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award.

☐ I am able to certify to the above statements.

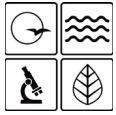
☐ I am unable to certify to the above statements and attached my explanation.

Typed Name of Authorized Representative

Title of Authorized Representative

Signature of Authorized Representative

Date



MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
FINANCIAL ASSISTANCE CENTER

Certification Regarding Debarment and Suspension Instructions

The Missouri Department of Natural Resources receives assistance from the federal government, and the funds provided to a community constitute a sub-agreement. Accordingly, each prospective recipient of a grant, loan, or cooperative agreement and any contractor or subcontractor must agree to fully comply with Executive Order 12549, 2 C.F.R. Part 180, and 2 C.F.R. Part 1532 regarding Debarment and Suspension.

“Principals,” for the purposes of this certification, means officers; directors; owners; partners; and persons having primary management or supervisory responsibilities within an entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

The prospective grant, loan, or cooperative agreement recipient should return the signed certification, and explanation if needed, with its application to:

Missouri Department of Natural Resources
Financial Assistance Center
PO Box 176
Jefferson City, MO 65102-0176

Or email to fac@dnr.mo.gov.

The recipient of funding should also obtain a certification from their consulting engineer and prime contractor. The funding recipient shall also check the status on the System for Award Management (SAM) located on the Internet at <https://www.sam.gov/portal/public/SAM/>.

Each prospective subcontractor should submit a completed certification or explanation to the prime contractor for the project.

CERTIFICATION OF NONSEGREGATED FACILITIES

(Applicable to federally assisted construction contracts and related sub-contracts exceeding \$10,000 which are not exempt from the Equal Opportunity clause.)

The federally assisted construction contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor 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 federally assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or 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. The federally assisted construction contractor 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 the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

Signature _____

Date _____

Name and Title of Signer _____
(Print or Type)

Firm Name _____

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

**BUSINESS ENTITY CERTIFICATION, ENROLLMENT DOCUMENTATION,
AND AFFIDAVIT OF WORK AUTHORIZATION**

BUSINESS ENTITY CERTIFICATION:

The vendor must certify their current business status by completing either Box A or Box B or Box C on this Exhibit.

- BOX A:** To be completed by a non-business entity as defined below.
- BOX B:** To be completed by a business entity who has not yet completed and submitted documentation pertaining to the federal work authorization program as described at <https://www.e-verify.gov/>.
- BOX C:** To be completed by a business entity who has current work authorization documentation on file with a Missouri Department including Office of Administration, Division of Purchasing.

Business entity, as defined in section 285.525, RSMo, pertaining to section 285.530, RSMo, is any person or group of persons performing or engaging in any activity, enterprise, profession, or occupation for gain, benefit, advantage, or livelihood. The term “**business entity**” shall include but not be limited to self-employed individuals, partnerships, corporations, contractors, and subcontractors. The term “**business entity**” shall include any business entity that possesses a business permit, license, or tax certificate issued by the state, any business entity that is exempt by law from obtaining such a business permit, and any business entity that is operating unlawfully without such a business permit. The term “**business entity**” shall not include a self-employed individual with no employees or entities utilizing the services of direct sellers as defined in subdivision (17) of subsection 12 of section 288.034, RSMo.

Note: Regarding governmental entities, business entity includes Missouri schools, Missouri universities, out of state agencies, out of state schools, out of state universities, and political subdivisions. A business entity does not include Missouri state agencies and federal government entities.

BOX A – CURRENTLY NOT A BUSINESS ENTITY

I certify that _____ (Company/Individual Name) **DOES NOT CURRENTLY MEET** the definition of a business entity, as defined in section 285.525, RSMo pertaining to section 285.530, RSMo as stated above, because: (check the applicable business status that applies below)

- ☐ - I am a self-employed individual with no employees; **OR**
- ☐ - The company that I represent employs the services of direct sellers as defined in subdivision (17) of subsection 12 of section 288.034, RSMo.

I certify that I am not an alien unlawfully present in the United States and if _____ (Company/Individual Name) is awarded a contract for the services requested herein under _____ (IFB Number) and if the business status changes during the life of the contract to become a business entity as defined in section 285.525, RSMo pertaining to section 285.530, RSMo then, prior to the performance of any services as a business entity, _____ (Company/Individual Name) agrees to complete Box B, comply with the requirements stated in Box B and provide the Department with all documentation required in Box B of this exhibit.

Authorized Representative's Name (Please Print)

Authorized Representative's Signature

Company Name (if applicable)

Date

(Complete the following if you DO NOT have the E-Verify documentation and a current Affidavit of Work Authorization already on file with the State of Missouri. If completing Box B, do not complete Box C.)

BOX B – CURRENT BUSINESS ENTITY STATUS

I certify that _____ (Business Entity Name) **MEETS** the definition of a business entity as defined in section 285.525, RSMo pertaining to section 285.530.

Authorized Business Entity Representative's
Name (Please Print)

*Authorized Business Entity
Representative's Signature*

Business Entity Name

Date

E-Mail Address

As a business entity, the vendor must perform/provide each of the following. The vendor should check each to verify completion/submission of all of the following:

- ☐ - Enroll and participate in the E-Verify federal work authorization program (Website: <https://www.e-verify.gov/>; Phone: 888-464-4218; Email: e-verify@dhs.gov) with respect to the employees hired after enrollment in the program who are proposed to work in connection with the services required herein;

AND

- ☐ - Provide documentation affirming said company's/individual's enrollment and participation in the E-Verify federal work authorization program. Documentation shall include EITHER the E-Verify Employment Eligibility Verification page listing the vendor's name and company ID OR a page from the E-Verify Memorandum of Understanding (MOU) listing the vendor's name and the MOU signature page completed and signed, at minimum, by the vendor and the Department of Homeland Security – Verification Division. If the signature page of the MOU lists the vendor's name and company ID, then no additional pages of the MOU must be submitted;

AND

- ☐ - Submit a completed, notarized Affidavit of Work Authorization provided on the next page of this Exhibit.

AFFIDAVIT OF WORK AUTHORIZATION:

The vendor who meets the section 285.525, RSMo, definition of a business entity must complete and return the following Affidavit of Work Authorization.

Comes now _____ (Name of Business Entity Authorized Representative) as _____ (Position/Title) first being duly sworn on my oath, affirm _____ (Business Entity Name) is enrolled and will continue to participate in the E-Verify federal work authorization program with respect to employees hired after enrollment in the program who are proposed to work in connection with the services related to contract(s) with the State of Missouri for the duration of the contract(s), if awarded in accordance with subsection 2 of section 285.530, RSMo. I also affirm that _____ (Business Entity Name) does not and will not knowingly employ a person who is an unauthorized alien in connection with the contracted services provided under the contract(s) for the duration of the contract(s), if awarded.

In Affirmation thereof, the facts stated above are true and correct. (The undersigned understands that false statements made in this filing are subject to the penalties provided under section 575.040, RSMo.)

<i>Authorized Representative's Signature</i>	Printed Name
Title	Date
E-Mail Address	E-Verify Company ID Number

Subscribed and sworn to before me this _____ of _____. I am
(DAY) (MONTH, YEAR)
commissioned as a notary public within the County of _____, State of
(NAME OF COUNTY)
_____, and my commission expires on _____.
(NAME OF STATE) (DATE)

Signature of Notary _____
Date

(Complete the following if you have the E-Verify documentation and a current Affidavit of Work Authorization already on file with the State of Missouri. If completing Box C, do not complete Box B.)

BOX C – AFFIDAVIT ON FILE - CURRENT BUSINESS ENTITY STATUS

I certify that _____ (Business Entity Name) **MEETS** the definition of a business entity as defined in section 285.525, RSMo pertaining to section 285.530, RSMo and have enrolled and currently participates in the E-Verify federal work authorization program with respect to the employees hired after enrollment in the program who are proposed to work in connection with the services related to contract(s) with the State of Missouri. We have previously provided documentation to a Missouri Department that affirms enrollment and participation in the E-Verify federal work authorization program. The documentation that was previously provided included the following.

- ✓ The E-Verify Employment Eligibility Verification page OR a page from the E-Verify Memorandum of Understanding (MOU) listing the vendor's name and the MOU signature page completed and signed by the vendor and the Department of Homeland Security – Verification Division
- ✓ A current, notarized Affidavit of Work Authorization (must be completed, signed, and notarized within the past twelve months).

Name of **Missouri Department** to Which Previous E-Verify Documentation Submitted:

Date of Previous E-Verify Documentation Submission: _____

Previous **Bid/Contract Number** for Which Previous E-Verify Documentation Submitted: _____
(if known)

Authorized Business Entity Representative's
Name (Please Print)

*Authorized Business Entity
Representative's Signature*

Business Entity Name

Date

E-Mail Address

E-Verify MOU Company ID Number

FOR STATE OF MISSOURI USE ONLY

Documentation Verification Completed By:

Buyer

Date

Domestic Products Procurement Act – RSMo 34.350 – 34.359 Certification

Each contract for the purchase or lease of manufactured goods or commodities by any public agency, and each contract made by a public agency for construction, alteration, repair, or maintenance of any public works shall contain a provision that any manufactured goods or commodities used or supplied in the performance of that contract or any subcontract thereto shall be manufactured or produced in the United States. (34.353.1 RSMo)

Project Name: _____

Project Number: _____

Contract Name: _____

Please check one of the following and sign where indicated.

☐

All of the manufactured goods used in the project are produced in the United States.

☐

A waiver is being requested from the _____ to the domestic

(owner)

products provision due to the following exception:

☐

The specified products are not manufactured or produced in the United States in sufficient quantities or manufactured or produced in the United States within the necessary time frames in sufficient quantities.

☐

The cost for the specified products would increase the contract by more than 10 percent*; or

☐

Only one line of a product is manufactured or produced in the United States.

Documentation of at least one of the cases above must be provided. List below the materials that cannot comply with the Domestic Product Procurement Act provisions.

☐ Additional sheets (attach if necessary)

Name of Contracting Firm

Signature

Date

ARPA Project Number

CERTIFICATION REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31 U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Typed Name & Title of Authorized Representative

Signature and Date of Authorized Representative

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

1. Type of Federal Action: a. contract _____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: a. bid/offer/application _____ b. initial award c. post-award	3. Report Type: a. initial filing _____ b. material change For material change only: Year _____ quarter _____ Date of last report _____
4. Name and Address of Reporting Entity: _____ Prime _____ Subawardee Tier _____, if Known: Congressional District, if known:		5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime: Congressional District, if known:
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i>	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only	Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)	

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503