

CONSTRUCTION DOCUMENTS MANUAL
AND
TECHNICAL SPECIFICATIONS

FENTER RD RECONSTRUCTION

PROJECT

LVWD BID NO.: 24-0105-02

VOLUME 1 OF 2

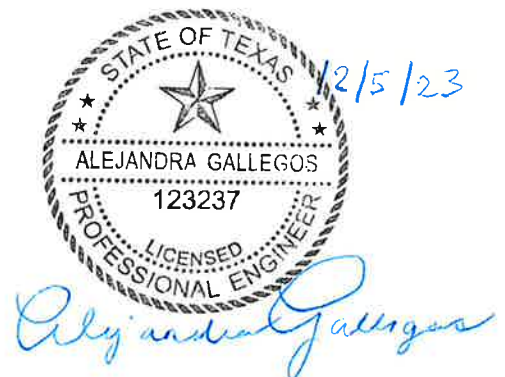


1557 FM ROAD 1110
CLINT, TEXAS 79836

BOARD MEMBERS

Rosalinda Vigil, President
David Carrasco, Vice-President
Henry Trujillo, Secretary/Treasurer
David Estrada, Director
Rod Chavez, Director
Gerald Grijalva, General Manager

ENGINEER'S SEAL
Alejandra Gallegos, PE TEXAS FIRM REGISTRATION No. F-761



LOWER VALLEY WATER DISTRICT

LVWD BID NO.: 24-0105-02

INFORMAL NOTICE

Sealed proposals for construction of the Fenter Rd Reconstruction project will be received by the Lower Valley Water District (LVWD) at the District's Main office located at 1557 FM 1110 or by mail to 1557 FM 1110, Clint, Texas 79836 until 3:00 PM, local time, on January 5, 2024, and at that time and place will be publicly opened and read aloud.

The work under this contract shall be for furnishing all labor, materials, transportation and services for the construction and installation of the following work:

The Fenter Rd Reconstruction project includes the reconstruction of approximately 3,000 linear feet of Fenter Rd including removal of asphalt, base and subgrade, and construction of a new pavement structure. The project will also include installation of header curb, reconstruction of driveways, removal and installation of signs, striping, drainage improvements, and adjustment of water meters and valve boxes.

Contract documents may be examined and obtained by accessing the following Lower Valley Water District's website, www.lvwd.org.

If you have trouble accessing the Contract Documents, please contact the Lower Valley Water District at (915) 791-4480 or by e-mail at purchasing@lvwd.org. Physical (hard) copies of the Contract Documents will NO longer be made available.

A non-mandatory pre-bid meeting will be held on Tuesday, December 12 at 11:00 AM at the Lower Valley Water District, 1557 FM 1110, Clint, Texas.

Each Bid shall be submitted in accordance with the Instructions to Bidders and be accompanied by a Bid Security in the amount of five percent of the amount bid.

The Successful Bidder states he or she must furnish a 100 percent (100%) Performance Bond and a 100 percent (100%) Payment Bond, in accordance with the Instructions to Bidders and the General Conditions.

By submission of the bid, Bidder fully understands the requirements of the Contract Documents and agrees to comply with all requirements thereof.

Wages paid on this project shall be not less than the minimum prevailing wage rates listed in the Contract Documents, Section 00840, General Wage Requirements.

The Lower Valley Water District (LVWD) adheres to the Cone of Silence policy which prohibits any communication regarding the bid between potential bidders (and subcontractors) and LVWD Board Members, Staff, and assigned Consulting Engineers. The provisions do not apply to oral communications with Purchasing Agent or Administrative Analyst, provided the communications is limited strictly to matters of process or procedure already contained in the solicitation document, oral communications at pre-bid conferences, or communications in writing (email preferred) submitted to the Administrative Analyst in response to inquiries regarding the bid. In addition to any other penalties provided by law, violation of the Cone of Silence by any bidder shall render that bidder's bid voidable. Any person having personal knowledge of a violation of these provisions shall report such violations to the LVWD General Counsel and/or the Purchasing Agent in writing.

This project is to be funded through a loan obtained from the North American Development Bank (NADB) through the issuance of Build America Bonds. This Bid is consistent with the procurement policies of the NADB. Copies of those policies can be obtained from their website at: http://www.nadb.org/pdfs/procurementdocs/ProcurementGuide_Eng.pdf

LOWER VALLEY WATER DISTRICT

FENTER RD RECONSTRUCTION

LVWD BID NO: 24-0105-02

TABLE OF CONTENTS

**BIDDING REQUIREMENTS, CONTRACT FORMS,
AND CONDITIONS OF THE CONTRACT**

DIVISION 0 – BIDDING & CONTRACT REQUIREMENTS

<u>Section</u>	<u>No. of Pages</u>
00010	INFORMAL NOTICE..... 1
00020	INVITATION TO BID..... 1
00100	INSTRUCTIONS TO BIDDERS 16
00300	BID FORM..... 11
00400	BID BOND..... 1
00310	MWBE SAMPLE SOLICITATION DOCUMENT.....9
00400	BID BOND.....1
00500	STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR..... 8
00510	STATEMENT OF NON-DIVESTMENT FROM ISRAEL.....1
00610	PERFORMANCE BOND 1
00630	PAYMENT BOND..... 1
00650	CERTIFICATE OF INSURANCE..... 1
00700	GENERAL CONDITIONS (EJCDC FORM NO. C-700, 2007 ED.) 68
00800	SUPPLEMENTARY GENERAL CONDITIONS 30
00840	GENERAL WAGE REQUIREMENTS 6
00900	ARPA REQUIRED INFORMATION..... 31

TECHNICAL SPECIFICATIONS

SECTION 01 00 00 – GENERAL REQUIREMENTS.....5
SECTION 01 02 00 - TPDES REQUIREMENTS.....4
SECTION 01 22 00 – MEASUREMENT AND PAYMENT.....9
SECTION 01 30 00 - SUBMITTALS.....6
SECTION 01 40 00 – TESTING LABORATORY SERVICES.....3
SECTION 01 57 00 - TEMPORARY CONTROLS.....2
SECTION 01 74 00 - CLEANING.....4
SECTION 01 74 01 - WARRANTIES.....3
SECTION 01 77 00 - PROJECT CLOSEOUT.....11

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS.....	4
SECTION 02 41 00 - SELECTIVE DEMOLITION.....	2
SECTION 02 50 00 – TREE REMOVAL.....	1
SECTION 03 01 10 - CONCRETE FORMWORK.....	5
SECTION 03 01 20 - CONCRETE REINFORCING STEEL.....	4
SECTION 03 39 00 - PLACING, FINISHING & CURING CONCRETE.....	9
SECTION 03 40 00 – CEMENT STABILIZED BACKFILL.....	1
SECTION 10 15 00 – DELINEATOR AND OBJECT MARKER ASSEMBLY.....	2
SECTION 31 00 00 – EARTHWORK.....	4
SECTION 31 10 00 – GRADING.....	1
SECTION 32 11 23 - CRUSHED AGGREGATE BASE COURSE.....	6
SECTION 32 12 17 - PLANT MIX BITUMINOUS PAVEMENTS.....	15
SECTION 32 16 00 - CAST-IN-PLACE CONCRETE.....	9
SECTION 32 71 23 - HOT APPLIED THERMOPLASTIC MARKINGS.....	16
SECTION 33 05 13 - ADJUSTMENTS OF WATER VALVES AND WATER METERS... ..	1
SECTION 34 00 00 – STONE COMMON DRY.....	1

END OF SECTION

SECTION 00020

INVITATION TO BID

Sealed proposals for construction of the Fenter Rd Reconstruction project will be received by the Lower Valley Water District (LVWD) at the District's Main office located at 1557 FM 1110 or by mail to 1557 FM 1110, Clint, Texas 79836 until 3:00 PM, local time, on January 5, 2024, and at that time and place will be publicly opened and read aloud.

The work under this contract shall be for furnishing all labor, materials, transportation and services for the construction and installation of the following work:

The Fenter Rd Reconstruction project includes the reconstruction of approximately 3,000 linear feet of Fenter Rd including removal of asphalt, base and subgrade, and construction of a new pavement structure. The project will also include installation of header curb, reconstruction of driveways, removal and installation of signs, striping, drainage improvements, and adjustment of water meters and valve boxes.

Contract documents may be examined and obtained by accessing the following Lower Valley Water District's website, www.lvwd.org.

If you have trouble accessing the Contract Documents, please contact the Lower Valley Water District at (915) 791-4480 or by e-mail at purchasing@lvwd.org. Physical (hard) copies of the Contract Documents will NO longer be made available.

A non-mandatory pre-bid meeting will be held on Tuesday, December 12 at 11:00 AM at the Lower Valley Water District, 1557 FM 1110, Clint, Texas.

Each Bid shall be submitted in accordance with the Instructions to Bidders and be accompanied by a Bid Security in the amount of five percent of the amount bid.

The Successful Bidder states he or she must furnish a 100 percent (100%) Performance Bond and a 100 percent (100%) Payment Bond, in accordance with the Instructions to Bidders and the General Conditions.

By submission of the bid, the Bidder fully understands the requirements of the Contract Documents and agrees to comply with all requirements thereof.

Wages paid on this project shall be not less than the minimum prevailing wage rates listed in the Contract Documents, Section 00840, General Wage Requirements.

The Lower Valley Water District (LVWD) adheres to the Cone of Silence policy which prohibits any communication regarding the bid between potential bidders (and subcontractors) and LVWD Board Members, Staff, and assigned Consulting Engineers. The provisions do not apply to oral communications with Purchasing Agent or Administrative Analyst, provided the communications is limited strictly to matters of process or procedure already contained in the solicitation document, oral communications at pre-bid conferences, or communications in writing (email preferred) submitted to the Administrative Analyst in response to inquiries regarding the bid. In addition to any other penalties provided by law, violation of the Cone of Silence by any bidder shall render that bidder's bid voidable. Any person having personal knowledge of a violation of these provisions shall report such violations to the LVWD General Counsel and/or the Purchasing Agent in writing.

END OF SECTION 00020

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS

Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (EJCDC C-700, 2007 ed.) have the meanings assigned to them in the General Conditions. The term "Bidder" means the entity (such as a corporation, partnership or sole proprietor) that submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a Bid to a Bidder. The term "Successful Bidder" means the lowest, responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, the Bid Bond or other Bid Security, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids). Other terms are defined in this Section 00100.

Other terms used in the Bidding Documents and not defined elsewhere have the following meanings which are applicable to both the singular and plural thereof:

Texas Resident Bidder - A bidder whose principal place of business is in this state and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in this state.

Nonresident Bidder - A bidder whose principal place of business is not in this state, but excludes a Contractor whose ultimate parent company or majority owner has its principal place of business in this state.

EPCWID #1 - El Paso County Water Improvement District #1 which authorizes dewatering into its facilities under certain terms and conditions and with whom the Owner has negotiated specific basic fees and procedures.

NADB – North American Development Bank

2. COPIES OF BIDDING DOCUMENTS

2.1 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement or Invitation to Bid may be obtained at the Purchasing Department, Lower Valley Water District, 1557 FM 1110, Clint, Texas; (915) 791-4480.

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

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

3. DETERMINING LOWEST RESPONSIBLE, RESPONSIVE BIDDER

To demonstrate that the Bidder is responsible and able to perform the Work, each Bidder must be prepared to submit written evidence, such as financial data, previous experience, present commitments and other data as may be called for below (or in the Supplementary Instructions). Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to Award of the Contract.

In determining the lowest responsible, responsive Bidder, in addition to price, the following elements will be considered:

- (a) the quality, availability and adaptability of the supplies, materials, equipment, or contractual services, to the particular use required;
- (b) the number and scope of conditions attached to the bid;
- (c) the ability, capacity and skill of the entity to perform the contract or to provide the service required;
- (d) whether the bidder can perform the contract and provide the service promptly, or within the time required, without delay or interference;
- (e) the character, responsibility, integrity, reputation, and experience of the bidder;
- (f) the quality of performance of previous services, or contracts;
- (g) the previous and existing compliance by the bidder with laws relating to the contract or service;
- (h) any previous or existing noncompliance by the bidder with specifications, or requirements relating to time of submission of specified data such as samples, models, drawings, certificates, or other information;
- (I) the sufficiency of the financial resources and ability of the bidder to perform the contract or to provide the service;
- (j) the ability of the bidder to provide future maintenance, repair parts, and service for the use of the subject of the contract.
- (k) the ability of the bidder to provide competent personnel for the job, as demonstrated by a listing of the names and the skills of experienced personnel who are currently employed by the bidder and who will be available for performing this work;
- (l) the experience of the bidder in performing work similar in type, size and complexity to this project, as demonstrated by a listing of projects, with verifiable references (names, addresses, phone numbers, etc.), successfully completed.

MINIMUM GENERAL REQUIREMENTS - ALL CONSTRUCTION PROJECTS

PROJECTS WITH VALUE LESS THAN \$1,000,000:

The Bidder, or at least two *Key Personnel employed by the Bidder, must demonstrate **Successful Completion of a project similar in nature and scope to this project within the past five (5) years and a similar project with a value of at least one-third (1/3) the value bid for this project.

PROJECTS WITH VALUE BETWEEN \$1,000,000 AND \$3,000.00:

The Bidder, or at least three *Key Personnel employed by the Bidder, must demonstrate **Successful Completion of one project similar in nature and scope to this project within the past five (5) years and one similar project with a value of at least 50% of the value bid for this project.

PROJECTS WITH VALUE BETWEEN \$3,000,000 AND \$6,000,000:

The Bidder must demonstrate a minimum of four (4) years experience in projects similar in nature and scope to this project. At least four *Key Personnel employed by the Bidder must have a minimum of five (5) years experience in similar construction projects. The Bidder must demonstrate **Successful Completion during the last five (5) years of at least one project comparable in nature and scope to this project and one similar project with a dollar value of at least 60% of the value bid for this project. The Bidder must have an employee, to be dedicated to this project, who is experienced in scheduling, with demonstrated ability in employing scheduling techniques similar to those to be used for this project.

PROJECTS WITH VALUE BETWEEN \$6,000,000 AND \$15,000,000:

The Bidder must have a minimum of five (5) years experience in projects similar in nature and scope to this project. At least four of the Bidder's *Key Personnel must have a minimum of five (5) years experience in similar construction projects. The Bidder must demonstrate **Successful Completion of at least two (2) projects similar in nature and scope to this project and one similar project with a dollar value of at least 75% of the value bid for this project, both within the past five years. The Bidder must demonstrate that it has an experienced employee who will serve as the scheduler; who is dedicated to this project; who has successfully employed scheduling techniques appropriate for this project. At least two (2) *Key Personnel for this project must have completed at least two (2) projects, similar in scope and nature to the project being bid, as an employee of the Company bidding this project.

*** KEY PERSONNEL: Defined as individuals who will be directly assigned to this project. Includes, but is not limited to, the Bidder's Project Manager, the Project Superintendent, the Scheduler, the Bidder's Construction Engineer, and Supervisory personnel such as the Foremen who will be directly assigned to this project as well as similar Subcontractor Key Persons. Resumes of Key Personnel must be submitted and accepted by the Owner in order for Bidder to receive the Award. Bidders are encouraged to submit documentation with the Bid but shall submit such documentation to Purchasing, no later than five (5) days after Engineer's Request.**

****SUCCESSFUL COMPLETION: Defined as completion of a project on time, which generally means no more than thirty (30) days later than the original contract time allocated. It also means within budget, which generally means within 5% of the original contract price. If there is any project submitted by the Bidder as qualifying, but which does not meet these requirements, in order to be fully responsive the Bidder is required to submit detailed information on that project demonstrating what caused the increases to cost or time. The name and telephone numbers of the Design Engineer and the Client are to be provided for evaluation as to whether the project may be considered "successful". For any project where liquidated damages were assessed, the Bidder will not be considered to have been on time.**

BIDDER MUST MEET THE FOLLOWING MINIMUM PROJECT SPECIFIC CRITERIA IN ORDER TO QUALIFY FOR AWARD OF THE BID:

1. Key personnel shall demonstrate successful completion of at least three (3) projects with similar scope of work and size within the past five (5) years. This requirement may be satisfied by employing the services of a qualified subcontractor and a list of paving projects.
2. Project involves work within EPCWID1 right of way. Bidder shall demonstrate successful completion of at least one (1) project that included work within EPCWID1 right of way.
3. Project involves work within TxDOT right of way. Bidder shall demonstrate successful completion of at least one (1) project within the last five years that included work within TxDOT right of way.

**LVWD FUNDED PROJECTS
MANDATORY GOOD FAITH EFFORTS
TO OBTAIN MINORITY PARTICIPATION IN THIS PROJECT**

THE UTILITY'S POLICY FOR ITS PROJECTS IS TO ENCOURAGE THE PARTICIPATION OF SMALL LOCALLY-OWNED BUSINESSES (SMLB), MINORITY BUSINESS ENTERPRISES (MBE) AND WOMEN-OWNED BUSINESS ENTERPRISES (WBE). THE UTILITY'S MINIMUM GOALS FOR THIS PROJECT ARE:

**10% FOR SMALL LOCALLY OWNED BUSINESSES
14% FOR MINORITY-OWNED BUSINESSES
2% FOR WOMEN-OWNED BUSINESSES**

THE BIDDER MUST MEET EACH OF THESE THREE GOALS OR DEMONSTRATE, AT THE TIME OF MAKING THE BID, THAT HE HAS MADE A GOOD FAITH EFFORT TO MEET EACH OF THE THREE GOALS IN ORDER TO QUALIFY FOR AWARD OF THIS PROJECT. THE DEFINITION OF A "GOOD FAITH EFFORT" IS DESCRIBED BELOW. IF THE BIDDER FAILS TO MEET THE GOALS, *AND ALSO FAILS TO PROVIDE EVIDENCE THAT A GOOD FAITH EFFORT HAS BEEN MADE TO MEET EACH GOAL*, THE OWNER RESERVES THE RIGHT TO REQUEST ADDITIONAL INFORMATION FROM THE BIDDER AS SUPPORT TO GOOD FAITH EFFORT DOCUMENTATION. THE BIDDER MAY MEET THE MANDATORY REQUIREMENT IN ONE OF THREE WAYS:

IF GOALS IN EACH CATEGORY ARE FULLY ACHIEVED, THEN THE BIDDER ONLY NEEDS TO PROVIDE ALL THE DETAILS OF THE ACTUAL PARTICIPATION IN THE BID PROPOSAL FORM, SECTION 00300, WHERE SPACE HAS BEEN PROVIDED FOR BIDDER'S USE.

IF GOALS ARE PARTIALLY ACHIEVED IN EACH OF THE CATEGORIES, PROVIDE THE DETAILS OF THE ACTUAL PARTICIPATION IN THE BID PROPOSAL FORM, AND PROVIDE EVIDENCE OF THE GOOD FAITH EFFORT TO MEET EACH GOAL, AS PART OF THE BID PROPOSAL, AT THE TIME THE BID IS SUBMITTED.

IF GOALS ARE NOT ACHIEVED, PROVIDE EVIDENCE OF A DEMONSTRATED GOOD FAITH EFFORT, AS DEFINED BELOW, AS PART OF THE BID PROPOSAL, AT THE TIME THE BID IS SUBMITTED.

Although a single prime contractor, a subcontractor, or a supplier may be a small locally-owned business and also a minority business or a woman-owned business, each firm may be counted in only one category (SMLB, MBE or WBE) for purposes of meeting these goals.

DEFINITION OF "GOOD FAITH EFFORT": Documentation that minority firms were given a genuine opportunity to participate. Evidence of a good faith effort must include a reasonable number of letters, which may be sent certified mail return receipt requested, showing the full details of the work to be performed by the minority firm, sent to bona fide firms in each of the categories described below; copies of responses to the letters; copies of correspondence with Chamber of Commerce (for Locally Owned Small Businesses) and with MBE and WBE associations; newspaper or trade magazine notices; and copies of Bidder's documentation file of the results of its solicitations.

DEFINITION OF "SMALL LOCALLY-OWNED BUSINESS FIRM" (SMLB): A Business corporation, partnership, joint venture, sole proprietorship, or other legal entity, formed for the purpose of making a profit, which has been located within the County of El Paso for at least twelve (12) months and of which 51% of the business must be owned by residents of El Paso County. Furthermore, the business must employ fewer than one hundred (100) employees or have annual gross receipts of less than one million dollars (\$1,000,000.00). It must not be a subsidiary of a business which would not meet these guidelines. Only United States citizens, born or naturalized, will be deemed eligible to be Small Locally-Owned Businesses.

DEFINITION OF "MINORITY BUSINESS ENTERPRISE (MBE)": A business which is:

- 1) certified as socially and economically disadvantaged by the Small Business Administration;

- 2) certified as a minority business enterprise by a US State or Federal agency;
- (3) an independent business concern which is at least 51% owned and controlled by minority group members
 - A. A minority group member is an individual who is a citizen of the United States and one of:
 1. Black American
 2. Hispanic American
 3. Native American
 4. Asian Pacific American
 5. Other groups whose members have been found to be disadvantaged by the Small New Business Act or by the Secretary of Commerce under Executive Order 11625, Sec. 5
 - B. The minority owner's interest must be real, substantial and continuing. This would include such characteristics as risk of loss/share of profit commensurate with proportional ownership and receipt of the customary incidents of ownership such as salary and/or tangible benefits.
 - C. A minority owner must have control of business decisions such as authority to sign bids and contracts, decisions in price negotiations, incurring liabilities for the firm, making staffing decisions, policymaking, etc.
 - D. A qualified MBE firm must perform a useful business function according to custom and practice in the industry. Acting merely as a passive conduit of funds to some other firm where such action is unnecessary to accomplish the project does not constitute a useful business function to practice in the industry.

DEFINITION OF "WOMEN-OWNED BUSINESS ENTERPRISE (WBE)": An independent business concern which is at least 51% owned by a woman or women having the same interests and controls identified in the MBE definition section of this guidance. Only United States citizens will be deemed eligible to be WBE's.

The form entitled "Minority Certification and Participation Summary", which is located at the end of Section 00300, Bid Form, should be completed and submitted by the Successful Bidder within fifteen (15) days of Notice of Award.

It is mandatory that bidder submit with his or her bid a fully executed bid proposal (including the tabulation of proposed subcontractors and suppliers), an original bid bond, the certificate of insurance availability, and minority participation categories reflecting bidder has met minority participation goals OR evidence of bidder's good faith effort to do so. Failure to submit these items with the bid will result in a finding that the bid is non-responsive and the bid will be disqualified.

EVIDENCE OF BIDDER'S GOOD FAITH EFFORT *OR* EVIDENCE OF *FULL* PARTICIPATION IN EACH CATEGORY IS ALSO REQUIRED AT THE TIME OF BID. OWNER RESERVES THE RIGHT TO REQUEST ADDITIONAL INFORMATION FROM THE BIDDER AS SUPPORT TO GOOD FAITH EFFORT DOCUMENTATION.

Bidders shall furnish a financial statement or other evidence of the Bidder's financial sufficiency to perform the contract, a sworn statement of his experience record, and a listing of the equipment available to him or any other statement or documentation required by the Owner as to his capability to complete the Work. The Post-Bid/Pre-Award Checklist and the Qualifications Statement may require submittal of additional documentation. PLEASE REVIEW THE CHECKLISTS PROVIDED AT THE END OF THIS SECTION 00100.

To assist the Owner in evaluating the Bidder's responsibility, the lowest responsive Bidder is required to complete and submit the "Qualification and Financial Disclosure Statement" found at the end of Section 00100 within five (5) calendar days of the Engineer's request. The Engineer will submit this document and any additional information requested by the Engineer, to the Owner as an attachment to his Recommendation of Award.

The Checklists found at the back of this Section are provided to assist the Bidder in fulfilling these requirements.

The Purchasing Department will evaluate the responsiveness of the Bidder's submittal. Purchasing Agent will forward the bids and results of the Purchasing Department's evaluation to the Engineer for further evaluation of responsiveness, qualifications of the Bidder and other related conditions of this Bid. Engineer will forward the results of their evaluation to the Owner. Owner will review and present its recommendation to the Public Service Board for award.

Bidder is required to submit information regarding his status as a "RESIDENT" or "NONRESIDENT" on the spaces provided in the proposal form.

A "Nonresident Bidder" will not be awarded the Contract if the state of his principal place of business assesses a penalty against out-of-state bidders unless his bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located.

The terms "Texas Resident Bidder" and "Nonresident Bidder" shall the meanings set forth for those terms in Chapter 2252 of the Tx. Government Code.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- 4.1 It is the responsibility of each Bidder, before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work, and to determine the character of equipment and facilities needed preliminary to and during the prosecution of the Work, (c) consider federal, state and local laws and regulations that may affect cost progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

When information as to soil conditions, test borings, and existing underground and overhead utility locations is shown on the Plans, Specifications, Drawings, or in preliminary reports prepared by the Engineer or under the Engineer's direction, such information was obtained for the Owner. The correctness of such information is not guaranteed by the Owner or by the Engineer and in no event shall be considered as a part of the contract, an inducement to bidding, or a factor for computation of bids. If such information is used by the Bidder in preparing a proposal, the Bidder must assume all risks that conditions encountered in performing the Work may be different from the approximation shown.

- 4.2 Reference is made to the Supplementary General Conditions for identification of:

4.2.1 Those reports of explorations and tests of subsurface conditions at the site which have been utilized by Engineer in preparation of the Contract Documents.

4.2.2 Those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Facilities) which are at or contiguous to the site which have been utilized by Engineer in preparation of the Contract Documents.

Copies of such reports and drawings will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents. Technical data has been identified and established in the Supplementary General Conditions.

4.2.3 See SC 17.08. Those certain dewatering issues, procedures, payment terms, submittal requirements, and close out terms which are the responsibility of the Bidder and which may impact Bidder's pricing of this Bid.

- 4.3 Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities or others, and Owner does not assume responsibility for the accuracy or completeness thereof.

- 4.4 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.2 and 4.3 of the General Conditions, and as may be amended in the Supplementary Conditions.
- 4.5 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 4.6 Each Bidder will be required to get permission from property owners to obtain access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition and to the satisfaction of the Engineer, upon completion of such explorations.

- 4.7 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.
- 4.8 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

5. INTERPRETATIONS AND ADDENDA

- 5.1 All questions about the meaning or intent of the Contract Documents are to be directed to Purchasing Department. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed, delivered, and/or e-mailed to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than 7 days prior to the date for opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer, with Owner's approval.

6. BID SECURITY

- 6.1 Each Bid must be accompanied by Bid security made payable to Owner in an amount of five percent of the Bidder's maximum Bid price and in the form of a certified or cashier's check or a Bid Bond issued by a surety meeting the requirements of Paragraph 5.1 of the General Conditions and Paragraph 5.1 of the Supplementary General Conditions.
- 6.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security and insurance, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security, insurance and other required contract documents within fifteen days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh day after the Effective Date of the Agreement or the forty-sixth day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security with Bids which are not competitive will be returned within seven days after the Bid opening.

The Bidder has agreed by signing this Bid that he fully understands the requirements of the bid documents.

Should the Bidder fail to return the Agreements, acceptable Bonds, Insurance Certificates and insurance policies within fifteen days of receipt of the documents, the Utility may charge excess costs generated by such delay at the rate of \$100 for each day of delay. In the event more than two reviews of insurance submittals are required by the Utility's Risk Manager, the Successful Bidder will additionally reimburse the Utility for those costs at the rate of \$125 per hour which will apply to each fifteen minute fraction thereof charged by the Risk Manager. These reimbursed costs will be deducted from the Bidders first Application for Payment or, in the event a Bid Bond is forfeited, such expenses may be reimbursed from the proceeds of the Bid Bond as part of the excess costs or recprocurement.

7. CONTRACT TIME

The numbers of Calendar Days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time) are set forth in the Agreement. Completion within this time is of the essence in the performance of this contract.

8. LIQUIDATED DAMAGES

Provisions for liquidated damages, if any, are set forth in the Agreement and in the Supplementary General Conditions.

9. SUBSTITUTE OR "OR EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or equal" item of material or equipment may be furnished or used by Contractor is acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the date of the Notice to Proceed. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in Paragraphs 6.7.1, 6.7.2, and 6.7.3 of the General Conditions and may be supplemented in the General Requirements.

10. SUBCONTRACTORS, SUPPLIERS AND OTHERS

10.1 The Bidder is required to identify all Subcontractors and Suppliers; to provide the value of each proposed subcontract or purchase order; and to provide their own and their subcontractor's business classification (Small Locally-Owned Business Enterprise, Minority Business Enterprise, Woman Owned Business Enterprise, or Other). The Bidder shall submit with his Bid a list of all proposed Subcontractors and Suppliers. Space for this submittal is provided within the Bid Proposal, Section 00300. Use additional sheets as necessary. The Bidder is encouraged to submit the MWBE Certification and Participation Summary Form with his Bid; the Form is not mandatory at the time bids are opened, but it must be submitted prior to Award. If requested by Engineer or by Owner, Bidder shall provide an experience statement with pertinent information regarding similar projects and other evidence of qualifications for each such Subcontractor, Supplier, person or organization. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, either Owner or Engineer may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute, in which case the apparent Successful Bidder shall submit an acceptable substitute, that Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution and Owner may consider such price adjustment in evaluating Bids and making the Contract Award.

After Award, Bidder shall provide a copy of the proposed subcontracts (unexecuted copies are acceptable at this time) to Purchasing indicating the scope and the value of work to be subcontracted or to be obtained through a purchase order to a Supplier. After execution of this Agreement by Owner and Bidder, contractor shall provide copies of the executed subcontracts and purchase orders to Suppliers to the Owner's Contracts Department prior to submittal of the first Application for Payment.

10.2 No Contractor shall be required to employ any Subcontractor, Supplier, other person or organization against whom Contractor has reasonable objection.

10.3 The Bidder shall submit a Final Report of total payments made to each subcontractor and supplier, as part of the required close out documents.

This submittal shall be made as a condition precedent to Final Payment.

11. BID FORM

11.1 The Bid Form is included with the Bidding Documents; additional copies may be obtained from Owner.

11.2 All blanks on the Bid Form must be completed in ink. Bids which do not have all blanks filled in or completed may be rejected at the Owner's option.

- 11.3 Bids by corporations must be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- 11.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- 11.5 All names must be printed below the signature.
- 11.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- 11.7 The address and telephone number for communications regarding the Bid must be shown.

12. SUBMISSION OF BIDS

Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted) and name and address of the Bidder and accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. The Bid proposal packet must include an electronic version of the bid (e.g., saved on a compact disk).

13. MODIFICATION AND WITHDRAWAL OF BIDS

- 13.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
- 13.2 If, within twenty-four hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid; that the mistake is clerical; that the mistake is so serious that enforcement of the Bid would be unconscionable; and that the mistake has occurred despite the exercise of ordinary care; that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

14. OPENING OF BIDS

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

15. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

All Bids will remain subject to acceptance for forty-five (45) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to that date. In the case of State, Federal, or NADBank-funded projects, all Bids will remain subject to acceptance for ninety (90) days or such reasonable time as the funding agency may require.

16. AWARD OF CONTRACT

- 16.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work and the right to disregard all immaterial, nonconforming, nonresponsive, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to the Bidder, whether because the Bid is not responsive or the Bidder is not responsible because the Bidder is deemed to be unqualified or of doubtful financial ability or fails to meet any other pertinent criteria established by Owner under Paragraph 3 hereof. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Any bids submitted in which there is a material failure to comply with the Bid requirements or specifications will be rejected and the contract will be awarded to the lowest responsible Bidder conforming to the specifications unless the Owner decides to reject all Bids.
- 16.2 In evaluating Bids, Owner will consider the responsiveness of the Bid, responsibility of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 16.3 Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary General Conditions or other sections of this bid document. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award or as a substitute.
- 16.4 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- 16.5 If the contract is to be awarded, it will be awarded to the lowest Bidder whose responsibility has been evaluated in accordance with these Instructions to Bidders.
- 16.6 If the contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within forty-five (45) days after the day of the Bid opening. In the case of State or Federally-funded projects, Owner will give the Successful Bidder a Notice of Award within ninety (90) days after the day of the Bid opening, or such reasonable time as the funding agency may require.

17. CONTRACT SECURITY

Paragraph 5.1 of the General Conditions and the Supplementary General Conditions set forth Owner's requirements as to performance and payment Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by the required Performance and Payment Bonds and the Certificate of Insurance and insurance policies. A Payment Bond must be provided for contracts \$25,000.00 or greater in value. If the contract requires an expenditure of less than \$100,000, the Owner reserves the right to waive the requirement for a Performance Bond, provided that payment is not due to the Contractor until the Work is completed and accepted by the Owner. Any provision in any bond furnished in attempted compliance with House Bill No. 31 that expands or restricts the rights or liabilities provided under this Act shall be disregarded and the provisions of this Act shall be read into that Bond.

18. SIGNING OF AGREEMENT

When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten days after, Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds and a copy of the Certificate of Insurance along with a copy or copies of the actual Insurance policy or policies. Owner shall deliver fully signed final contract to Contractor when all pre-construction contract requirements have been met.

19. PRE-BID CONFERENCE

A pre-bid conference will be held at 11 A.M. on the 12th day of December, 2023 at 1557 FM 1110, Clint, Texas. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference.

20. SALES AND USE TAXES

Owner is exempt from Municipal and State Sales and Use Taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Contract Price. Refer to Supplementary General Conditions SC-6.15 for additional information.

21. NADB REQUIREMENTS

This project is to be funded through a loan obtained from the North American Development Bank (NADB) through the issuance of Build America Bonds. This Bid is consistent with the procurement policies of the NADB. Copies of those policies can be found from their website at:

http://www.nadb.org/pdfs/procurementdocs/ProcurementGuide_Eng.pdf

22. AMERICAN RESCUE PLAN ACT (ARPA) REQUIREMENTS

This project will be partially funded with ARPA funds. The Bidder shall provide the ARPA required information listed in Section 00900.

QUALIFICATION AND FINANCIAL DISCLOSURE STATEMENT

BIDDER:

PROJECT NAME:

Fenter Rd Reconstruction

1. ORGANIZATION

- 1.1 How many years has your organization been in business as a Contractor?
- 1.2 How many years has your organization been in business under its present business name?
- 1.2.1 Under what other or former names has your organization operated?
- 1.3 If your organization is a corporation, answer the following:
- 1.3.1 Date of incorporation: _____
- 1.3.2 State of incorporation: _____
- 1.3.3 President's name: _____
- 1.3.4 Vice-president's name(s): _____
- 1.3.5 Secretary's name: _____
- 1.3.6 Treasurer's name: _____
- 1.4 If your organization is a partnership, answer the following:
- 1.4.1 Date of organization: _____
- 1.4.2 Type of partnership
(if applicable): _____
- 1.4.3 Name(s) of general
partner(s): _____
- 1.5 If your organization is individually owned, answer the following:
- 1.5.1 Date of organization: _____
- 1.5.2 Name of owner: _____
- 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

2. LICENSING

- 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable. Indicate name, license number and expiration date for Master Electrician or other trade required under the Instructions to Bidders section of this Bid.
- 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

3. EXPERIENCE

- 3.1 List the categories of work that your organization normally performs with its own forces.
- 3.2 Claims and Suits. (If the answer to any of the questions below is yes, please attach details.)
 - 3.2.1 Has your organization ever failed to complete any work awarded to it?
 - 3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?
 - 3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?
- 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)
- 3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.
 - 3.4.1 State total worth of work in progress and under contract:
- 3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.
 - 3.5.1 State annual amount of construction work performed each year during the past five years:
- 3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization. Submit resumes of Key Personnel (as defined in Section 00100, Instructions to Bidders). Bidder hereby certifies that the Resident Superintendent has the authority to act on behalf of the Contractor at all times. No substitution shall be made without the written authorization of the Owner and the Engineer based upon acceptance of the qualifications of the proposed substitute.
- 3.7 On a separate sheet, provide evidence that the Bidder meets the minimum criteria called out in Section 00100, Instructions to Bidders. Provide similar evidence for Subcontractors, if required by Bid or by Engineer.
- 3.8 Provide the MWBE CERTIFICATION SUMMARY FORM found at the end of Section 00300.

4. REFERENCES

4.1 Trade References:

4.2 Bank References:

4.3 Surety:

Name and telephone number of Bonding Company: _____

Name, telephone and address of Agent: _____

5. FINANCING

5.1 Financial Statement

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

- a. Cash Flow Statement
- b. Notes to Financial Statement
- c. Auditor Statement
- d. Comparison Statements, if available

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

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

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

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

6. SIGNATURE

6.1 To be executed by a Principal of the firm authorized to certify the foregoing information:

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

6.2 Dated at _____ this _____ day of _____, 202__.

Name of Organization: _____

By: _____

(Printed Name)

Title: _____

BID PROPOSAL CHECKLIST	
Section 00100/00300	1. <u>MANDATORY</u> : Signed Bid Form with all blanks filled in, including acknowledgement of any issued addenda and names of all Subcontractors and Suppliers.
Section 00100/00300	2. <u>MANDATORY</u> : Original and Notarized Bid Security or Bond
Section 00100/00300	3. <u>MANDATORY</u> : Certificate of Insurance Availability
Section 00100/00300	4. <u>MANDATORY</u> : Names and categories (SMLB, MBE OR WBE) of all Subcontractors and Suppliers with SMLB, MBE OR WBE certifications
Section 00100/00300	5. <u>MANDATORY</u> : Evidence of Good Faith Efforts if Minority Participation Goals are not met
Section 0510	6. <u>MANDATORY</u> : Statement of Nondivestment From Israel
Section 00100	7. <u>MANDATORY</u> : Electronic version of the Bid Proposal (saved on a Compact Disk)
Section 00900	8. <u>MANDATORY</u> : ARPA Required Information (Attachments A, C, D, G, H, I, J, K, AND L)
Section 00100	9. <u>MANDATORY</u> : Non-Bribery Certification

POST-BID/PRE-AWARD CHECKLIST	
Section 00100/00810	1. <u>MANDATORY</u> : Evidence of Worker's Compensation Insurance Coverage: a Certificate of Insurance or Form DWC-81, DWC-82, DWC-83, DWC-84, DWC-85 or if self-insured, a coverage agreement filed with the Texas Worker's Compensation Commission's Division of Self Insurance Regulation.
Section 00100/00810	2. <u>MANDATORY</u> : If employees provided by leasing company, evidence of Texas State License and copy of their Worker's Compensation policy. If no leased employees will be used, provide a letter on Contractor's letterhead stating so.
Section 00100/00300	3. <u>MANDATORY</u> : Financial Statements
Section 00100/00300	4. <u>MANDATORY</u> : Qualification Statement and Qualifications of Key Personnel (included in Section 00100)
Section 00100/00300	5. <u>MANDATORY</u> : Updated Minority Certification And Participation Summary
Section 00100	6. <u>MANDATORY</u> : Performance and Payment Bonds

SECTION 00300

BID FORM

PROJECT IDENTIFICATION: Lower Valley Water District

FENTER RD RECONSTRUCTION

LVWD BID NO.: 24-0105-02

Name and Address of OWNER: Lower Valley Water District
1557 FM 1110
P.O. Box 909
Clint, Texas 79836

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for forty-five days after the day of Bid opening. In the case of State, Federal, or NADBank-funded projects, all Bids will remain subject to acceptance for 90 days or such reasonable time as the funding agency may require. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER's Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - A. BIDDER has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date Number

- B. BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
 - C. BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraph 4.2 of the General Conditions, and accepts the determination set forth in Paragraph SC-4.2 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings.

- D. BIDDER has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in "C." above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.2 of the General Conditions.
 - E. BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities.
 - F. BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
 - G. BIDDER has given ENGINEER written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER.
 - H. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
4. Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BASE BID 1 (INCLUDES ALL WORK FROM STA 0+90 TO STA 11+46 AND FROM STA 20+46 TO 30+83.67)					
Item No	Description of Item	Est. Quantity	Unit	Unit Bid Price	Extended Amount (Qty x Unit Price)
1	Mobilization & Bonds (for Items 2-19)	1	LS		
2	Implement Storm Water Pollution Prevention Plan	1	LS		
3	Traffic Control	5	MO		
4	Remove Asphalt Pavement and Base Material, and Dispose Off-site (up to 10")	6260	SY		
5	Excavation of Subgrade and Dispose Off-site	6260	SY		
6	Tree Removal	3	EA		
7	Grading	21	STA		
8	Remove Sign Post and Assembly & Dispose Off-site	4	EA		
9	Adjust Water Valve	2	EA		
10	Adjust Water Meter	4	EA		
11	Furnish and Install HMAC Type C Pavement	870	TON		
12a	FL BS (CMP IN PLC)(TY A GR 3) (6")	6240	SY		
12b	FL BS (CMP IN PLC)(TY A GR 3) (4")	20	SY		
13	Compacted Select Fill	6260	SY		
14	Subgrade Preparation	6260	SY		
15	Furnish & Install Header Curb	4250	LF		
16	Install 4" Broken Yellow Striping	350	LF		
17	Install 4" Solid White Striping	4150	LF		
18	Install 4" Solid Yellow Striping	1300	LF		
19	Furnish & Install Sign, Post, and Assembly	7	EA		

TOTAL BASE BID 1 (ITEMS 1 THROUGH 19) _____

TOTAL BASE BID 1 (in words)

In accordance with Section 151.311 of the Texas Tax Code (V.A.T.C.S.), regarding taxes on materials and services, and requiring a separated contract, the following is the breakdown of cost for materials and cost for labor for this bid:

MATERIALS TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

LABOR TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

RENTAL EQUIPMENT AND OTHER TAXABLE ITEMS: \$ _____

OTHER (I.E. BONDS, INSURANCE, CAPITAL EQUIPMENT, ETC.) \$ _____

***TOTAL CONTRACT (TOTAL MUST EQUAL TOTAL BID PRICE): \$ _____**

BASE BID 1 - ALTERNATE 1 (INCLUDES V-CHANNEL WORK DESCRIBED IN SHEET 20 OF THE ENGINEERING PLANS FROM STA 20+30 TO STA 30+51.22)					
Item No	Description of Item	Est. Quantity	Unit	Unit Bid Price	Extended Amount (Qty x Unit Price)
A1	Mobilization & Bonds (for Item A2)	1	LS		
A2	Stone Common Dry (4"-6")	530	CY		

TOTAL BASE BID 1 ALTERNATE 1 (ITEMS A1 THROUGH A2) _____

TOTAL BASE BID 1 ALTERNATE 1 (in words)

In accordance with Section 151.311 of the Texas Tax Code (V.A.T.C.S.), regarding taxes on materials and services, and requiring a separated contract, the following is the breakdown of cost for materials and cost for labor for this bid:

MATERIALS TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

LABOR TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

RENTAL EQUIPMENT AND OTHER TAXABLE ITEMS: \$ _____

OTHER (I.E. BONDS, INSURANCE, CAPITAL EQUIPMENT, ETC.) \$ _____

***TOTAL CONTRACT (TOTAL MUST EQUAL TOTAL BID PRICE):** \$ _____

BASE BID 2 (INCLUDES ALL WORK BETWEEN STA 11+46 AND STA 20+46)					
Item No	Description of Item	Est. Quantity	Unit	Unit Bid Price	Extended Amount (Qty x Unit Price)
1	Mobilization & Bonds (for Items 2-21)	1	LS		
2	Implement Storm Water Pollution Prevention Plan	1	LS		
3	Traffic Control	5	MO		
4	Remove Asphalt Pavement and Base Material, and Dispose Off-site (up to 10")	2880	SY		
5	Excavation of Subgrade and Dispose Off-site	2690	SY		
7	Grading	10	STA		
8	Remove Sign Post and Assembly & Dispose Off-site	10	EA		
11	Furnish and Install HMAC Type C Pavement	370	TON		
12a	FL BS (CMP IN PLC)(TY A GR 3) (6")	2640	SY		
12b	FL BS (CMP IN PLC)(TY A GR 3) (4")	50	SY		
13	Compacted Select Fill	2690	SY		
14	Subgrade Preparation	2690	SY		
15	Furnish & Install Header Curb	1800	LF		
17	Install 4" Solid White Striping	1800	LF		
18	Install 4" Solid Yellow Striping	1800	LF		
19	Furnish & Install Sign, Post, and Assembly	11	EA		
20	Furnish & Install Object Marker	2	EA		
21	Cement Stabilized Backfill (2-sack) (12")	15	SY		

TOTAL BASE BID 2 (ITEMS 1 THROUGH 21) _____

TOTAL BASE BID 2 (in words)

In accordance with Section 151.311 of the Texas Tax Code (V.A.T.C.S.), regarding taxes on materials and services, and requiring a separated contract, the following is the breakdown of cost for materials and cost for labor for this bid:

MATERIALS TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

LABOR TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

RENTAL EQUIPMENT AND OTHER TAXABLE ITEMS: \$ _____

OTHER (I.E. BONDS, INSURANCE, CAPITAL EQUIPMENT, ETC.) \$ _____

***TOTAL CONTRACT (TOTAL MUST EQUAL TOTAL BID PRICE):** \$ _____

5. BIDDER agrees that the Work will be substantially complete within **163** Calendar Days after the date when the Contract time commences to run as provided in Paragraph 2.3 of the General Conditions as modified in the Supplementary Conditions.

BIDDER accepts the provisions of the Supplementary Conditions and the Agreement as to liquidated damages in the event of failure to complete the Work on time.

6. BIDDER MUST ANSWER THE FOLLOWING QUESTIONS: (Refer to INSTRUCTIONS TO BIDDERS for definitions.)

- A. Is the bidder that is making and submitting this bid a "RESIDENT BIDDER" or a "NONRESIDENT BIDDER"?

Answer: _____

- B. If the bidder is a "NONRESIDENT BIDDER", does the state in which the Nonresident Bidder's principal place of business is located have a law requiring a Nonresident Bidder of that state to bid a certain amount of percentage under the bid or a Resident Bidder of that state in order for the nonresident bidder of that state to be awarded a contract on his bid in such state?

Answer: _____

- C. If the answer to Question Number 2 is "yes", then what amount or percentage must a Texas Resident Bidder bid under the bid of a Resident Bidder of that state in order to be awarded a contract on such bid in said state?

Answer: _____

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

- A. Required Bid Security in the form of _____

- B. A tabulation of all Subcontractors who will provide labor at the site of the work or render services to the CONTRACTOR in or about the construction of the work and Suppliers and other persons and organizations is required to be identified in this Bid. Complete the following table, designating each as Small Locally-Owned Business Enterprise (SMLB), Minority Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or Other (not either SMLB, WBE or MBE) is required. Only one category may be checked. Include the work item and value of work to be provided by the Prime Contractor, as well as its category.

Tabulation of Subcontractors and Suppliers

SUBCONTRACTOR/SUPPLIER	WORK ITEM	SUBCONTRACT OR PURCHASE ORDER VALUE (If value is unknown, please list <i>Pending</i>)	S M L B	M B E	W B E	O T H E R
			Please check one box			
Prime Contractor:						

C. Will the Contractor meet the Small Locally Owned Business Enterprise, Minority Business Enterprise and Women-Owned Business Enterprise goals as required by these contract documents and the funding agencies?

YES _____ NO _____

If "YES", include above each of the firms to be used, their business status as a MBE, WBE or SMLB, the proposed dollar value and type of work to be performed.

If "NO", documentation supporting good faith effort is required.

8. Communications concerning this Bid shall be addressed to the following named individual, address, telephone number, and facsimile number:

Name: _____
Address: _____

Phone: _____ Fax: _____

E-Mail _____

9. The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

SUBMITTED on _____, 20____.

If BIDDER is:

An Individual

By _____ (SEAL)
(Name of Bidder)

(Title) (Signature)

doing business as _____

Business address: _____

Phone No.: _____

A Partnership

By _____ (SEAL)
(Firm Name)

(Signature - general partner)

Business address: _____

Phone No.: _____

A Corporation

By _____
(Corporation Name)

(state of incorporation)

By _____
(name of person authorized to sign)

(Title) (Signature)

(Corporate Seal)

Attest _____
(Secretary)

Business address: _____

Phone No.: _____

Federal Tax Identification Number _____

When proposing as a Corporation, Bidder swears and affirms by signing this Bid that the proposing Corporation is currently in existence, is currently authorized to do business in the State of Texas (or State of incorporation) and that no franchise tax reports or payments are delinquent as of the date of this Bid Proposal. The Bidder will provide a Certificate of Account Status with the signed Contract Documents. See the Agreement, Section 00500, for the sample form which is to be obtained by the successful Contractor from the Texas (or other state) Comptroller of Public Accounts and submitted as part of the final, executed Contract Documents.

CERTIFICATION OF INSURANCE AVAILABILITY

Date _____

I, _____ (Name of Insurance Agent), certify that I have reviewed the insurance requirements listed in Article 5 of the Supplementary Conditions of the specifications for the Fenter Rd Reconstruction project, Bid No. 24-0105-02, and further certify that _____ (Name of Bidder) has or can obtain the insurance coverage required by this Project so that a certificate of insurance and a copy(s) for the actual insurance policies can be submitted to the Owner within fifteen (15) days of the Notice of Award.

Signed _____

Title _____

Insurance Agency _____

Address _____

Telephone _____

**MINORITY CERTIFICATION
AND
PARTICIPATION SUMMARY**
(LVWD FUNDED PROJECTS)

BID NUMBER: _____

BID TITLE: _____

I certify that the Minority (MBE) and Women's Business Enterprises (WBE) and Small Locally Owned Businesses (SMLB) participating in this project are qualified in accordance with the Minority requirements included in the above listed Bid Documents and that we will ensure all consultants, contractors, suppliers and subcontractors will comply with the Minority guidelines. Definitions of each category are found in the 00100, Instructions to Bidders Section. Attached are:

Solicitation Documents: _____

Proposed Subcontracts for the below listed firms: _____

MBE, WBE or SMLB FIRM NAME	ADDRESS	PHONE	CONTRACT AMOUNT	MBE	WBE	SMLB

The attached documents outline the efforts taken in complying with the Minority Guidelines.

CONTRACTOR

SIGNATURE OF AUTHORIZED REPRESENTATIVE

DATE

PRINTED NAME OF AUTHORIZED REPRESENTATIVE

The logo for ACME CONSTRUCTION features the company name in white, uppercase letters inside a blue oval. A yellow swoosh is positioned above the oval, extending from the left side towards the top right.

ACME CONSTRUCTION

**10518 Burr Oak Drive
San Antonio, Texas 78609**

512-557-7089
Fax 512-557-2097

January 5, 2008

CERTIFIED MAIL / RETURN RECEIPT REQUESTED

Amazing Results Landscape and Supply Company
111 Red Rock Terrace
Lignite, Texas 72533

Gentlemen:

We are actively seeking MWBE Contractors and suppliers for work to be done under Project Number 123456, Sewer System Improvements, City of Anywhere, Texas. The work will consist of utility worm, concrete, paving, fencing, landscaping, masonry, excavation and trucking, barricades, back-hoe work and supplies and materials.

Plans and specifications may be viewed or obtained at the project engineer's general offices, Bing, Campbell and Associates, 19510 Jackson Blvd., Muleshoe, Texas 76698.

All bids must be submitted to the above mentioned address by Noon, Friday, February 16, 2008.

Sincerely,

John Q. Doe, Project Director
Acme Construction



Amazing Results
Landscaping

January 12, 2008

Mr. John Q. Doe, Project Director
Acme Construction
10518 Burr Oak Drive
San Antonio, Texas 78609

RE: PROJECT NO. 123456, ANYWHERE TEXAS SEWER SYSTEM IMPROVEMENTS PROJECT

Dear Mr. Doe:

We wish to submit the following bid for the above mentioned project:

St. Augustine sod – 900 square yards at \$1.75 per square yard \$1,575.00
(Includes installation, rolling, fertilizing, and days of watering)

Hydro-Mulch – 15 acres at \$1,175 per acre \$17,625.00
(5-acre minimum pre trip; No water; No maintenance; areas that do not germinate will be reseeded) Proper watering is the responsibility of customer.

Hay Bales – We will furnish and install at a rate of \$15.00 per bale

We look forward to hearing from you concerning our bid. Thank you.

Sincerely,

Theodore T. "Red" Robbins
Manager

*** A Certified MBE FIRM ***

1111 Red Rock Terrace
Lignite, Texas 72533
(512) 489-5678 (800) 549-0000
(512) 489-5679 fax
www.amazingresults.com

The logo for ACME CONSTRUCTION features the company name in white, uppercase letters inside a blue oval. A yellow swoosh is positioned above the oval, extending from the left side towards the top right.

ACME CONSTRUCTION

**10518 Burr Oak Drive
San Antonio, Texas 78609**

512-557-7089
Fax 512-557-2097

January 5, 2008

CERTIFIED MAIL / RETURN RECEIPT REQUESTED

Rider Excavation Services
7856 Dry Gulch
Little Indian Mound, Texas 74561

Gentlemen:

We are actively seeking MWBE Contractors and suppliers for work to be done under Project Number 123456, Sewer System Improvements, City of Anywhere, Texas. The work will consist of utility worm, concrete, paving, fencing, landscaping, masonry, excavation and trucking, barricades, back-hoe work and supplies and materials.

Plans and specifications may be viewed or obtained at the project engineer's general offices, Bing, Campbell and Associates, 19510 Jackson Blvd., Muleshoe, Texas 76698.

All bids must be submitted to the above mentioned address by Noon, Friday, February 16, 2008.

Sincerely,

John Q. Doe, Project Director
Acme Construction



Rider Excavation Services

January 8, 2008

Mr. John Q. Doe, Project director
Acme Construction
10518 Burr Oak Drive
San Antonio, Texas 78609

RE: PROJECT NO. 123456
ANYWHERE TEXAS SEWER SYSTEM IMPROVEMENTS PROJECT

Dear Mr. Doe:

Thank you for your letter of January 5, 2008 requesting bids for the Anywhere, Texas Sewer System Improvements Project. We will not be submitting a bid because we are scheduled to begin work on another project that is projected to start on approximately the same date as ours.

We appreciate the opportunity to participate in your project. Please contact us again for any future projects.

Sincerely,

Easy Rider President
Rider Excavation Services

The logo for ACME CONSTRUCTION features the company name in white, uppercase letters inside a blue oval. A yellow swoosh underline is positioned above the oval.

ACME CONSTRUCTION

**10518 Burr Oak Drive
San Antonio, Texas 78609**

512-557-7089
Fax 512-557-2097

January 5, 2008

CERTIFIED MAIL / RETURN RECEIPT REQUESTED

Shadow Paving
P. O. Box 903
Pharr, Texas 72579

Gentlemen:

We are actively seeking MWBE Contractors and suppliers for work to be done under Project Number 123456, Sewer System Improvements, City of Anywhere, Texas. The work will consist of utility worm, concrete, paving, fencing, landscaping, masonry, excavation and trucking, barricades, back-hoe work and supplies and materials.

Plans and specifications may be viewed or obtained at the project engineer's general offices, Bing, Campbell and Associates, 19510 Jackson Blvd., Muleshoe, Texas 76698.

All bids must be submitted to the above mentioned address by Noon, Friday, February 16, 2008.

Sincerely,

John Q. Doe, Project Director
Acme Construction

SHADOW PAVING



January 8, 2008

Acme Construction
John Q. Doe, Project Director
10518 Burr Oak Dr.
San Antonio, TX 78609

Dear Mr.Doe:

Thank you for your letter of January 5, 2008 requesting a bid for the paving portion of the Anywhere, Texas Sewer System Improvements Project. Because of the distance of the project from our offices, we will not be interested in submitting a bid.

We appreciate your interest in our services. Please keep us in mind for future projects that may require expertise and services.

Sincerely,

Elmer A. Paver
Office Manager, Shadow Paving

The logo for ACME CONSTRUCTION features the company name in white, uppercase letters inside a blue oval. A yellow swoosh underline is positioned above the oval, extending from the left side of the page towards the right.

**10518 Burr Oak Drive
San Antonio, Texas 78609**

512-557-7089
Fax 512-557-2097

January 5, 2008

CERTIFIED MAIL / RETURN RECEIPT REQUESTED

Construction Trades Newsletter
100 Someplace Dr.
P. O. Box 500
Anywhere, Texas 08654

Attn: Ms. Glory Everett, Editor

Dear Ms. Everett:

Please publish the following in the "Public Notices" section of your weekly newsletter on the following dates: 1/11/08; 1/18/08; 1/25/08; and 2/1/08.

"Acme Construction is soliciting subcontract and material bids in connection with the Improvements to the Sewer System for the City of Anywhere, Texas. Qualified MBE and WBE firms are encouraged to submit bids in response to this invitation. The work will consist of utility work, concrete, paving, fencing, landscaping, masonry, excavation and trucking, barricades, back-hoe work and supplies and materials. Plans and specifications may be viewed or obtained at the project engineer's general offices, Bing, Campbell and Associates, 19510 Jackson Blvd., Muleshoe, Texas 76698. Telephone No. 512-557-2091, Fax 512-557-2090. All bids must be submitted to the above mentioned address by Noon, Friday, February 16, 2008".

Please bill Acme Construction, 10518 Burr Oak Drive, San Antonio, Texas 78609. The person authorizing the placement of this ad is B. J. Tenfold. If you have any questions, you may contact Mr. Tenfold at 512-557-7000.

Sincerely,

B. J. Tenfold
Manager of Accounts

**10518 Burr Oak Drive
San Antonio, Texas 78609**

512-557-7089
Fax 512-557-2097

January 5, 2008

CERTIFIED MAIL / RETURN RECEIPT REQUESTED

Anywhere Weekly Courier
1111 Main Street
P. O. Box 1
Anywhere, Texas 08654

Attn: Mr. Bucky Beaver, Circulation Manager

Dear Mr. Beaver:

Please publish the following in the "Public Notices" section of your weekly newspaper editions on the following dates: 1/11/08; 1/18/08; 1/25/08; and 2/1/08.

"Acme Construction is soliciting subcontract and material bids in connection with the Improvements to the Sewer System for the City of Anywhere, Texas. Qualified MBE and WBE firms are encouraged to submit bids in response to this invitation. The work will consist of utility work, concrete, paving, fencing, landscaping, masonry, excavation and trucking, barricades, back-hoe work and supplies and materials. Plans and specifications may be viewed or obtained at the project engineer's general offices, Bing, Campbell and Associates, 19510 Jackson Blvd., Muleshoe, Texas 76698. Telephone No. 512-557-2091, Fax 512-557-2090. All bids must be submitted to the above mentioned address by Noon, Friday, February 16, 2008".

Please bill Acme Construction, 10518 Burr Oak Drive, San Antonio, Texas 78609. The person authorizing the placement of this ad is B. J. Tenfold. If you have any questions, you may contact Mr. Tenfold at 512-557-7000.

Sincerely,

B. J. Tenfold
Manager of Accounts

THE STATE OF TEXAS }
COUNTY OF GHI }

Before me Homer Shortcut, a Notary Public in and for GHI County, Texas on this day personally appeared Bucky Beaver, Circulation Manager for Small Town Newspapers Group, Inc., publishers of the Anywhere Weekly Courier, who being by me duly sworn did depose and say that said newspaper has been published continuously for more than fifty-two weeks prior to the first insertion of this Legal Notice Number 879 at GHI County, Texas and the attached printed copy of the legal notice is a true copy of the original and was printed weekly on the following date(s): 1/11/08; 1/18/08; 1/25/08; 2/1/08.

Circulation Manager
Anywhere Weekly Courier
Small Town Newspaper Group, Inc.

Appeared and sworn to before me on this
21st day of January, 2008

NOTARY PUBLIC in and for the State of Texas
My Commission expires 12/28/2010

Legal Notice as Published

Acme Construction is soliciting subcontract and material bids in connection with the Improvements to the Sewer System for the City of Anywhere, Texas. Qualified MBE and WBE firms are encouraged to submit bids in response to this invitation. The work will consist of utility work, concrete, paving, fencing, landscaping, masonry, excavation and trucking, barricades, back-hoe work and supplies and materials. Plans and specifications may be viewed or obtained at the project engineer's general offices, Bing, Campbell and Associates, 19510 Jackson Blvd., Muleshoe, Texas 76698. Telephone No. 512-557-2091, Fax 512-557-2090. All bids must be submitted to the above mentioned address by Noon, Friday, February 16, 2008.

BID BOND¹

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned, _____ as PRINCIPAL, AND _____ as SURETY are held and firmly bound unto _____ hereinafter called the "Local Public Agency", in the penal sum of _____ Dollars, (\$ _____), lawful money of the United States, for the payment for which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that Whereas the Principal has submitted the accompanying Bid, dated _____, 20____, for Fenter Rd Reconstruction.

NOW, THEREFORE, if the Principal shall not withdraw said Bid within the period specified therein after the opening of the same, or, if no period be specified, within thirty (30) days after the said opening, and shall within the period specified therefore, or if no period by specified, within ten (10) days after the prescribed forms are presented to him for signature, enter into a written Contract with the Local Public Agency in accordance with the Bid as accepted, and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract or in the event of the withdrawal of said Bid within the period specified, or the failure to enter into such Contract and give such bond within the time specified, if the Principal shall pay Local Public Agency the difference between the amount specified in said Bid and the amount for which the Local Public Agency may procure the required work or supplies or both, if the latter be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this _____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these present signed by its undersigned representative, pursuant to authority of its governing body.

(SEAL)

(SEAL)

Attest:

By: _____

By: _____

Countersigned

By _____

Attorney-in-Fact², State of _____

¹ Forms of Bid Bonds prepared to meet the requirements of local or State laws or the needs of the Local Public Agency should be substituted for this form where necessary.

² Power-of-attorney for person signing for surety company must be attached to bond.

SECTION 00500

**STANDARD FORM OF AGREEMENT BETWEEN OWNER
AND CONTRACTOR ON THE BASIS OF A STIPULATED PRICE**

THIS AGREEMENT is dated as of the _____ day of _____ in the year 201__ by and between Lower Valley Water District (hereinafter called OWNER) and _____
_____ (hereinafter called CONTRACTOR). OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK.

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

FENTER RD RECONSTRUCTION

The work under this contract shall be for furnishing all labor, materials, transportation and services for the construction and installation of the following work:

The Fenter Rd Reconstruction project includes the reconstruction of approximately 3,000 linear feet of Fenter Rd including removal of asphalt, base and subgrade, and construction of a new pavement structure. The project will also include installation of header curb, reconstruction of driveways, removal and installation of signs, striping, drainage improvements, and adjustment of water meters and valve boxes.

ARTICLE 2. ENGINEER.

The Project has been designed by Huitt-Zollars, Inc. who is hereinafter called ENGINEER and who is 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 completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME.

3.1 The Work will be Substantially completed within **163** Calendar Days from the date when the Contract Time commences to run as provided in Paragraph 2.03 of the General Conditions, and as revised in Supplementary Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions, and as revised in the Supplementary Conditions, within **193** calendar days. Final completion includes CONTRACTOR'S resolution of all punch list items and CONTRACTOR'S submission of required close-out documentation. Any failure of the CONTRACTOR to complete the project within the contract time will be considered a material breach of this contract.

3.2 Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss and public inconvenience if the Work is not completed and the submittals are not submitted within the times specified in Paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER the sum per day as noted below per milestone for each and every milestone date as defined in Section 01 00 00 of these Specifications and which the Contractor fails to meet. For Milestone 2, liquidated damages shall be computed from the milestone date until the date the milestone task is completed.

Liquidated Damages
-----Per Day-----

Milestone	Description	Liquidated Damages per Day
Milestone No. 1	Fenter Rd Reconstruction between STA 17+97 and STA 18+23 as described in Section 01 00 00 of these Specifications and Sheet 10 of the Fenter Rd Reconstruction project engineering plans.	\$2,050 per day with a total maximum amount of \$26,650 for Milestone 1.
Milestone No. 2	Remaining work for the complete reconstruction of Fenter Rd as described in Section 01 00 00 of these Specifications and the Fenter Rd Reconstruction project engineering plans.	<ul style="list-style-type: none"> ▪ \$2,050 per day for substantial completion ▪ \$1,025 per day for final completion

Milestone No. 1 Milestone 1 work shall be completed by February 14, 2024 to avoid conflicts with EPCWID1 irrigation season. It is expected that Notice to Proceed will be provided on January 29, 2024.

Milestone No. 2 150 Calendar Days will be provided to complete work in this milestone

ARTICLE 4. CONTRACT PRICE.

4.1 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds, per the attached CONTRACTOR's Bid in accordance with the below listed separate charges:

BASE BID 1

MATERIALS TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

LABOR TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

RENTAL EQUIPMENT AND OTHER TAXABLE ITEMS: \$ _____

OTHER (I.E. BONDS, INSURANCE, CAPITAL EQUIPMENT, ETC.) \$ _____

***TOTAL CONTRACT:** \$ _____

***(TOTAL MUST EQUAL TOTAL BID PRICE)**

BASE BID 1 ALTERNATE 1

MATERIALS TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

LABOR TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX: \$ _____

RENTAL EQUIPMENT AND OTHER TAXABLE ITEMS: \$ _____

OTHER (I.E. BONDS, INSURANCE, CAPITAL EQUIPMENT, ETC.) \$ _____

***TOTAL CONTRACT:** \$ _____
***(TOTAL MUST EQUAL TOTAL BID PRICE)**

BASE BID 2

**MATERIALS TO BE INCORPORATED IN
PROJECT NOT SUBJECT TO SALES TAX:** \$ _____

**LABOR TO BE INCORPORATED IN
PROJECT NOT SUBJECT TO SALES TAX:** \$ _____

**RENTAL EQUIPMENT
AND OTHER TAXABLE ITEMS:** \$ _____

**OTHER (I.E. BONDS, INSURANCE,
CAPITAL EQUIPMENT, ETC.)** \$ _____

***TOTAL CONTRACT:** \$ _____
***(TOTAL MUST EQUAL TOTAL BID PRICE)**

ARTICLE 5. PAYMENT PROCEDURES.

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

5.1 Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER for Work which is completed in accordance with the terms and conditions of the Contract Documents. All progress payments will be on the basis of the progress of the Work measured by the schedule of values established in Paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed and accepted) or, in the event there is no schedule of values, as provided in the General Requirements. No interest will be paid for late payments.

Prior to Substantial Completion, progress payments will be made in an amount equal to the percentages indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with Paragraph 14.7 of the General Conditions.

Ninety-five percent of Work completed (ninety percent for contracts under \$400,000.00), including 95 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in Paragraph 14.2 of the General Conditions).

5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said Paragraph 14.13.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS.

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

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

6.2 CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in

Paragraph 4.2 of the General Conditions, and accepts the determination set forth in Paragraph SC-4.2 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings.

- 6.3 CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 6.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work necessary for the performance or furnishing of the Work at the Contract Price, within the specifically the provisions of Paragraph 4.2 of the General Conditions. CONTRACTOR understands that the correctness of such information is not guaranteed by the OWNER or the ENGINEER and CONTRACTOR understands that the conditions encountered in performing the work may be different from the approximations shown.
- 6.4 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the location of said Underground Facilities as determined by his own field investigations. CONTRACTOR understands that the correctness of such information is not guaranteed by the OWNER or the ENGINEER and CONTRACTOR understands that the conditions encountered in performing the work may be different from the approximations shown.
- 6.5 CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 6.6 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

ARTICLE 7. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 7.1 CONTRACTOR's Bid (Section 00300)
- 7.2 Agreement (Section 00500)
- 7.3 Performance and Payment Bonds, and Certificate of Insurance, and insurance policies identified as Sections 00610, 00630 and 00650.
- 7.4 Bid Bond.
- 7.5 General Conditions (Section 00700)
- 7.6 Supplementary Conditions (Section 00800)
- 7.7 General Wage Rates (Section 00840)
- 7.8 ARPA Required Information (Section 00900)
- 7.9 Specifications bearing the title Project Manual for the Construction of Fenter Rd consisting of division numbers 01 00 00 through 34 00 00 as listed in table of contents thereof.
- 7.10 Drawings consisting of a cover sheet and sheets listed in the Index to Drawings, each sheet bearing the following general title:

Fenter Rd Reconstruction
(Drawings not attached to this Agreement.)

- 7.11 Addenda numbers _____ to _____, inclusive (not attached to this Agreement.)

- 7.12 Documentation submitted by CONTRACTOR prior to Notice of Award (Pages _____ to _____, inclusive).
- 7.13 The Instructions to Bidders, Information Available to Bidders, Bid Form and Bid Security, as well as any supplements to the Bid Form.
- 7.14 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraphs 3.4 and 3.5 of the General Conditions.
- 7.15 The documents listed in Paragraphs 7.2 et. seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in Paragraphs 3.4 and 3.5 of the General Conditions.

ARTICLE 8. MISCELLANEOUS.

- 8.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 8.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.
- 8.4 Any contract or contracts awarded under this Invitation for Bids are expected to be funded in part by a loan from the Texas Water Development Board. Neither the State of Texas nor any of its departments, agencies, or employees are or will be a party to this Invitation for Bids or any resulting contract.

ARTICLE 9. OTHER PROVISIONS.

- 9.1 Should any dispute arise under this Contract which culminates in litigation, venue of that suit shall be in a court of competent jurisdiction sitting in El Paso County, Texas. The court shall apply the laws of the State of Texas in construing and interpreting the terms of this Contract and the Contract Documents.
- 9.2 In case any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal, or unenforceable in any respect, that invalidity, illegality, unenforceability shall not affect any other provisions and this Agreement shall be construed as if such invalid, illegal, or unenforceable provisions had never been included.
- 9.3 The captions or headings of paragraphs in this Contract are inserted for convenience only and shall not be considered in constraining the provisions hereof if any question of intent should arise.
- 9.4 For NADBank-funded projects, Contractor agrees to indemnify and hold harmless North American Development Bank (NADB) and each of its directors, officers, employees, agents and representatives (collectively, "NADB's Associated Persons") against all claims for death, personal injury, damages, or other relief against NADB or NADB's Associated Persons, including costs, expenses and attorney's fees, resulting from negligence or willful acts or failure to act by the Contractor.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Agreement will be effective on _____, 20_____.

OWNER: Lower Valley Water District CONTRACTOR _____

By _____
General Manager

By _____

Name _____

Title _____

Address for giving notices:

1557 FM 1110
Clint, Texas 79836

Address for giving notices:

Date Signed _____

Date Signed _____

Federal Tax I.D. No.

Agent for service of process:

INSTRUCTIONS FOR EXECUTING CONTRACT

If the CONTRACTOR be a corporation, the following certificate should be executed:

I, _____, certify that I am the _____ of the corporation named as CONTRACTOR hereinabove; that, _____ who signed the foregoing Contract on behalf of the CONTRACTOR was then, _____ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

Corporate Seal

If the Contract is signed by the secretary of the corporation, the above certificate should be executed by some other officer of the corporation under the corporate seal. In lieu of the foregoing certificate, there may be attached to the Contract copies of so much of the records of the corporation as will show the official character and authority of the officers signing, duly certified by the Secretary or Assistant Secretary under the corporate seal to be true copies.

The full name and business address of the CONTRACTOR should be inserted and the Contract shall be signed with his official signature. Please have the name of the signing party or parties typewritten or printed under all signatures to the Contract.

If the CONTRACTOR should be operating as a partnership, each partner should sign the Contract. If the Contract is not signed by each partner, there should be attached to the Contract a duly authenticated Power of Attorney, evidencing the signer's (signers') authority to sign such Contract for and in behalf of the partnership.

If the CONTRACTOR is an individual, the trade name (if the CONTRACTOR is operating under a trade name) should be indicated in the Contract and the Contract should be signed by such individual. If signed by one other than the CONTRACTOR, there should be attached to the Contract a duly authenticated Power of Attorney evidencing the signer's authority to execute such Contract for and in behalf of the CONTRACTOR.

CONTRACT SUBMITTAL CHECKLIST	
1.	Executed Agreement
2.	Payment and Performance Bonds
3.	Insurance Certificate and Policies
4.	Certificate of Account Status (paid franchise taxes)
5.	If employees provided by leasing company, evidence of Texas State License and copy of their Worker's Compensation policy. If no leased employees will be used, provide a letter on Contractor's letterhead stating so.
6.	Federal Tax Identification Number
7.	Certificate of Account Status (paid franchise taxes)
8.	Final/Updated (if applicable) Minority Certification and Participation Summary
9.	Preliminary Schedule of Values
10.	Preliminary Construction Schedule
11.	Schedule of Shop Drawings
12.	NOI
13.	Buy America Documentation (if necessary)
14.	ARPA Required Information (Attachments A, C, D, G, H, I, J, K, AND L)

Deliver all items to the OWNER's Purchasing Department.

Deliver copies of items 1-14 to ENGINEER.

*Once Notice to Proceed has been issued, provide executed subcontracts and purchase orders to Purchasing Manager.

TEXAS STATUTORY PERFORMANCE BOND

(Penalty of this Bond must be 100% of Contract Amount)

Public Work – State of Texas

STATE OF TEXAS }
COUNTY OF _____ }

BOND NUMBER _____

KNOW ALL MEN BY THESE PRESENTS:

That _____ (hereinafter called the Principal), as Principal and _____, a corporation organized and existing under the laws of the State of _____, and whose principal office is located in the City of _____, and duly authorized to do business in the State of Texas (hereinafter called the Surety).

As Surety, are held firmly bound unto _____, hereinafter called the Owner), in the penal sum of _____ Dollars (\$_____) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Owner, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof, for _____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the said Principal shall faithfully perform the work in accordance with the plans, specifications and contract documents, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code and all liabilities on this Bond shall be determined in accordance with the provisions thereof to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

BY: _____
Principal

WITNESS:

BY: _____
Surety

PAYMENT BOND
PUBLIC WORK - STATE OF TEXAS

STATE OF TEXAS }
COUNTY OF _____ }

BOND NUMBER _____

KNOW ALL MEN BY THESE PRESENTS: That _____
_____ of the City of _____
County of _____ and State of _____ (hereinafter called the
Principal) , and _____,
authorized under the laws of the State of Texas to act as Surety on bonds for Principals (hereinafter called the Surety)
are held and firmly bound unto _____ (hereinafter
called the Owner) , in the penal sum of _____ Dollars
(\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs,
administrators executors, successors and assigns, jointly and severally, by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day
of _____ , 20 _____ for _____
_____ to which contract is hereby referred to and made part hereof as fully and
to the same extend as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the said Principal shall pay all
claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said
contract, then this obligation shall be void: otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas
Government Code and all liabilities on this bond shall be determined in accordance with the provisions of said
Chapter to the same extend as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms
of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same,
shall in anywise affect its obligation on this bond and it does hereby waive notice of any such change, extension of
time, alteration or addition to the terms of the contract, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this
_____ day of _____ , 20 _____.

BY: _____
Principal

WITNESS:

BY: _____
Surety

CERTIFICATE OF INSURANCE

ISSUE DATE

PRODUCER

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER **A**

COMPANY LETTER **B**

COMPANY LETTER **C**

COMPANY LETTER **D**

COMPANY LETTER **E**

INSURED

COVERAGES

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

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	ALL LIMITS IN THOUSANDS	
	GENERAL LIABILITY				GENERAL AGGREGATE	\$
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OPS AGGREGATE	\$
	<input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCURRENCE				PERSONAL & ADVERTISING INJURY *	\$
	<input type="checkbox"/> OWNERS & CONTRACTORS PROTECTIVE				EACH OCCURRENCE	\$
					FIRE DAMAGE (ANY ONE FIRE)	\$
					MEDICAL EXPENSES (ANY ONE PERSON)	\$
	AUTOMOBILE LIABILITY				CSL	\$
	<input type="checkbox"/> ANY AUTO				CSL	\$
	<input type="checkbox"/> ALL OWNED AUTOS				CSL	\$
	<input type="checkbox"/> SCHEDULED AUTOS				CSL	\$
<input type="checkbox"/> HIRED AUTOS						
<input type="checkbox"/> NON-OWNED AUTOS						
<input type="checkbox"/> GARAGE LIABILITY						
	EXCESS LIABILITY				\$	EACH OCCURRENCE
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM				AGGREGATE	
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY	
					\$	(EACH ACCIDENT)
					\$	(DISEASE-POLICY LIMIT)
					\$	(DISEASE-EACH EMPLOYEE)
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS

* DELETE EMPLOYEE EXCLUSIONS

ADDITIONAL INSURED / CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED OR MATERIALLY CHANGED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY SHALL PROVIDE 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT.

AUTHORIZED REPRESENTATIVE

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

and

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

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

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

Copyright © 2007 National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

Associated General Contractors of America
2300 Wilson Boulevard, Suite 400, Arlington, VA 22201-3308
(703) 548-3118
www.agc.org

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1 – Definitions and Terminology.....	1
1.01 Defined Terms.....	1
1.02 Terminology.....	5
Article 2 – Preliminary Matters.....	6
2.01 Delivery of Bonds and Evidence of Insurance.....	6
2.02 Copies of Documents.....	6
2.03 Commencement of Contract Times; Notice to Proceed.....	6
2.04 Starting the Work.....	7
2.05 Before Starting Construction.....	7
2.06 Preconstruction Conference; Designation of Authorized Representatives.....	7
2.07 Initial Acceptance of Schedules.....	7
Article 3 – Contract Documents: Intent, Amending, Reuse.....	8
3.01 Intent.....	8
3.02 Reference Standards.....	8
3.03 Reporting and Resolving Discrepancies.....	9
3.04 Amending and Supplementing Contract Documents.....	9
3.05 Reuse of Documents.....	10
3.06 Electronic Data.....	10
Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points.....	11
4.01 Availability of Lands.....	11
4.02 Subsurface and Physical Conditions.....	11
4.03 Differing Subsurface or Physical Conditions.....	12
4.04 Underground Facilities.....	13
4.05 Reference Points.....	14
4.06 Hazardous Environmental Condition at Site.....	14
Article 5 – Bonds and Insurance.....	16
5.01 Performance, Payment, and Other Bonds.....	16
5.02 Licensed Sureties and Insurers.....	16
5.03 Certificates of Insurance.....	17
5.04 Contractor’s Insurance.....	17
5.05 Owner’s Liability Insurance.....	19
5.06 Property Insurance.....	19
5.07 Waiver of Rights.....	20
5.08 Receipt and Application of Insurance Proceeds.....	21

5.09	Acceptance of Bonds and Insurance; Option to Replace	21
5.10	Partial Utilization, Acknowledgment of Property Insurer	22
Article 6 – Contractor’s Responsibilities.....		22
6.01	Supervision and Superintendence	22
6.02	Labor; Working Hours	22
6.03	Services, Materials, and Equipment	22
6.04	Progress Schedule	23
6.05	Substitutes and “Or-Equals”	23
6.06	Concerning Subcontractors, Suppliers, and Others	25
6.07	Patent Fees and Royalties.....	27
6.08	Permits.....	27
6.09	Laws and Regulations	28
6.10	Taxes.....	28
6.11	Use of Site and Other Areas.....	28
6.12	Record Documents	29
6.13	Safety and Protection.....	29
6.14	Safety Representative	30
6.15	Hazard Communication Programs.....	30
6.16	Emergencies	30
6.17	Shop Drawings and Samples	31
6.18	Continuing the Work.....	32
6.19	Contractor’s General Warranty and Guarantee	33
6.20	Indemnification	33
6.21	Delegation of Professional Design Services.....	34
Article 7 – Other Work at the Site		35
7.01	Related Work at Site	35
7.02	Coordination.....	35
7.03	Legal Relationships	36
Article 8 – Owner’s Responsibilities.....		36
8.01	Communications to Contractor.....	36
8.02	Replacement of Engineer	36
8.03	Furnish Data	36
8.04	Pay When Due.....	36
8.05	Lands and Easements; Reports and Tests.....	36
8.06	Insurance.....	36
8.07	Change Orders	37
8.08	Inspections, Tests, and Approvals.....	37
8.09	Limitations on Owner’s Responsibilities.....	37
8.10	Undisclosed Hazardous Environmental Condition	37
8.11	Evidence of Financial Arrangements.....	37
8.12	Compliance with Site Safety Program.....	37
Article 9 – Engineer’s Status During Construction.....		37
9.01	Owner’s Representative	37

9.02	Visits to Site	37
9.03	Project Representative.....	38
9.04	Authorized Variations in Work.....	38
9.05	Rejecting Defective Work.....	38
9.06	Shop Drawings, Change Orders and Payments	39
9.07	Determinations for Unit Price Work.....	39
9.08	Decisions on Requirements of Contract Documents and Acceptability of Work	39
9.09	Limitations on Engineer's Authority and Responsibilities	39
9.10	Compliance with Site Safety Program.....	40
Article 10 – Changes in the Work; Claims.....		40
10.01	Authorized Changes in the Work.....	40
10.02	Unauthorized Changes in the Work.....	41
10.03	Execution of Change Orders	41
10.04	Notification to Surety	41
10.05	Claims.....	41
Article 11 – Cost of the Work; Allowances; Unit Price Work		42
11.01	Cost of the Work	42
11.02	Allowances	45
11.03	Unit Price Work	45
Article 12 – Change of Contract Price; Change of Contract Times.....		46
12.01	Change of Contract Price	46
12.02	Change of Contract Times	47
12.03	Delays	47
Article 13 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work.....		48
13.01	Notice of Defects.....	48
13.02	Access to Work	48
13.03	Tests and Inspections	49
13.04	Uncovering Work.....	49
13.05	Owner May Stop the Work	50
13.06	Correction or Removal of Defective Work	50
13.07	Correction Period	50
13.08	Acceptance of Defective Work.....	51
13.09	Owner May Correct Defective Work.....	52
Article 14 – Payments to Contractor and Completion		52
14.01	Schedule of Values.....	52
14.02	Progress Payments.....	52
14.03	Contractor's Warranty of Title.....	55
14.04	Substantial Completion.....	55
14.05	Partial Utilization	56
14.06	Final Inspection	57
14.07	Final Payment.....	57
14.08	Final Completion Delayed	58

14.09 Waiver of Claims	58
Article 15 – Suspension of Work and Termination.....	59
15.01 Owner May Suspend Work.....	59
15.02 Owner May Terminate for Cause.....	59
15.03 Owner May Terminate For Convenience	60
15.04 Contractor May Stop Work or Terminate.....	60
Article 16 – Dispute Resolution	61
16.01 Methods and Procedures	61
Article 17 – Miscellaneous	61
17.01 Giving Notice	61
17.02 Computation of Times	62
17.03 Cumulative Remedies	62
17.04 Survival of Obligations	62
17.05 Controlling Law	62
17.06 Headings	62

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
 12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop

Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words or terms discussed in Paragraph 1.02.B-F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

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

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

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

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

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

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

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

2.03 *Commencement of Contract Times; Notice to Proceed*

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

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

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

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on

Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

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

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

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

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

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

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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

4.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

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

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

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

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

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Owner's Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

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

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

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

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

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

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

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

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

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

6.12 *Record Documents*

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

6.13 *Safety and Protection*

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

shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

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

required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

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

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

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

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

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

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

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

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.

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

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

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

8.03 *Furnish Data*

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

8.04 *Pay When Due*

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

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

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

8.07 *Change Orders*

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

8.08 *Inspections, Tests, and Approvals*

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

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

8.12 *Compliance with Safety Program*

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

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

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

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or

continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

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

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not

exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

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

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

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

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

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

11.01 *Cost of the Work*

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

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of

said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

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

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to

the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee*: The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

13.01 Notice of Defects

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

13.02 Access to Work

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

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

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

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

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

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments:

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an

Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

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

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or

- involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

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

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

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

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If,

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

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A-D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

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

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work

has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

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

14.08 Final Completion Delayed

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

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:
1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when

so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

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

to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

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

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

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

17.03 *Cumulative Remedies*

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

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06 *Headings*

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

SECTION 00800

SUPPLEMENTARY CONDITIONS

TABLE OF CONTENTS

INTRODUCTORY STATEMENT

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

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

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

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01.A.10 Add the following sentence to Paragraph 1.01.A.10

When submitted, a Claim must be signed by the Designated Authorized Representative.

SC-1.01.A.51 Delete Paragraph 1.01.A.51 in its entirety and insert the following in its place:

Designated Authorized Representative — the representative authorized by the party filing the Claim to execute legally-binding agreements on behalf of that party. For Owner, the Designated Authorized Representative shall be the Chief Technical Officer, a Vice President, or President and Chief Executive Officer. For Contractor, the owner or its designee authorized pursuant to a power of attorney.

SC-1.01.A.52 Add the following paragraph immediately after Paragraph 1.01.A.51:

Health and Safety Plan — The part of the Contract Documents prepared by Contractor that describes safety procedures for the Work, identifies the Contractor's safety representative required by Paragraph 6.14.A, and certifies that the Contractor's employees have received or will receive training prior to the commencement of the Work on (1) basic health and safety issues; (2) the Health and Safety Plan; (3) the methods and techniques the Contractor will use on the Project; (4) procedures for Contractor entrance into an exit from the Site(s); and (5) informing Owner about any unique hazards presented by the Work or found as a result of the Work.

ARTICLE 2 - PRELIMINARY MATTERS

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

- A. Owner shall furnish Contractor electronic copies of the Drawings and Project Manual as portable document format (.PDF) files. Physical (hard) copies of the Contract Documents will not be available.

SC-2.03 Amend the third sentence of Paragraph 2.03.A by changing the word “sixtieth” to read as “seventy-fifth”.

SC-2.05.B Add the following new paragraph immediately after Paragraph 2.05.A.3:

- B. *Health and Safety Plan.* Contractor shall submit a copy of Health and Safety Plan no later than the later of: (1) fifteen days after the bid award; or (2) thirty days before Work at the Site is started. No Work shall proceed until the Owner has accepted the Health and Safety Plan.

SC-2.06 Amend the first sentence of Paragraph 2.06.B to read as follows:

At or prior to this conference Owner and Contractor each shall designate, in writing by Owner and in writing by Contractor as a submittal, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract.

SC-2.07 Amend the first sentence of Paragraph 2.07.A to read as follows:

At the preconstruction conference indicated in Paragraph 2.06 or other time acceptable to the parties and Engineer, Engineer and Contractor will review the acceptability to Engineer, as provided below, of the schedules submitted in accordance with Paragraph 2.05.A.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01.B.1 Add the following to new paragraph immediately after Paragraph 3.01.B:

SC-3.01.B.1 In resolving such conflicts, errors and discrepancies, the Contract Documents will be given precedence in the following order: Change Orders,, Field Orders; Addenda, Agreement, Performance Bond and Payment Bond, Supplementary Conditions, General Conditions, Specifications and Drawings. Numerical dimensions shown on the Drawings shall govern over scaled dimensions on the Drawings. This Paragraph SC-3.01.B.1 is not, however, a definitive enumeration of what comprises the “Contract Documents”, which definitive enumeration is indicated in the Agreement.

SC – 3.04.A Remove the words “or a Work Change Directive”.

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

SC 4.01.D Add the following new paragraph immediately after Paragraph 4.01.C:

SC-4.01.D All Work associated with special provisions of easements shall be performed in accordance with the Contract Documents, unless the Contract Documents indicate that easement provisions govern. Should the actions of Contractor or Subcontractors or Suppliers

cause the Work to be delayed to the point that the ending date of an easement is exceeded, Contractor shall reimburse Owner for additional costs required to extend the period of rights to the easement to complete the Work. Such delay shall be considered to be within the control of Contractor, in accordance with Paragraph 12.03.

SC-4.02.C Add the following new paragraphs immediately after Paragraph 4.02.B:

SC-4.02.C The following reports of explorations and tests of subsurface conditions at or contiguous to the Site are known to Owner:

1. Geotechnical Report dated April 5, 2021, prepared by LOI Engineers in El Paso, Texas.

E. The reports and drawings identified above are not part of the Contract Documents, but the “technical data” contained therein upon which Contractor may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference. Contractor is not entitled to rely upon any other information and data known to or identified by Owner or Engineer.

F. Electronic copies of reports and drawings identified in SC-4.02.C that are not included with the Bidding Documents may be requested from the Owner.

SC-4.04.B.2 Amend Paragraph 4.04.B.2 by removing the following after “contract Documents is required,” in the first sentence “

a Work Change Directive or

SC-4.05.A Amend the third sentence of Paragraph 4.05.A to read as follows:

Contractor shall report to Engineer when a reference point, including property boundary stakes or monuments, or an elevation benchmark, is disturbed, lost, or destroyed, or requires relocation because of necessary changes in grades or locations. Contractor shall be responsible for accurately replacing or relocating such reference points by a professional land surveyor licensed by and registered in the State of Texas.

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following in its place:

SC-4.06.A No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

SC-4-06.B Not Used.

ARTICLE 5 - BONDS AND INSURANCE

SC-5.01.A Delete Paragraph 5.01.A in its entirety and insert the following in its place:

SC-5.01.A Except as provided in this Paragraph SC-5.01.A, Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds and certificates of insurance as are required by the Contract Documents. Certificates of insurance shall be in the form prescribed by the Contract Documents. Conditions under which a performance bond or payment bond are not required are as follows:

1. Payment bond is not required when the Contract Price is \$25,000 or less.
2. When the Contract Price is less than \$100,000, a performance bond is not required.

SC-5.01.B Delete Paragraph 5.01.B in its entirety and insert the following in its place:

SC-5.01.B All bonds shall be in the form prescribed by the Contract Documents, except as provided otherwise by Laws and Regulations including, but not limited to, Chapter 2253 of the Texas Government Code and Article 7.19-1 of the Texas Insurance Code. The bonds shall be executed by surety which shall be authorized and admitted to do business in the State of Texas, licensed by the State of Texas to issue surety bonds, and carry an A.M. Best Key rating of not less than A VIII. If the amount of the bond is in excess of ten percent of surety's capital and surplus, surety shall furnish to Owner a written certification that surety has insured that portion of surety's risk that exceeds ten percent of surety's capital and surplus with one or more reinsurers who are duly authorized, accredited or trusted to do business in the State of Texas. If any portion of surety's obligation is reinsured, the amount reinsured shall not exceed ten percent of the reinsurer's capital and surplus. Surety and the reinsurer(s) shall furnish additional information and documentation, if any, required by Owner for Owner to determine whether surety or its reinsurer(s) comply with the requirements of this Paragraph SC-5.01.B. All bonds signed by an agent or attorney-in-fact shall be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

SC-5.02 Add the following at the end of Paragraph 5.02.A:

Insurance shall be procured from insurers or indemnity companies acceptable to Owner. Insurance or indemnity company furnishing insurance for the Contract shall carry an A.M. Best Key rating of not less than A VIII.

SC-5.04.B.1 Delete Paragraph 5.04.B.1 in its entirety and insert the following in its place:

SC-5.04.B.1 With respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner, Engineer, Engineer's consultants, and entities indicated below under Paragraph SC-5.04.B.1.a, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

a. In addition to the individuals or entities specified above, include as additional insured, or loss payees as their interest may appear, the following:

1. Lower Valley Water District
1557 FM 1110
Clint, Texas 79836
2. Town of Clint
200 San Elizario Rd
Clint, TX 79836

SC-5.04.B.4 Add the following at the end of Paragraph 5.04.B.4:

If, at any time, the required insurance policies are canceled, terminated, or modified so that the insurance is not in full force and effect as required under the Contract Documents, Owner may terminate for cause in accordance with Paragraph 15.02 of the General Conditions or, where possible, obtain insurance coverage equal to that required by the Contract Documents, the full cost of which will be charged to Contractor and deducted from any payments due Contractor.

a. Each Contractor shall require his subcontractors, at all tiers, to carry insurance coverages satisfactory to the Contractor and to provide evidence of such insurance as specified herein.

For purposes of this Bid, a Payment Bond will be required in an amount equal to the Bid Price and a Performance Bond **will** be required in a like amount.

SC-5.04.B.6.b Delete Paragraph 5.04.B.6.b in its entirety and replace with the following:

SC-5.04.B.6.b. Contractor shall furnish to Owner and each other additional insured identified in the Contract Documents, to whom evidence of insurance has been issued, evidence satisfactory to Owner and other such additional insured of continuation of such insurance at final payment and for a duration thereafter equal to the correction period required under Paragraph 13.07.

SC-5.04.C Add the following new Paragraph 5.04.C:

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation and Employer's Liability Insurance:

a. State: Statutory

b. Employer's Liability: In accordance with Table 00800-1 of these Supplementary Conditions.

c. *Terminology*: The following terms are not defined but when used in this Paragraph SC-5.04.C.1 for workers' compensation insurance, and have the meanings indicated below:

1) Certificate of coverage: A copy of a certificate of insurance, a certificate of authority to self-insure, issued by the Texas Workers Compensation Commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on the Project, for the duration of the Project. Contractor shall not execute TWCC Forms 83 or 85 or other form that precludes coverage under Contractor's policy if Contractor hires a Subcontractor or service provider without worker's compensation insurance.

2) Duration of the Project: Is the time from the Contractor's beginning work on the Project until the time Contractor's and Subcontractor's obligations under the Contract Documents are fully complete.

- 3) Contractor and Subcontractors (as indicated in Texas Labor Code §406.5096) includes all persons or entities performing all or part of the Work, regardless of whether that person or entity contracted directly with Contractor and regardless of whether that person or entity has employees. This includes, without limitation, independent contractors, Subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other services related to the Project. "Services" does not include activities unrelated to the Project, such as food or beverage vendors, office supply deliveries, and delivery of portable toilets or portable sanitary facilities.
- d. Comply with the following relative to Worker's Compensation and Employer's Liability insurance:
- 1) *Waiver of Subrogation Relative to Workers' Compensation Insurance:* The policy shall be endorsed to provide that insurer waives any right of subrogation that insurer may acquire against Owner, Engineer, Engineer's consultants, and others named in the Contract Documents as additional insured relative to Contractor's liability insurance, by reason of any payment made on account of injury, including death resulting therefrom, sustained by an employee of the insured.
 - 2) If workers employed on the Work will be employed through a leasing company, furnish evidence of leasing company's State of Texas license and a copy of leasing company's Worker's Compensation policy insuring its employees (including sole proprietors, partners, supervisors, and executive officers) who perform work in the State of Texas.
 - 3) Contractor shall furnish coverage, based on proper reporting of classification codes and payroll amounts and filing of coverage agreements, which meets the statutory requirements of Texas Labor Code §401.011(44) for all employees of Contractor performing the Work or services on the Project, for the duration of the Project.
 - 4) Contractor shall furnish to Owner a certificate of coverage prior to being awarded the Contract.
 - 5) If the coverage period shown on the Contractor's current certificate of coverage ends during the Contract Times, Contractor shall, prior to the end of the coverage period, furnish to Owner a new certificate of coverage indicating that coverage has been extended; furnish updated certificate of coverage throughout the duration of the Project.
 - 6) *Subcontractors and Workers' Compensation and Employee Liability Insurance:*
 - a) Contractor shall contractually require each Subcontractor to comply with the workers' compensation and employer's liability insurance requirements of the Contract Documents, to same extent such requirements are binding on Contractor.

- b) Obtain from each Subcontractor and furnish to Owner a certificate of coverage, prior to that Subcontractor beginning work on the Project. Not later than seven days after receipt by Contractor, furnish updated, valid certificate of coverage for each Subcontractor throughout the duration of the Project.
- 7) Retain Contractor's and Subcontractors' required certificates of coverage for the duration of the Project.
- 8) Contractor shall notify Owner in writing, in accordance with Paragraph 17.01, within 10 days after Contractor knew or should have known, of a change that materially affects the provision of coverage of any entity performing work or services on the Contract.
- 9) Post at the Site a notice, in the text, form, and manner prescribed by the Texas Workers' Compensation Commission, informing persons performing work or services on the Contract that they are required to be covered, and stating how a person may verify coverage and report lack of coverage. Such posted notice does not satisfy other posting requirements imposed by the Act or other commission rules in the State of Texas. Such notice shall be printed with a title in text that is not less than 30-point bold type, with and other text in not less than 19-point non-bold type, and shall be in English, Spanish, and other languages, if any, common to the workers at the Site. Text for the notices shall be as indicated by the Commission on the sample notice without changes.
- 10) By executing the Agreement or furnishing or causing to be furnished a certificate of coverage, Contractor represents to Owner that employees of Contractor and Subcontractors who will perform work or services on the Contract will be covered by workers' compensation coverage for the duration of the Project; that such coverage will be based on proper reporting of classification codes and payroll amounts; and that coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Furnishing false or misleading information may subject Contractor to administrative penalties of authorities having jurisdiction, criminal penalties, civil penalties of authorities having jurisdiction, and other civil actions.
- 11) Contractor's failure to comply with one or more workers' compensation insurance provisions is a breach of the Contract by Contractor, entitling Owner to terminate for cause in accordance with Paragraph 15.02, unless otherwise provided by Laws and Regulations.
- 12) If any provision of the Workers' Compensation and Employee Liability insurance requirements of the Contract Documents, or its application to any person or circumstance, is held invalid, the invalidity does not affect other provisions or applications of this rule that can be given effect without the invalid provision or application, and to this end the provisions of this rule are declared to be severable.

2. Contractor's General Liability under Paragraphs 5.04.A.3 through 5.04.A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of Contractor. General Liability coverage shall be for not less than the limits indicated in Table 00800-1 of these Supplementary Conditions.
3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions: Shall be for not less than the limits indicated in Table 00800-1 of these Supplementary Conditions.
4. Umbrella Liability:
 - a. Contractor shall purchase and maintain, until final payment by Owner, Umbrella Liability Insurance. Such insurance shall insure against all claims in excess of the limits provided under workers' compensation and employer's liability, general liability insurance, and automobile liability policies. The limits of umbrella liability shall be in accordance with Table 00800-1 of these Supplementary Conditions.
5. *Table of Minimum Liability Insurance Coverage Limits:* The limits of liability insurance shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations. The limits of coverage under Paragraph 5.04 vary with the Contract Price as indicated in Table 00800-1:

TABLE 00800-1

LIMITS OF COVERAGE FOR ALL CONSTRUCTION PROJECTS	AUTOMOBILE (5.04.A.6) {Combined Single Limit} Per Accident	COMMERCIAL GENERAL LIABILITY (5.04.A.3 through 5.04.A.6) {Combined Single Limit} Per Project	WORKERS' COMPENSATION (5.04.A.1 through 5.04.A.2) {Employers' Liability} Per Accident Per Employee Per Disease	UMBRELLA (SC-5.04.C.4) {Combined Single Limit}
<p>CONTRACT PRICE LESS THAN \$100,000:</p> <p>Occurrence *General Aggregate Products/Completed Operations Aggregate</p>	<p>\$300,000</p>	<p>\$ 500,000 \$ 500,000 \$1,000,000</p>	<p>\$ 500,000 \$ 500,000 \$ 500,000</p>	<p>Not applicable</p>
<p>CONTRACT PRICE EQUAL TO \$100,000 OR GREATER AND LESS THAN \$500,000:</p> <p>Occurrence *General Aggregate Products/Completed Operations Aggregate</p>	<p>\$500,000</p>	<p>\$ 500,000 \$1,000,000 \$1,000,000</p>	<p>\$ 500,000 \$ 500,000 \$ 500,000</p>	<p>Not applicable</p>
<p>CONTRACT PRICE EQUAL TO OR GREATER THAN \$500,000 AND UP TO AND INCLUDING \$10,000,000:</p> <p>Occurrence *General Aggregate Products/Completed Operations Aggregate</p>	<p>\$1,000,000</p>	<p>\$1,000,000 \$2,000,000 \$2,000,000</p>	<p>\$1,000,000 \$1,000,000 \$1,000,000</p>	<p>\$2,000,000 \$2,000,000</p>
<p>CONTRACT PRICE GREATER THAN \$10,000,000:</p> <p>Occurrence *General Aggregate Products/Completed Operations Aggregate</p>	<p>\$1,000,000</p>	<p>\$1,000,000 \$2,000,000 \$2,000,000</p>	<p>\$1,000,000 \$1,000,000 \$1,000,000</p>	<p>\$5,000,000 \$5,000,000</p>

SC-5.05 Delete Paragraph 5.05 in its entirety and insert the following in its place:

SC-5.05 Not Used.

SC-5.06 Delete Paragraph 5.06 in its entirety and insert the following in its place:

SC-5.06. *Property Insurance*

A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost of the Work. This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, Engineer, and other individuals or entities identified herein, and the officers, directors, members, partners, employees, agents and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured, additional insured, or loss payee as their interest may appear;

a. In addition to the individuals or entities specified above, include as additional insured, or loss payees as their interest may appear, the following:

1. Lower Valley Water District
1557 FM 1110
Clint, Texas 79836

2. Town of Clint
200 San Elizario Rd
Clint, TX 79836

3. El Paso County Water Improvement District No. 1 (ND)
13247 Alameda Ave
Clint, TX 79836-0749

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood) and mechanical and electrical breakdown or failure, and damage to electrical apparatus from electrical currents;

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

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and start-up; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.
- B. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph SC-5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured or loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph SC-5.07.
- C. The risk of loss within any deductible amount applicable to the policies of insurance purchased in accordance with this Paragraph SC-5.06 will be borne by Contractor, Subcontractors, or others suffering such loss.
- D. Contractor shall purchase and maintain flood insurance upon the Work in the amount of the full replacement cost of the Work.

SC-5.07 Delete Paragraph 5.07 in its entirety and insert the following in its place:

SC-5.07. *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph SC-5.06 will protect Owner, Contractor, Subcontractors, Engineer, and all other individuals or entities identified in Paragraph SC-5.06 to be listed as insureds or additional insured or loss payees (and the officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of loss or damage the insurers will have no rights of recovery against any of the insureds or additional insured or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Engineer, and all other individuals or entities identified in Paragraph SC-5.06 to be listed as insureds or additional insureds or loss payees (and the officers, directors, members, partners, employees, agents and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire and other perils whether or not insured by Owner, and;
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04 or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage, or consequential loss referred to in Paragraph SC-5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, Engineer, and the officers, directors, members, partners,

employees, agents and other consultants and subcontractors of each and any of them.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

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

SC-6.02.C For Work financed in whole or in part by loans or grants from, or loans insured or guaranteed by, the United States or any agency or instrumentality thereof under any statute of the United States providing wage standards for such work, the provisions of the Contract Documents are subject to the applicable provisions of the Contract Work Hours and Safety Standards Act, 40 U.S.C.A. §327 et seq. Contractor and Subcontractor shall not require or allow any laborer or mechanic to be employed on the Work in excess of forty hours in any work week unless such laborer or mechanic receives compensation at a rate not less than one-and-one-half times his or her basis rate of pay for hours worked in excess of forty hours in such work week. Except as may be otherwise required by law, all claims pertaining to the classification of labor employed on the Project shall be decided by Owner's governing body or other duly designated official.

SC 6.06.H Add the following new paragraphs immediately after Paragraph 6.06.G:

SC-6.06.H Contractor shall perform, with his organization and with the assistance of workers under Contractor's immediate superintendence, not less than 40 percent of the Contract Price, exclusive of Work not commonly found in contracts for similar construction which require specialized knowledge, craftsmanship, or equipment not ordinarily available in the organizations of contractors performing construction similar in nature to the Work. The value of the Work, exclusive of said items, will be interpreted as the value of labor, equipment, superintendence, and only those portions of materials and equipment incorporated into the Work that are related to the Contract's direct labor requirements.

SC-6.08.A Amend the first sentence of Paragraph 6.08.A to read as follows:

Contractor shall obtain, pay for, and be responsible for complying with all construction permits and licenses necessary to perform the Work and operate at the Site.

SC-6.08.B Add the following new paragraph immediately after Paragraph 6.08.A:

SC-6.08.B *TPDES Permit and Related Permits and Requirements*

1. The Work is subject to the Texas Pollution Discharge Elimination System (TPDES) permitting requirements for the installation and maintenance of temporary and permanent erosion and sediment controls and stormwater pollution prevention measures throughout the construction period.
2. Owner has prepared a Stormwater Pollution Prevention Plan (SWPPP). SWPPP requirements are in the Specifications.
3. Contractor's responsibilities are as follows:

- a. Obtain a signed certification statement from all Subcontractors responsible for implementing erosion and sedimentation controls and other best management practices for the Site that are part of the SWPPP. Such statement shall indicate that the Subcontractor understands the permit requirements. The certified statement forms shall be attached to and become part of the SWPPP.
- b. Fill out the TCEQ's "Construction Site Notice" form, which is Attachment 2 to the TPDES General Permit TXR150000 (form available from Owner or on the Internet at <http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/stormwater/txr152d2.pdf> and post it near the main entrance of the Site, or at multiple postings if the Work is linear. Submit a copy of the completed Construction Site Notice form to Owner and Engineer.
- c. Maintain erosion/sedimentation controls and other protective measures identified in the SWPPP in effective operating condition.
- d. Perform inspections every 14 days and after every half-inch of rainfall, noting the following observations on an inspection form provided by Owner:
 - 1) Locations of discharges of sediment or other pollutants from the Site.
 - 2) Locations of storm water, erosion, sedimentation controls that are in need of maintenance or repair.
 - 3) Locations of storm water, erosion, sedimentation controls that are not performing, failing to operate, or are inadequate.
 - 4) Locations where additional storm water, erosion, sedimentation controls are needed.
- e. Continuously maintain at the Site a copy of the SWPPP (with updates, as described below) and inspection reports.
- f. Update the SWPPP as necessary to comply with TPDES permitting requirements, which includes noting changes in erosion, and sedimentation controls and other best management practices that are part of the SWPPP and which may be necessary due to the results of inspection reports.
- g. Upon Substantial Completion or establishment of permanent cover over disturbed soil areas (if such cover is established after Substantial Completion), submit TPDES records to Owner.

SC-6.09.D Add the following new paragraph immediately after Paragraph 6.09.C:

SC-6.09.D *Minimum Prevailing Wage Rates*

1. Wage rates paid to workers employed in performing the Work at the Site, including Contractor and Subcontractor employees, shall not be less than the following:
 - a. Federal Davis-Bacon minimum prevailing wage rates, comprised of 5 pages, which is part of the Contract Documents. Comply with 40 USC 31 and 29 CFR Parts 1, 3, and 5.

Contractor shall be aware of changes in the minimum prevailing wage rates applicable to the Work and shall pay the minimum prevailing wages at no additional cost to Owner. Contractor shall post the schedule of classifications and wage rates at conspicuous locations at the Site. Such schedule shall also show deductions, if any, required by law to be made from wages earned by laborers and mechanics engaged on the Work.

2. Contractor shall give preference to hiring qualified local residents for work as laborers and mechanics on the Project. Employees shall be bona-fide residents of the United States of America.
3. Contractor and Subcontractors shall pay each of their employees, engaged in the Work in full, not less often than once per week, and without deductions or subsequent rebates on any account, except for deductions mandated by law.
4. Contractor, and Subcontractors shall keep a complete payroll record indicating the name, address, and Social Security number of each employee engaged in the Work, together with the classification of work in which the employee is engaged, the hourly wage rate paid, number of deductions made from such wages and total amount paid to the employee. Submit to Owner one copy of each such payroll record, for the period for which payment is requested, with each Application for Payment. Each payroll record shall bear the affidavit of the employer certifying, under oath, that such payroll is a true, complete, and accurate report of the wages earned and paid to each employee engaged in the Work, that no deductions from any wages due each employee, except as set out on the payroll, have been directly or indirectly made, and that no rebates, either direct or indirect, have been nor will be required of an employee.

5. Certified payroll reports shall indicate for each worker whether the labor performed was performed under the Building, Heavy, Highway, or Water and Sewer Line Prevailing Wage Rate scale. Certified payroll reports shall be submitted for the complete Contract period and, for weeks where no Work was performed, negative reports shall be submitted, marked "No Work Performed". Clearly mark "FIRST PAYROLL" on the first payroll submitted, and clearly mark "FINAL PAYROLL" on the last payroll submitted for the Contract.
6. Apprentices will be work only under a bona fide apprenticeship program registered with the U.S. Department of Labor. A copy of such program shall be submitted to Owner, together with current certification or evidence of registration with the U.S. Department of Labor, Bureau of Apprenticeship and Training, for each apprentice engaged in the Work.
7. Contractor shall, when requested by Owner, submit additional certification and documentation (such as copy of cancelled check or an Employee Restitution Receipt Form) indicating that employee has received back compensation due.
8. Contractor and Subcontractors in violation of this provision are subject to a penalty of \$60 per day for each worker that is paid less than the rate specified in the Project's applicable prevailing wage rates.

SC-6.10.B Add the following new paragraph immediately after Paragraph 6.10.A:

SC-6.10.B Exemption from State of Texas sales tax may be obtained on materials and equipment incorporated into the Work and supplies required to perform the Work. Owner is an organization which qualifies for such exemption pursuant to provisions of Article 20.04(F) of the Texas Limited Sales, Excise and Use Tax Act. In accordance with Texas House Bill 11, Contractor may purchase, materials, equipment, and supplies consumed in the performance of the Work by issuing to Suppliers an exemption certificate in lieu of the tax, said exemption certificate complying with State of Texas Comptroller's ruling no. 95-0.07. Such exemption certificate(s) issued by Contractor in lieu of the sales will be subject to the provisions of the State of Texas Comptroller's ruling no. 95-0.09 as amended to be effective October 2, 1968. Exemption certificate may be obtained from Owner's Purchasing Agent.

SC-6.11.E Add the following new paragraph immediately after Paragraph 6.11.D:

SC-6.11.E *Dust Control*

1. Contractor shall not cause or allow dust-generating operations, earthmoving operation, use of property, or other operation that results in fugitive dust emissions that exceed the limits prescribed by the authority having jurisdiction, in accordance with Texas Administrative Code Title 30, Part 1, Chapter 111, Subchapter A, Division 4, Rule 111.145.
2. Provide necessary equipment and materials to apply sufficient dust suppressants, properly clean all vehicle "track-out" areas on and adjacent to the Site, and provide adequate physical stabilizations of soils to comply with requirements of earthmoving permits and approved dust control plan or activities, if any.

3. Contractor shall pay fines and civil penalties imposed by authorities having jurisdiction and incurred by Owner because of Contractor's violation of earthmoving permits and dust control plans or activities.
4. Implement measures to control fugitive dust emissions from the Site in compliance with earthmoving permit and Laws and Regulations.

SC-6.13.D Replace the word "safety program" with "Health and Safety Plan."

SC-6.13.G Add the following new paragraphs immediately after Paragraph 6.13.F:

SC-6.13.G Within twenty-four hours of receiving a request from Owner, Contractor shall furnish to Owner documentation substantiating representations made in the Health and Safety Plan including, but not limited to, that each of the Contractor's employees has received training on the Health and Safety Plan as well as any other training necessary to competently effectuate the Health and Safety Plan.

SC-6.13.H Owner maintains a drug- and alcohol-free workplace in accordance with the Drug-free Workplace Act of 1983. Contractor shall publicize a statement notifying employees on the Work that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the workplace, including at the Site.

SC-6.14.I Owner maintains specific rules regarding smoking on Owner's properties. Contractor shall adhere to such rules at the Site.

SC-6.14.J Owner maintains specific rules regarding firearms and Contractor shall adhere to such rules at the Site.

SC-6.14.A.1 Add following new subparagraph immediately after Paragraph 6.14.A:

SC-6.14.A.1 Contractor's safety representative shall be identified in submittal to Owner and Engineer for acceptance prior to commencement of Work at the Site. Name and qualifications of proposed substitute, if any, shall be submitted to Owner for acceptance.

SC-6.16.A Amend Paragraph 6.16.A by removing "Work Change Directive or" from the last sentence.

SC-6.17.E.2 Add the following new paragraphs immediately after Paragraph 6.17.E.1:

SC-6.17.E.2 For each Contractor submittal required under the Contract Documents, Engineer will review one initial submittal and one resubmittal at no cost to Contractor. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, Samples, or other submittals requiring approval or acceptance, and Contractor shall reimburse Owner for Engineer's charges for labor and expenses for such time.

SC-6.17.F In the event that Contractor requests a change of a previously approved or previously accepted submittal, Contractor shall reimburse Owner for Engineer's charges for Engineer's review time unless the need for such change is beyond Contractor's control.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

SC-8.11 Delete Paragraph 8.11 in its entirety and insert the following in its place:

SC-8.11 Not used.

ARTICLE 9 – ENGINEER’S RESPONSIBILITIES

SC-9.03 Add a new paragraph immediately after Paragraph 9.03.A that is to read as follows:

SC-9.03.B Resident Project Representative (RPR) will be Engineer’s employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR’s actions. RPR’s dealings in matters pertaining to the Work in general shall be with Engineer and Contractor keeping Owner advised as necessary. RPR’s dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner with the knowledge of and under the direction of Engineer.

1. Duties and Responsibilities to RPR:
 - a. Schedules: Review the Progress Schedule, Schedule of Submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 - b. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
 - c. Liaison:
 - 1) Serve as Engineer’s liaison with Contractor, working principally through Contractor’s superintendent, and assist in providing understanding of the intent of the Contract Documents; and assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s operations on the Site.
 - 2) Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
 - d. Shop Drawings and Samples:
 - 1) Record date of receipt of Shop Drawings and Samples that are received at the Site.
 - 2) Receive Samples that are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - 3) Advise Engineer and Contractor of the commencement of any Work requiring a Shop Drawing or Sample if the submittal has not been approved by Engineer.

- e. Review of Work, Rejection of Defective Work, Inspections, and Tests:
 - 1) Conduct observations of the Work in progress on the Site to assist Engineer in determining if the Work is, in general, proceeding in accordance with the Contract Documents.
 - 2) Report to Engineer when RPR believes that any Work is unsatisfactory, faulty, or defective or does not conform generally to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test, or approval required to be made; and advise Engineer of Work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection, or approval.
 - 3) Verify that tests, equipment, and systems startups, and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof; and observe, record, and report to Engineer appropriate details relative to the test procedures and startups.
 - 4) Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to Engineer.
- f. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
- g. Modifications: Consider and evaluate Contractor's suggestions for modifications to Drawings or Specifications and report with RPR's recommendations to Engineer. Transmit to Contractor decisions issued by Engineer.
- h. Records:
 - 1) Maintain at the Site orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, and reproductions of original Contract Documents including all Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Agreement, Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other Project-related documents.
 - 2) Keep a record recording Contractor's hours on the Site, weather conditions, data relative to questions on Change Orders or changed conditions, list of visitors to the Site, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.

- 3) Record names, addresses, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
Reports:
 - 1) Furnish Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and Schedule of Submittals.
 - 2) Consult with Engineer in advance of scheduled major tests, inspections, or start of important phases of the Work.
 - 3) Prepare draft of proposed Change Orders, obtaining backup documents from Contractor, and provide recommendations to Engineer regarding Change Orders and Field Orders.
 - 4) Report immediately to Engineer and Owner upon the occurrence of any Site accident, any Hazardous Environmental Condition, emergencies or acts of God endangering the Work, or property damage by fire or other cause.
- j. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission, and submit recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
- k. Certificates, Maintenance and Operation Manuals: During the course of the Work, verify that certificates, maintenance and operation manuals, and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to Engineer for review and forwarding to Owner prior to final payment for the Work.
- l. Completion:
 - 1) Before Engineer issues a certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.
 - 2) Observe whether Contractor has arranged for inspections required by Laws and Regulations, including but not limited to those to be performed by public authorities having jurisdiction over the Work.
 - 3) Conduct final inspection in the company of Engineer, Owner, and Contractor, and prepare a final list of items to be completed or corrected.

- 4) Observe that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance of the Work.
2. The RPR shall not:
 - a. Authorize any deviation from the Contract Documents or substitution of materials or equipment, including “or equal” items.
 - b. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
 - c. Undertake any of the responsibilities of Contractor, Subcontractors, or Contractor’s superintendent.
 - d. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction, unless such advice or directions are specifically required by the Contract Documents.
 - e. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
 - f. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
 - g. Authorize Owner to occupy the Project in whole or in part.
 - h. Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Engineer.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

SC-10.01.A Amend Paragraph 10.01.A by removing from the first sentence “, or a Work Change Directive”.

SC-10.01.B Remove Paragraph 10.01.B in its entirety.

SC-10.03.A.2 Remove Paragraph 10.03.A.2 in its entirety and replace with the following: “Not used.”

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

SC-10.03.B Change Order requests shall be accompanied by Contractor’s time impact analysis for the Change Order request to be reviewed.

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

SC-11.01.A.5.c Delete Paragraph 11.01.A.5.c in its entirety and insert the following in its place:

c. Construction Equipment and Machinery

- 1) Rentals of all construction equipment and machinery, and the parts thereof in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the Rental Rate Blue Book. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

SC-11.03.D.1 Delete Paragraph 11.03.D.1 in its entirety and insert the following in its place:

SC-11.03.D.1 The total cost of a particular item of Unit Price Work amounts to 10 percent or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and

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

SC-12.01.C.2.c Delete the semicolon at the end of GC 12.01.C.2.c, and add the following:

, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be no greater than 25 percent of the costs incurred by the Subcontractor who actually performs the work;

SC-12.04 Add the following new paragraph immediately after Paragraph 12.03:

SC-12.04 *Liquidated Damages:*

- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- B. *Liquidated Damages Relative to Milestones:* Owner and Contractor recognize that time is of the essence as stated in Paragraph SC-12.04.A above and that Owner will suffer financial loss if the Work is not performed to achieve the Milestone within the time limits specified for Milestones in

Specification Section 01 00 00 and the Owner-Contract Agreement, plus any changes thereof allowed in accordance with Article 12 of the General Conditions. Owner and Contractor 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 performed to achieve the Milestone on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner \$2,050 for each day that expires after the time specified in the Contract Documents for achieving the Milestones (adjusted for changes thereof, if any, made in accordance with Article 12 of the General Conditions) until the Work is sufficiently complete to achieve the associated Milestone. In the event of multiple Milestones, Contractor is liable for liquidated damages for each missed Milestone, but liquidated damages for more than one missed Milestone will not be cumulative (e.g., maximum daily rate of liquidated damages under this Paragraph SC-12.04.B is \$2,050 per day).

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02.A.1 Add the following new subparagraph immediately after Paragraph 14.02.A.1:

SC-14.02.A.1 Contractor's and Subcontractor's certified payroll record for the period covered by the Application for Payment shall accompany the Application for Payment. Contractor's Application for Payment shall be on Owner's standard Application for Payment form.

SC-14.02.C.1 Delete Paragraph 14.02.C.1 in its entirety and insert the following in its place:

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

SC-14.07.B.1 Amend the first sentence of Paragraph 14.07.B.1 to read as follows:

If, on the basis of Engineer's final inspection and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within 20 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment.

SC 14.07.C.1 Add the following at the end of Paragraph 14.07.C.1:

An approvable application for final payment shall include Contractor and Subcontractor payrolls for the period covered in the final Application for Payment; an update of progress against the accepted Progress Schedule; and such other items as the Engineer may reasonably require.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

SC-15.02.A.5 Add the following new paragraphs immediately after Paragraph 15.02.A.4:

SC-15.02.A.5 If the Contract or any part thereof is sublet or assigned to another party by Contractor, without the written consent of Owner and surety that issued the performance bond and payment bond;

ARTICLE 17 - MISCELLANEOUS

SC-17.07 Add the following new paragraph immediately after Paragraph 17.06:

SC-17.07 *Working Near Utilities*

A. *Construction Adjacent to High Voltage Electric Lines:*

1. Contractor shall comply with Laws and Regulations, including U.S. Occupational Safety and Health Administration (OSHA) safety standards regarding construction adjacent to high-voltage electric lines and facilities, including trenching, crane operations, final grading, and other associated work which may result in impaired clearance to an existing electrical line or facility.
2. It is a violation of OSHA regulations to operate equipment in a manner that results in persons or equipment coming within ten feet of an energized electric line. Such Laws and Regulations are enforced by OSHA, and violators are subject to penalties imposed under federal Law.
3. Texas Law prohibits function or activity where it is possible for the person performing such activity to come within six feet of an overhead power line.
4. Contractor shall notify the El Paso Electric Company in writing of Contractor's anticipated dates and times when such work is scheduled. Written notification of El Paso Electric Company shall be at least six working days prior to each scheduled activity near El Paso Electric Company power lines and facilities, so that El Paso Electric Company personnel can coordinate with Contractor to provide proper clearance of energized electric lines. No other type of notice will be acceptable and work shall not be initiated until proper clearance and arrangements are confirmed by Contractor with the El Paso Electric Company.

5. Submit written notification to:

Raul Guel, Distribution Engineering Design
El Paso Electric Company
P. O. Box 982
El Paso, Texas 79960
(915) 543-4015

6. Simultaneously submit one copy of the notification letter to Owner's Contracts Development Manager and retain copy in Contractor's file.

7. Below are selected El Paso Electric Company phone numbers:

Claims Director	(915) 543-4158
Trouble & Emergencies	(915) 543-5720
Field Services/Power Consultants	(915) 543-2255
Cable Locator	(915) 543-4051

B. *Construction Adjacent to Gas Lines*: Contractor shall comply with the One-Call Notification and System Protection Program developed by Southern Union Gas Company, and with State Damage Prevention Law, HB 2295:

- Contact Texas Gas Co. not less than two working days before commencing excavation activities
- Determine exact location of all underground utilities by safe and acceptable means
- Employ the two foot safety rule
- Utilize "Professional Excavator's Manual" as revised

SC-17.08 Add the following new paragraph immediately after Paragraph 17.07:

17.08 *EPCWID #1 Dewatering Permit Requirements*

- A. A license agreement for "Discharge of Foreign Waters into District Drain Ditches" is required between Owner and the El Paso County Water Improvement District (EPCWID) #1 before Contractor may begin dewatering operations. Contractor shall be a co-licensee with Owner. Terms and conditions of the license agreement are applicable to Contractor, who will function, relative to the license EPCWID #1 agreement only, as an agent of Owner, by preparing an approvable plan and carrying out the terms of the plan and the EPCWID #1 license agreement. Contractor shall, to the extent permitted by law, defend and hold harmless Owner, its employees, insurers and agents; and the Engineer and Engineer's consultants, and their employees, officers, insurers, and agents from claims arising out of damages caused by actions, or inactions, of Contractor or as a result of EPCWID's exercise of any or all options given it under the license agreement.

- B. Contractor shall prepare and submit to Engineer a “Dewatering Plan”, a “Final Schedule for Dewatering”, and an estimate of fees due EPCWID #1. Submit “Dewatering Plan” within 15 days of the date that the Contract Times commence running. “Dewatering Plan” shall include the estimated quantities of dewatering for each month of the Contract, the design capacity and number of pumps to be used by Contractor, and the point(s) of dewatering pump discharge. Engineer will review for acceptability the “Dewatering Plan” and, when the submittal is acceptable to Engineer, Engineer will forward it, through Owner, to EPCWID #1. Prepare and submit the submittal and schedule the Work so that Owner receives the “Dewatering Plan” submittal not less than 14 days before the start of dewatering operations at the Site. Owner will pay the fees as estimated in the "Dewatering Plan".
- C. Estimate the dewatering fees on the following basis:
1. Dewatering fee at the rate of \$150 per acre-foot of water discharged. For a month in which the discharge exceeds the amount estimated under the “Dewatering Plan”, Contractor shall advise Owner and Engineer in writing, that such excess fees may be due so that the Owner may consider its liability for, and take action to make payment of, such excess fees to EPCWID #1. Owner will pay such excess fees only to the extent that such fees are incurred through no fault of Contractor.
- D. Samples of the discharge water shall be tested by a qualified testing laboratory hired by Contractor. Submit to Engineer results of total dissolved solids (TDS) tests, which Engineer will transmit to EPCWID #1. Submit to Engineer and Owner monthly reports of discharge quantities and quality (TDS and sulfates), which specific requirements may be more particularly indicated in the Specifications and in the associated discharge permit; Engineer will transmit monthly reports to EPCWID #1.
- E. Contractor will not be eligible for final payment by Owner until final dewatering fees based upon actual quantities and damages (if any) due EPCWID # 1 have been paid and payment due from Contractor has been made. A “Final Release” from EPCWID # 1 shall be received by Owner as a condition precedent to Contractor applies for final payment.

SC-17.10 Add the following new paragraph immediately after Paragraph 17.09:

SC-17.10 Texas Water Development Board (TWDB) contracts require that all Contractors and subcontractors maintain project costs in a manner consistent with generally accepted accounting principles. All records are to be maintained for a minimum period of three years and beyond that minimum period if litigation, a claim, or an audit is in process, or if audit findings are not resolved. The three year period will begin upon completion of final payment.

***** END OF SUPPLEMENTARY CONDITIONS *****

REQUIRED WORKERS' COMPENSATION COVERAGE

(Title must be 30 point font & bold lettering)

(19 point font from here on)

The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling, or delivering equipment or materials, or providing labor or transportation or other service related to the project, regardless of the identity of their employer or status as an employee."

"Call the Texas Workers' Compensation Commission at 512-440-3789 to receive information on the legal requirements for coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."

* The above sign to be provided in both English and Spanish without any additional words or changes and shall be posted at the Project Site. Refer to Paragraph SC-5.04.C.1 of the Supplementary Conditions (Document 00800 in the Contract Documents).

SECTION 00840

GENERAL WAGE REQUIREMENTS

PART 1: GENERAL

1.01 REQUIREMENTS

- A. Each employee shall be paid not less than the minimum rate of wages for the classification of work in which he is employed, as set out in the most current Davis-Bacon wage rates and set out in this section of the Specifications.
- B. Sewer and Water Lines Wage Rates shall be used for the entire project except on the pavement replacement, where the Highway Construction Wage Rates shall be used.

END OF SECTION

"General Decision Number: TX20230024 01/06/2023

Superseded General Decision Number: TX20220024

State: Texas

Construction Type: Highway

County: El Paso County in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number
0

Publication Date
01/06/2023

SUTX2011-005 08/02/2011

Rates Fringes

CEMENT MASON/CONCRETE
FINISHER (Paving and
Structures).....\$ 12.44 **

ELECTRICIAN.....\$ 20.27

FORM BUILDER/FORM SETTER
(Structures).....\$ 12.26 **

LABORER
Asphalt Raker.....\$ 11.44 **
Laborer, Common.....\$ 10.58 **
Laborer, Utility.....\$ 11.33 **
Pipelayer.....\$ 11.37 **

POWER EQUIPMENT OPERATOR:
Asphalt Distributor.....\$ 13.28 **
Asphalt Paving Machine.....\$ 13.26 **
Excavator, 50,000 lbs or
less.....\$ 13.49 **
Front End Loader Over 3CY..\$ 13.57 **
Front End Loader 3CY or
less.....\$ 13.29 **
Motor Grader Fine Grade...\$ 16.13 **
Scraper.....\$ 11.12 **

Servicer.....\$ 13.44 **

TRUCK DRIVER
Single Axle.....\$ 13.16 **
Single or Tandem Axle Dump..\$ 14.06 **

WELDER.....\$ 13.74 **

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====
** Workers in this classification may be entitled to a higher
minimum wage under Executive Order 14026 (\$16.20) or 13658
(\$12.15). Please see the Note at the top of the wage
determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is

like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative

Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISIO"

SECTION 00900 ARPA Required Information – (Attachments A, C, D, G, H, I, J, K, AND L)

The following documents are to be completed and returned with the Responder's response package. See each attachment for specific instructions.

- 1. ATTACHMENT A:** Solicitation Cover Sheet – Signed by Authorized
- 2. ATTACHMENT B:**
- 3. ATTACHMENT C:** System for Award Management (SAM.gov) – 2 pages
- 4. ATTACHMENT D:** Customer / Client References
- 5. ATTACHMENT E:**
- 6. ATTACHMENT F:**
 - a. ATTACHMENT F.1:**
 - b. ATTACHMENT F.2:**
 - c. ATTACHMENT F.3:**
- 7. ATTACHMENT G:** Ethics and Conflict of Interest Acknowledgement
- 8. ATTACHMENT H:** Texas Ethics Commission Certificate of Interested Parties (Form 1295)
- 9. ATTACHMENT I:** Conflict of Interest Questionnaire (Form CIQ)
- 10. ATTACHMENT J:** Disclosure of Lobbying Activities SF-LLL Certification
- 11. ATTACHMENT K:** Bidder's Certification
- 12. ATTACHMENT L:** Non-Collusion Affidavit

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
ARPA Terms & Conditions			
ARPA Terms, Conditions, & Records	<p>1. Use of Funds.</p> <p>a. Recipient understands and agrees that the funds disbursed under this award may only be used in compliance with section 603(c) of the Social Security Act (the Act), Treasury’s regulations implementing that section, and guidance issued by Treasury regarding the foregoing.</p> <p>b. Recipient will determine prior to engaging in any project using this assistance that it has the institutional, managerial, and financial capability to ensure proper planning, management, and completion of such project.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	Subrecipients
ARPA Terms, Conditions, & Records	<p>2. Period of Performance. The period of performance for this award begins on the date hereof and ends on December 31, 2026. As set forth in Treasury’s implementing regulations, Recipients may use award funds to cover eligible costs incurred during the period that begins on March 3, 2021, and ends on December 31, 2024.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	Subrecipients
ARPA Terms, Conditions, & Records	<p>3. Reporting. Recipient agrees to comply with any reporting obligations established by Treasury as they relate to this award.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	Subrecipients
ARPA Terms, Conditions, & Records	<p>4. Maintenance of and Access to Records</p> <p>a. Recipient shall maintain records and financial documents sufficient to evidence compliance with section 603(c) of the Act, Treasury’s regulations implementing that section, and guidance issued by Treasury regarding the foregoing.</p> <p>b. The Treasury Office of Inspector General and the Government Accountability Office, or their authorized representatives, shall have the right of access to records (electronic and otherwise) of Recipient in order to conduct audits or other investigations.</p> <p>c. Records shall be maintained by Recipient for a period of five (5) years after all funds have been expended or returned to Treasury, whichever is later.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: orange;">Contractor RFQ</p> <p style="color: magenta;">Subrecipients</p> <p style="color: green;">Vendors</p> <p style="color: red;">EC 6.1 Awardees</p>
ARPA Terms, Conditions, & Records	<p>5. Pre-award Costs. Pre-award costs, as defined in 2 CFR § 200.458, may not be paid with funding from this award.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	Subrecipients
ARPA Terms, Conditions, & Records	<p>6. Administrative Costs. Recipient may use funds provided under this award to cover both direct and indirect costs.</p>	<p>Section 9901 of the American</p>	Subrecipients

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
		Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	
ARPA Terms, Conditions, & Records	7. Cost Sharing. Cost sharing or matching funds are not required to be provided by Recipient.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	8. Conflicts of Interest. Recipient understands and agrees it must maintain a conflict of interest policy consistent with 2 CFR § 200.318(c) and that such conflict of interest policy is applicable to each activity funded under this award. Recipient and subrecipients must disclose in writing to Treasury or the pass-through entity, as appropriate, any potential conflict of interest affecting the awarded funds in accordance with 2 CFR § 200.112.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors EC 6.1 Awardees
ARPA Terms, Conditions, & Records	9. Compliance with Applicable Law and Regulations. a. Recipient agrees to comply with the requirements of section 603 of the Act, regulations adopted by Treasury pursuant to section 603(f) of the Act, and guidance issued by Treasury regarding the foregoing. Recipient also agrees to comply with all other applicable federal statutes, regulations, and executive orders, and Recipient shall provide for such compliance by other parties in any agreements it enters into with other parties relating to this award. b. Federal regulations applicable to this award include, without limitation, the following: i. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 CFR Part 200, other than such provisions as Treasury may determine are inapplicable to this Award and subject to such exceptions as may be otherwise provided by Treasury [ARPA/SLFRF EC 6.1 applicable Uniform Guidance Sections are specifically listed/included at end of this document] . Subpart F – Audit Requirements of the Uniform Guidance, implementing the Single Audit Act, shall apply to this award. ii. Universal Identifier and System for Award Management (SAM), 2 CFR Part 25, pursuant to which the award term set forth in Appendix A to 2 CFR Part 25 is hereby incorporated by reference. iii. Reporting Subaward and Executive Compensation Information, 2 CFR Part 170, pursuant to which the award term set forth in Appendix A to 2 CFR Part 170 is hereby incorporated by reference. iv. OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Non-procurement), 2 CFR Part 180, including the		Contractor RFP/IFB Contractor RFQ Subrecipients Vendors EC 6.1 Awardees

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<p>requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 CFR Part 180, subpart B) that the award is subject to 2 CFR Part 180 and Treasury's implementing regulation at 31 CFR Part 19.</p> <ul style="list-style-type: none"> v. Recipient Integrity and Performance Matters, pursuant to which the award term set forth in 2 CFR Part 200, Appendix XII to Part 200 is hereby incorporated by reference. vi. Governmentwide Requirements for Drug-Free Workplace, 31 CFR Part 20. (Subrecipient Only) vii. New Restrictions on Lobbying, 31 CFR Part 21. viii. Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (42 U.S.C. §§ 4601-4655) and implementing regulations. ix. Generally applicable federal environmental laws and regulations. <p>c. Statutes and regulations prohibiting discrimination applicable to this award include, without limitation, the following:</p> <ul style="list-style-type: none"> i. Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.) and Treasury's implementing regulations at 31 CFR Part 22, which prohibit discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance; ii. The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability; iii. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance; iv. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 CFR Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and v. Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto. 		
<p>ARPA Terms, Conditions, & Records</p>	<p>10. Remedial Actions. In the event of Recipient's noncompliance with section 603 of the Act, other applicable laws, Treasury's implementing regulations, guidance, or any reporting or other program requirements, Treasury may impose additional conditions on the receipt of a subsequent tranche of future award funds, if any, or take other available remedies as set forth in 2 CFR § 200.339. In the case of a violation of section 603(c) of the Act regarding the use of funds, previous payments shall be subject to recoupment as provided in section 603(e) of the Act.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	<p style="color: magenta;">Subrecipients</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
ARPA Terms, Conditions, & Records	11. Hatch Act. Recipient agrees to comply, as applicable, with requirements of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limit certain political activities of state or local government employees whose principal employment is in connection with an activity financed in whole or in part by this federal assistance.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients (City/County)
ARPA Terms, Conditions, & Records	12. False Statements. Recipient understands that making false statements or claims in connection with this award is a violation of federal law and may result in criminal, civil, or administrative sanctions, including fines, imprisonment, civil damages and penalties, debarment from participating in federal awards or contracts, and/or any other remedy available by law.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors EC 6.1 Awardees
ARPA Terms, Conditions, & Records	13. Publications. Any publications produced with funds from this award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of Recipient] by the U.S. Department of the Treasury."	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Contractor RFQ Subrecipients EC 6.1 Awardees
ARPA Terms, Conditions, & Records	14. Debts Owed the Federal Government. a. Any funds paid to Recipient (1) in excess of the amount to which Recipient is finally determined to be authorized to retain under the terms of this award; (2) that are determined by the Treasury Office of Inspector General to have been misused; or (3) that are determined by Treasury to be subject to a repayment obligation pursuant to section 603(e) of the Act and have not been repaid by Recipient shall constitute a debt to the federal government. b. Any debts determined to be owed the federal government must be paid promptly by Recipient. A debt is delinquent if it has not been paid by the date specified in Treasury's initial written demand for payment, unless other satisfactory arrangements have been made or if the Recipient knowingly or improperly retains funds that are a debt as defined in paragraph 14(a). Treasury will take any actions available to it to collect such a debt.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	15. Disclaimer. a. The United States expressly disclaims any and all responsibility or liability to Recipient or third persons for the actions of Recipient or third persons resulting in death, bodily injury, property damages, or any other losses resulting in any way from the performance of this award or any other losses resulting in any way from the performance of this award or any contract, or subcontract under this award. b. The acceptance of this award by Recipient does not in any way establish an agency relationship between the United States and Recipient.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
ARPA Terms, Conditions, & Records	<p>16. Protections for Whistleblowers.</p> <p>a. In accordance with 41 U.S.C. § 4712, Recipient may not discharge, demote, or otherwise discriminate against an employee in reprisal for disclosing to any of the list of persons or entities provided below, information that the employee reasonably believes is evidence of gross mismanagement of a federal contract or grant, a gross waste of federal funds, an abuse of authority relating to a federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a federal contract (including the competition for or negotiation of a contract) or grant.</p> <p>b. The list of persons and entities referenced in the paragraph above includes the following:</p> <ul style="list-style-type: none"> i. A member of Congress or a representative of a committee of Congress; ii. An Inspector General; iii. The Government Accountability Office; iv. A Treasury employee responsible for contract or grant oversight or management; v. An authorized official of the Department of Justice or other law enforcement agency; vi. A court or grand jury; or vii. A management official or other employee of Recipient, contractor, or subcontractor who has the responsibility to investigate, discover, or address misconduct. <p>c. Recipient shall inform its employees in writing of the rights and remedies provided under this section, in the predominant native language of the workforce.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	<p>Contractor RFP/IFB</p> <p>Contractor RFQ</p> <p>Subrecipients</p> <p>Vendors</p> <p>EC 6.1 Awardees</p>
ARPA Terms, Conditions, & Records	<p>17. Increasing Seat Belt Use in the United States. Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Recipient should encourage its contractors to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented or personally owned vehicles.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p> <p>Section 602(b), 603(b) and/or 603(c) as applicable</p>	<p>Contractor RFP/IFB</p> <p>Contractor RFQ</p> <p>Subrecipients</p> <p>Vendors</p> <p>EC 6.1 Awardees</p>
ARPA Terms, Conditions, & Records	<p>18. Reducing Text Messaging While Driving. Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Recipient should encourage its employees, subrecipients, and contractors to adopt and enforce policies that ban text messaging while driving, and Recipient should establish workplace safety policies to decrease accidents caused by distracted drivers.</p>	<p>Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2;</p>	<p>Contractor RFP/IFB</p> <p>Contractor RFQ</p> <p>Subrecipients</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
		Section 602(b), 603(b) and/or 603(c) as applicable	Vendors EC 6.1 Awardees
Applicable Uniform Guidance Sections			
None	<p>Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”</p> <p><u>41 CFR 60-1.4 Equal opportunity clause.</u></p> <p>(b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause:</p> <p>The [recipient] 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:</p> <p>During the performance of this contract, the contractor agrees as follows:</p> <p>(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:</p> <p>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.</p> <p>(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.</p> <p>(3) The contractor will not discharge or in any other manner discriminate</p>	2 CFR 200 APPENDIX II (C) and 41 CFR §60-1.4(b)	Contractor RFP/IFB Contractor RFQ Subrecipients

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<p>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.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(9) 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.</p> <p>(10) The [recipient] 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 [recipient] so participating is a state or local government, the above equal</p>		

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<p>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.</p> <p>(11) The [recipient] 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 recipient agency in the discharge of the agency’s primary responsibility for securing compliance.</p> <p>The recipient 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 subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] 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 [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.</p>		
<p style="text-align: center;">State Provision Applies at any amount and/or >\$2,000 for CDBG/Braided Funds</p>	<p>Texas Prevailing Wage requirements applies only to the construction of a <u>public work</u>, including a building, highway, road, excavation, and repair work or other project development or improvement, paid for in whole or in part from public funds, without regard to whether the work is done under public supervision or direction. (G.V. 2258)</p> <p>-----</p> <p>Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$10,000,00 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance</p>	<p style="text-align: center;">2 CFR 200 APPENDIX II (D) And TX G.V. 2258 Prevailing Wage Rates</p>	<p style="text-align: center;">Contractor RFP/IFB Subrecipients</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3 , “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.		
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: orange;">Contractor RFQ</p> <p style="color: magenta;">Subrecipients</p> <p style="color: red;">EC 6.1 Awardees</p>
None	The non-Federal entity or applicant for a Federal award must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award including the term and condition outlined in appendix XII to this part are required to report certain civil, criminal, or administrative proceedings to SAM (currently FAPIIS). Failure to make required disclosures can result in any of the remedies described in § 200.339 . (See also 2 CFR part 180 , 31 U.S.C. 3321 , and 41 U.S.C. 2313 .)	2. CFR 200.113	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: orange;">Contractor RFQ</p> <p style="color: magenta;">Subrecipients</p> <p style="color: green;">Vendors</p> <p style="color: red;">EC 6.1 Awardees</p>
None	Non-Federal entities are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, 2 CFR part 180 . The regulations in 2 CFR part 180 restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs or activities.	2 CFR 200.214	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: orange;">Contractor RFQ</p> <p style="color: magenta;">Subrecipients</p> <p style="color: green;">Vendors</p> <p style="color: red;">EC 6.1 Awardees</p>
Over \$50,000	Federal awarding agencies and recipients are subject to the regulations implementing Never Contract with the Enemy in 2 CFR part 183 . The regulations in 2 CFR part 183 affect covered contracts, grants and cooperative agreements that are expected to exceed \$50,000 within the period of performance, are performed outside the United States and its territories, and are in support of a contingency operation in which members of the Armed Forces are actively engaged in hostilities.	2 CFR 200.215	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: orange;">Contractor RFQ</p> <p style="color: magenta;">Subrecipients</p> <p style="color: green;">Vendors</p> <p style="color: red;">EC 6.1 Awardees</p>
None	(a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:	2 CFR 200.216	<p style="color: blue;">Contractor RFP/IFB</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<p>(1) Procure or obtain;</p> <p>(2) Extend or renew a contract to procure or obtain; or</p> <p>(3) 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).</p> <p>(i) 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).</p> <p>(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.</p> <p>(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.</p> <p>(b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.</p> <p>(c) See Public Law 115-232, section 889 for additional information.</p> <p>(d) See also § 200.471.</p>		<p>Contractor RFQ</p> <p>Subrecipients</p> <p>Vendors</p> <p>EC 6.1 Awardees</p>
None	<p>Contracting with HUB, small and minority businesses, women’s business enterprises, and labor surplus area firms.</p> <p>(a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women’s business enterprises, and labor surplus area firms are used when possible.</p> <p>(b) Affirmative steps must include:</p>	2 CFR 200.321	<p>Contractor RFP/IFB</p> <p>Contractor RFQ</p> <p>Subrecipients</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<ul style="list-style-type: none"> (1) Placing qualified small and minority businesses and women’s business enterprises on solicitation lists; (2) Assuring that small and minority businesses, and women’s business enterprises are solicited whenever they are potential sources; (3) 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; (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women’s business enterprises; (5) 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; and (6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (b)(1) through (5) of this section. 		
None	<p>Financial records, supporting documents, statistical records, and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three (3) years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. All records related to ARPA shall be maintained for five (5) years per the ARPA terms, conditions, and regulations. The only exceptions are the following:</p> <ul style="list-style-type: none"> (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. All records related to ARPA shall be maintained for five (5) years per the ARPA terms, conditions, and regulations. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds must be retained for three (3) years after final disposition. All records related to ARPA shall be maintained for five (5) years per the ARPA terms and conditions and regulations. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity All records related to ARPA shall be maintained for five (5) years per the ARPA terms and conditions and regulations. All records related to ARPA shall be maintained for five (5) years per the ARPA terms, conditions, and regulations. 	2 CFR 200.334	<p style="color: blue; margin: 0;">Contractor RFP/IFB</p> <p style="color: orange; margin: 0;">Contractor RFQ</p> <p style="color: magenta; margin: 0;">Subrecipients</p> <p style="color: green; margin: 0;">Vendors</p> <p style="color: red; margin: 0;">EC 6.1 Awardees</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<p>(e) Records for program income transactions after the period of performance. In some cases, recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned.</p> <p>(f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates).</p> <p>(1) <i>If submitted for negotiation.</i> If the proposal, plan, or other computation is required to be submitted to the Federal government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. All records related to ARPA shall be maintained for five (5) years per the ARPA terms, conditions, and regulations.</p> <p>(2) <i>If not submitted for negotiation.</i> If the proposal, plan, or other computation is not required to be submitted to the Federal government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. All records related to ARPA shall be maintained for five (5) years per the ARPA terms, conditions, and regulations.</p>		
None	<p>The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.</p>	2 CFR 200.336	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: orange;">Contractor RFQ</p> <p style="color: magenta;">Subrecipients</p> <p style="color: red;">EC 6.1 Awardees</p>
Other References			
None	<p>CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental entity may not enter into a governmental contract with a company that is identified</p>	Texas Government Code 2252.152	<p style="color: blue;">Contractor RFP/IFB</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	<p>on a list prepared and maintained under Section 806.051, 807.051, or 2252.153. The term “foreign terrorist organization” in this paragraph has the meaning assigned to such a term in Section 2252.151(2) of the Texas Government Code.</p>		<p>Contractor RFQ Subrecipients EC 6.1 Awardees</p>
<p>>\$100,000</p>	<p>PROVISION REQUIRED IN CONTRACT.</p> <p>(a) This section applies only to a contract that:</p> <ol style="list-style-type: none"> (1) is between a governmental entity and a company with ten (10) or more full-time employees; and (2) has a value of \$100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. <p>(b) A governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it:</p> <ol style="list-style-type: none"> (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. 	<p>Texas Government Code 2271</p>	<p>Contractor RFP/IFB Contractor RFQ Subrecipients Vendors EC 6.1 Awardees</p>
<p>For Critical Infrastructure Projects</p>	<p>PROHIBITION ON CONTRACTS WITH CERTAIN FOREIGN-OWNED COMPANIES IN CONNECTION WITH CRITICAL INFRASTRUCTURE.</p> <p>PROHIBITED CONTRACTS.</p> <p>(a) A governmental entity may not enter into a contract or other agreement relating to critical infrastructure in this state with a company:</p> <ol style="list-style-type: none"> (1) if, under the contract or other agreement, the company would be granted direct or remote access to or control of critical infrastructure in this state, excluding access specifically allowed by the governmental entity for product warranty and support purposes; and (2) if the governmental entity knows that the company is: <ol style="list-style-type: none"> (A) owned by or the majority of stock or other ownership interest of the company is held or controlled by: <ol style="list-style-type: none"> (i) individuals who are citizens of China, Iran, North Korea, Russia, or a designated country; or (ii) a company or other entity, including a governmental entity, that is owned or controlled by citizens of or is directly controlled by the government of China, Iran, North Korea, Russia, or a designated country; or (B) headquartered in China, Iran, North Korea, Russia, or a designated country. <p>(b) The prohibition described by Subsection (a) applies regardless of whether:</p> <ol style="list-style-type: none"> (1) the company’s or its parent company’s securities are publicly traded; or (2) the company or its parent company is listed on a public stock exchange as: <ol style="list-style-type: none"> (A) a Chinese, Iranian, North Korean, or Russian company; or (B) a company of a designated country. 	<p>Texas Government Code, Title 10, Subtitle F, Chapter 2274.0102</p>	<p>Subrecipients EC 6.1 Awardees</p>

ARPA Required Provisions for EC 6.1/Revenue Loss Projects

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
	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.	42 U.S.C. 6201	<p style="color: blue;">Contractor RFP/IFB</p> <p style="color: magenta;">Subrecipients</p>
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.	<p style="color: magenta;">Subrecipients</p>

Attachment A: Solicitation Response Cover Sheet

This Form is to be completed and returned with the Responder's submittal.

SOLICITATION NUMBER:	
NAME OF SOLICITATION:	
NAME OF BUSINESS (RESPONDENT):	
MAILING ADDRESS:	
CITY, STATE, ZIP:	
PHONE NUMBER:	
EMAIL OF RESPONDENT CONTACT:	
EIN/FEDERAL TAX IDENTIFICATION NO:	
AUTHORIZED SIGNATORY NAME/TITLE:	
AUTHORIZED SIGNATURE:	

Authorized Agent – Signature and Contact Information

The Respondent's authorized agent must sign this document to acknowledge they read this solicitation carefully and completely, and the information submitted is true and correct.

AUTHORIZED AGENT NAME:	
AUTHORIZED SIGNATURE:	
TITLE OF AUTHORIZED AGENT:	
DATE OF SIGNATURE:	

Attachment C: System for Award Management (SAM.gov)

This project is funded by the Coronavirus State and Local Fiscal Recovery Funds which requires Responder registration on SAM.gov.

Verification of SAM.gov Status

Responder must not be debarred at the time of the proposal response submittal. The proposal response package must include verification of the Respondent's SAM.gov status. The verification of SAM.gov status may be provided as follows:

1. Responder may provide a dated printout to verify proof of registration, without exclusions, from the SAM.gov website as stated in the Eligibility Verification Form.

OR

2. Responder may complete and submit the "Federal Debarment/Suspension Status Certification" form with the proposal response submittal. The "Federal Debarment/Suspension Status Certification" is located on the following page under Attachment C/X.

Contract Award

The ARPA Award Recipient must verify the SAM.gov status of the Respondent(s) selected for contract award prior to execution of the contract as stated in the Eligibility Verification Form. The final verification of the Responder's SAM.gov status is completed prior to contract award, and in addition to the initial verification documentation provided with the proposal response submittal.

Attachment C: System for Award Management (SAM.gov) continued

FEDERAL DEBARMENT/SUSPENSION STATUS CERTIFICATION

COMPANY/ENTITY NAME:

CONTACT NAME:

CONTACT EMAIL & PHONE:

Applicable Regulations:

As stated in the ARPA / SLFRF Terms & Conditions: *“OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Non-Procurement), 2 C.F.R. Part 180, including the requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 C.F.R. Part 180, subpart B) that the award is subject to 2 C.F.R. Part 180 and Treasury’s implementing regulation at 31 C.F.R. Part 19.”*

Also, Federal Executive Order (E.O.) 12549: *“Debarment”* requires that contractors, beneficiaries or subrecipient organizations and their principals – who are receiving awards, using federal funds, are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify you from receiving or retaining funds. Information on debarment is available at the following website: www.sam.gov

Be advised that we may pursue available remedies per 2 CFR 180.360 as an ARPA Recipient entity: *“If a Federal agency later determines that you failed to tell the [awarding agency] that you were excluded or disqualified at the time you entered into the covered transaction with that person/[awarding agency], the agency may pursue any available remedies, including suspension and debarment.”*

(Initial)

Certification & Signature

We hereby certify that we are not excluded, disqualified or debarred from receiving federally funded awards.

We hereby confirm that if that status should change within the course of this agreement, we will provide notification immediately. Failure to do so may result in the termination of this agreement and/or the repayment of funds.

Your signature certifies that neither you nor your principal(s) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature

Date:

Printed Name & Title:

Attachment C: System for Award Management (SAM.gov) continued

ELIGIBILITY VERIFICATION FORM			
ENTITY LEGAL NAME:			Date:
STREET ADDRESS:			
CITY:	STATE:	ZIP:	
CONTACT NAME:			
CONTACT EMAIL:			
CONTACT PHONE:			
<p><i>All entities must be pre-vetted for eligibility/ability to perform the outlined ARPA funded scope of work and a record (PDF of SAM.gov screenshot) of SAM debarment clearance should be attached to this form. This should be completed before submitting.</i></p> <p>Return PDF of Form Here: [enter email address]</p>			
Section 1:			
Provide your organization's Unique Entity Identifier (UEI) number (as generated by registration in SAM.gov):			
Scope of Work Description:			
Section 2: (optional)			
Principal(s):	Title(s):	Gender M/F	Race:**
<p>** W = White B = Black H = Hispanic A/PI = Asian/Pacific Islander AL/AN Alaskan/American Native</p>			
Certification			
<p><i>Your signature certifies that the information provided on this form is correct and that failure to provide the requested information may disqualify you from receiving or retaining funds.</i></p>			
<p>_____</p> <p>Signature</p>			
<p>_____</p> <p>Printed Name & Title</p>			Date:
For Department Use Only:			
SAM Debarment/Certification record of Clearance	Yes [] No []	Note:	
State Debarred Vendor List Cleared	Yes [] No []	Note:	
Verified By:			Date:

ATTACHMENT D: Customer / Client References Form

Respondents shall use Attachment D to provide a minimum of three (3) references for jobs completed within last five (5) years.

The references shall illustrate recent experience successfully completing work of a similar nature and scope as the work described in this RFP. This form may be modified as needed to comply with the requirement to document company information. ***Failure to provide references may result in the proposal being considered non-responsive.***

REQUIRED REFERENCE INFORMATION:

REFERENCE #1:

Company Name:	
Company Address:	
Contract Project Name:	
Contact Name and Title:	
Contact Phone:	
Contact Email:	
Contract Award Date:	
Contract Completion Date:	
Brief Description of Services:	

REFERENCE #2:

Company Name:	
Company Address:	
Contract Project Name:	
Contact Name and Title:	
Contact Phone:	
Contact Email:	
Contract Award Date:	
Contract Completion Date:	
Brief Description of Services:	

REFERENCE #3:

Company Name:	
Company Address:	
Contract Project Name:	
Contact Name and Title:	
Contact Phone:	
Contact Email:	
Contract Award Date:	
Contract Completion Date:	
Brief Description of Services:	

Attachment G: Ethics and Conflict of Interest Acknowledgement

Public servants are expected to conduct themselves impartially and in a manner that inspires public confidence, while ensuring that responsible contractors have fair and equal access to governmental procurement.

The City of XXX/XXX County is committed to protection of government integrity, while also facilitating the recruitment and retention of the skilled personnel necessary to support its operations. To achieve this objective, The City of XXX/XXX County has established standards of ethical conduct and conflict of interest policies and expects all vendors, contractors, and subrecipients to adhere to the same core principles, as described below.

To achieve these standards, it is essential that those doing business with the City of XXX/XXX County also observe the ethical standards prescribed here.

I acknowledge that it is a breach of ethics to attempt to influence any public employee, elected official, or department head to violate the standards of ethical conduct set forth in this code.

I further acknowledge that it is a breach of ethics for any employee of City of XXX/XXX County or a vendor doing business with the County to participate directly or indirectly in a procurement when the employee or vendor knows that:

- A. The employee or any member of the employee's immediate family or household has a substantial financial interest in a company responding to a City of XXX/XXX County procurement.
- B. A business or organization in which the employee or any member of the employee's immediate family has a financial interest pertaining to the procurement.

I understand that it is a breach of ethics to offer, give, or agree to give any employee of City of XXX/XXX County or for any employee to solicit, demand, accept, or agree to accept from a vendor, a gratuity of consequence or any offer of employment in connection with any decision, approval, disapproval, recommendation, preparation, or any part of a program requirement or purchase request influencing the content of specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or controversy, any particular matter pertaining to any program requirement, contract or subcontract, or to any solicitation or proposal therefore pending before City of XXX/XXX County.

I acknowledge that it is a breach of ethics for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor for any contract for City of XXX/XXX County as an inducement for the award of a contract or order.

I acknowledge all terms of the State of Texas (via the Texas Ethics Commission) for when a Conflict-of-Interest Questionnaire (CIQ) should be filed online and also understand that the City/County has designated XXXX as the point of contact should any questions or concerns arise related to Ethics or conflicts of interest at any time that must be reported for review.

I certify that I have read and understand the ethical standards set forth by City of XXX/XXX County and agree to comply with them in all business dealings with the County.

[Vendor Authorized Representative Signature] _____

PRINT NAME AND TITLE: _____

COMPANY NAME: _____

[Date] : _____

Attachment H: Texas Ethics Commission Certificate of Interested Parties (Form 1295)

(Form 1295) - INSERT LATEST FORM

(To be completed ONLY by the awarded vendor)

CERTIFICATE OF INTERESTED PARTIES		FORM 1295																																																																																					
Complete Nos. 1 - 4 and 6 if there are interested parties. Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.		OFFICE USE ONLY																																																																																					
1 Name of business entity filing form, and the city, state and country of the business entity's place of business.		Must file online at www.ethics.state.tx.us/File																																																																																					
2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.																																																																																							
3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.																																																																																							
4	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%; padding: 5px;">Name of Interested Party</th> <th style="width: 20%; padding: 5px;">City, State, Country (place of business)</th> <th colspan="2" style="width: 40%; padding: 5px;">Nature of Interest (check applicable)</th> </tr> <tr> <td></td> <td></td> <th style="width: 10%; padding: 5px;">Controlling</th> <th style="width: 10%; padding: 5px;">Intermediary</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)				Controlling	Intermediary																																	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%; padding: 5px;">Name of Interested Party</th> <th style="width: 20%; padding: 5px;">City, State, Country (place of business)</th> <th colspan="2" style="width: 40%; padding: 5px;">Nature of Interest (check applicable)</th> </tr> <tr> <td></td> <td></td> <th style="width: 10%; padding: 5px;">Controlling</th> <th style="width: 10%; padding: 5px;">Intermediary</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)				Controlling	Intermediary																																				
Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)																																																																																					
		Controlling	Intermediary																																																																																				
Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)																																																																																					
		Controlling	Intermediary																																																																																				
5 Check only if there is NO Interested Party. <input type="checkbox"/>																																																																																							
6 UNSWORN DECLARATION My name is _____, and my date of birth is _____. My address: _____ (street) _____ (city) _____ (state) _____ (zip code) _____ (country). I declare under penalty of perjury that the foregoing is true and correct. Executed in _____ County, State of _____, on the _____ day of _____, 20____. (month) (year) <div style="text-align: right; margin-top: 10px;"> _____ Signature of authorized agent of contracting business entity (Declarant) </div>																																																																																							
ADD ADDITIONAL PAGES AS NECESSARY																																																																																							

Attachment I: Conflict of Interest Questionnaire Instructions

The Respondent must describe any conflicts of interest regarding the goods and or services associated with this solicitation.

The Respondent shall complete and submit Form CIQ (Attachment I) if the service provider or key employees have conflicts regarding these services.

In the event that a conflict is identified, Respondents must also provide a plan for mitigating the conflict(s).

The Entity may in its sole discretion determine whether a conflict disqualifies a firm, and/or whether a conflict mitigation plan is acceptable.

Attachment I: Conflict of Interest Questionnaire (Form CIQ)

CONFLICT OF INTEREST QUESTIONNAIRE		FORM CIQ
For vendor doing business with local governmental entity		
<p>This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.</p> <p>This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).</p> <p>By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.</p> <p>A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.</p>	OFFICE USE ONLY Date Received	
1 Name of vendor who has a business relationship with local governmental entity.		
2 <input type="checkbox"/> Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)		
3 Name of local government officer about whom the information is being disclosed.	_____ Name of Officer	
4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.		
<p style="margin-left: 40px;">A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?</p> <p style="margin-left: 80px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </p> <p style="margin-left: 40px;">B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?</p> <p style="margin-left: 80px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </p>		
5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.		
6 <input type="checkbox"/> Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).		
7	_____ Signature of vendor doing business with the governmental entity Date	

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;

or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Attachment J: Disclosure of Lobbying Activities SF-LLL
Certification Regarding Lobbying
(To be submitted with each bid or offer exceeding \$100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(a) 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 an 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.

(b) 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, an officer or employee of Congress, or an employee of 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.

(c) The undersigned shall require that the language paragraph 1 and 2 of this anti-lobbying certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients 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 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995).

The Contractor, _____ (insert business name), certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

SIGNATURE:	
NAME OF AUTHORIZED AGENT:	
TITLE OF AUTHORIZED AGENT:	
DATE:	

Disclosure of Lobbying Activities

COMPLETE THIS FORM ONLY IF YOUR BID OR OFFER EXCEEDS \$100,000 AND FUNDS HAVE BEEN OR WILL BE PAID FOR LOBBYING ACTIVITIES RELATED TO THIS RFP.

Type of Federal Action: _____ a. contract _____ b. grant _____ c. cooperative agreement _____ d. loan _____ e. loan guarantee _____ f. loan insurance	Status of Federal Action: _____ a. bid/offer/application _____ b. initial award _____ c. post-award	Report Type: _____ a. initial filing _____ b. material change
Name and Address of Reporting Entity: ____ Prime ____ Subawardee Tier____, If Known: Congressional District, if known:	If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime: Congressional District, if known:	
Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, <i>if applicable</i> : _____	
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)	

Attachment K: Bidder's Certification

In accordance with Texas Government Code Sections 2252.001 through 2252.004 (relating to bids by nonresident contractors), the pertinent portion of the Act has been extracted and is as follows:

1. "Nonresident bidder" refers to a person who is not a resident.
2. "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

A governmental entity may not award a governmental contract to a nonresident bidder unless the nonresident underbids the lowest bid submitted by a responsible resident bidder by an amount that is not less than the greater of the following:

1. the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located; or
2. the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which a majority of the manufacturing relating to the contract will be performed.

I certify that _____ (Company Name) is a

Resident bidder of Texas, as defined in Section 2252.001(4), Texas Government Code,

OR

Nonresident bidder defined in Section 2252.001(3), Texas Government and our principal place of business is located _____ (City and State).

SIGNATURE:	
NAME OF AUTHORIZED AGENT:	
TITLE OF AUTHORIZED AGENT:	
DATE:	

Attachment L: NON-COLLUSION AFFIDAVIT

NON-COLLUSION AFFIDAVIT

STATE OF TEXAS §
 §
COUNTY OF _____ §

By the signature below, the signatory for the bidder certifies that neither he/she nor the firm, corporation, partnership or institution represented by the signatory or anyone acting for the firm bidding this project has violated the antitrust laws of this State, codified at Section 15.01, *et seq.*, Texas Business and Commerce Code, or the Federal antitrust laws, nor communicated directly or indirectly the bid made to any competitor or any other person engaged in the same line of business, nor has the signatory or anyone acting for the firm, corporation or institution submitting a bid committed any other act of collusion related to the development and submission of this bid proposal.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date: _____

SUBSCRIBED and sworn to before me the undersigned authority by _____ the _____ of, _____ on behalf of said bidder.

Notary Public in and for the
State of Texas

My commission expires: _____

Technical Specifications

FENTER RD RECONSTRUCTION

December 5, 2023

FENTER RD RECONSTRUCTION

TABLE OF CONTENTS

	No. of Pages
SECTION 01 00 00 – GENERAL REQUIREMENTS.....	5
SECTION 01 02 00 - TPDES REQUIREMENTS.....	4
SECTION 01 22 00 – MEASUREMENT AND PAYMENT.....	9
SECTION 01 30 00 - SUBMITTALS.....	6
SECTION 01 40 00 – TESTING LABORATORY SERVICES.....	3
SECTION 01 57 00 - TEMPORARY CONTROLS.....	2
SECTION 01 74 00 - CLEANING.....	4
SECTION 01 74 01 - WARRANTIES.....	3
SECTION 01 77 00 - PROJECT CLOSEOUT.....	11
SECTION 01 78 39 - PROJECT RECORD DOCUMENTS.....	4
SECTION 02 41 00 - SELECTIVE DEMOLITION.....	2
SECTION 02 50 00 – TREE REMOVAL.....	1
SECTION 03 01 10 - CONCRETE FORMWORK.....	5
SECTION 03 01 20 - CONCRETE REINFORCING STEEL.....	4
SECTION 03 39 00 - PLACING, FINISHING & CURING CONCRETE.....	9
SECTION 03 40 00 – CEMENT STABILIZED BACKFILL.....	1
SECTION 10 15 00 – DELINEATOR AND OBJECT MARKER ASSEMBLY.....	2
SECTION 31 00 00 – EARTHWORK.....	4
SECTION 31 10 00 – GRADING.....	1
SECTION 32 11 23 - CRUSHED AGGREGATE BASE COURSE.....	6
SECTION 32 12 17 - PLANT MIX BITUMINOUS PAVEMENTS.....	15
SECTION 32 16 00 - CAST-IN-PLACE CONCRETE.....	9
SECTION 32 71 23 - HOT APPLIED THERMOPLASTIC MARKINGS.....	16
SECTION 33 05 13 - ADJUSTMENTS OF WATER VALVES AND WATER METERS.....	1
SECTION 34 00 00 – STONE COMMON DRY.....	1

TABLE OF CONTENTS

FENTER RD RECONSTRUCTION

SECTION 01 00 00 – GENERAL REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL DESCRIPTION OF THE PROJECT

The work contemplated under this contract consists of furnishing all labor, materials, equipment, and tools necessary for the construction of the project titled as follows:

FENTER RD RECONSTRUCTION

The Fenter Rd Reconstruction project includes the reconstruction of approximately 3,000 linear feet of Fenter Rd including removal of asphalt, base and subgrade, and construction of a new pavement structure. The project will also include installation of header curb, reconstruction of driveways, removal and installation of signs, striping, drainage improvements, and adjustment of water meters and valve boxes.

Work under this project will be divided into the following milestones:

Milestone No. 1: Contractor shall reconstruct the Fenter Rd section from STA 17+97 to STA 18+23 by February 14, 2024 to avoid conflicts with EPCWID1's irrigation season. The Salitral Lateral crosses this segment of Fenter Rd through a culvert. Work to be completed by the Milestone 1 deadline includes demolition of existing pavement structure, excavation, placement of 2-sac for proposed pavement structure, header curb and parkway grading. HMAC shall be placed when weather is optimal as described in Section 32 12 17 of these Specifications; therefore, the base course and HMAC may be placed after the February 14, 2024 deadline. If placement of HMAC will exceed two calendar days from placement of base course, prime coat shall be applied for moisture retention and density tests shall be conducted again to verify proper compaction before HMAC placement. Contractor shall exercise caution when working in this area to avoid damage to the Salitral Lateral culvert, which shall be protected in place.

Milestone No. 2: Contractor shall reconstruct the remaining sections of Fenter Rd from STA 0+90 to STA 17+97 and from STA 18+23 to STA 30+83.67 as described in the Fenter Rd Reconstruction engineering plans and these specifications within the 150 Calendar Days allowed to substantially complete this milestone.

1.2 CONTRACT DRAWINGS OR PLANS

The details for the above mentioned work are shown on a set of drawings dated December 4, 2023. These drawings together with these specifications and contract documents form the Contract. Where figures are shown on the drawings, they shall take

FENTER RD RECONSTRUCTION

precedence over any scaled distances or dimensions.

1.3 COMMON REFERENCE STANDARDS

Reference in the Specifications to known standards such as codes, specifications, etc. promulgated by professional or technical associations, institutes and societies, are intended to mean the latest edition of each such standard adopted and published as of the date of the invitation to bid on this project except where otherwise specifically indicated. Each such standard referred to shall be considered a part of the specifications to the same extent as if reproduced herein in full.

- These technical specifications contain references to Codes and Specifications, Texas Department of Transportation Departmental Materials Specifications, Texas Department of Transportation Test Methods, ASTM Standards, and other professional or technical organizations.
- It shall be the sole responsibility of the contractor to be cognizant of the referenced materials and be familiar where the contractor can research, view and/or obtain the said referenced materials.
- Each standard, code and specification referred to shall be considered a part of the specification to the same extend as if reproduced therein in full.

1.4 EQUIPMENT

Equipment of a condition and design sufficient to insure a thorough and workmanlike prosecution of the project shall be used at all times and any equipment which, in the opinion of the Town Engineer or his representative, has outlived its efficiency or is inadequate in design, shall be removed from the project within forty-eight (48) hours after receipt of written notice from the Town Engineer or representative.

1.5 ELEVATION

Elevations of the ground as shown on the plans are believed to be reasonably correct but are not guaranteed. The horizontal datum is based on the Texas coordinate system of 1983 (NAD83), central zone (4203), distances shown are surface distances using a ground scale factor of 1.000231, scaled at $n=0$, $e=0$. The vertical datum is based on the North American vertical datum of 1988 (NAVD88), using GEOID 18.

1.6 PROTECTION OF EXISTING UTILITIES AND STRUCTURES

The Contractor shall exercise care to prevent damage to, and shall be liable for any damage to, and for maintenance and protection of such lines and structures as are shown on the drawings or otherwise brought to the attention of the Contractor or of which he should reasonably be aware of. It shall be the responsibility of the contractor, whether

FENTER RD RECONSTRUCTION

indicated on the drawings or not, to verify the location, depth, and condition of all existing utilities and substructures and protect them from damage. The contractor shall contact all the utility companies and conduct all necessary field investigations/potholing prior to any excavation. If damage occurs, the Contractor shall immediately correct or replace existing structures or facilities that are damaged in any way as a result of his operations.

The Contractor shall not cut, remove, change, or disturb any existing lines or structures, except as provided by the plans and these specifications, without the express permission of the owner of any such line. The Contractor shall provide the utility owner with reasonable advance notice to perform the required adjustments and relocations.

The Contractor shall inform Texas Gas of required utility adjustments or relocations at least 30 days in advance of planned construction. The Contractor shall inform El Paso Electric Company of required utility adjustments or replacements at least two weeks in advance of planned construction.

1.7 DUST CONTROL

The Contractor shall take proper steps and procedures to prevent abnormal dust conditions caused by his operations in connection with this Contract on unpaved roads used by the Contractor or his subcontractors, excavation or fill areas, demolition operations, or other activities. Dust control shall be achieved either by sprinkling, the use of dust palliative, the modification of operations, or any other means acceptable to the Health or Environmental Control Agency having jurisdiction.

1.8 NOISE ABATMENT

In inhabited areas, particularly residential, operations shall be performed in a manner to minimize unnecessary noise generation. In residential areas, particular consideration shall be given to noise generated by repair and service activities during the early morning or night hours. Contractor shall comply with limits set by the El Paso City County Health Municipal Code, Chapter 9.40.

PART 2 - PRODUCTS

2.1 MATERIALS AND APPLIANCES

If at any time before the commencement, or during the progress of the work, the materials and appliances used appear to the Town Engineer or representative as not sufficient and improper for securing the quality of the work required, he may order the Contractor to improve their character and the Contractor shall conform to such order. The failure of the Town Engineer or representative to demand any improvement shall not release the Contractor from his obligation to secure the quality of the work as specified.

2.2 DISPOSAL OF WASTE MATERIALS

All waste materials including excavation, concrete, asphalt pavement, and driveways

FENTER RD RECONSTRUCTION

shall be disposed of at designated points approved by the Town Engineer or representative.

PART 3 - EXECUTION

3.1 NOTIFICATION OF PROPERTY OWNERS

- A. The Contractor shall be responsible for the notification of property owners, businesses and residents along the project route to explain the construction to them. The Contractor shall be responsible for providing access to the businesses and residences for all property owners, customers and residents at all times including nights, weekends, and holidays.
- B. Notification of all businesses and residents and property owners shall be by printed handout approved by the Owner. The Contractor shall furnish proof to the Owner that each resident along the route has been notified.
- C. Any resident unable to park their vehicle at their residence due to the construction shall be provided with a place to park as near to the residence as possible. The Contractor shall provide security for such vehicle.

3.2 DAMAGE TO PRIVATE PROPERTY

- A. The Contractor shall be responsible for any damage to private property caused by the construction project. The Contractor upon receipt of a complaint of damage, shall, within 10 days, respond in writing with a proposal to repair said damage or a letter stating reason why the damage was not caused by the construction.
- B. Except for extenuating circumstances beyond the control of the Contractor the damage shall be repaired completely within 10 days of the complaint.
- C. The Contractor shall not enter or occupy private land outside of acquired rights-of-way or construction easements, except by written permission of the Owner of the private property. Copies of such written permission shall be provided to the Town Engineer or representative.

3.3 CONTRACTOR'S SUPERINTENDENT

The Contractor shall keep on the project, at all times during its progress, a qualified, competent, Resident Superintendent satisfactory to the Town Engineer or representative. The Resident Superintendent shall be fluent in English and capable of communicating with the public, Engineer, Inspector, and Owner.

3.4 SANITARY FACILITIES

FENTER RD RECONSTRUCTION

- A. The Contractor shall provide temporary toilets, wash facilities, and drinking water facilities with potable water approved by local health authorities. Comply with governing regulations including safety and health codes for the type, number, location, operation, and maintenance of fixtures and facilities; provide not less than specified requirements. Install facilities in locations that will best serve the project's needs.

- B. Supply and maintain toilet tissue, paper towels, paper cups, and similar disposable materials as appropriate for each facility. Provide appropriate covered waste containers for used materials.

FENTER RD RECONSTRUCTION

SECTION 01 02 00 - TPDES REQUIREMENTS

PART 1—GENERAL

The Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit No. TXR 150000, was issued March 5, 2018 (Construction General Permit) and amended January 28, 2022. The Construction General Permit allows operators to obtain permit coverage for storm water conveyance from Small and Large Construction Activities. The TPDES program implements the federal National Pollutant Discharge Elimination System (NPDES) program in the state of Texas, which requires that operators of Small or Large Construction Activities obtain permit coverage prior to the commencement of construction activities.

The engineer has estimated that the project will disturb approximately 2.91 acre of land. **Therefore, a Storm Water Pollution Prevention Plan (SWP3) is required. As mandated by the State's TPDES Program, the Contractor needs to provide and adequately implement an SWP3 as required for his construction support activities and proposed construction means and methods at no additional cost to the owner.**

1.01 SECTION INCLUDES

- A. Documentation to be prepared and signed by Contractor before conducting construction operations, in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit Number TXR 150000, amended January 28, 2022 (Construction General Permit).
- B. Implementation, maintenance inspection, and termination of storm water pollution prevention control measures including, but not limited to, erosion and sediment controls, storm water management plans, waste collection and disposal, and other applicable practices shown on the drawings or specified elsewhere in the Contract.

1.02 DEFINITIONS

- A. Commencement of Construction Activities: The exposure of soil resulting from activities such as clearing, grading, and excavating.
- B. Large Construction Activity is defined as a project that:
 - 1. disturbs five acres or more, or
 - 2. disturbs less than five acres but is part of a large common plan of development that will disturb five acres or more of land.

FENTER RD RECONSTRUCTION

C. Small Construction Activity is a project that:

1. disturbs one or more acres but less than five acres, or
2. disturbs less than one acre but is part of a larger common plan of development that will ultimately disturb one or more acres but less than five acres.

D. Operator is a person or persons who have day-to-day operation control of the construction activities, which are necessary to ensure compliance with the SWP3 for the site.

PART 2—PRODUCTS – Not Used

PART 3—EXECUTION

3.01 STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A The Contractor shall have an SWP3 prepared in accordance with Part III of the Construction General Permit for Small or Large Construction Activities. A professional engineer licensed in the state of Texas shall prepare the SWP3.

B Support Activities within 1-mile distance of project boundary of the permitted construction site, which directly supports the project, should be included in the Storm Water Pollution Prevention Plan prepared for the Contractor. These activities include but are not limited to:

- (a) Equipment Staging Areas
- (b) Material Storage yards
- (c) Material Borrow areas
- (d) Excavated material disposal areas
- (e) Concrete batch plants
- (f) Asphalt batch plants

Refer to Part II, Section A of the Construction General Permit for a description of Discharges Eligible for Authorization under the Construction General Permit.

C The SWP3 will be updated as needed during construction following Part III, Section E of the Construction General Permit.

D The SWP3 shall be submitted to the engineer 15 days after award of the contract. Any comments provided shall be addressed prior to commencing construction activities.

FENTER RD RECONSTRUCTION

- E The SWP3 shall be submitted to the Town of Clint for Review and Approval seven (7) days prior to commencement of construction activities. Refer to Part 3.01, Section E and Part 3.02, Section B for additional submittal requirements for Large and Small Construction Activities, respectively.
- F The SWP3 shall be implemented prior to commencement of construction activities and maintained through the duration of construction.

3.02 LARGE CONSTRUCTION ACTIVITY – Not Required for this Size Project

3.03 SMALL CONSTRUCTION ACTIVITY – Required for this Size Project

A. CONSTRUCTION SITE NOTICE

1. Fill out, sign, and date the Construction Site Notice, included at the end of this Section. Submit the signed copy of the Construction Site Notice to the Engineer at least two days before commencement of construction activities.
2. Post a signed copy of the Construction Site Notice near the main entrance of a construction site in a prominent place for viewing by the general public and local, state, and federal authorities prior to commencing construction activities, and maintain it in that location until completion of the construction. Post name and telephone number of Contractor's local contact person, brief project description and location of SWP3.

If Project is a linear construction project (e.g.: road, utilities, etc.), post notice in a publicly accessible location near active construction. Move notice as necessary.

3. The Contractor shall submit a signed copy of the Construction Site Notice to the Town of Clint and the Lower Valley Water District.

B. STORM WATER POLLUTION PREVENTION PLAN APPLICATION

1. Provide the engineer with a copy of the signed application 10 days prior to commencing construction activities.

3.04 CERTIFICATION REQUIREMENTS – Not Required for this Size Project

FENTER RD RECONSTRUCTION

3.05 RETENTION OF RECORDS – Not Required for this Size Project

3.06 ON-SITE WASTE MATERIAL STORAGE

- A. On site waste material storage shall be self-contained and shall satisfy appropriate local, state, and federal rules and regulations.
- B. Prepare list of waste material to be stored on-site. Update list as necessary to include up-to-date information. Keep a copy of the updated list with the SWP3.
- C. Prepare description of controls to reduce pollutants generated from on-site storage. Include storage practices necessary to minimize exposure of materials to storm water, and spill prevention and response measures consistent with best management practices. Keep a copy of the description with the SWP3.

FENTER RD RECONSTRUCTION

SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. This section includes procedures for measurement and payment plus conditions for nonconformance assessment and nonpayment for rejected products.

1.2 AUTHORITY

- A. Measurement methods delineated in specification sections are intended to complement the criteria of this section. In the event of conflict, the requirements of the specific specification section shall govern.
- B. The Town Engineer or designated representative will take all measurements and compute quantities accordingly.
- C. The Contractor shall assist the Town Engineer or designated representative by providing necessary equipment, workers, and survey personnel as required.

1.3 UNIT QUANTITIES SPECIFIED

- A. Quantity and measurement estimates stated in the Bid Form are for contract purposes only.
- B. Quantities and measurements supplied or placed in the Work and verified by the Town Engineer or designed representative shall determine payment as stated in the General Conditions.
- C. If the actual Work requires greater or lesser quantities than those quantities indicated in the Bid Form, the Contractor shall provide the required quantities at the unit prices contracted, except as otherwise stated in the General Conditions, the contract drawings, or other sections within the specifications.

1.4 METHODS OF MEASUREMENT OF QUANTITIES

A. Measurement by Volume:

- A.1 Stockpiles: Measured by cubic dimension using mean length, width, and height or thickness.
- A.2 Excavation and Embankment Materials: Measured by cubic dimensions using the average end area method.

- B. Measurement by Area: Measured as a square dimension using either mean length and width or radius of a circle (or portion of a circle).

FENTER RD RECONSTRUCTION

- C. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- D. Stipulated Price Measurement: Measured by unit designated in the agreement.
- E. Other: Includes items measured by weight, volume, area or lineal means or combinations, as appropriate, as a completed item or unit of the Work.

1.5 REQUIREMENTS

- A. The general scope of work under each bid item includes all labor, equipment and materials required for construction of completely functional and operational facilities as shown on the Drawings and in these Specifications.
- B. All estimated quantities for unit price bid items stipulated in the bid proposal are approximate and are to be used only (a) as a basis for estimating the probable cost of the work and (b) for the purpose of comparing the bids submitted for the work. The actual amount of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for unit price work and materials will be the actual amount of work done and material furnished as measured by the Town Engineer or designated representative.
- C. All measurements and payments will be based on completed and accepted work performed in strict accordance with the Drawings and Specifications and in accordance with contract unit bid prices. Incidental work and items not listed in the contract-unit bid price schedule will not be paid for separately, but will be included in the payment for the listed item or items and shall be full compensation for all labor, equipment, materials, testing and incidentals necessary to perform the work in accordance with these contract documents.
- D. Separate payment will not be made for related items of subsidiary work, but will be considered as part of the bid items in the proposal. Payment will be made for all work covered in this section at the contract unit price bid items or be included in the lump sum bid items prices for items in the proposal. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications.

PART 2 – PRODUCTS (NOT USED)

FENTER RD RECONSTRUCTION

PART 3 - EXECUTION

3.1 GENERAL

A. Two general classes of pay items exist consisting of:

- A.1 Unit price items: Payment for the various unit price items will be made at the particular contract price per unit as shown on the proposal.
- A.2 Lump Sum Items: Lump sum items are to be paid for at a lump sum price per job, not in measured increments. Lump sum items shall include all work and materials involved in the installation, construction or performance of work, including incidental and subsidiary items as may be required to complete that item as shown on the drawings and designated in the specifications.

B. The unit price or lump sum price bid on each item as stated in the Proposal shall include furnishing all labor, superintendence, incidentals, machinery, supplies, equipment and materials necessary to complete the various items of work in accordance with the Design Drawings and Specifications. Cost of work or materials shown on the Design Drawings, called for in the Specifications and on which no separate payment is made shall be included in the bid price on the various pay items for which they are associated.

3.2 MEASUREMENT AND PAYMENT

Base Bid 1 and Base Bid 2 Items

Mobilization & Bonds (Bid Item No. 1)

Shall include all costs for Contractor's mobilization and demobilization, insurance and bond, construction permits and fees, site administration expenses, temporary utilities, coordinating with owners of affected properties, and coordinating with Town's testing lab. Any demolition not covered under the demolition items is also subsidiary to this Item. This item shall also include all costs for contract closeout, site clean-up, and all costs associated with Contractor's demobilization from the site. This item shall also include a video recording of the existing conditions before construction and a video recording of the site after the completion of all work. Payment for mobilization and demobilization shall be on a Lump Sum basis as noted in the Bid Schedule. Mobilization/Demobilization shall not exceed 5% of the total of the below item descriptions, 2 – 21.

Implement Storm Water Pollution Prevention Plan (Bid Item No. 2)

Payment for storm water pollution prevention measures, including construction entrances/exits, silt fences, erosion control logs, dust control, concrete washout areas, protection of existing inlets and irrigation ditches, protection of the Mesa Drain and Salitral Lateral, etc., will be made at a Lump Sum price and shall be total compensation for complete performance of this work through the duration of the project.

FENTER RD RECONSTRUCTION

Traffic Control (Bid Item No. 3)

Traffic control shall be paid for on a Lump Sum basis and shall include coordinating traffic control requirements with the governing agencies as called out in the drawings and specifications. Prepare traffic control plans in conformance with the Texas Manual on Uniform Traffic Control Devices For Streets And Highways (latest edition); submitting traffic control plans to the governing agencies (Town of Clint, TxDOT); temporary pedestrian fencing, walkways, and ramps; obtaining approval of the traffic control plans prior to beginning construction in areas affecting traffic; providing two approved copies of the traffic control plans to the Town Engineer or designated representative. The Contractor shall construct, grade, and maintain in transitable condition during construction and remove when permanent improvements are completed. The Contractor shall also provide and install all traffic control devices, materials, equipment, temporary patch paving, on-going coordination and personnel as required to implement and maintain the traffic control plans for the duration of the project. No measurement of the work or material included in this item shall be made. All materials and work associated with this item shall be included with the price of the item. Payment includes full compensation for the complete performance of the work in accordance with the Project's drawings and the provisions of these specifications. Shadow Vehicles with TMA and high intensity rotating, flashing, oscillating or strobe lights will not be paid for directly, but will be subsidiary to this Item.

Remove Asphalt Pavement and Base Material, and Dispose off-site (Bid Item No. 4)

Measurement shall be the actual square yards removed. The surface area is based on the width shown in the plans. This item includes the removal of asphalt pavement and base course. Removed item shall be properly disposed of and shall not exceed the limits shown on the drawings. Removal of the additional asphalt for tie in to existing pavement shall be subsidiary to this Item. Payment shall be made at the unit price as stated in the bid schedule and will be compensation in full for the necessary materials, repair to base course when necessary, equipment and work including saw-cut, removal, and off-site disposal, in accordance with the Construction Drawings and Specifications.

Excavation of Subgrade and Dispose off-site (Bid Item No. 5)

Measurement shall be by the square yards of subgrade to be removed. The surface area is based on the width shown in the plans. The work performed will be paid for at the unit price bid for the types of work described for a depth specified in plans. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans. Removed item shall be properly disposed of. Payment shall be made at the unit price as stated in the bid schedule and will be compensation in full for authorized excavation; drying; undercutting subgrade and reworking or replacing the undercut material in rock cuts; hauling; disposal of material not used elsewhere on the project; scarification and compaction; and equipment, labor, materials, tools, and incidentals.

FENTER RD RECONSTRUCTION

Tree Removal (Bid Item No. 6)

Measurement shall be by each tree to be removed. Payment shall be made at the unit price as stated in the bid schedule and will be compensation in full for the necessary materials, equipment and labor required for the tree removal in accordance with the Construction Drawings and Specifications. Removal of the stump, off-site disposal, trimming, and incidentals are subsidiary to this Item.

Grading (Bid Item No. 7)

This Item will be measured by the 100-ft station as measured along the centerline of the roadway. The unit price will include all grading required within the width shown in the plans for the 100-ft station. This price is full compensation for furnishing and operating equipment and for labor, materials, tools, and incidentals. "Sprinkling" and "Rolling" will not be paid for directly, but will be subsidiary to this Item. Additional material required to achieve the grades and cross sections indicated in the plans shall be subsidiary to this Item. The work performed under this Item will not include work specified for payment under other Items.

Remove Sign Post and Assembly & Dispose Off-site (Bid Item No. 8)

Shall be paid for each sign post and assembly to be removed and shall include full compensation for disassembly; removal of foundation; removal and salvaging of signs, pole assembly, and related materials, and delivering items to the Town; backfilling; surface placement; disposing of unsalvageable materials; and materials, tools, equipment, labor, and incidentals. Payment shall be made at the unit price as stated in the bid schedule and will be compensated in full for the necessary materials and Work in accordance with the Construction Drawings and Specifications.

Adjust Water Valve (Bid Item No. 9)

Measurement shall be by each water valve adjusted. The price is full compensation for any coordination with utility company, adjustments, concrete collars, bonnet box adjustments, new bonnet box (if necessary), materials, fittings, including backfill as required, and for excavation, tools, material, equipment, labor, incidentals and for all work performed in accordance with the Construction Drawings and Specifications.

Adjust Water Meter (Bid Item No. 10)

Measurement shall be by each water meter box adjusted. The price is full compensation for any coordination with utility company, adjustments, concrete collars, box adjustments, new box (if necessary), materials, fittings, including backfill as required, and for excavation, tools, material, equipment, labor, incidentals and for all work performed in accordance with the Construction Drawings and Specifications.

FENTER RD RECONSTRUCTION

Furnish and Install HMAC Type C Pavement (Bid Item No. 11)

Measurement shall be by the ton of hot mix asphaltic concrete (HMAC) pavement installed, as determined by measurement along the baseline of the roadway using horizontal stationing and shall not exceed the limits shown on the drawings. Additional asphalt required for the tie in to existing pavement, as per the Pavement Junction detail, shall be subsidiary to this Item. Payment shall be made at the unit price as stated in the bid schedule and will be compensation in full for all necessary materials, equipment and work including tack coat, joint sealant, placement, rolling, repair of base course, clean-up, off-site disposal, equipment, labor, tools and incidentals in accordance with the Construction Drawings and Specifications.

Crushed Aggregate Base Course (Bid Item No. 12)

Measurement and payment are by the square yard for the surface area in the completed and accepted final position. The surface area of the base course is based on the width shown in the plans. The work performed and materials furnished will be paid for at the unit price bid for the types of work described for a depth specified in plans. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, spreading, blading, mixing, shaping, placing, compaction, reworking, finishing, correcting locations where thickness is deficient, corrections of soft spots in the subgrade, curing, furnishing and placing prime coat, furnishing scales and labor for weighing and measuring, and equipment, labor, tools and incidentals. Sprinkling and rolling (including proof rolling) will be subsidiary to this Item.

Compacted Select Fill (Bid Item No. 13)

Measurement and payment are by the square yard for the surface area of select fill in the completed and accepted final position. Payment shall be made at the unit price as stated in the bid schedule. The surface area of the select fill is based on the width shown in the plans. The price is full compensation for furnishing embankment; hauling; placing, compacting, finishing, and reworking; surface preparation; repairs; disposal of waste material; cleaning; and equipment, labor, tools, and incidentals. All sprinkling and rolling (including proof rolling) will not be paid directly, but will be considered subsidiary to this Item. Corrections of soft spots (including cement stabilized backfill (2-sack)) in the subgrade will be subsidiary to this Item.

Subgrade preparation (Bid Item No. 14)

Measurement shall be by square yards of area where subgrade preparation is required. Grade the roadway and shape to the typical sections shown in the plans. Scarify existing natural ground or roadbed and compact in accordance with the method shown on the plans. The price is full compensation for furnishing and operating equipment; excavation required to achieve final grades, sprinkling; rolling; hauling; placing, scarification, compacting, finishing, and reworking; surface preparation; repairs; and for labor, materials, tools, and incidentals. All work involved in removing, excavating, and replacing (furnishing approved select fill) or reworking unsuitable or

FENTER RD RECONSTRUCTION

unstable material is considered subsidiary to this Item. Corrections of soft spots (including cement stabilized backfill (2-sack)) in the subgrade will be subsidiary to this Item. The work performed under this Item will not include work specified for payment under other Items.

Furnish & Install Header Curb (Bid Item No. 15)

Measurement shall be the actual amount of header concrete curb in linear feet. Payment shall be made at the unit price as stated in the bid schedule and will be compensation in full for excavation or select fill required for placement of header curb, compacting, and preparing subgrade, furnishing and installing the necessary materials, dowels, steel reinforcement, and for all work performed in accordance with the Construction Drawings and Specifications, and shall include all associated items, as detailed, including concrete, forming, curing, re-grading, expansion joints, broom finish, saw cutting, clean up and off-site disposal.

Furnish and Install Reflective Pavement Marking Ty1 for Markings (Bid Item Nos. 16 through 18)

Shall be paid for as linear foot or each as indicated in plans and shall include the full compensation for blast cleaning, mechanical cleaning and/or other cleaning methods; surface preparation; and for application of pavement markings, materials, tools, equipment, labor, traffic control, and incidentals necessary to complete the work. No payment will be made for the elimination of pavement markers or pavement markings when pavement markers or markings are to be removed in conjunction with the elimination of asphalt pavement. This item shall include the proper placement of the Type I pavement markings of the various types, colors, shapes, sizes, widths and thickness specified as per the drawings and specifications. Pavement shall be cleaned of dirt/debris and ready to accept the markings. All costs for this work shall be included in the Contractor's price and shall be complete compensation for complete performance of this work including equipment, materials, labor, tools, incidentals and work in accordance with the Construction Drawings and Specifications.

Furnish & Install Sign, Post, and Assembly (Bid Item No. 19)

Shall be paid for each and shall include the proper and complete installation. Payment shall be made at the unit price as stated in the bid schedule and will be compensation in full for furnishing and installing the necessary materials and incidentals necessary to complete the work, in accordance with the Construction Drawings and Specifications. Sign installation will be compensated in full for furnishing and installing new signs, connections, and hardware, including post and triangular base; street name sign hardware pole caps and cross brackets; foundations (including concrete and rebar); fabrication of sign panels; furnishing bolts, rivets, screws, fasteners, clamps, brackets, and sign support connections; preparing and cleaning signs; galvanizing; and equipment, materials, labor, tools, incidentals required to complete the work in accordance with the Construction Drawings and Specifications. Two back-to-back chevron signs (W1-8R and W1-8L) will be installed per one sign post. This assembly will be measured as one sign post assembly.

FENTER RD RECONSTRUCTION

Furnish & Install Object Marker (Bid Item No. 20)

Installation will be measured by each bidirectional object marker assembly installed. The price is full compensation for furnishing and fabricating when required, and installing and mounting the object marker assemblies including posts, adhesive or pads for surface mount assemblies, back plates, reflector units, fastening plates, brackets, bolts, nuts, and washers; and materials, equipment, labor, tools, and incidentals.

Cement Stabilized Backfill (2-sack) (Bid Item No. 21)

Measurement and payment are by the square yard for the surface area in the completed and accepted final position. The surface area of the cement stabilized backfill is based on the width shown in the plans. The work performed and materials furnished will be paid for at the unit price bid for the type of work described for a depth specified in plans. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans. This price is full compensation for furnishing materials, loading, hauling, delivery of materials, shaping, placing, compaction, reworking, finishing, correcting locations where thickness is deficient, and equipment, labor, tools and incidentals. This Item shall be used to pay for the cement stabilized backfill proposed for the pavement structure above the Salitral Lateral. Cement stabilized backfill used for subgrade correction shall be subsidiary to Items 13 and 14.

Base Bid 1 Alternate 1 Items

Mobilization & Bonds- Alternate Bid (Bid Item No. A1)

Shall include all costs for Contractor's mobilization and demobilization, insurance and bond, construction permits and fees, site administration expenses, temporary utilities, coordinating with owners of affected properties, and coordinating with Town's testing lab. Any demolition not covered under the demolition items is also subsidiary to this Item. This item shall also include all costs for contract closeout, site clean-up, and all costs associated with Contractor's demobilization from the site. This item shall also include a video recording of the existing conditions before construction and a video recording of the site after the completion of all work. Payment for mobilization and demobilization shall be on a Lump Sum basis as noted in the Bid Schedule. Mobilization/Demobilization shall not exceed 5% of the total of the below Item A2.

Stone Common Dry (4" to 6") (Bid Item No. A2)

This Item will be measured by the cubic yard of material complete in place. Volume will be computed on the basis of the measured area in place and the thickness shown on the plans. This price is full compensation for furnishing, hauling, and placing the stones and for filter fabric, scales, test weights, equipment, labor, tools, and incidentals. Payment for all necessary excavation required for stone placement as specified in the plans, and for shaping of slopes will be included in the unit price of this Item.

FENTER RD RECONSTRUCTION

3.3 PAYMENT INCLUDES

- A. Full compensation for all required supervision, labor, products, tools, equipment, plant, transportation, services, and incidentals; and erection, application, or installation of an item of the work; and Contractor's overhead and profit.
- B. Total compensation for required Unit Price Work shall be included in the Unit Price bid. Claims for payment as Unit Price Work, but not specifically covered in the list of unit prices of the bid items will not be accepted.

END OF SECTION

FENTER RD RECONSTRUCTION

SECTION 01 30 00 - SUBMITTALS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Submit construction schedule, shop drawings, product data, samples, schedule of values and products list as specified in this and other Sections

1.02 CONSTRUCTION SCHEDULE

- A. Content: Show product and installation dates for major Products. Show dates for substantial completion, final completion and Owner occupancy.
- B. Updating: Indicate progress of each activity, show revised completion dates. Provide listing of current and anticipated accelerations and delays. Describe proposed corrective action when required.

1.03 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
 - 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 48 inches.
 - 7. Initial Submittal: Submit one correctable, translucent, reproducible print for the Engineer's review. The Engineer will return the reproducible print.
 - 8. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

FENTER RD RECONSTRUCTION

1.04 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 3. Submittals: Submit 2 copies of each required submittal; submit 4 copies where required for maintenance manuals. The Engineer will retain one and will return the other marked with action taken and corrections or modifications required.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 4. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

FENTER RD RECONSTRUCTION

1.05 OFFICE SAMPLES

- A. Submit office samples of size and quantity specified or of sufficient size and quantity to clearly illustrate functional characteristics of product, material, or system with integrally related parts and attachment devices.

1.06 FIELD SAMPLES

- A. Construct each sample complete, including work of all trades required in finished work. After approval, where appropriate, field samples may be incorporated into the Project. When directed, remove from the site field samples not incorporated into the Project.

1.07 SCHEDULE OF VALUES

- A. Submit a Schedule of Values covering various parts of work, including quantities aggregating the total sum of the Contract. This Schedule will be the basis for the Contractor's Application for Payment.
- B. Upon request by Engineer, support values given with data that will substantiate their correctness.

1.08 PRODUCTS LIST

- A. Submit a complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.

1.09 ENGINEER'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Engineer will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Engineer will stamp each submittal with a uniform, action stamp. The Engineer will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When the Engineer marks a submittal "Approved", the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.

FENTER RD RECONSTRUCTION

2. Final-But-Restricted Release: When the Engineer marks a submittal "Approved as Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 3. Returned for Resubmitted: When the Engineer marks a submittal "Not Approved, Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - a. Do not use, or allow others to use, submittals marked "Not Approved, Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
 4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Engineer will return the submittal marked "Action Not Required."
- C. Unsolicited Submittals: The Engineer will return unsolicited submittals to the sender without action.

1.00 QUALITY ASSURANCE SUBMITTALS

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
 1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in other Sections of the respective Specifications.

FENTER RD RECONSTRUCTION

PART 2 EXECUTION

2.01 CONTRACTOR'S SUBMITTAL

- A. Review submittals prior to submission and provide stamp of approval signed or initialed and dated by Contractor, indicating the Contractor has inspected the submittals and certifying that they are complete, correct, in compliance with the contract Documents and suitable for the Project.
- B. Notify Engineer in writing at time of submission of deviation in submittals from requirements of Contract Documents.
- C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delays.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that requires sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - 3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
- D. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
 - 1. Provide a space approximately 4 by 5 inches on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 - 2. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.
 - c. Name and address of the Engineer.
 - d. Name and address of the Contractor.
 - e. Name and address of the subcontractor.
 - f. Name and address of the supplier.
 - g. Name of the manufacturer.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.

FENTER RD RECONSTRUCTION

2.02 CORRECTIONS

- A. Immediately incorporate all required corrections in the submittals and resubmit for further review, if required.

END OF SECTION

FENTER RD RECONSTRUCTION

SECTION 01 40 00 – TESTING LABORATORY SERVICES

PART 1 – GENERAL

1.1 SCOPE OF WORK

Where tests of materials or any portions of the Work are required by law/ordinance or public authority, the Contractor shall bear all costs of such tests, shall give timely notice of readiness therefore and shall furnish to the Engineer the required certification of testing or approval.

Tests specified in the Technical Specifications shall fall into four categories: (1) those required for approval of materials prior to use, which serve the same purpose as shop drawings or samples; (2) those required by law; (3) those necessary for acceptance of equipment, or facilities, and (4) those made during the progress of the Work to check compliance with the requirements of the Contract Documents. The Contractor shall bear all the costs of the tests in the first three categories.

The tests in the fourth category shall include test normally performed by a commercial laboratory for materials such as: density tests for pipe bedding, trench and/or structural backfill, sub-grade, base course, and hot mix; proctor tests and Atterberg Limits for pipe bedding, trench and/or structural backfill, sub-grade and base course; in place densities for Asphalt pavement, including Marshall stability, Asphalt extraction and gradation tests; cylinders for concrete compressive strength, mortar cubes and prisms for grout strength.

Tests conducted in the fourth category shall be carried out at the discretion of the Engineer. The cost for testing materials in this category shall be paid for by the Owner, with the following exception. The Contractor shall furnish the materials for any samples and shall fully cooperate with the Engineer or Testing Laboratory in securing such samples. In addition, all failing tests under category (4) shall be paid for by the Contractor. Any re-work necessary by the Contractor to obtain passing tests shall be at the Contractor's cost and at no time extension for delays will be considered by the Owner.

1.2 QUALITY ASSURANCE

A. Qualifications of Testing Laboratory: The testing laboratory will be qualified in accordance with ASTM E329. The testing laboratories qualifications shall be submitted to the Engineer for approval before testing begins.

B. Codes and Standards: Testing, when required, will be in accordance with pertinent codes and regulations and with selected standards of the American Society for Testing on Materials.

FENTER RD RECONSTRUCTION

1.3 COORDINATION

The testing representative shall process and distribute to the Engineer, the Owner, and to City Engineering required copies of test reports and related instructions to ensure necessary retesting and replacement of materials with the least possible delay in progress of the work.

1.4 CODE COMPLIANCE TESTING

Inspections and tests required by codes or ordinances, or by a plan approval authority, and which are made by a legally constituted authority, shall be the responsibility of and shall be paid for by the Contractor, unless otherwise provided in the contract documents.

1.5 INSPECTION BY OWNER'S PERSONNEL

From time to time, personnel employed by the Owner may inspect the work where the work is in progress, but shall have no authority to direct the Contractor or request changes in the work except through the Engineer.

1.6 TAKING SPECIMENS

Specimens and samples for testing, unless otherwise provided in the contract documents, will be taken by the testing personnel. Sampling equipment and personnel will be provided by the testing laboratory. Deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

1.7 SCHEDULES FOR TESTING

A. **Establishing the Schedule:** By advance discussion with the testing laboratory, the Contractor will determine the time required for the laboratory to perform its tests, to issue each of its findings and the lead time required for the laboratory to collect specimens. The Owner will provide the required time to the Contractor, so that it can be incorporated in the construction schedule.

B. **Revising the Schedule:** When changes on the testing schedule are necessary, coordinate such changes of schedule with the Engineer as required.

1.8 MINIMUM REQUIREMENTS FOR TESTS

The Contractor shall be required to meet the following minimum requirements for the tests:

FENTER RD RECONSTRUCTION

A. Street Construction:

1. Field Densities:

- | | | |
|----|------------------|------------------------|
| a. | Subgrade* | 1 density per 150 l.f. |
| b. | Fill* | 1 density per 200 l.f. |
| c. | Base Course | 1 density per 200 l.f. |
| d. | Asphalt Pavement | 1 density per 150 l.f. |

*Field density tests and corresponding moisture content determination shall be made for each layer of compacted fill. If any areas of doubtful compaction appear, additional tests may be required.

One moisture-density curve should be obtained for each type of material used in accordance with ASTM D-1557, and one sieve analysis and one plasticity index for each type of material used, according to ASTM C-136, and D-4318.

2. Concrete:

- 1 set (four specimens) per each 8 cy or less
- Slump tests shall be made every time test cylinders are made in accordance with ASTM C 143 and reported by the testing laboratory.

3. Asphalt Pavement:

- 3 gradations; in-place density of asphalt as recommended by the Materials Testing Engineer representing the Testing Laboratory.

FENTER RD RECONSTRUCTION

SECTION 01 57 00 - TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 SECTION INCLUDES

Temporary Controls: Barriers and fencing, protection of the Work, water control, dust control, erosion and sediment control, noise control, and pollution control.

1.2 RELATED SECTIONS

- A. General Conditions
- B. Section 01 00 00– General Requirements

1.3 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way.
- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.4 WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.5 SECURITY

Coordinate with Owner’s security program.

1.6 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispensing into atmosphere.

FENTER RD RECONSTRUCTION

1.7 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize amount of bare soil exposed at one time.
- C. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- F. All phases of sedimentation and erosion control shall comply with the U.S. Environmental Protection Agency NPDES Regulations and the state regulations, which require the preparation of a Stormwater Pollution Prevention Plan (SWPPP). The Contractor shall conform to the plans and maintain the SWPPP at all times.

1.8 NOISE CONTROL

Provide methods, means, and facilities to minimize noise produced by construction operations.

1.9 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- B. Comply with all applicable federal, state, and local laws and regulations concerning environmental pollution control and abatement.

PART 2 – MEASUREMENT AND PAYMENT

No additional payments will be made for temporary controls. Cost of temporary controls shall be incorporated to the overall lump sum project cost.

FENTER RD RECONSTRUCTION

SECTION 01 74 00 - CLEANING

PART 1 – GENERAL

1.1 SUMMARY

- A. Throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, and Sections in Division 1 of these Specifications.
 - 2. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

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

PART 2 – PRODUCT

2.1 CLEANING MATERIALS AND EQUIPMENT

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

2.2 COMPATIBILITY

- A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 – EXECUTION

3.1 PROGRESS CLEANING

- A. General:
 - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.

FENTER RD RECONSTRUCTION

2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this work.
3. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
4. Provide adequate storage of all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Restack, tidy, or otherwise service arrangements to meet the requirements of subparagraph 3.1-A-1 above.
3. Maintain the site in a neat and orderly condition at all times.
4. Haul roads shall be dampened for dust control.
5. Loaded haul trucks shall be covered with tarpaulin.
6. Excess dirt on road shall be removed daily.
7. Stabilized construction entrance.

C. Structures:

1. Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, sweep interior spaces clean.
 - a. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.
3. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

FENTER RD RECONSTRUCTION

4. Following the installation of finish floor materials, clean the finish floor daily (and more often if necessary) at all times while work is being performed in the space in which finish materials are installed.
 - a. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Engineer, may be injurious to the finish floor material.
5. The following cleaning is to be accomplished immediately prior to the time the Contractor requests Substantial Completion Inspection:
 - a. Remove labels which are not required as permanent labels.
 - b. Remove debris and surface dust from all areas including plenums, shafts, and similar spaces.
 - c. Remove crates, cartons and other flammable waste material or trash from work areas. Restore property to its original condition where no improvements are shown.
 - d. Care shall be taken by workmen not to mark, soil or otherwise deface finished surfaces. In the event that finished surfaces become defaced, all costs for cleaning and restoring such surfaces to their originally intended condition shall be the responsibility of the Contractor.
 - e. Clean all work on the premises including drives, paving, fences, grounds and walls. Cleanup shall include removal of smudges, marks, stains, fingerprints soil, dirt, paint, dust, lint, labels, discolorations and other foreign materials.
 - f. Clean and treat all spills of hydraulic oils or similar materials in accordance with local, state and federal laws. Return grounds to pre-project conditions or better.
 - g. Clean sumps, traps, pipes, sewers and manholes affected by work.
 - h. Remove temporary buildings and structures, fences, scaffolding, surplus materials and rubbish of every kind from the site of the work.

3.2 SIDEWALK CLEANING

- A. Use a high pressure, heated vapor spray to clean sidewalk to remain in place. Spray shall remove all gum, stains, and dirt.

FENTER RD RECONSTRUCTION

- B. Prevent damage to adjacent buildings, landscaping, painted surfaces or other infrastructure.
- C. Discharge detergents and solvents must adhere to applicable codes and regulations.

3.3 FINAL CLEANING

- A. "Clean", for the purpose of this section, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials
- B. Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.1 above.
- C. Site:
 - 1. Completely remove resultant debris.
- D. Schedule final cleaning as approved by the Engineering Department to enable the Owner to accept a completely clean work.

3.4 CLEANING DURING OWNER'S OCCUPANCY

Should the Owner occupy the work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning shall be as determined by the Engineering Department in accordance with the General Conditions of the Contract.

FENTER RD RECONSTRUCTION

SECTION 01 74 01 - WARRANTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section 01 30 00 - "Submittals" specifies procedures for submitting warranties.
 - 2. Division 1 Section 01 77 00 - "Project Closeout" specifies contract closeout procedures.
- C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products.

1.3 DEFINITIONS

- A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

1.4 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

FENTER RD RECONSTRUCTION

- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

- A. Submit written warranties to the Owner or his representative prior to the date certified for Substantial Completion. If the Owner or his representative's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner or his representative.
 - 1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner or his representative within 15 days of completion of that designated portion of the Work.
- B. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

FENTER RD RECONSTRUCTION

- C. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the 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 the Installer.
 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.
 3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 74 01

FENTER RD RECONSTRUCTION

SECTION 01 77 00 - PROJECT CLOSEOUT

PART 1 – GENERAL

Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.1 GENERAL DESCRIPTION OF REQUIREMENTS

- A. DEFINITION: Project Closeout is hereby defined to include requirements near the end of the Contract Time, in preparation for substantial completion acceptance, occupancy by Owner, release of retainage, acceptance, final payment, normal termination of contract, and similar actions evidencing completion of the work.
- B. TIME of closeout is directly related to completion and acceptance, and therefore may be either a single time period for the entire project, or a series of time periods for individual portions or phases of the project which have been certified as substantially complete at different dates.
1. This Section is based on completion and acceptance of the entire project during a single time period.
 2. If the project is to be accepted in phases, whether by originally specified project scope or by subsequent agreement between the parties, then Project Closeout requirements shall pertain to each separately accepted portion or phase of the project; unless by written notice the Owner allows for these requirements to be done singularly upon anticipated acceptance of the final phase.
- C. REQUIRED DOCUMENTS for Project Closeout include, but are not necessarily limited to the following, which are required at various stages of project completion:
1. As-Built Record Drawings and Specifications
 2. Operating & Maintenance Manuals
 3. Record Approved Submittals and Samples
 4. Completed Punch Lists
 5. Consent(s) of Surety
 6. Evidence of Turnover of Spare Parts
 7. Evidence of User Training

FENTER RD RECONSTRUCTION

1.2 REQUIREMENTS AT VARIOUS STAGES OF COMPLETION

A. SUBSTANTIAL COMPLETION

1. Prior to requesting Owner to schedule a Substantial Completion, or Pre-Final, inspection (for either the entire work or portions thereof as agreed to by the parties to the contract); complete the following and list known exceptions in request.
 - a. Submit to Owner a complete copy of the Contractor's most current punch list covering the portion(s) of the Project claimed as substantially complete.
 - i) Such punch list shall indicate dates of Contractor re-checks and completion of work items noted.
 - ii) All items remaining outstanding on the Contractor's punch list shall include a projected date of completion and/or correction with an explanation of why such is not presently completed
 - b. Submit to the Owner for review the preliminary copies of Owner's Operating and Maintenance (O&M) Manuals as described later in this Section.
 - c. Obtain and submit releases enabling Owner's full and unrestricted use of the work and access to services and utilities, including (where applicable) operating certificates, and similar releases.
 - d. Deliver special tools (those required for adjustments but not commonly available from other sources), spare parts, extra stocks of materials, and similar physical items to Owner.
2. Complete instructions of Owner's operating and maintenance personnel for all systems and equipment serving the areas claimed as substantially complete, for which Owner Training was not completed in association with system demonstrations and inspections.
 - a. Arrange for each installer of work requiring continuing maintenance (by Owner) or operation to meet with Owner's personnel, at project site, to provide basic instructions needed for proper operation and maintenance of all work.
 - b. The Contractor shall also provide technicians representing the equipment/system manufacturer to instruct and train the Owner's Personnel in the use, operation, and maintenance of the equipment.

FENTER RD RECONSTRUCTION

- c. Demonstrate in the field the start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of the system(s) and each component device.
3. Complete initial clean up requirements as described later in this Section for the entire portion of the Project claimed as substantially complete. Touch up and otherwise repair and restore marred exposed finishes.
4. Substantial Completion Inspection Procedure
 - a. Upon receipt of evidence of compliance with above noted requirements along with Contractor's notice that work has been substantially completed, as evidenced by receipt of Contractor's punch list with completion and/or corrections noted; Owner will schedule Substantial Completion Inspection of the work. If status of work is found to be as indicated on Contractor's punch list, the Engineer will prepare Substantial Completion Punch List noting all items requiring completion and/or correction.
 - b. If investigation indicates that Contractor's punch list did not accurately reflect status of the work, or if corrections and/or completion has not been substantially resolved by the Contractor; the Inspection will be terminated and all Owner and A/E costs for scheduling and attendance at the terminated inspection(s) will be the responsibility of the Contractor.

B. FINAL ACCEPTANCE

1. Prior to requesting Owner to schedule Final Inspection for the Project, complete the following:
 - a. Submit copy of Engineer's pre-final, or substantial completion, punch list, which includes evidence that each item has been completed or otherwise resolved.
 - b. Submit final meter readings for utilities, and similar data as of time of substantial completion or when Owner took possession of and responsibility for corresponding elements of the work.
 - c. Submit final record specifications, two copies of all approved submittals, and operating & maintenance manuals as described later in this Section. This includes specific warranties, maintenance agreements, product certifications and similar documents. Record closeout documentation must be acceptable to the Owner prior to issuance of final payment.

FENTER RD RECONSTRUCTION

- d. Complete final cleaning requirements, including touch-up of marred surfaces.

2. Final Acceptance Inspection Procedure

- a. Upon compliance with all above noted requirements, and following completion of the work required in the substantial completion punch list, provide written notice to the Owner that the project is ready for Final Inspection.
- b. Upon receipt of evidence of compliance with above noted requirements for Final Acceptance; the Owner will schedule a Final Acceptance Inspection.
 - i) If status of work is found to be as indicated by Contractor as being complete and in compliance with the conditions of the Contract, the Engineer will provide written recommendation to the Owner to accept the project.
 - ii) If, however, this investigation indicates that corrections and/or completion has not been resolved by the Contractor; the Inspection will be terminated and all Owner and A/E costs for scheduling and attendance at the terminated inspection will be the responsibility of the Contractor. In case of remaining correction/completion items, the Contractor shall again notify the Owner when all such items have been resolved, and request re-inspection.

1.3 REQUIRED PROJECT RECORD DOCUMENTS

A. As-Built Record Drawings/Shop Drawings

1. As-built drawings are the responsibility of the Contractor.
 - a. Drawings are required to show all work and show additional information of value to Owner's records; provide access to documents for Owner and/or Engineer's reference or review during normal working hours.
 - b. In general terms; the Contractor is to furnish a marked-up set of drawings illustrating as-built conditions.
 - c. This Section requires that completed as-builts and specifications be submitted to the Owner for review prior to requesting substantial completion, or pre-final, inspections. Further, it is required that final submission of these documents, along with operating and

FENTER RD RECONSTRUCTION

maintenance manuals, be furnished prior to the pre-final (or substantial completion) inspection.

B. Operating and Maintenance Manuals

1. In general terms, the Contractor is to organize maintenance-and-operating manual information into suitable sets of manageable size, and bind into individual binders properly tabbed and indexed.
 - a. Such shall include emergency instructions, spare parts listings, warranties, wiring diagrams, inspection procedures, shop drawings, product data, and similar applicable information.
 - b. Provide a phone number for warranty service such that Owner can receive a response within 24 hours.
 - c. Such shall be bound in heavy-duty 2", 3-ring vinyl-covered binders including pocket folders for folded sheet information. Mark binder identification on both front and spine of each.
 - d. **Four** complete copies of each bound Manual are required.
2. The requirements of this Section are separate, distinct and in addition to product submittal requirements that may be established by other Sections of the Specifications. Owner's manuals, manufacturer's printed instructions, parts lists, and other submittals required by other Sections of the Specifications may be included in the O&M Manuals provided that they are approved and are formatted in a manner consistent with the requirements of this Section.
3. Equipment is defined as any mechanism, mechanical, electrical or electronic device, or any combination thereof, which is made up of 2 or more working parts to perform a particular function, and is usually proprietary as to source.
4. When an item of equipment is a packaged unit furnished by one manufacturer and the package as furnished contains proprietary items of equipment obtained from other sources; copies of equipment data as required herein shall be furnished for each item of such equipment as if it had been separately furnished
5. All the applicable data for anyone item of equipment or material or system shall be bound together as a package, within a Manual containing like equipment, materials, or systems, as indicated by specification division. Each package of data shall be numbered according to the Specification Section governing the particular system.

FENTER RD RECONSTRUCTION

6. All data furnished in accordance with this Section shall be submitted on bindable 8-1/2" x 11" sheets or on sheets that are bindable and foldable multiples of 8-1/2" x 11". The bindable edge shall be the left 1" edge.
7. Waivers to the size requirement may be requested in specific instances upon application in writing to the Owner with justification for substitution.
8. Material and equipment data required by this Section is intended to include all data necessary for the proper installation, removal, normal operation, emergency operation, startup, shutdown, maintenance, cleaning, adjustment, calibration, lubrication, assembly, disassembly, repair, inspection, trouble shooting and service of the equipment or materials.
9. The Contractor is to accumulate and package the documentation as herein specified, and submit same to the Owner or his designated representative for review. It is recommended that a "preliminary" copy of each volume be reviewed with the Engineer prior to final printing and binding.
10. The Contractor's submission of O&M Manuals to the Owner for review is a precondition for scheduling of a Substantial Completion Inspection and/or any reduction in, or release of, contract retainage. The Contractor's final submission of these Manuals in an acceptable format (based on review of preliminary copies by the Owner), is a precondition for scheduling of a Final Acceptance Inspection, release of remaining contract retainage, or application for Final Payment
11. Equipment Data to be Included in O&M Manuals
 - a. Description of Equipment: shall be prepared upon 8-1/2" x 11 " forms. Include one such form for each item of equipment. The equipment information to be included in the O&M Manuals is as follows:
 - i) Complete description of item: Such should list basic descriptive terminology first, followed by modifying words to include model, size and weight, flow rate, amperage, voltage, material, etc., as applicable, plan designation, if any, and package serial number
 - ii) Part Number: Manufacturer's and supplier's part number
 - iii) Quantity: Total quantity of this equipment item installed under this Contract
 - iv) Specification Paragraph Reference: State the specification section and paragraph under which the item of equipment was procured, and page number
 - v) Source: Manufacturer's name and address and supplier's name and address.

FENTER RD RECONSTRUCTION

- vi) Serial Number: Complete manufacturer's serial number(s) or other identity symbol(s) as applicable
 - vii) Location: State the name of the system and/or sub-system in which each like item of equipment is installed and state the physical location of each like item of equipment by identifying the columnar grid intersections, as shown on the plans, near which the item is located and also state the room or space title as applicable.
- b. Parts Lists: which clearly identifies every part in the item of equipment with the proper manufacturer's name, part nomenclature and number, local source, and list price.
- c. Recommended Spare Parts: Furnish a list of recommended spare parts for each equipment item that will be needed to support that item of equipment for a 12-month period. The quantities of spare parts recommended shall be based upon the quantity of like equipment items installed under the Contract. The recommended spare parts list for each equipment item shall be prepared upon 8-1/2" x 11 " forms which contain the following information for each part in columns
- i) Part Description: Complete descriptive nomenclature plus manufacturer's complete model and part number, and list price cost for each part
 - ii) Quantity Per Assembly: Quantity of listed part that occurs in the item of equipment
 - iii) Quantity of Equipment Items: Quantity of like equipment items installed under this Contract
 - iv) Shelf Life: Storage life of part, in months, if the part has limited life
 - v) Recommended Quantity: Quantity of part recommended to support the installed quantity of equipment in which the part appears for a period of 12 months
 - vi) Source for part: Name, address, and phone number of the nearest supplier for the part.
- d. Contractor's Purchase Order: Copy of Contractor's purchase order for equipment. The copy furnished need only show quantity ordered, part number, equipment description and name and address of contractor who supplied the item.
- e. Normal Operating Instructions: Normal operating instructions shall provide sufficient detailed information to permit the Owner's operations staff to adjust, startup, operate and shut down the

FENTER RD RECONSTRUCTION

equipment. Special startup precautions must be noted as well as other action items required before the equipment is put into service

- f. Emergency Operating Procedures: A detailed description of the sequence of action to be taken in the event of a malfunction of the unit, either to permit a short period of continued operation or emergency shutdown to prevent further damage to the unit and to the system in which it is installed.
- g. Preventive Maintenance: Detailed information to cover routine and special inspection requirements, including field adjustments, inspections for wear, adjustment changes, packing wear, lubrication points, frequency and specific lubrication type required, cleaning of the unit and type solvent to use, and such other measures as are applicable to preventive maintenance program.
- h. Calibration: Detailed data on what to calibrate, how to calibrate, when to calibrate and procedures to enable checking the equipment for reliability or indications as well as data for test equipment, special tools (not commonly available) and the location of test points.
- i. Scale and Corrosion Control: Detailed information covering the prevention of and removal of scale and corrosion.
- j. Trouble Shooting Procedures: Detailed information and procedures for detecting and isolating malfunctions and detailed information concerning probable causes and applicable remedies.
- k. Removal and Installation Instructions: Detailed information concerning the logical sequence of steps required to remove and install the item including instructions for the use of special tools and equipment
- l. Disassembly and Assembly Instructions: Detailed illustrations and text to show the logical procedure and provide the instructions necessary to disassemble and assemble the unit properly. The text shall include all checks and special precautions as well as the use of special tools and equipment required to perform the assembly or disassembly
- m. Repair Instructions: Detailed repair procedures to bring the equipment up to the required operating standard including instruction for examining equipment and parts for needed repairs and adjustments, and tests or inspections required to determine whether old parts may be reused or must be replaced.

FENTER RD RECONSTRUCTION

- n. System Drawings: Detailed drawings, where applicable, that clearly show wiring diagrams, control diagrams, system schematics, pneumatic and fluid flow diagrams, etc., which pertain to the unit function. Drawings are required to show modifications to another manufacturer's standard unit which is incorporated into the assembly or package unit.
- i) System diagrams shall be provided on multiples of 8-1/2" x 11 format, folded to fit within the Manual. The outer (exposed) face of the folded drawing shall include identification of the system and the specification section which governs its installation and operation.
 - ii) The requirements of this paragraph are separate, distinct, and in addition to similar requirements that may be, established by other Sections. Where such system diagrams are required for submittal by other specification sections, the same diagrams will be acceptable for inclusion herein, so long as the diagrams used were approved during the submittal phase and they are reproduced for clarity and to fit the size format of the O&M Manual.
 - iii) The Contractor shall provide diagrammatic drawings for each installed system, which shall show the placement of the system and the physical location of each item or equipment installed within the system. Each installed item of equipment shown on the drawing will be identified by the equipment item model and/or serial/part number.
 - iv) System drawings may, for purpose of clarity, be prepared upon a major subsystem basis.
 - v) The drawings may be prepared upon several drawings having referenced match lines.
- o. Special Tools and Test Equipment: Furnish a detailed list of the special tools and test equipment needed to perform repair and maintenance for each equipment item. The list shall contain the special tool and test equipment part number, size, quantity, price, manufacturer's name and address, and local supplier's name and address.
- p. Warranties & Guarantees: Bind within the tabbed section for each system, equipment item, or material, an executed copy of the specified warranty/guarantee covering that particular system, equipment item, or material
- i) This is to include both the manufacturer's warranty as specified and the installing contractor's guarantee for workmanship and system operation

FENTER RD RECONSTRUCTION

- ii) This copy of the particular warranty/guarantee is in addition to original signature copies of all project warranties/guarantees bound together separately.
 - iii) Provide in a separate tabbed section of the O&M Manual a grouping of all project warranties and guarantees as required by various specification sections and other conditions of the Contract. This is to include all specific warranties on manufactured items and installed systems as noted above, in addition to General Contractor's project warranty and applicable guarantees from all subcontractors and suppliers covering defects in workmanship or manufacture.
 - iv) As clarification, it is intended that the Owner be provided with a tabbed section containing all project warranties and also be provided with a copy of the appropriate warranty in the same section as the equipment (or system) data furnished in individual tabbed sections of the O&M Manuals for convenient reference
- q. Training of Owner Personnel: Documentation of training of Owner's Personnel regarding operation of particular systems shall be included within the tabbed section for that particular system. Such documentation shall include identification of parties receiving training and date(s) of such training.
- r. Miscellaneous Record Information: The following shall be bound in like manner to above noted equipment data and system drawings. It is suggested that a separate tabbed section be included in the Manual for these Miscellaneous Items. Categories of requirements resulting in miscellaneous work records are recognized to include, but not necessarily by way of limitation, the following
- i) Certifications received in lieu of labels on products and similar record documentation
 - ii) Documented qualification of installation firms.
 - iii) Load/performance testing
 - iv) Final inspection and correction procedures.
 - v) Transmittals of all spare parts, specified extra material stock, record samples, Owner salvaged equipment and material, and other items as appropriate; including identification of receiving party and date of receipt of all such items.

FENTER RD RECONSTRUCTION

C. Record Product Submittals

1. During progress of the work, maintain approved copies of each product data submittal and shop drawing, and mark up significant variations in the actual work in comparison with submitted information. Include both variations in product as delivered to site, and variations from manufacturer's instructions and recommendations for installation
2. Give particular attention to concealed products and portions of the work which are not clearly identified in the original submittal or cannot otherwise be readily discerned at a later date by direct observation.
3. Upon completion of markup, submit two complete sets of all approved submittals to Engineer for review and subsequent transmittal to Owner. Organize and group files in sturdy file boxes with tabbed dividers for each separate specification division. Include a complete table of contents.
4. These record submittal requirements are in addition to inclusion of similar material as supplementary as-built drawings or technical data for the O&M Manuals.

D. Record Sample Submittal

1. Comply with Owner's instructions for packaging, identification marking and delivery to Owner's designated location at the Project Site or the Physical Plant.
2. Dispose of other samples in manner specified for disposal of surplus and waste materials, unless otherwise indicated or directed by Owner.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

Refer to Section 01 74 00 for cleaning of project site throughout construction and at substantial completion.

FENTER RD RECONSTRUCTION

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
- B. Related Requirements:
 - 1. Section 01 77 00 "Closeout Procedures" for general closeout procedures.

1.02 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of original marked-up record prints, one color copy of the marked-up record prints, and one color electronic scanned version(s) in PDF format of marked-up record prints.
- B. Record Specifications: Submit one paper copy of Project's Specifications, including addenda and contract modifications.

PART 2 - PRODUCTS

2.01 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
 - 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 provide information for preparation of corresponding marked-up record prints.

FENTER RD RECONSTRUCTION

- a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding archive photographic documentation.
2. Content: Types of items requiring marking include, but are not limited to, the following:
- a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Locations of concealed internal utilities.
 - i. Changes made by Change Order or Construction Change Directive.
 - j. Changes made following Owner's written orders.
 - k. Details not on the original Contract Drawings.
 - l. Field records for variable and concealed conditions.
 - m. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

FENTER RD RECONSTRUCTION

- B. Format: Identify and date each record Drawing; include the designation "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 "RECORD DRAWINGS."
 - d. Name of Owner.
 - e. Name of Contractor.

2.02 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. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 - 5. Note related Change Orders and record Drawings where applicable.
- B. Format: Submit record Specifications as paper copy.

PART 3 - EXECUTION

3.01 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

FENTER RD RECONSTRUCTION

- 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 Owner's reference during normal working hours.

FENTER RD RECONSTRUCTION

SECTION 02 41 00 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. In accordance with pertinent provisions of this Section, carefully demolish and remove from the site those items scheduled to be so demolished and removed.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 DELIVERY, STORAGE, AND HANDLING

Comply with pertinent provisions in the General Conditions.

PART 2 - PRODUCTS

(No products are required in this Section)

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 DEMOLITION

- A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.

FENTER RD RECONSTRUCTION

- B. In company with the Town Engineer or his representative, visit the site and verify the extent and location of selective demolition required.
 - 1. Carefully identify limits of selective demolition.
 - 2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
 - 1. Shut off, cap, and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
 - 2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
 - 3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.
- D. Demolished material shall be considered to be property of the Contractor unless otherwise indicated in writing and shall be completely removed from the job site.
- E. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and other work being performed on or near the site.

3.3 REPLACEMENTS

In the event of demolition of items not so scheduled to be demolished, promptly replace such items to the approval of the Owner and at no additional cost to the Owner.

FENTER RD RECONSTRUCTION

SECTION 02 50 00 – TREE REMOVAL

PART 1 – GENERAL

- 1.1 Remove and dispose of trees. Remove stumps.

PART 2 – EQUIPMENT

- 2.1 Provide equipment necessary to complete the work.

PART 3 – EXECUTION

- 3.1 Perform tree removal at locations shown on the plans. Ensure trees, shrubs, and other landscape features that are to remain are not damaged. Dispose of debris within 48 hours of cutting, off the right of way, in accordance with federal, state, and local regulations unless otherwise approved.
- 3.2 Tree Removal – Remove trees of various diameters as shown on the plans, or as directed. Remove tree stumps to at least 12 in. below the surrounding terrain unless otherwise shown on the plans, or as directed. Backfill holes with acceptable material and compact flush with surrounding area, or as shown on the plans.
- 3.2 Stump Removal – Remove tree stumps at least 12 in. below the surrounding terrain unless otherwise shown on the plans, or as directed. Backfill holes with acceptable material and compact flush with surrounding area, or as shown on the plans.

FENTER RD RECONSTRUCTION

SECTION 03 01 10 - CONCRETE FORMWORK

PART 1 - GENERAL

1.1 REFERENCE STANDARDS:

- A. American Concrete Institute
 - 1. Recommended Practice for Concrete Formwork (ACI 347).
 - 2. Formwork for Concrete (SP-4).
- B. American Iron and Steel Institute: Specification for the Design of Light Gage Cold-Formed Steel Structural Members.
- C. American Society for Testing Materials:
 - 1. Specification for Zinc-Coated (Galvanized) Steel Sheets of Structural Quality, Coils and Cut Lengths (ASTM A 446).
 - 2. Standard Specification for Preformed Expansion Joint Fillers for Concrete (Bituminous Type) (ASTM D 994).
 - 3. Standard Specifications for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types) (ASTM D 1751).
 - 4. Standard Specifications for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Non-bituminous Types) (ASTM D 1752).
- D. U.S. Army Corps of Engineers: Handbook for Concrete and Cement: Polyvinyl chloride Water stops.
- E. United States Department of Commerce: Commercial Standard for Polyethylene Sheeting (Construction, Industrial and Agricultural Application) (CS 238).
- F. Douglas Fir Plywood Association: Technical Data on Douglas Fir Plywood.
- G. United States Department of Commerce:
 - 1. Product Standard for Softwood Plywood - Construction & Industrial (PS-1).
 - 2. Simplified Practice Recommendation R87-32.

FENTER RD RECONSTRUCTION

- H. Western Wood Products Association: Standard Grading Rules.
- I. Building Research Advisory Board (National Academy of Sciences): Dimensional Tolerances for Cast-In-Place Concrete.
- J. Latest edition of each above Standard shall apply.

1.2 SUBMITTALS

Test results of field cured cylinders for form removal shall be submitted to the Town Engineer.

1.3 COORDINATION OF WORK

All work of this section of the specifications shall be coordinated with all other trades of work that are affected to insure that the requirements of the Contract Documents are complied with.

PART 2 - PRODUCTS

2.1 PLYWOOD FORMS

In general, plywood forms shall be used for all formed surfaces. Plywood forms shall be made from plywood sheets of adequate thickness and from sheets as large as possible with smooth even edges. Plywood forms can be made from either new or used, but in good condition, plywood. All plywood shall conform to PS-1 of USDC.

2.2 FORM ACCESSORIES

Form accessories to be partially or wholly embedded in the concrete such as ties and hangers, shall be commercially manufactured units. Nonfabricated wire is not acceptable. The portion remaining within the concrete shall leave no metal within one (1) inch of the surface. Spreader cones on ties shall not exceed one (1) inch diameter. No wood form spreaders shall be used. Embedded items which occur at the surface of the concrete shall be galvanized.

2.3 EXPANSION JOINT FILLER

Expansion joint filler shall conform to ASTM D 994 or D 1752 for all exterior uses subject to weathering, including where covered by a sealant. Expansion joint filler shall conform to ASTM D 1751 for all interior uses not subject to weathering. Joint material shall extend the full depth of the slab or joint and shall be of the thickness indicated on the drawings. Expansion joint filler shall be Burke No. 236 or approved equivalent.

FENTER RD RECONSTRUCTION

2.4 JOINT SEALING COMPOUND

Where joints in concrete construction are shown to be sealed, the joint sealing compound shall be a cold-applied two-component polyurethane-base sealant specifically recommended by the manufacturer for use in submerged joints. The handling, mixing and placing of the material and preparation of the joint prior to sealing shall be in strict accordance with the recommendations of the manufacturer. A two (2) component epoxy primer suitable for use in submerged joints and compatible with the sealer shall be used on all joints. Compound to be Sikaflex- 2c NS/SL or approved equal.

2.5 WATER STOPS

Water stops wherever indicated on the drawings shall be extruded virgin Polyvinyl chloride (PVC). Water stops shall be Greenstreak, style 696, PVC ribbed with centerbulb as manufactured by Greenstreak, 3400 Tree Court Industrial Boulevard, St. Louis, Missouri, 63122, (314) 225-9400, or approved equal.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Forms shall conform to the shape, lines and dimensions of the concrete as called for by the drawings. Forms shall be substantial and sufficiently tight to prevent leakage of mortar and braced or tied together so as to maintain their position and shape to insure safety to workmen and the public.
- B. Temporary openings shall be provided to facilitate cleaning and inspection immediately before the placing of concrete.
- C. During concrete placing, all shores and reshores shall be continuously checked and adjusted as necessary if any movement has taken place. Shores and reshores shall be securely braced against lateral movement.
- D. The general arrangement of forms must be such as will allow their erection in the proper sequence with other construction operations such as the placing of reinforcing and other details of similar general nature.
- E. The Contractor is responsible for the design, engineering and construction of all formwork to support all loads required. The Contractor shall consider in his formwork design the elastic and plastic deformations of those structural concrete slabs and beams required to support forms for subsequent concrete placing or to support reshores.
- F. All form surfaces shall be cleaned before re-use. No damaged forms shall be used. Formwork tolerances shall conform to BRAB (NAS) or ACI 347 requirements, whichever is stricter in the particular instance.
- G. Formwork, in general, shall comply with ACI 347. ACI SP-4 shall be used as a guide for all form construction.

FENTER RD RECONSTRUCTION

3.2 PLYWOOD FORMS

- A. Plywood forms shall be installed with closed, flush joints.
- B. Plywood shall be sealed against absorption of moisture from the concrete by either a field applied approved sealer or a factory applied non-absorptive liner. All sealing of forms shall be done prior to placing of reinforcing steel. Excess coating material shall not be allowed to stand in puddles in the forms nor allowed to come in contact with concrete against which fresh concrete will be placed or any reinforcing steel. Sealer shall be compatible with final finish requirements.

3.3 EXPANSION AND CONSTRUCTION JOINTS

- A. Expansion joints shall be formed as detailed on the Contract Drawings, placed around junctures of concrete slabs and vertical surfaces, and elsewhere as indicated. Fill joints with preformed expansion joint filler for full depth or leave open as detailed, and as required for sealing, caulking, etc.
- B. Construction joints shall be formed as detailed, located where shown on the Contract Drawings, or as directed by the Town Engineer or designated representative. The concrete between construction joints shall be placed in one continuous operation. All steel reinforcing shall run continuous through construction joints. Joints shall be perpendicular to main reinforcement.

3.4 ANCHORS, INSERTS, SLEEVES, ETC.

- A. Provide for installation in all formwork of inserts, dovetail anchors for masonry, reglets, Water stops, sleeves, anchors, bolts, anchor plates and other fastening devices, as furnished by others and required for attachment of other work. Properly locate in cooperation with other trades and secure in position before concrete is placed.
- B. Wherever pipes, other than electric conduits one (1) inch or less in size pass through concrete, they shall not be poured in solid. Before concrete is placed, they must be surrounded with a tight metal sleeve providing, after the concrete is placed, at least one-fourth inch clearance all around and in such a position relative to the stress within the concrete element that the strength of that element is not unreasonably impaired and as directed by the Town Engineer or designated representative. Provide additional reinforcing around the sleeved openings as shown on drawings.

FENTER RD RECONSTRUCTION

3.5 REMOVAL OF FORMS

In no case shall the supporting form of any member be removed in less than one (day for footings, columns, piers and walls and fourteen (14) days for beams, joists and slabs or until such time as the concrete has attained a minimum strength of 80% of their specified twenty-eight (28) day strength based on field cured test cylinders.

3.6 PLACING OF WATER STOPS

- A. If indicated on drawings, water stops shall be installed so as to form a continuous watertight barrier. Each piece of premolded waterstop shall be of maximum practical length in order to minimize the number of joints. Care should be taken to correctly position, adequately support and completely protect Water stops during form construction and reinforcing steel and concrete placement.
- B. Joining of PVC Water stops at ends by heat-scaling shall be performed in accordance with manufacturer's recommendations.
- C. Heat sealed joints shall be completely fused without charring and shall result in smooth transitions with no kinks or warping. All waterstop joints shall be reviewed and approved by the Town Engineer prior to placement of concrete. In no case will concrete be placed around Water stops, unless approval has been given to the Contractor's Foreman by the Town Engineer or designated representative.

FENTER RD RECONSTRUCTION

SECTION 03 01 20 - CONCRETE REINFORCING STEEL

PART 1 - GENERAL

1.1 GOVERNING STANDARDS

- A. American Concrete Institute:
 - 1. Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI 315).
 - 2. Building Code Requirements for Reinforced Concrete (ACI 318).
- B. American Society for Testing Materials:
 - 1. Specification for Deformed Billet-Steel Bars for Concrete (ASTM A 615).
 - 2. Specifications for Welded Steel Wire Fabric for Concrete Reinforcement (ASTM A 185).
 - 3. Specifications for merchant quality hot-rolled carbon steel bars subject to mechanical property requirements.
- C. American Welding Society: Recommended Practices for Welding Reinforcing Steel, Metal Inserts and Connections in Reinforced Concrete Construction (AWS D 12.1).
- D. Concrete Reinforcing Steel Institute: Manual of Standard Practice.
- E. Building Research Advisory Board, (National Academy of Sciences): Dimensional Tolerances for Cast-In-Place Concrete.
- F. Portland Cement Association (PCA):
 - 1. Joint Design for Concrete Highway and Street Pavements.
- G. Latest Edition of each of the above Standards shall apply.

1.2 SHOP DRAWINGS

Shop drawings showing complete bending and placing details of all reinforcing shall be submitted to the Town Engineer for review. Shop drawings shall include complete layout plans for each layer of reinforcing of the continuous reinforced concrete pavement (CRCP) showing the number, arrangement, spacing, location marking orientation, etc., of all reinforcement required for the layer being described. The ends of all reinforcing bars shall be located by appropriate dimensions in the shop drawings.

FENTER RD RECONSTRUCTION

PART 2 - PRODUCTS

2.1 REINFORCING STEEL BARS

Reinforcing steel bars for all concrete construction, shall be deformed bars conforming to ASTM A 615, Grade 60, unless noted otherwise on the drawings.

2.2 LOAD TRANSFER DOWELS

Load transfer dowels for all concrete construction shall be round, smooth, straight steel dowel bars conforming to ASTM A 663, Grade 60, unless noted otherwise on the drawings.

2.3 METAL ACCESSORIES

Metal accessories, including spacers, chairs, ties, dowels, expansion caps, and other devices necessary for properly spacing, placing, supporting and fastening reinforcement shall be of adequate size and strength and shall be of standard manufacture for the purpose intended. Where the concrete surface will be exposed to the weather in the finished structure the portions of all accessories in contact with the formwork shall be galvanized.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Detailing, fabricating and placing of reinforcement shall be at least the equal of that set forth in the Manual of Standard Practice for Detailing Reinforced Concrete Structures published by the American Concrete Institute, and better where required by the drawings and specifications.
- B. Fabrication and placing tolerances of reinforcing shall be within the limits listed in the CRSI, Manual of Standard Practice and the BRAB, Dimensional Tolerances for Cast-In-Place Concrete.
- C. Splices shall only be made in accordance with the drawings, or, where not shown, at approved places of least weakness and with a lap of at least thirty-two (32) diameters. Horizontal bars shall be bent twelve (12) inches around corners. Separate corner bars which bend around corners a minimum of two feet and 0 inches (2'-0") each side may be used.
- D. Reinforcement for piers or columns shall not be detailed or fabricated until field measurements of actual footing elevations can be made.
- E. Protect all materials, reinforcement and accessories from damage when stored at the project site. Store all materials above and clear of the ground surface.

FENTER RD RECONSTRUCTION

3.2 FABRICATION

- A. Reinforcement shall be carefully formed to the shapes on the drawings.
- B. Reinforcement shall not be bent or straightened in a manner which will injure the material. Bars with kinks or bends not shown in the drawings shall not be used. Heating of bars will not be permitted for bending.

3.3 FIELD ERECTION

- A. Reinforcement shall be securely fastened into position by metal chairs or spacers, or metal ties, as the case demands, for accurate rigid positioning. In general, reinforcing shall be so placed that it may be walked upon without displacement.
- B. Provide beam bar chairs to support reinforcing at the specified clearance in the top and bottom of joists and beams. Provide three (3) spacers for joists and beams whose span is less than ten (10) feet. Add one spacer for each additional five (5) feet or fraction of span.
- C. For slabs, chairs shall be continuous type spaced not to exceed four (4) feet for top and bottom reinforcing. No. 5 support bars with single high chairs at four (4) feet maximum spacing may be used instead of continuous high chairs for top slab reinforcing.
- D. Footing reinforcement shall be supported by 3" x 3" x 3" concrete blocks at four feet and 0 inches (4'-0") c.c. maximum each way.
- E. Ends of all reinforcing bars, top or bottom, shall be supported within one (1) foot of the ends.
- F. Welded wire fabric shall be tied and stayed with #14 wire or other approved means, and firmly supported to maintain it in proper position during concrete-placing operations. All joints and laps shall be of sufficient overlap to develop uniform strength. Laps should be minimum of six (6) inches. Fabric in slabs on grade shall be supported by concrete blocks at four feet and 0 inches (4'-0") c.c. maximum each way at clearance from top surface of slab indicated in the Contract Drawings but not lower than at mid-depth of slab.
- G. Placement of all reinforcement is subject to review by the Town Engineer or designated representative at his discretion before any concrete is placed. No concrete shall be poured without the approval of the Town Engineer or designated representative.
- H. Provide expansion cap for each load transfer dowel. The minimum length of the expansion cap shall be the applicable joint width plus 1/2 inch. Place dowel at pavement slab mid-depth. Dowels shall be greased or approved slip cover material used. If necessary, dowels shall be placed in existing slab by drilling into hardened concrete. After the dowel has been placed on the drilled concrete, the

FENTER RD RECONSTRUCTION

drilled section will be grouted properly with cement.

3.4 WELDING OF REINFORCEMENT

All welding of reinforcement shall be conducted in accordance with the recommended practices of AWS D 12.1. No welding of reinforcing shall be done without written approval by the Town Engineer or designated representative.

3.5 CONDITION OF REINFORCEMENT

Metal reinforcement, at time concrete is placed around it, shall be cleaned of concrete from previous placement, dust, scale, mill scale, oil or other coatings that will destroy or reduce the bond. When there has been a delay in placing concrete, the reinforcing shall be re-inspected and, if necessary, cleaned, relocated and tied, and approved by the Town Engineer or designated representative before placing concrete.

FENTER RD RECONSTRUCTION

SECTION 03 39 00 - PLACING, FINISHING & CURING CONCRETE

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- A. American Concrete Institute (ACI):
 - 1. Specifications for Structural Concrete for Buildings (ACI 301).
 - 2. Recommended Practice for Cold Weather Concrete (ACI 306).
 - 3. Building Code Requirements for Reinforced Concrete (ACI 318).
 - 4. Recommended Practice for Hot Weather Concrete (ACI 318).
 - 5. Consolidation of Concrete (ACI COMM. 609).
 - 6. Curing Concrete (ACI COMM. 612).
 - 7. Recommended Practice for Measuring, Mixing and Placing Concrete (ACI 614).
 - 8. Manual of Concrete Inspection (SP-2).
 - 9. Guide to Joint Sealants for Concrete Structures (ACI 504R).
- B. American Society for Testing Materials (ASTM):
 - 1. Standard Specification for Sheet Materials for Curing Concrete (ASTM C 171).
 - 2. Standard Specifications for Liquid Membrane-Forming Compounds for Curing Concrete (ASTM C 309).
 - 3. Specifications for Cotton Mats for Curing Concrete (ASTM C 440).
- C. Portland Cement Association (PCA):
 - 1. Design and Control of Concrete Mixtures.
 - 2. Maintenance of Joints and Cracks in Concrete Pavements.
 - 3. Patching Concrete Pavements.
- D. United States Department of Commerce: Commercial Standard for Polyethylene Sheeting (Construction, Industrial and Agricultural Applications) (CS 238).
- E. U.S. Army Corps of Engineers: Pigmented Membrane-Forming Compounds for Curing Concrete (CRD C 300).
- F. Latest edition of each of above Governing Standards shall apply. Except as modified in this Section or the other related Sections. ACI 301 shall generally apply to all concrete work in this project.

FENTER RD RECONSTRUCTION

1.2 SUBMITTALS

- A. Manufacturer's literature for membrane-forming compounds for curing and for liquid floor hardeners shall be submitted for review by the Town Engineer or designated representative prior to their use on the project.
- B. Manufacturer's literature, specifications and technical support data on foundation waterproofing.

1.3 COORDINATION OF WORK

During placing and finishing of concrete (including patching concrete pavement and/or the repair and replacement of spalled areas in existing concrete slabs), coordinate all work and trades to insure that the requirements of the Contract Documents are complied with.

PART 2 - PRODUCTS

2.1 MEMBRANE-FORMING COMPOUNDS FOR CURING:

- A. Membrane-forming compounds shall conform to the requirements of CRD-C300 except as to pigment and shall include a fugitive dye which shall become inconspicuous as required by ASTM C 309.
- B. The membrane-forming compound used shall not be detrimental to the bonding of any finish required on any concrete surface, horizontal or vertical.

PART 3 - EXECUTION

3.1 REVIEW BY THE TOWN ENGINEER BEFORE CONCRETE PLACEMENT AND REPLACEMENT:

- A. Review by the Town Engineer or designated representative is required of all foundations, forms, reinforcing steel, pipes, conduits, sleeves, inserts and other work required to be built into the concrete before the concrete is placed. Review by the Town Engineer or designated representative does not relieve the Contractor from complying with the requirements of the Contract Drawings and Specifications.
- B. The Town Engineer must be notified at least twenty-four (24) hours prior to the placing of any concrete, and the placing of concrete before such notice is given and/or before review by the Town Engineer or designated representative, is a valid reason for rejecting the concrete so placed.

FENTER RD RECONSTRUCTION

- C. The date of placing of concrete for the different members of the structure shall be marked in ink on a set of drawings that are to be kept on file at the job site until completion of the structure. These drawings shall be returned to the Town Engineer or designated representative at completion of all concrete placing.

3.2 SETTING OF BASE OR BEARING PLATES:

- A. The top of concrete or other bearing surfaces shall be finished to the elevations indicated on the drawings. Embedded items shall be set to the dimensions shown.
- B. Base and bearing plates shall then be set and anchored to the proper line and elevation using-steel wedges, shims, and/or setting nuts for leveling and plumbing the structural members.
- C. Wedges or shims shall not be removed, but where protruding shall be cut flush with the edge of the base or bearing plate.

3.3 PLACING CONCRETE:

- A. Placing of concrete shall be in accordance with the recommended practice of ACI 614 and PCA "Design and Control of Concrete Mixtures" and "Patching Concrete Pavement".
- B. No concrete shall be placed during rain, sleet or snow. Rain water shall not be allowed to increase the mixing water or to damage finished surfaces.
- C. Before any concrete is placed, mixing and conveying equipment shall be well cleaned, formwork completed, the forms of space to be filled with concrete thoroughly cleaned; forms, if not oiled, shall be wet; all reinforcement secured and cleaned; and expansion joint material, waterstops, anchors and other embedded items positioned.
- D. Bottom of footings shall be sprinkled sufficiently to eliminate drawing of water from the fresh concrete. The hardened concrete of joints between footings and walls or columns, between walls or columns and beams or floors they support, and other similar joints shall be dampened (but not saturated) immediately prior to placing fresh concrete.
- E. Excess form oil shall be wiped off and no oil shall be allowed to coat reinforcing steel to the slightest degree. Any oil used shall be of such quality that later surface treatments specified for concrete will not be injured or prevented from application.
- F. Concrete shall be handled as rapidly as practicable from the mixer to the place of final deposit by methods which prevent the separation or loss of

FENTER RD RECONSTRUCTION

ingredients. It shall be deposited as nearly as practicable in its final position to avoid rehandling or flowing.

- G. All vertical members shall be filled at least two (2) hours ahead of horizontal members in order to allow the concrete in the vertical members to take its initial settlement. Vertical members shall be filled in one continuous operation, using drop chutes of rubber or metal, if necessary. The concrete shall not be allowed to drop freely more than 4-feet.
- H. Place concrete only when the ambient temperature is at least 40° F. and rising, and will remain above 40° for a period of at least 12 hours. A calibrated thermometer shall be provided at the project site.
- I. Place slabs, between construction joints in one operation.
- J. Concrete shall be carefully worked around reinforcing, waterstops and other embedded items, along surfaces and into the corners of forms eliminating all air or stone pockets.
- K. Place concrete for slabs to required thickness and strike off at designed elevations and contours. After screeding, the concrete surface shall be tamped to force coarse aggregate away from the surface.
- L. Concrete shall be consolidated by the use of vibrators in accordance with ACI 609. Vibration must be by direct action in the concrete and not against forms or reinforcements.

Concrete shall be vibrated until the water shows indications of rising, but not until the water has risen. Vibrators shall not be used to transport concrete laterally within the forms or footings. Vibrators shall have a minimum frequency of 8000 revolutions per minute. Size of vibrator diameter shall be as required by space available between forms and reinforcing, embedded items, etc., and suitable for the mass thickness of concrete being placed. A spare vibrator shall be kept at the project site during all concrete placement operations.

3.4 PROTECTION AND CURING OF CONCRETE:

- A. All concrete placed shall be protected such that the temperature at the surface shall be prevented from going below 55°F. for 72 hours after placing and prevented from going below freezing for 3 days thereafter.
- B. The Contractor shall submit, for review by the Town Engineer, the methods proposed for protecting the concrete against low or high temperatures. The Contractor shall adhere to the recommendations for cold or hot weather concreting of ACI 306 and 605, respectively, as to temperature of fresh concrete, heating or cooling of concrete materials, use of accelerators and other admixtures, methods of protection, temperature records, etc.

FENTER RD RECONSTRUCTION

- C. Prevention of loss of moisture from surface of concrete shall be accomplished by keeping surface or forms continuously wet for as long as conditions require. Wet curing shall extend for not less than seven (7) days.
- D. Slabs on grade shall be cured either by using liquid membrane-forming compounds conforming to the requirements of CRD-C 300 and ASTM C 309, by using water-proof paper conforming to the requirements of ASTM C 171, or by using a wet covering kept continuously wet, such as cotton mats conforming to the requirements of ASTM 440, or burlap.
- E. Whatever curing method is used, it shall be applied immediately after final troweling, floating, or after forms are removed. The curing method used shall be coordinated with the method of protection.
- F. Membrane-forming compounds shall be applied as soon as possible after finishing operations. Apply compound in two (2) coats, the second at right angles to the first.
- G. After concrete placement protect concrete during other construction activities as necessary to prevent damage from equipment and personnel movements and from excessive stresses resulting from construction loads.
- H. Sand floated finish shall be as follows: the forms shall be removed before the surface has fully hardened. The surface then shall be wet and rubbed with a wood float by a uniform circular motion, with fine sand being rubbed into the surface until the resulting finish is even and uniform in color and texture. This finish shall be used for all wall exposed concrete surfaces.
- I. An as-cast finish shall be used for all unexposed concrete surfaces.
- J. When required by the Town Engineer, a broom finish shall be provided on top of slab. Broom finish shall consist of a course and scoured texture as directed by the Town Engineer by drawing a stiff broom across the concrete surface. This operation shall follow immediately after floating. Tolerances shall be within 1/8-inch to promote the intended drainage.

3.5 REPAIR OF SURFACE DEFECTS:

- A. After forms are removed, joint marks, fins, honeycombed areas, bulges, depressions, etc., on all concrete surfaces shall be removed and/or filled, leaving a smooth, dense and true surface.
- B. All tie holes and all repairable defective areas shall be patched immediately using non-staining, non-shrink grout with a minimum compressive strength of 6000 p.s.i. The color of the patching grout shall match that of adjacent concrete.

FENTER RD RECONSTRUCTION

- C. Honeycombed areas and other defective concrete shall be removed down to sound concrete as directed by the Town Engineer before patching. All honeycombed areas shall be shown to the Town Engineer.
- D. All areas to be patched shall be thoroughly cleaned and dampened before patching is begun.

3.6 FINISHING OF FORMED SURFACES:

- A. ***Rough Form Finish:*** For formed concrete surfaces not exposed-to-view in the finish work or by other construction, unless otherwise indicated. This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding ¼-inch in height rubbed down or chipped off.
- B. ***Smooth Form Finish:*** For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, damp proofing, painting or other similar system. This is as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas with fins or other projections completely removed and smoothed.
- C. ***Grout Cleaned Finish:*** Provide grout cleaned finish to scheduled concrete surfaces which have received smooth form finish treatment.

Combine one part Portland cement to 1-1/2 parts fine sand by volume, and mix with water to consistency of thick paint. Proprietary additives may be used at Contractor's option. Blend standard Portland cement and white Portland cement, amounts determined by trial patches, so that final color of dry grout will match adjacent surfaces.

Thoroughly wet concrete surfaces and apply grout to coat surfaces and fill small holes. Remove excess grout by scraping and rubbing with clean burlap. Keep damp by fog spray for at least 36 hours after rubbing.

- D. ***Related Unformed Surfaces:*** At tops of walls, horizontal offsets, and similar unformed surfaces occurring 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.

FENTER RD RECONSTRUCTION

3.7 SAWING GREEN CONCRETE:

- A. The sawing contractor shall provide sawing equipment adequate in units and power to complete the sawing operation as per plans and specifications. The sawing contractor shall supply, except on very small jobs, at least one standby saw in good working condition. An adequate supply of diamond saw blades shall be maintained on job site.
- B. Sawing method - the sawing method shall consist of cutting a groove in the pavement with a power driven concrete saw.
- C. Sawed grooves for longitudinal and transverse weakened plane joints shall be cut to a minimum depth of (1/4-thickness of slab divided by 4) and to minimum width of 1/8-inch but in no case shall the width exceed 1/4-inch.
- D. The exact time of sawing longitudinal and transverse weakened plane joints shall be the sawing contractor's responsibility. Sawing transverse weakened plane joints shall be completed within 24 hours following paving. Sawing of longitudinal weakened plane joints shall be completed within 48 hours.
- E. The sequence of sawing may vary due to climatic conditions. The contractor shall exert all possible effort to prevent volunteer cracking.
- F. Transverse contraction and longitudinal contraction joints shall be sawed as shown on the plans. The saw kerf shall be straight and true to the required depth and width. Reference points will be supplied by owner or contracting agency where joints are to be saved. Joints should be flushed immediately after sawing to remove concrete laitance.
- G. All joints shall be sawed true to line, with their faces perpendicular to the surface of the pavement. Joints shall not vary more than 1/4-inch from the true line. Transverse joints in succeeding lines shall be sawed in line matching abutting joints in first lane.

3.8 REPAIR AND SEALING OF CRACKS:

- A. Volunteer cracks are all cracks and portions of cracks that are not coincident with constructed joints.
- B. All volunteer cracks that occur during the 10 calendar days following placement of concrete shall be repaired by injecting the entire length of crack with epoxy under pressure. Volunteer cracks not requiring epoxy injection shall be limited to single, continuous, volunteer cracks without branch or connecting cracks that conform to either conditions described in Section 1) or 2) below.
 - 1) Begin or end at a longitudinal joint or edge of pavement which are not within 5-feet at any point along length of crack of a transverse joint or another volunteer crack that has not been injected with

FENTER RD RECONSTRUCTION

epoxy.

- 2) Do not begin or end at a longitudinal joint or edge of pavement and are not: (A) Within 5-feet, at any point along length of crack of any transverse joint; (B) Within 1-foot at any point along length of crack of any longitudinal joint-edge of slab or other volunteer crack that has not been injected with epoxy.
- C. Epoxy injection shall be completed within 90 days after pavement is placed. Any accumulations of epoxy in saw cuts shall be removed by resawing to the specific depth prior to opening pavement to traffic.
 - D. Equipment used in sawing operations must meet all OSHA standards and specifications. Gas and air equipment may only be used on outside work areas due to noise and fume pollution, unless vented to the outside.

3.9 FULL DEPTH PATCHING:

Full depth patching shall be rectangular in shape and conform to the dimensions and typical Sections shown on the plans. Patches shall be sawed full depth and replaced on a prepared subgrade to the same thickness as the existing pavement.

Provide steel reinforcement similar to that of whole slab replacement as noted on the drawings.

Provide load transfer dowels drilled, grouted and coated as specified.

Texture patched surfaces similar to that of surrounding pavement.

3.10 REPAIR OF SPALLS AT SLABS AND AT JOINTS:

Spalls shall be repaired by shallow saw cutting in a waffle pattern within the damaged area or 6-inches from the joint or edge of spall, whichever is larger. All unsound concrete should be removed, spall cleaned and patched with specified material and finished to match surface texture of adjacent pavement.

3.11 MONOLITHIC SLAB FINISHES:

- A. **Float Finish:** Apply float finish to monolithic slabs surfaces to receive trowel finish and other finishes as hereinafter specified and slab surfaces which are to be covered with membrane or elastic waterproofing, membrane or elastic roofing, or sand-red terrazzo, and as otherwise indicated.
- B. **Trowel Finish:** Apply trowel finish to monolithic slab surfaces to be exposed-to-view, and slab surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile, paint or other thin film finish coating system. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating when surface water has

FENTER RD RECONSTRUCTION

disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats, or by hand-floating if area is small or inaccessible to power units. Check and level surface plane so that depressions between high spots do not exceed 5/16-inch under a 10-foot straightedge. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

After floating, begin first trowel finish operation using a power-driven trowel. Begin first troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and with a level surface plane so that depressions between high spots do not exceed 1/8-inch under a 10-foot straightedge.

- C. ***Non-Slip Broom Finish:*** Apply non-slip broom finish to sidewalks, exterior concrete platforms, steps and ramps, and elsewhere as indicated.

Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with the Town Engineer.

- D. ***Finished Surface of Slabs and Joints:*** Faulted joints (longitudinal and transversal) shall be grinded on the high side of the faulted area. A self-propelled diamond bladed grinder shall skim the entire area to provide a uniform appearance and texture at a continuous motion. A vacuum system shall be used for cleanup.

Full depth repair and spall repair shall be completed before grinding operation. Joint sealing shall follow thereafter.

FENTER RD RECONSTRUCTION

SECTION 03 40 00 - CEMENT STABILIZED BACKFILL

1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Specification Sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

Cement Stabilized Backfill shall be used in this project for the following:

- A. "2-Sac" Cement Stabilized Backfill for proposed pavement section above the Salitral Lateral.
- B. Subgrade areas where pumping occurs.

1.3 SUBMITTALS

Material Certificates: Provide copies of materials certificates, signed by material producer and Contractor, certifying that each material item complies with, or exceeds specified requirements.

1.4 MATERIALS & CONSTRUCTION

Where cement stabilized backfill is shown on the Drawings or required for pavement structure stabilization, it shall consist of cement-stabilized backfill that contains aggregate conforming to the gradation limits shown in Table 1 of the TxDOT Specification Item 400, water, and a minimum of 7% hydraulic cement based on the dry weight of the aggregate, in accordance with Tex-120-E. Cement Stabilized Backfill shall be furnished and placed in accordance with Item 400 of the Texas Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges.

END OF SECTION

FENTER RD RECONSTRUCTION

SECTION 10 15 00 – DELINEATOR AND OBJECT MARKER ASSEMBLY

PART 1 – GENERAL

- 1.1 Install delineator or object marker assembly.
- 1.2 These technical specifications contain references to Codes and Specifications, Texas Department of Transportation Departmental Materials Specifications, Texas Department of Transportation Test Methods, ASTM Standards, and other professional or technical organizations.
- 1.3 It shall be the sole responsibility of the contractor to be cognizant of the referenced materials and be familiar where the contractor can research, view and/or obtain the said referenced materials.
- 1.4 Each standard, code and specification referred to shall be considered a part of the specification to the same extent as if reproduced therein in full.

PART 2 – MATERIALS

Furnish only new materials in accordance with details shown on the plans unless otherwise directed. The Engineer will sample in accordance with Tex-725-I or Tex-737-I.

- 2.1 Delineator and Object Marker Assemblies. Fabricate in accordance with the following:
 - DMS-8600, “Delineators, Object Markers, and Barrier Reflectors.”
 - DMS-4400, “Flexible Delineator and Object Marker Posts (Embedded and Surface-Mount Types).”
- 2.2 Wing Channel Post. Furnish material of the size shown on the plans. Supply a notarized original of the Form D-9-USA-1 (Department Form 1818) with supporting mill test report certifying that the base metal is in accordance with the following:
 - ASTM A1011, SS Grade 50.
 - ASTM A499.

Galvanize material in accordance with TxDOT Item 445, “Galvanizing.”

PART 3 – EXECUTION

Locate delineators and object markers as shown on the plans or as directed.

Locate barrier reflectors as shown on the plans or as directed, and install in accordance with manufacturers recommendations.

Install winged channel post and flexible delineator posts to allow the reflector units and reflectorized panels to be installed at the specified height and orientation. Align post as shown or as directed.

FENTER RD RECONSTRUCTION

Drive post plumb using a driving cap to prevent visible cross-section dimension distortion. Drill or drive a pilot hole when post cannot be driven without visibly distorting the cross-section dimension. Backfill pilot holes thoroughly by tamping in 6-in. lifts to grade.

Install surface-mount and other types of delineators and object markers in accordance with details shown on the plans.

Repair damaged galvanizing in accordance with TxDOT Item 445, Section 445.3.5., "Repairs."
Install reflector units on wing channel posts after the posts have been erected.

FENTER RD RECONSTRUCTION

SECTION 31 00 00 – EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this section.

1.2 DESCRIPTION OF WORK

The extent of work consists of furnishing all equipment, labor and materials required for the general site excavation, removal of existing pavements and base as required, removal of subgrade, preparation of subgrade, procuring of fill material, and the placement and compaction of fill and site grading.

1.3 GOVERNING STANDARDS

A. American Society for Testing Materials (ASTM):

1. Sampling Stone, Slag, Gravel, Sand and Stone Block for Use as Highway Materials (ASTM D 75)
2. Grain-size Analysis of Soils (ASTM D 422)
3. Test for Liquid Limit of Soils (ASTM D 423)
4. Test for Plastic Limit and Plasticity Index of Soils (ASTM D 424)
5. Test for Shrinkage Facts of Soils (ASTM D 427)
6. Test for Moisture Density Relations of Soil Using 10 lbs. Hammer 18" drop (ASTM D 1557)
7. Test for Density of Soil in Place by the Sand Cone Method (ASTM D 1556)
8. Test for Density of Soil in Place by the Rubber Balloon Method ASTM D 2167)
9. Test for Density of Soil and Soil Aggregate in Place by Nuclear Methods (ASTM D 2922)

B. Latest edition of each of the above Governing Standards shall apply.

FENTER RD RECONSTRUCTION

1.4 SUBMITTALS

Soil test results of proposed fill material shall be submitted to Town of Clint for approval before any filling is begun.

1.5 COORDINATION OF WORK

- A. All work performed under this section of the Specification shall be coordinated with all other trades or work that are affected to insure that all requirements of the Contract Documents are complied with.
- B. During placement and compaction of fill, coordinate and cooperate with the Soils Engineer and soils testing laboratory.
- C. No filling shall be installed until the Town Engineer has reviewed the scarified and compacted existing surface.

PART 2 - PRODUCTS

2.1 FILL MATERIAL PROPERTIES

Select fill material used for site grading should be granular, cohesionless, and free of deleterious material and particles over 4 inches in greatest dimension. Soils proposed for use as fill materials should be classified in accordance with ASTM D-2487. The following soils classified in accordance with the Unified Soil Classification System (USCS) can be considered satisfactory for use as select fill.

GM, GC, GW-GM, GW-GC, GP, GP-GM and GP-GC, SM, SC, SW-SM, SW-SC, SP-SM, SW-SC and SC-SM.

2.2 FILL MATERIAL SOURCE

Imported fill material as required shall be taken from any source provided that it complies with the above fill material requirements. Approval of the material is required before it is used and will be based on tests of representative samples from the source. Sampling shall be done in accordance with ASTM D 75.

PART 3 - EXECUTION

3.1 GENERAL SITE PREPARATION

- A. The site to receive fill shall be cleaned of all debris, vegetation, and organic matter.

FENTER RD RECONSTRUCTION

- B. The exposed surface resulting from the general site preparation will be inspected by a representative of the Soils Engineer before construction is begun. Additional excavation and/or preparation may be required as directed by the Soils Engineer's representative.

3.2 PREPARATION OF AREA TO BE FILLED

- A. After acceptance by the Town Engineer of all the surfaces to receive fill, they shall be scarified to a depth of 6" and compacted to the same density as the compacted fill.
- B. No debris shall be left within the site to be filled. All soils loosened or weakened by clearing shall be over excavated and removed.

3.3 PLACING OF FILL MATERIAL

- A. Fill material shall be spread in layers not to exceed eight (8) inches after compaction in depth on the previously prepared exposed surface.
- B. Fill material that does not contain sufficient moisture to compact properly shall be sprinkled and material that contains excess moisture shall be allowed to dry to a water content that will permit compaction.

3.4 COMPACTION OF FILL MATERIAL

- A. Compaction of fill material shall be done with approved types of power, pneumatic, or tamping rollers. Compaction by earth moving equipment, vibratory compaction water settling or jetting will not be acceptable.
- B. Each layer of fill in the roadway section shall be compacted to a relative compaction which is not less than 95% of the maximum density determined for the fill material by ASTM D 1557. The upper 1'-0" of fill in nonstructural areas of the site shall also be compacted to not less than 95% of maximum density.
- C. Determination of in-place density in the field shall be in accordance with the requirements of ASTM D 1556 or ASTM D 2167 or by Nuclear Methods (ASTM D 2922). Moisture content in the field shall be within $\pm 3\%$ of the optimum moisture content as determined for the material by ASTM D 1556.
- D. Fill material outside the roadway section and below the upper 1'-0" shall be compacted to 90% of the maximum density determined for the fill material by ASTM D 1556.

FENTER RD RECONSTRUCTION

3.5 CONTROL AND TESTS

- A. Control of the fill shall consist of field inspection and testing at the direction of the Town Engineer or his representative to determine that all existing undesirable material is removed and that each layer of new fill has been compacted to the required density and to assure that the proper moisture is being obtained.
- B. Field density tests and corresponding moisture content determination shall be made for each layer of compacted fill. If any areas of doubtful compaction appear, additional tests may be required.
- C. Any layer or portion of a layer that does not attain the compaction required shall be scarified and re-compacted until the required density is obtained at no additional expense to the Owner, including costs of additional testing.

3.6 TESTING LABORATORY

Refer to General Conditions

3.7 SITE GRADING

- A. Areas with slabs on grade, walks on grade, etc., shall be rough graded to required elevation under the concrete slabs or topsoil.
- B. All other areas shall be finish graded to elevations shown on the Contract Drawings.
- C. In general, all other areas which do not require grading shall be disturbed as little as possible and new graded areas shall be graded to match the existing contours with smooth uniform transitions.

3.8 DRAINAGE CONTROL DURING EXCAVATION

The Contractor shall control the grading around the excavated areas to the extent that the ground shall be sloped away from the several excavations to prevent water from running into them.

3.9 DISPOSAL OF REMOVED MATERIALS

All surface organic materials, lumber, rubbish, ted., classified as waste found on the site shall be disposed of outside the project site, at legal approved locations.

3.10 DISPOSAL OF EXCESS EXCAVATED MATERIAL

Excess excavated material, if any, shall be disposed of off the site, at legal approved locations.

FENTER RD RECONSTRUCTION

SECTION 31 10 00 – GRADING

PART 1 – GENERAL

- 1.1 Construct adjacent slopes. Construct adjacent slopes and/or swales according to the typical sections shown on the plans.

PART 2 – EQUIPMENT

- 2.1 Provide equipment necessary to complete the work.

PART 3 – EXECUTION

- 3.1 Remove or rework unsuitable or unstable materials. Grade the adjacent slopes and/or swales, and shape to the typical sections shown on the plans. Finish to a profile uniform and consistent with the topography. Scarify existing natural ground or roadbed and compact in accordance with the method shown on the plans.

FENTER RD RECONSTRUCTION

SECTION 32 11 23 - CRUSHED AGGREGATE BASE COURSE

PART 1 – DESCRIPTION

- 1.1 This item shall consist of a base course composed of crushed aggregates constructed on the prepared underlying course in accordance with these specifications and shall conform to the dimensions and typical cross section shown on the plans and with the lines and grades approved by the Town Engineer or designated representative.

PART 2 – MATERIALS

- 2.1 **SUBMITTALS.** Submit soil sieve analysis and soil classification data from quarry for review by the Town Engineer.
- 2.2 **AGGREGATE.** The aggregate shall be either crushed stone or crushed gravel. The fine aggregate shall be screenings obtained from crushed stone or gravel.

The crushed stone shall consist of hard, durable particles or fragments of stone, free from dirt or other objectionable matter, and shall contain not more than 8% of flat, elongated, soft, or disintegrated pieces.

The crushed gravel shall consist of hard durable stones, rocks, and boulders crushed to specified sizes and shall be free from excess flat, elongated, soft or disintegrated pieces, dirt, or other objectionable matter. The method used in production of crushed gravel shall be such that the finished product shall be as uniform as practicable. The crushing of the gravel shall result in a product, all of which will be retained on a No. 4 mesh sieve, and shall have at least 60% by weight of particles with at least two fractured faces and 75% by weight of particles with at least one fractured face. If necessary, the gravel shall be screened before crushing to meet this requirement or to eliminate an excess of fine particles. All stones, rocks, and boulders of inferior quality occurring in the pit shall be wasted.

The crushed aggregate shall have a percent of wear not more than 45 at 500 revolutions, as determined by AASHTO T 96 (Los Angeles Rattler Test).

The crushed aggregate shall not show evidence of disintegration nor show a total loss greater than 12% when subjected to 5 cycles of the magnesium sulphate accelerated soundness test using AASHTO T 104.

All material passing the No. 4 mesh sieve produced in the crushing operation of either the stone or gravel shall be incorporated in the base material unless there is an excessive amount which, if included, would not meet the gradation requirements.

The crushed aggregate shall meet the requirements of one of the gradations given in the following table when tested in accordance with AASHTO T 11 and T 27.

FENTER RD RECONSTRUCTION

TABLE 1. -- REQUIREMENTS FOR GRADATION OF AGGREGATE

Percentage by Weight Retained

TXDOT ITEM 247 TYPE A GRADE 3

2 ½" Maximum Aggregate Size

Sieve Designation (square openings)	
2½ inch	0
1¾ inch	0-10
No. 4	45-75
No. 40	50-85

The gradations in the table represent the limits which shall determine suitability of aggregate for use from the sources of supply. The final gradations decided on within the limits designated in the table shall be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieves or vice versa.

The portion of the base aggregate, including any blended material, passing the No. 40 mesh sieve shall have a liquid limit of not more than 35 and a plasticity index of not more than 12 when tested in accordance with AASHTO T 89 and T 90.

The selection of any of the gradations shown in the table shall be such that the maximum size aggregate used in any course shall not be more than two thirds the thickness of the layer of course being constructed.

Recycled base material may be reused provided that the material be tested to confirm all requirements stated in the project specifications are met for base material.

For this project the crushed stone base material shall be mixed with 5% cement by dry unit weight volume.

- 2.3 TESTING FOR GRADATION OF AGGREGATE: Base material shall be tested for gradation at every 1000 tons or less, at source, with a minimum of one gradation test per project.

FENTER RD RECONSTRUCTION

PART 3 – CONSTRUCTION METHODS

- 3.1 OPERATION AT SOURCES OF SUPPLY. All work involved in clearing and stripping of quarries and pits, including the handling of unsuitable material, shall be performed by the Contractor at his own expense. The base material shall be obtained from approved sources. The material shall be handled in a manner that shall secure a uniform and satisfactory product.
- 3.2 EQUIPMENT. All equipment necessary for the proper construction of this work shall be on the project, in first class working condition, and approved by the Town Engineer or designated representative before construction is permitted to start.
- 3.3 PREPARING UNDERLYING COURSE. The underlying course shall be tested and accepted by the Town Engineer or designated representative before placing and spreading operations are started. Any ruts or soft, yielding places caused by improper drainage conditions, hauling, or any other cause, shall be corrected and rolled to the required compaction before the base course is placed thereon.

To protect the underlying course and to insure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one way slope.

- 3.4 PLANT MIX. The base material shall be uniformly blended during crushing operations or mixed in an approved plant. The type of plant may be either a central proportioning and mixing plant or a traveling plant. The plant shall blend and mix the materials to meet these specifications and to secure the proper moisture content for compaction.
- 3.5 PLACING AND SPREADING.

- a). *Central Plant.* The crushed aggregate base material that has been proportioned in a crushing and screening plant, or proportioned and processed in a central mixing plant, shall be placed on the prepared underlying course and compacted in layers of the thickness shown on the plans. The depositing and spreading of the material shall commence where designated and shall progress without breaks. The material shall be deposited and spread in lanes in a uniform layer and without segregation of size to such loose depth that, when compacted, the layer shall have the required thickness. The base aggregate shall be spread by spreader boxes OR OTHER APPROVED DEVICES OR METHODS that shall spread the aggregate in the required amount to avoid or minimize the need for rehandling the material and to prevent the rutting of the underlying course. The spreader boxes or other devices shall be equipped with strike-off templates or screeds that can be adjusted or controlled to secure the required thickness of the material. Dumping from vehicles in piles on the underlying course which will require rehandling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

If necessary, the base course shall be bladed until a smooth, uniform surface is

FENTER RD RECONSTRUCTION

obtained that is true to line, grade, and cross section and until the mix is in condition for compacting.

- b). *Method of placing.* The base course shall be constructed in a layer not less than 2½ inches nor more than 6 inches of compacted thickness. The aggregate, as spread, shall be of uniform gradation with no segregation or pockets of fine or coarse materials. Unless otherwise permitted by the Town Engineer or designated representative, the aggregate shall not be spread more than 2,000 square yards or 500 linear feet of street in advance of the rolling. Any necessary sprinkling shall be kept within these limits. No material shall be placed in snow or on a soft, muddy, or frozen underlying course.

When more than one layer is required, the construction procedure described herein shall apply similarly to each layer.

The Town Engineer or designated representative shall make tests to determine the maximum density and the proper moisture content of the base material, and this information will be available to the Contractor. The base material shall have a satisfactory moisture content when rolling is started, and any minor variations prior to or during rolling shall be corrected by sprinkling or aeration, if necessary.

During the placing and spreading, sufficient caution shall be exercised to prevent the incorporation of embankment, subbase, or shoulder material in the base course mixture.

- 3.6 FINISHING AND COMPACTING. After spreading, the crushed aggregate shall be thoroughly compacted by rolling. **No vibratory roller or any other type of vibratory machine shall be permitted without the written authorization from the Town Engineer or designated representative.** The rolling shall progress gradually from the sides to the center of the lane under construction, or from one side toward previously placed material by lapping uniformly each preceding rear wheel track by one half the width of such track. Rolling shall continue until the entire area of the course has been rolled by the rear wheels. The rolling shall continue until the stone is thoroughly set, the interstices of the material reduced to a minimum, and until creeping of the stone ahead of the roller is no longer visible. Rolling shall continue until the base material has been compacted to not less than **100%** density for non-cohesive embankment and **95%** density for cohesive embankment, as specified. Density tests will be taken at every 500 square yards or at every 150 linear feet of street with a minimum of two (2) density tests taken for each street. Blading and rolling shall be done alternately, as required or directed, to obtain smooth, even, and uniformly compacted base.

The course shall not be rolled when the underlying course is soft or yielding or when the rolling causes undulation in the base course. When the rolling develops irregularities that exceed ¼ inch when tested with a 16 foot straightedge, the irregular surface shall be loosened, refilled with the kind of material as that used in constructing the course, and rolled again as required.

FENTER RD RECONSTRUCTION

In areas inaccessible to rollers, the base course material shall be tamped thoroughly with mechanical tampers as approved by the Town Engineer.

The sprinkling during rolling, if necessary, shall be in the amount and by equipment approved by the Town Engineer or designated representative.

- 3.7 PROTECTION. Work on the base course shall not be accomplished during freezing temperatures nor when the embankment is wet. When the aggregates contain frozen materials or when the underlying course is frozen, the construction shall be stopped.

Hauling equipment may be routed over completed portions of the base course, provided no damage results and provided that such equipment is routed over the full width of the base course to avoid rutting or uneven compaction. However, the Town Engineer or designated representative in charge shall have full and specific authority to stop all hauling over completed or partially completed base course when, in his opinion, such hauling is causing damage. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at his own expense.

- 3.8 MAINTENANCE. Following the completion of the base course, the contractor shall perform all maintenance work necessary to keep the base course in a condition satisfactory for priming. After priming, the surface shall be kept clean and free from foreign material. The base course shall be properly drained at all times. If cleaning is necessary, or if the prime coat becomes disturbed, any work or restitution necessary shall be performed at the expense of the contractor.

- 3.9 PRIME COAT PLACEMENT. After the base course has been tested and accepted by the Town Engineer or designated representative and before placement of the plant mix bituminous pavement, the Contractor shall place prime coat over the base course. The prime coat shall be CSSIH or an approved equal. An area of one square yard of base course shall require 0.25 gallons of prime coat. Place HMAC within 3 hours of applying prime coat.

FENTER RD RECONSTRUCTION

TESTING AND MATERIAL REQUIREMENTS

Testing and Short Title	Material and Short Title
AASHTO T 96 - Abrasion	None
AASHTO T 104 - Soundness	
AASHTO T 11 and T 27- Gradation	
AASHTO T 89 - Liquid Limit	
AASHTO T 90 - Plastic Limit and Plasticity Index	
AASHTO T 19 - Unit Weight	

FENTER RD RECONSTRUCTION

SECTION 32 12 17 - PLANT MIX BITUMINOUS PAVEMENTS

PART 1 – DESCRIPTION

- 1.1 This item shall consist of a surface course composed of mineral aggregate and bituminous material mixed in a central mixing plant and placed on a prepared course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross sections shown on the plans.

Each course shall be constructed to the depth, typical section, or elevation required by the plans and shall be rolled, finished and approved before the placement of the next course.

- 1.2 JOB EXPERIENCE.

Asphalt pavement business firm shall have continuously been in business for a minimum of five (5) years in the commercial asphalt pavement business. Additionally, supervisor and/or project superintendent shall have a minimum of five (5) years' experience as an asphalt paver.

PART 2 – MATERIALS

- 2.1 AGGREGATE. Aggregates shall consist of crushed stone or crushed gravel with or without sand or other inert finely divided mineral aggregate. The portion of materials retained on the No.8 sieve shall be known as coarse aggregate, the portion passing the No. 8 sieve and retained on the No. 200 sieve as fine aggregate, and the portion passing the No. 200 sieve a mineral filler.

- a). *Coarse Aggregate.* Coarse aggregate shall consist of sound, tough, durable particles, free from adherent films of matter that would prevent thorough coating with the bituminous material. The percentage of wear shall not be greater than 40 percent when tested in accordance with ASTM C131.

Aggregate shall contain at least 60 percent by weight of crushed pieces having two or more fractured faces and 75 percent having at least one fractured face. The area of each face shall be equal to at least 75% of the smallest midsectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces. Fractured faces shall be obtained by artificial crushing.

The aggregate shall not contain more than 8%, by weight, of flat or elongated pieces. A flat particle is one having a ratio of width to thickness greater than five; an elongated particle is one having a ratio of length to width greater than five.

- b). *Fine Aggregate.* Fine aggregate shall consist of clean, sound, durable, angular particles produced by crushing stone or gravel that meets the requirements for wear and soundness specified for coarse aggregate. The aggregate particles shall

FENTER RD RECONSTRUCTION

be free from coatings of clay, silt, or other objectionable matter and shall contain no clay balls. The fine aggregate, including any blended filler, shall have a plasticity index of not more than six when tested in accordance with ASTM D424, and a liquid limit of not more than 25 when tested in accordance with ASTM D423 or shall have a sand equivalent value not less than 45 in accordance with ASTM D2419.

Natural sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. The amount of sand to be added will be adjusted to produce mixtures conforming to requirements of this specification.

- c). *Sampling and Testing.* ASTM D75 shall be used in sampling coarse and fine aggregate, and ASTM C183 shall be used in sampling mineral filler. The Contractor shall furnish documentation to the Town Engineer or designated representative confirming that the aggregates meet specification requirements.
- d). *Sources of Aggregates.* Sources of aggregates shall be selected well in advance of the time the materials are required in the work. When the aggregates are obtained from a previously approved source or an existing source producing aggregates that has a satisfactory service record in bituminous pavement construction for at least five years, samples shall be submitted 14 days prior to start of production. An inspection of the producer's operation will be made by the Town Engineer or designated representative. When new sources are to be developed, the Contractor shall indicate the sources and shall submit a plan for operation 30 days in advance of starting production. Samples from test pits, borings, and other excavations shall be submitted at the same time. Approval of the source of aggregate does not relieve the Contractor in any way of the responsibility for delivery at the job site of aggregates that meet the requirements specified herein.
- e). *Samples of Aggregates.* Samples of aggregates shall be furnished by the Contractor at the start of production or at every 500 tons with a minimum of two per project. The sampling points will be designated by the Town Engineer or designated representative. The samples will be the basis of approval of specific lots of aggregates from the standpoint of the quality requirements of this section.

2.2 FILLER. If filler, in addition to that naturally present in the aggregate, is necessary, it shall meet the requirements of ASTM D242.

2.3 BITUMINOUS MATERIAL. Bituminous material shall conform to the following requirements: AC-20 In accordance with ASTM D3381.

The Contractor shall furnish contractor's certified test reports for each tank load of bitumen shipped to the project. The report shall be delivered to the Town Engineer or designated representative before permission is granted for use of the material. The furnishing of the contractor's certified test report for the bituminous material shall be the basis for final acceptance.

FENTER RD RECONSTRUCTION

2.4 **JOB MIX FORMULA.** Submit proposed mix design of each class of mix for review prior to beginning of work. No bituminous mixture for pavement shall be produced until a job mix formula has been approved by the Town Engineer or designated representative. The formula shall be submitted in writing by the Contractor to the Town Engineer or designated representative at least 10 days prior to the start of paving operations and shall indicate the definite percentage of each sieve fraction of aggregate, the percentage of bitumen, and the temperature of the completed mixture when discharged from the mixer. All test data used to develop the job mix formula shall also be submitted. The job mix formula for each mixture shall be in effect until modified in writing by the Town Engineer or designated representative. Should a change in sources of materials be made, a new job mix formula must be established before the new material is used.

The bituminous mixture shall be designed using procedures contained in Chapter III, MARSHALL METHOD OF MIX DESIGN, of the Asphalt Institute's Manual Series No. 2 (MS-2), current edition, and shall meet the requirements of Tables 1 and 2. The temperature of the mix immediately prior to compaction shall be $250^{\circ} \pm 5^{\circ}\text{F}$ ($121^{\circ} \pm 3^{\circ}\text{C}$).

TABLE 1. MARSHALL DESIGN CRITERIA

Test Property	
Number of Blows	75
Stability, minimum pounds	1500
Flow, 0.01 in. (0.25mm)	8-16
Percent air voids	3-5
Percent voids in mineral aggregate	See Table 2

FENTER RD RECONSTRUCTION

TABLE 2. MINIMUM PERCENT VOIDS IN MINERAL AGGREGATE

Maximum Particle Size	Minimum Voids in Mineral Aggregate Percent
in.	mm
3/4	19.0
1	25.0
1 1/4	31.25

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory screens, will conform to the gradation or gradations specified in Table 3 when tested in accordance with ASTM Standard C136 d (dry sieve). The percentage by weight for the bituminous material shall be within the limits specified.

The gradations in Table 3 represent the limits which shall determine the suitability of aggregate for use from the sources of supply. The aggregate, as finally selected, shall have a gradation within the limits designated in Table 3 and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa, but shall be uniformly graded from coarse to fine.

TABLE 3. AGGREGATE - BITUMINOUS PAVEMENT SPECIFICATION GRADATION BAND

Sieve	Percentage by Weight Passing Sieves		
Size:	GRADE A 1 1/4" max.	GRADE B 1" max.	GRADE C 3 / 4" max
1 1/4 in. (30.0 mm)	100	---	---
1 in. (24.0 mm)	86-98	100	---
3/4 in. (19.0 mm)	68-93	76-100	100
1/2 in. (12.5 mm)	57-81	66-86	79-99
3/8" (9.5 mm)	49-69	57-77	68-88
No.4 (4.75 mm)	34-54	40-60	48-68
No.8 (2.36 mm)	22-42	26-46	33-53
No.16 (1.18 mm)	13-33	17-37	20-40
No.30 (0.600 mm)	8-24	11-27	14-30
No.50 (0.300 mm)	6-18	7-19	9-21
No.100 (0.150 mm)	4-12	6-16	6-16
No.200 (0.075 mm)	3-6	3-6	3-6
Bitumen Percent			
Stone	4.5 - 7.0	4.5 - 7.0	4.8-5.5

FENTER RD RECONSTRUCTION

ASTM D1075, is less than 75, the aggregates shall be rejected or the asphalt shall be treated with an anti-stripping agent. The amount of anti-stripping agent added to the asphalt shall be sufficient to produce an index of retained strength of not less than 75.

- 2.5 TEST SECTION. Prior to full production, the Contractor shall prepare a quantity of bituminous mixture according to the job mix formula. The amount of mixture should be sufficient to construct a test section 50 feet long and 12 feet wide placed in two sections and shall be of the same depth specified for the construction of the course which it represents. The underlying grade or pavement structure upon which the test section is to be constructed shall be the same as the remainder of the course represented by the test section. The equipment used in construction of the test section shall be the same type and weight to be used on the remainder of the course represented by the test section.

If the test section should prove to be unsatisfactory, the necessary adjustments to the mix design, plant operation, and/or rolling procedures shall be made. Additional test sections, as required, shall be constructed and evaluated for conformance to the specifications. When test sections do not conform to specification requirements, the pavement shall be removed and replaced at the Contractor's expense. A marginal quality test section that has been placed in an area of little or no traffic may be left in place. If a second test section also does not meet specification requirements both sections shall be removed at the Contractor's expense. Full production shall not begin without the Town Engineer or designated representative's approval.

PART 3 - CONSTRUCTION METHODS

- 3.1 WEATHER LIMITATIONS. The bituminous mixture shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 5.

TABLE 5. BASE TEMPERATURE LIMITATIONS

Mat Thickness	Base Temperature (Minimum)	
3 in. (7.5 cm) or Greater	40°F	4°C
Greater than 1 in. (2.5 cm) but Less than 3 in. (7.5 cm)	45°F	7°C
1 in. (2.5 cm) or Less	50°F	10°C

FENTER RD RECONSTRUCTION

3.2 BITUMINOUS MIXING PLANT. Plants used for the preparation of bituminous mixtures shall conform to the requirements of ASTM D995 with the following changes:

A. Requirements for All Plants.

1. *Truck scales.* The bituminous mixture shall be weighed on approved scales furnished by the Contractor, or on public scales at the Contractor's expense. Such scales shall be inspected and sealed as often as the Town Engineer or designated representative deems necessary to assure their accuracy.
2. *Inspection of plant.* The Town Engineer or designated representative shall have access, at all times, to all parts of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and character of materials; and checking the temperatures maintained in the preparation of the mixtures.
3. *Storage bins and surge bins.* Paragraph 3.9 of ASTM D995 is deleted. Instead, the following applies. Use of surge bins or storage bins for temporary storage of hot bituminous mixtures will be permitted as follows:
 - a. The bituminous mixture may be stored in surge bins for period of time not to exceed 3 hours, provided all specifications, temperature and segregation, requirements are fully met.
 - b. The bituminous mixture may be stored in insulated storage bins provided an inert gas atmosphere or oxygen proof hot oil seal is maintained in the bin during the storage period.

The bins shall be such that mix drawn from them meets the same requirements as mix loaded directly into trucks.

If the Town Engineer or designated representative determines that there is an excessive amount of heat loss, segregation or oxidation of the mixture due to temporary storage, no storage will be allowed.

3.3 HAULING EQUIPMENT. Trucks used for hauling bituminous mixtures shall have tight, clean, and smooth metal beds. To prevent the mixture from adhering to them, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other approved material. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated and covers shall be securely fastened.

FENTER RD RECONSTRUCTION

All equipment used to haul material to the job site shall dump material directly unto the paver hopper, unless a low lift loader is used to transfer asphalt mix from windrow to paver hopper.

- 3.4 BITUMINOUS PAVERS. Bituminous pavers shall be self-contained, power propelled units with an activated vibrating screed (see K3305-10) or strike off assembly, heated if necessary, and shall be capable of spreading and finishing courses of bituminous plant mix material which will meet the specified thickness, smoothness, and grade. Pavers used for shoulders and similar construction shall be capable of spreading and finishing courses of bituminous plant mix material in widths shown on the plans.

The paver shall have a receiving hopper of sufficient capacity to permit a uniform spreading operation. The hopper shall be equipped with a distribution system to place the mixture uniformly in front of the screed. The screed or strike off assembly shall effectively produce a finished surface of the required evenness and texture without rearing, shoving, or gouging the mixture.

The paver shall be capable of operating at forward speeds consistent with satisfactory laying of the mixture.

If an automatic grade control device is used, the paver shall be equipped with a control system capable of automatically maintaining the specified screed elevation. The control system shall be automatically actuated from either a reference line or surface through a system of mechanical sensors or sensor directed mechanisms or devices which will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface. The transverse slope controller shall be capable of maintaining the screed at the desired slope within plus or minus 0.1 percent.

The controls shall be capable of working in conjunction with any of the following attachments:

- a). Ski type device of not less than 30 feet (9.14 m) in length or as directed by the Town Engineer or designated representative.
- b). Taut stringline (wire) set to grade.
- c). Short ski or shoe.

- 3.5 ROLLERS. Rollers of the steel wheel (Minimum 15 tons), or pneumatic tired type (Minimum 20 tons) may be used. Vibratory rollers may be used subject to approval, in writing, of the Town Engineer or designated representative. The number, type, and weight of rollers shall be sufficient to compact the mixture to the required density while it is still in a workable condition. The use of equipment which causes excessive crushing of the aggregate will not be permitted.

FENTER RD RECONSTRUCTION

- 3.6 PREPARATION OF BITUMINOUS MATERIAL. The bituminous material shall be heated in a manner that will avoid local overheating and provide a continuous supply of the bituminous material to the mixer at a uniform temperature. The temperature of the bituminous material delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles but shall not exceed 325°F (160°C).
- 3.7 PREPARATION OF MINERAL AGGREGATE. The aggregate for the mixture shall be dried and heated to the temperature designated by the job formula within the job tolerance specified. The maximum temperature and rate of heating shall be such that no permanent damage occurs to the aggregates. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.
- 3.8 PREPARATION OF BITUMINOUS MIXTURE. The aggregates and the bituminous material shall be weighed or metered and introduced into the mixer in the amount specified by the job mix formula.

The combined materials shall be mixed until the aggregate obtains a uniform coating of bitumen and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture. It shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, and approved by the Town Engineer or designated representative for each individual plant and for each type of aggregate used. The minimum mixing time shall be 25 seconds. The mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of the mix shall not exceed 1.0 percent.

- 3.9 TRANSPORTING, SPREADING, AND FINISHING. The mixture shall be transported from the mixing plant to the point of use in vehicles conforming to the requirements of Section 4.3. Deliveries shall be scheduled so that spreading and rolling of all mixture prepared for one day's run can be completed during daylight, unless adequate artificial lighting is provided. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to atmospheric temperature.

Immediately before placing the bituminous mixture, the underlying course shall be cleared of all debris with power blowers, power brooms, or hand brooms as directed.

The mix shall be placed at a temperature of not less than 250°F (107°C) when asphalt cement is used and not less than 150°F (65°C) when tar is used.

FENTER RD RECONSTRUCTION

Place asphalt when ambient air and base surface temperature is greater than 40°F and rising. If the surface is wet or frozen, do not place asphalt.

Place bitumen mixture when temperature is not more than 15°F below bitumen suppliers bill of lading and not more than maximum specified temperature.

Upon arrival, the mixture shall be spread to the full width by an approved bituminous paver. It shall be struck off in a uniform layer of such depth that, when the work is completed, it shall have the required thickness and conform to the grade and contour indicated. The speed of the paver shall be regulated to eliminate pulling and tearing of the bituminous mat. Unless otherwise directed, placement of the mixture shall begin along the centerline of a crowned section or on the high side of areas with a one way slope. On streets with inverted crown, no joint will be placed at invert of street. The mixture shall be placed in consecutive adjacent strips having a minimum width of 12 feet except where edge lanes require less width to complete the area.

Immediately after placement, protect pavement from mechanical injury for 7 days.

In a two layer operation the longitudinal joint in one layer shall offset that in the layer immediately below by at least 1 foot (30 cm); however, the joint in the top layer shall be at the centerline of the pavement. Except on streets with inverted crowns, where the invert is at the center line of the street.

Transverse joints in one layer shall be offset by at least 2 feet (60 cm) from transverse joints in the previous layer. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet (3 m).

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture may be spread, raked, and luted by hand tools.

- 3.10 **COMPACTION OF MIXTURE.** After spreading, the mixture shall be thoroughly and uniformly compacted by rolling. The surface shall be rolled when the mixture has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. **No vibratory roller or any other type of vibratory machine shall be permitted without the written authorization from the Town Engineer or designated representative.** The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor with approval from the Town Engineer or designated representative.

The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until all roller marks are eliminated, the surface is of smooth uniform texture, free of segregation and voids and true to grade and cross section, and the required field density is obtained. No exposed aggregate will be accepted, failure to comply with this

FENTER RD RECONSTRUCTION

requirement, will result in complete removal and replacement of pavement.

To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened, but excessive water will not be permitted.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with hot hand tampers.

Any mixture that becomes loose and broken, mixed with dirt, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

A minimum prime coat coverage (CSSIH) of 0.25 gallons per square yard shall be placed on all new asphaltic pavement surfaces, as per Item K3019-6.

- 3.11 JOINTS. The formation of all joints shall be made in such a manner as to ensure a continuous bond between old and new sections of the course. All joints shall have the same texture, density, and smoothness as other sections of the course.

The roller shall not pass over the end of the freshly laid mixture except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course, in which case the edge shall be cut back to its full depth and width on a straight line to expose a vertical face. In both methods all contact surfaces shall be given a tack coat of bituminous material before placing any fresh mixture against the joint.

Longitudinal joints which are irregular, damaged, or otherwise defective shall be cut back to expose a clean, sound surface for the full depth of the course. All contact surfaces shall be given a tack coat of bituminous material prior to placing any fresh mixture against the joint.

- 3.12 ACCEPTANCE SAMPLING AND TESTING OF BITUMINOUS MIXTURE (DENSITY). Pavement density will be determined by comparing the density of cores or nuclear density machine taken from the compacted pavement to the density of laboratory compacted specimens.

- a). *Lot sizes.* The pavement will be accepted for density on a lot basis. A lot will consist of:
 - 1). One day's production.
- b). *Laboratory Density.* Bituminous mixture for laboratory compacted specimens shall be sampled as per paragraph 4.12.

FENTER RD RECONSTRUCTION

The specimens shall be compacted in accordance with ASTM D1559, Section 3.5, except that the temperature immediately prior to compaction shall be $250^{\circ}\text{F} \pm 5^{\circ}$ ($120^{\circ}\text{C} \pm 3^{\circ}$). The sample of bituminous mixture can be placed in an oven for not more than 30 minutes to maintain the heat, but it shall not be reheated if it cools below 250°F (120°C) before use. The density of each specimen shall be determined in accordance with ASTM D2726 or D1188, whichever is applicable.

- c). *Core Density or Nuclear Density Machine.* Cores or nuclear density machine for determining the density of the compacted pavement shall be taken as indicated in paragraph 4.12. The cores shall be taken in accordance with the requirements of paragraph 4.14. The density of each core shall be determined in accordance with ASTM D 2726 or D1188, whichever is applicable. The density from nuclear density machine shall be determined in accordance with ASTM D 1557.
- d). *Pavement Density.* The target density (percent compaction) of each lot of in-place pavement shall be 98% of the average density of the laboratory prepared specimens. The pavement density shall be determined by dividing the core density of one day's production by the average density of the laboratory prepared specimens.
- e). *Acceptance Criteria.*
 - 1.) *Surface / Smoothness Tests.* Tests for conformity with the specified crown and grade shall be made by the Contractor immediately after initial compaction. Any variation shall be corrected by the removal or addition of materials and by continuous rolling.

The finished surface shall not vary more than $\frac{1}{4}$ inches for the surface course when tested with a 16 foot (4.8 m) straightedge applied parallel with, or at right angles to, the centerline.

After the completion of final rolling, the smoothness of the course shall be tested by the Town Engineer or designated representative; humps or depressions exceeding the specified tolerances shall be immediately corrected by removing the defective work and replacing with new material, as directed by the Town Engineer or designated representative. This shall be done at the Contractor's expense.

The finished surfaces of bituminous courses shall not vary from the grade line, elevations, and cross sections shown on the contract drawings by more than $\frac{1}{2}$ inch (12.70 mm). The Contractor shall correct pavement areas varying in excess of this amount by removing and replacing the defective work. Skin patching will not be permitted.

Segregation and/or exposed aggregate will not be accepted, failure to

FENTER RD RECONSTRUCTION

comply with this requirement, will result in complete removal and replacement of pavement at the contractor’s expense. Patching will not be accepted.

- 2.) Sampling Pavement. Core samples or Nuclear Density Machine for determination of the density of completed pavements shall be obtained by the Owner. The size, number, and locations of the samples will be as directed by the Town Engineer or designated representative. Samples shall be neatly cut with a saw, core drill, or other approved equipment. The Contractor shall patch core locations in accordance with this specifications, at no additional cost to the owner.

- 3.) Thickness. Thickness shall be evaluated for compliance to the requirements shown on the plans. At the discretion of the Town Engineer or designated representative, the thickness of the pavement course shall be determined by cores taken at locations indicated by the Town Engineer or designated representative. Contractor shall patch, core locations in accordance with this specifications, at no additional cost to the owner.

- 4.) Mat Density. Shall comply with section 4.12 b., c., and d.

All tests necessary to determine conformance with requirements specified in this item will be performed by the Town Engineer or designated representative without cost to the Contractor. All failures shall be paid by the Contractor

Each lot of bituminous mix shall be accepted for density when core or nuclear density machine equals or exceeds 98%. Density requirements will be accepted at an adjusted contract price in accordance with Table 7.

TABLE 7. PRICE ADJUSTMENT SCHEDULE

Percentage of Compaction (Core or Nuclear Machine)	Percent of Contract Price to be Paid
98-100	100
95-97.9	90
Below 95	To be Removed and Replaced*

* Lot shall be removed and replaced. However, the Town Engineer may decide to allow the rejected pavement to remain. In that case, if the Town Engineer and Contractor agree in writing that the pavement shall not be removed, it shall be paid for at 50 percent of the contract price and the total project payment limitation be reduced by the amount withheld for the rejected pavement.

FENTER RD RECONSTRUCTION

PART 4 - TESTING REQUIREMENTS

ASTM C29	Unit Weight of Aggregate
ASTM C88	Soundness of Aggregates by Use of Magnesium Sulfate
ASTM C131	Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine
ASTM C136	Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C183	Sampling Hydraulic Cement
ASTM D75	Sampling Aggregates
ASTM D423	Liquid Limit of Soils
ASTM D424	Plastic Limit and Plasticity Index of Soils
ASTM D995	Requirements for Mixing Plants for Hot Mixed, Hot Laid Bituminous Paving Mixtures
ASTM D1075	Effect of Water on Cohesion of Compacted Bituminous Mixtures
ASTM D1188	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin Coated Specimens
ASTM D1461	Moisture of Volatile Distillates in Bituminous Paving Mixtures
ASTM D1559	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ASTM D1557	Tests for Moisture Density Relations of Soils and Soil Aggregate Mixtures, Using 10 pound (4.5 kg) Rammer and 18 inch (457 mm) Drop.
ASTM D2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D2419	Sand Equivalent Value of Soil and Fine Aggregate
ASTM D2489	Degree of Particle Coating of Bituminous Aggregate Mixtures

FENTER RD RECONSTRUCTION

ASTM D2726	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens
ASTM D3665	Random Sampling of Paving Materials
ASTM D3666	Inspection and Testing Agencies for Bituminous Paving Materials
AASHTO T30	Mechanical Analysis of Extracted Aggregate
The Asphalt Institute's Series (SS-1)	Model Construction Specifications for Asphalt Concrete and Other Plant Type Mixes
The Asphalt Institute's Manual No.2 (MS-2)	Mix Design Methods for Asphalt Concrete

PART 5 - MATERIAL REQUIREMENTS

ASTM D242	Mineral Filler for Bituminous Paving Mixtures
ASTM D490	Tar
ASTM D946	Asphalt Cement for Use in Pavement Construction
ASTM D3381	Viscosity Graded Asphalt Cement for Use in Pavement Construction
AASHTO M226	Viscosity Graded Asphalt Cement

FENTER RD RECONSTRUCTION

SECTION 32 16 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

A. American Concrete Institute (ACI):

1. Recommended Practice of Evaluation of Compression Test Results of Field Concrete (ACI 214).
2. Specifications for Structural Concrete for Buildings (ACI 301).
3. Building Code Requirements for Reinforced Concrete (ACI 318).
4. Recommended Practice for Selecting Proportions for Concrete (ACI 613).
5. Selection and Use of Aggregates for Concrete (ACI Comm. 621).
6. ACI Manual of Concrete Inspection (SP-2).
7. Recommended Practice for Measuring, Mixing and Placing Concrete (ACI 614).

B. American Society for Testing Materials (ASTM):

1. Standard Method for Making and Curing Concrete Compression and Flexure Test Specimens in the Field (ASTM C 31).
2. Standard Specifications for Concrete Aggregates (ASTM C 33).
3. Standard Method of Test for Compressive Strength of Molded Concrete Cylinders (ASTM C 39).
4. Standard Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete (ASTM C 42).
5. Standard Specification for Ready-Mixed Concrete (ASTM C 94).
6. Standard Method of Test for Sieve of Screen Analysis of Fine and Coarse Aggregate (ASTM C 136).
7. Standard Method of Test for Slump of Portland Cement Concrete (ASTM C 143).
8. Standard Specification for Portland Cement (ASTM C 150).
9. Standard Method of Sampling Fresh Concrete (ASTM C 172).
10. Standard Specification for Air-Entraining Admixtures for Concrete (ASTM C 260).
11. Standard Specification for Chemical Admixtures for Concrete (ASTM C 494).

C. Portland Cement Association: Design and Control of Concrete Mixtures.

D. Latest Edition of each of above Governing Standards shall apply. Except as modified in this Section or the other related Sections, ACI 301 shall generally apply to all concrete work in this project.

FENTER RD RECONSTRUCTION

1.2 SUBMITTALS

- A. The proposed concrete mix design for each separate class of concrete shall be submitted by the Contractor for review by the Town Engineer.
- B. Design Mix proportions together with certifications by an independent testing laboratory or by the material manufacturer that proposed grout setting bed for base and bearing plates will reach the specified strength shall be submitted for review by the Town Engineer.

1.3 COORDINATION OF WORK

- A. If concrete is supplied by a ready-mix concrete producer, the Contractor shall coordinate the delivery of all off-site produced concrete.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT

Portland cement shall conform to the requirements for Type I or III cement of ASTM C 150.

2.2 AGGREGATES

- A. Fine aggregate shall consist of natural and/or manufactured sand having hard, strong and durable particles and which conform to the requirements of ASTM C 33.
- B. Coarse aggregate shall consist of clean, hard, fine-grained, sound crushed rock or washed gravel which do not contain in excess of five (5) percent by weight of flat, chip-like, thin, elongated, friable or laminated pieces, or more than one (1) percent by weight of shale or cherty material. Any piece having a major dimension in excess of two and one-half (2 1/2) times the average thickness shall be considered to be flat or elongated. Coarse aggregate shall conform to the requirements of ASTM C 33.
- C. Refer to concrete quality table for maximum sizes of aggregate permitted for each class of concrete.

2.3 WATER

Water shall be clean water from the utility company mains, free from acids, alkalis, oils or organic materials and shall be suitable for drinking purposes.

FENTER RD RECONSTRUCTION

2.4 ADMIXTURES

- A. Air-entraining admixtures shall conform to ASTM C 260.
- B. All other admixtures shall conform to ASTM C 494.
 - Type A: Water-Reducing
 - Type B: Retarding
 - Type C: Accelerating
 - Type D: Water-Reducing and Retarding
 - Type E: Water-Reducing and Accelerating
 - Type F: High-Range, Water-Reducing
 - Type G: High-Range, Water-Reducing and Retarding
- C. Approval of any admixtures is required before use in concrete.
- D. No calcium chloride shall be used as an admixture under any circumstances in any concrete in this project.

2.5 EMBEDDED ITEMS

All embedded steel plates, shapes, etc. shall conform to the requirements of ASTM A 36 and shall be galvanized. Coat with "Galvaweld" where galvanizing is damaged, at bends, and welds etc.

2.6 QUALITY OF CONCRETE

- A. The exact proportions of cement, aggregate and water for each class of concrete shall be determined by an approved independent testing laboratory. Mix design shall be based on the saturated surface dry (SSD) condition of the aggregate. The contractor shall pay for all mix designs.
- B. Review by the Town Engineer of mix design submitted does not relieve the contractor of the sole responsibility for each mix design to produce concrete of the strength specified.
- C. The required minimum strength of concrete cores at 28 days, minimum laboratory strength in 28 days, minimum number of sacks of cement per cubic yard of concrete, maximum size of aggregate and required slump of the concrete as delivered at the job site for each of the indicated classes of concrete construction shall be as shown in the Concrete Quality table that follows:

FENTER RD RECONSTRUCTION

CONCRETE QUALITY

Class of Concrete Constr.	Minimum Core Test @ 28 Days (p.s.i.)	Minimum Lab Test @ 28 Days (p.s.i.)	Min. No. Sacks of Cement p/ Cu. Yd.	Maximum Aggregate Size	Req'd Slump (inches)	Admix- ture Type	Cement
Thrust Blocking	2000	2500	4	1 1/2	4	I	
Rip Rap	2000	2500	4	1 1/2	2 1/2	I	
Rockwall Foundation	3000	3300	5	1 1/2	5	I	
Parkway Structures	3000	3600	5	3/4	3 1/2	I	
Drainage Structures (Not Direct Traffic)	3000	3600	5 1/2	3/4	5	F or G	I
Machine Laid Curb, Barrier Railing	3000	3600	6	3/4	3 1/2	E	I
Drainage Structures (Direct Traffic)	3000	3600	6	3/4	5	F or G	I
Pavement	4000	4800	6	1	3 1/2	Type A	III
Bus Pads & Approach Slab	(@ 3 Days)	(@3 Days)				Air - Entrained	

D. Slumps shown in the above Concrete Quality table are at place of final deposit of concrete Slump tolerance shall be plus or minimum one (1) inch for 3 1/2" or greater and plus or minimum 1/2" for 3" slump or less.

FENTER RD RECONSTRUCTION

2.7 GROUT SETTING BED FOR BASE AND BEARING PLATES

- A. Grout setting bed for base and bearing plates for structural elements, lamp post, etc. shall be non-shrink and shall develop a minimum laboratory test compression strength of 10,000 psi in 28 days.
- B. Embeco or equal shall be used. However, where the setting bed is exposed to the elements, it must be non-staining.

PART 3 - EXECUTION

3.1 STORAGE OF MATERIALS

- A. Protect all materials from damage or contamination by water, dirt, or other substances while stored at either the project site or the production site and during delivery.
- B. Store all materials above and clear of the ground surface except for aggregate.
- C. The method of delivering the aggregates to the work and storing and handling shall be such that the moisture content of the aggregates as they come to the mixer shall not be subjected to frequent or unnecessary changes. Aggregate stockpiles shall be arranged and used in a manner to avoid excessive segregation or contamination with other materials or with other sizes of like aggregates.

3.2 MIXING OF CONCRETE

- A. Measuring and mixing of concrete shall be in accordance with the recommended practices of ACI 614 and PCA.
- B. All concrete shall be thoroughly mixed in approved batch-mixer conforming to the requirements of the Mixer Manufacturer Bureau of the Associated General Contractor of America.
- C. All concrete materials shall be batched by weight. Materials for concrete shall be measured within the following percentages of accuracy:

Cement	1%	Water	1%
Aggregates	2%	Admixtures	3%

- D. Fine and coarse aggregates shall be separately measured and the water required by the concrete mix designs shall include the water that is contained in the aggregates. The method used for measuring shall be subject to the approval of the Town Engineer, and shall be such that all mix ingredients can be uniformly and

FENTER RD RECONSTRUCTION

accurately controlled and easily checked. Fine and coarse aggregates shall be measured loose and moist as delivered on the job.

- E. Each batch of 2 cubic yards or less shall be mixed for not less than 1 1/2 minutes after all ingredients are in the mixer. Mixing time shall be increased 15 seconds for each additional cubic yard or fraction thereof. Each batch shall be completely discharged before another is mixed.

3.3 TRUCK-MIXED CONCRETE

- A. The use of truck-mixed concrete will be permitted if consistent with the general provisions of this Section and ASTM C 94.
- B. The mixing time length and the number of revolutions of mixing shall conform to ASTM C 94. Concrete shall be rejected if not placed within 1½ hours after water is first added or if 300 revolutions have taken place, whichever comes first.
- C. No water shall be added to any truck-mixed concrete after leaving the batching plant.

3.4 DELIVERY TICKETS

- A. Duplicate delivery tickets, one for the Contractor and one for the Town Engineer shall be furnished with each load of truck-mixed concrete delivered to the project site.
- B. Delivery tickets shall provide the following information:
 - 1. Ticket number
 - 2. Date
 - 3. Name of ready-mixed concrete producer
 - 4. Name or number of plant at which concrete is batched
 - 5. Truck number
 - 6. Contractor's name
 - 7. Job name and location
 - 8. Type of cement used (i.e. I, III, air-entrained, etc.)
 - 9. Class of concrete together with required strength, cement content, maximum size of aggregate and slump
 - 10. Time dispatched from plant, time arrived at job site, time left job site
 - 11. Type, name and amount of admixture, if any
 - 12. Amount of concrete in load in cubic yards
 - 13. Amount of water added at job, if any, with signature of person authorizing the added water

FENTER RD RECONSTRUCTION

3.5 USE OF ADMIXTURES

- A. Admixtures for the purposes of increasing workability or appearance of the concrete, or for improving any other characteristic, will be permitted, but only with the approval of the Town Engineering. Any proposed admixture shall conform to the requirements of ASTM C 260 or C 494.
- B. Admixture shall be added by methods and in quantities recommended by the manufacturer. The Contractor shall be responsible for incorrect usage of type or quantity of admixtures.

3.6 CONCRETE TESTING PROCEDURES

- A. The Contractor shall furnish all materials that are to be tested at no cost to the Owner. All testing will be conducted in accordance with the herein before listed ASTM Standards and Specifications by an established independent testing laboratory selected and paid by the Owner.
- B. The Contractor shall be responsible for notifying the project inspector at least 24 hours before it is necessary to make test cylinders.
- C. Sampling of fresh concrete shall be in accordance with ASTM C 172.
- D. Slump tests shall be made every time test cylinders are made in accordance with ASTM C 143 and reported by the testing laboratory. Additional slump tests may be required if any batches or deliveries are in doubt as to quality and as required for good control. The Contractor shall have slump measuring equipment available at the site at all times. Any slump test made by the Contractor shall be made in the presence of the Town Engineer.
- E. Test cylinders will be made of concrete that is actually being placed at the project site and in accordance with ASTM C 31. Normally, one test shall consist of three cylinders: one for testing at end of 7 days and two (2) for testing at the end of 28 days. One test shall be made for each 50 cubic yards or fraction thereof in each day's placing and for each separate specified class of concrete.
- F. The Contractor shall provide adequate facilities as required by the testing laboratory for safe storage and proper curing of concrete test cylinders on the project site for the first 24 hours as required by ASTM C 31.
- G. If the Contractor desires to remove shoring earlier than at 14 days, at least two additional cylinders for the purpose of determining the compressive strength of the concrete slab at the time of removal of the forms shall be made. Such test cylinders shall be properly identified, protected in the same manner that the corresponding concrete is being protected and left at the job site until required for testing. The Contractor shall pay for all of these additional tests.

FENTER RD RECONSTRUCTION

H. Testing of cylinders will be in accordance with ASTM C 39.

3.7 EVALUATION OF CONCRETE TEST

The concrete cylinder tests shall be evaluated in the following manner.

- A. The concrete shall be considered acceptable if:
- (1) the average of the two 28 day compression tests is equal to or greater than the required laboratory minimum 28 day strength specified for each particular class of concrete construction.
 - (2) but, if any one of the two 28 day compression tests is less than the average of these two tests by more than 10%, that entire test shall be considered erratic and not indicative of the concrete strength. Core samples will be required of this concrete.
- B. Should any of the 28 day compression tests show an average compressive strength less than required laboratory minimum 28 day strength specified for each class of concrete construction, the cement content of the remaining concrete to be placed shall be increased as will be regulated the Town Engineer to insure concrete at adequate strength throughout the remainder of the work and no charge shall be made to the Owner for this increased cement content.
- C. If any 28 day compression tests indicate that concrete of low strength has been placed which cannot safely, in the opinion of the Town Engineer, sustain the loads for which it has been designed under laws and regulations, the concrete in question shall be tested by taking cores from such portions of the work as the Town Engineer may direct. At least three representative cores shall be taken and tested as specified in ASTM C 42.
- D. If compression tests of the core specimens show that the concrete is inadequate for design loads and stresses, the concrete shall be strengthened, defective members or materials replaced, or load tests of the area required as will be regulated by the Town Engineer.
- E. The taking and testing of core samples, the replacement or strengthening of defective concrete and area load tests shall be entirely at the expense of the Contractor.

3.8 TESTING OF CONCRETE

- A. The Contractor will provide all materials that are to be tested. The testing laboratory will submit three (3) copies of each report to the Town Engineer and two (2) copies of the report to the Contractor. See General Requirements.

FENTER RD RECONSTRUCTION

- B. Concrete for each test shall be tested at the place of deposit for slump and entrained air and these values recorded on the test report.
- C. The Contractor shall keep a standard slump cone and bull nosed rod on the job site for any additional slump tests required by the Town Engineer where a variation of slumps is visible.

FENTER RD RECONSTRUCTION

SECTION 32 71 23 - HOT APPLIED THERMOPLASTIC MARKINGS

PART 1 – GENERAL

1.1

- A. These technical specifications contain references to City of El Paso Standards, Codes and Specifications, Texas Department of Transportation Departmental Materials Specifications, Texas Department of Transportation Test Methods, ASTM Standards, NEC Codes, NEMA, ANSI, ITE, MUTCD, ANSI/AWS, ISMA, AASHTO and other professional or technical organizations.
- B. It shall be the sole responsibility of the contractor to be cognizant of the referenced materials and be familiar where the contractor can research, view and/or obtain the said referenced materials.
- C. Each standard, code and specification referred to shall be considered a part of the specification to the same extent as if reproduced therein in full.

PART 2 – SPECIAL PROVISIONS

- 2.1 Longitudinal markings shall not extend into the stop bar or crosswalk.
- 2.2 Longitudinal markings shall not extend into the intersection.
- 2.3 The thickness of the thermoplastic stripes shall be determined by using the mechanical method described in Part I of Tex-854-B.

PART 3 – TRAFFIC CONTROL

- 3.1 Traffic control shall conform to the current Texas MUTCD. Traffic control plans must be submitted to and approved by the Engineering Department prior to starting work at any location.

PART 4 – REFERENCES AND EXPERIENCE

- 4.1 The contractor shall have a minimum of five (5) years' experience installing thermoplastic pavement marking on roadways and shall submit a client reference list with no less than five (5) organizations for whom the contractor has installed thermoplastic in the past five (5) years.

PART 5 – MATERIALS

- 5.1 Submittals. Submit manufacturer's product data to Town Engineering for review.
- 5.2 Type I Marking Materials. Type I markings are thermoplastic type materials that require heating to elevated temperatures for application. Type I marking materials shall conform to Texas Department of Transportation Departmental Materials Specification DMS-8220.

FENTER RD RECONSTRUCTION

Each container of Type I marking material shall be clearly marked to indicate the color, mass, type of material, manufacturer's name and the lot/batch number.

- 5.3 Raised Profile Markings. Raised Profile Markings are created by extruding a thermoplastic marking of normal thickness with a raised thermoplastic “bump” (approximately 300 mil) at uniform spacing following TxDOT specification: Position Guidance using Raised Markers, Reflectorized Profile Markings, PM(2)-00A
- 5.4 Source of Supply. All marking materials shall be purchased on the open market. All glass traffic beads shall be purchased on the open market.
- 5.5 Equipment Requirements. Equipment used to place pavement markings shall:
- A. Be maintained in satisfactory operating condition.
 - B. Be considered in satisfactory operating condition if it has an average placement rate of 5000 linear feet per hour of acceptable four (4) inch solid or broken lines over any five (5) consecutive working days.
 - C. Meet or exceed the material handling at elevated temperatures requirements of the National Fire Underwriters and the Texas Railroad Commission.
 - D. Be capable of placing a minimum of 40,000 linear feet of four (4) inch solid or broken markings per working day.
 - E. Have production capabilities similar to four-inch marking equipment and shall be capable of placing linear markings up to eight (8) inches in width in a single pass when used for placing markings in widths other than four (4) inches.
 - F. Have production capabilities considered satisfactory by the Town Engineer when used to place markings other than solid or broken lines.
 - G. Be capable of placing a centerline and no-passing barrier-line configuration consisting of one (1) broken line with two (2) solid lines at the same time to the alignment and spacing shown on the plans.
 - H. Be capable of placing broken and/or continuous white line from both sides.
 - I. Be capable of placing lines with clean edges and of uniform cross-section. All lines shall have a tolerance of plus or minus 1/8 inch per four (4) inch width.
 - J. Have an automatic cut-off device with manual operating capabilities to provide clean, reasonably square marking ends to the satisfaction of the Town Engineer, and to provide a method of applying broken line in an approximate stripe-to-gap ratio of 1 to 3. The length of the stripe shall not be less than ten (10) feet or more than 10.5 feet. The total length of any stripe-gap cycle shall not be less than 39.5 feet or more than 40.5 feet.
 - K. Provide continuous mixing and agitation of the pavement marking material. The use of pans, aprons or similar appliances, which the die overruns, will not be permitted for longitudinal striping applications.
 - L. Apply beads by an automatic bead dispenser attached to the pavement marking equipment in such a manner that the beads are dispensed uniformly and almost instantly upon the marking as the marking is being applied to the road surface. The bead dispenser shall have an automatic cut-off control, synchronized with the cut-off of the pavement marking equipment.
 - M. When Type I markings are to be placed, the Contractor shall have a hand-held thermometer on the project. The thermometer shall be capable of measuring the temperature of the pavement marking material to be placed.

FENTER RD RECONSTRUCTION

PART 6 – CONSTRUCTION METHODS

- 6.1 General. When required by the Town Engineer, the Contractor and the Town representative shall review the sequence of work to be followed and the estimated progress schedule.
- A. Markings may be placed on roadways either free of traffic or open to traffic. On roadways already open to traffic, the markings shall be placed under traffic conditions that exist with a minimum of interference to the operation of the facility. Traffic control shall be as shown on the plans or as approved by the Engineering Department in writing. All markings placed under open-traffic conditions shall be protected from traffic damage and disfigurement. On roadways open to traffic, with three (3) lanes of travel in one direction, all markings shall be placed from the outside lanes only, unless otherwise approved in writing by Town Engineer.
 - B. Guides to mark the location of pavement markings shall be established as shown on the plans or as directed by the Town Engineer. The Contractor shall be responsible for establishing the pavement marking guides. Broken longitudinal markings shall be placed approximately four (4) inches from longitudinal joints.
 - C. Markings shall be placed in proper alignment with the guides. The deviation rate in alignment shall not exceed one (1) inch per 200 feet of roadway. The maximum deviation shall not exceed two (2) inches nor shall any deviation be abrupt.
 - D. Markings shall essentially have a uniform cross-section. The density and quality of markings shall be uniform throughout their thickness. The applied markings shall have no more than five (5) percent, by area, of holes or voids and shall be free of blisters.
 - E. Markings, in place on the roadway, shall be reflectorized both internally and externally. Glass beads shall be applied to the materials at a uniform rate sufficient to achieve uniform and distinctive retroreflective characteristics when observed in accordance with Test Method Tex-828-B.
 - F. The Contractor's personnel shall be sufficiently skilled in the work of installing pavement markings.
 - G. Markings placed that are not in alignment or sequence, as shown on the plans or as stated in this specification, shall be removed by the Contractor at the Contractor's expense. Removal shall be in accordance with Item, "Eliminating Existing Pavement Markings and Markers. Guides placed on the roadway for alignment purposes shall not establish a permanent marking on the roadway.
 - H. Unless otherwise shown on the plans, pavement markings may be applied by any method that will yield markings meeting the requirements of this specification.

PART 7 – SURFACE PREPARATION

- 7.1 New Portland-cement-concrete surfaces shall be cleaned in accordance with Item, "Pavement Surface Preparation for Markings" to remove curing membrane, dirt, grease, loose and/or flaking existing construction markings and other forms of contamination.
- 7.2 Older Portland-cement-concrete surfaces and asphaltic surfaces that exhibit loose and/or flaking existing markings shall be cleaned in accordance with Item, "Pavement Surface Preparation for Markings", to remove all loose and flaking markings.

FENTER RD RECONSTRUCTION

- 7.3 Pavement to which material is to be applied shall be completely dry. Pavements shall be considered dry if, on a sunny day after observation for 15 minutes, no condensation occurs on the underside of a 0.3 meter square piece of clear plastic that has been placed on the pavement and weighted on the edges.

PART 8 – APPLICATION OF TYPE I MARKINGS

- 8.1 Type I pavement marking material shall be applied within temperature limits recommended by the material manufacturer. Application of Type I pavement markings shall be done only on clean, dry pavement having a surface temperature above 10 °C. Pavement temperature shall be measured in accordance with Test Method Tex-829-B.
- 8.2 When Type I pavement marking application is by spray, and operations cease for five (5) minutes or more, the spray head shall be flushed by spraying pavement marking material into a pan or similar container until the pavement marking material being sprayed is at the proper temperature for application.
- 8.3 Unless otherwise shown on the plans, Type I marking minimum thickness shall be 0.090 inches (90 mil), when measured in accordance with Test Method Tex-854-B. The maximum thickness of all Type I markings shall be 0.180 inches (180 mil).
- 8.4 The thickness of Type I markings at the time of placement will be measured above the plane formed by the pavement surface. **The contractor shall measure the thickness of the thermoplastic per Tex-854-B.** The markings shall be of uniform thickness throughout their lengths and widths.

PART 9 – PERFORMANCE PERIOD FOR TYPE I MARKINGS

- 9.1 Type I pavement markings shall meet all requirements of this specification for a minimum of 547 calendar days after installation. Pavement markings that fail to meet all requirements of this specification shall be removed and replaced by the Contractor at the Contractor's expense. The Contractor shall replace all pavement markings failing the requirements of this specification within 30 calendar days following notification by the Owner of such failing. All replacement markings shall also meet all requirements of this specification for a minimum of 547 calendar days after installation.

PART 10 – MEASUREMENT

- 10.1 This Item will be measured by the linear foot
- 10.2 Where solid double stripes are placed, only one stripe shall be measured.
- 10.3 Where Combination Solid plus broken (example: one direction no passing marking or two way left turn channelization) are placed, only the solid stripe shall be measured.

FENTER RD RECONSTRUCTION

- 10.4 Where broken lane line markings are applied only the actual marking will be measured. The skipped portion will not be measured.

PART 11 – HOT APPLIED THERMOPLASTIC

- 11.1 This specification describes the minimum requirements for the materials, composition, quality, sampling, and testing of thermoplastic and materials utilized in its application to the roadway surface.

11.2 Bidders' and/or Suppliers' Requirements

- A. All prospective bidders and/or suppliers are notified that, before any bid is considered, the manufacturer of the material proposed for use in this contract shall submit a letter certifying that the manufacturer has been approved by the Texas Department of Transportation to manufacture the materials for used on state projects.
- B. This is to ensure that the manufacturer has the technical and production capabilities to produce a material conforming to the requirements of this specification.

11.3 Sampling and Testing

- A. Sampling and testing shall be in accordance with CST/M &P Manual of Testing Procedures.
- B. Specific tests are normally indicated in conjunction with specific specification requirements. However, the Town of Clint reserves the right to conduct whatever tests are deemed necessary to identify component materials and verify results of specific tests indicated in conjunction with specification requirements.
- C. Costs of sampling and testing of failing material shall be assessed at the rate established by Town Engineer. Amounts due to the Town of Clint for conducting such tests shall be deducted from partial or final payments.

11.4 Material Requirements

- A. Thermoplastic pavement marking material shall be a product especially compounded for traffic markings for use on either asphaltic or Portland cement concrete surfaces.
- B. Each bag shall be clearly marked to indicate color, weight, and lot or batch number (a lot or batch shall be considered as each individual mix or blend that produces a finished product ready for use).
- C. Each bag shall contain 22.7 kilograms (50 pounds) of material.

FENTER RD RECONSTRUCTION

- D. The bag shall be composed of a material that allows it to be put with its contents into the melter for use.

11.5 Pigments

- A. Prime and filler pigments shall, when washed free of resins by solvent washing, pass a U.S. Standard Sieve Number 200, (Test Method TEX-863-B Determining Material Characteristics of Thermoplastic Pavement Marking Material") and shall meet the following specific requirements for each pigment.

11.6 Prime Pigments

The white pigment shall be a Rutile Titanium Dioxide.

- B. The yellow pigment shall be a heat resistant, double encapsulated medium chrome yellow or other approved heat-resistant pigment.

11.7 Filler Pigment

- A. The filler pigment shall be calcium carbonate of 95 percent purity.

11.8 Binder

- A. The binder shall consist of a mixture of resins, at least one of which is solid at room temperature, and high boiling point plasticizers.
- B. At least 1/3 of the binder composition shall be a maleic-modified glyceryl ester of rosin and shall be no less than eight (8) percent by weight of the entire material formulation.
- C. The infrared analysis of the resin extract shall match the spectra on file at CST/M &P in accordance with Test Method Tex-888-B Obtaining the Infrared Spectrum of Organic Materials."

11.9 Silica

- A. The total silica used in the formulation shall be in the form of glass traffic beads.

11.10 Certification

All prospective bidders and/or suppliers are notified that, before any bid is considered, the manufacturer of the material proposed for use in this contract shall submitted a letter certifying that the manufacturer has been approved by the Texas Department of Transportation to manufacture and supply the material for use on state projects. Material provided under this contract shall be of manufacture and product code or designation shown on the list of approved manufacturers of materials covered by this specification and maintained by CST/M &P of Texas Department of Transportation.

FENTER RD RECONSTRUCTION

PART 12 – SAMPLING AND TESTING

- 12.1 Sampling shall be in accordance with Test Method “Tex-830-B Sampling Traffic Beads.” Testing shall be in accordance with the methods listed in “Material Requirements” of this specification.

PART 13 – PACKAGING AND LABELING

13.1 Packaging

- A. Beads shall be packaged in 22.7 kilograms (50 pound) bags constructed as follows:
- The bags shall be a minimum of five (5) plies, consisting of two (2) plies of 22.7 kilograms (50 pounds) weight (minimum) natural Kraft paper, one (1) ply of 0.02 millimeter (0.8 mil) high density polyethylene, and two (2) plies of 22.7 kilograms (50 pounds) weight (minimum) natural Kraft paper
 - Seams in the bag walls shall have strength equal to the paper. The bottom and top seam shall be sewn with cotton thread and covered with 40.9 kilograms (90 pounds) crepe tape, or shall be pinch, bottom-style paper bags having glued top and bottom seams.
- B. The bag shall permit no leakage of beads.
- C. Glass traffic beads purchased by the Contractor for use on highway projects shall be packaged in 22.7 kilograms (50 pound) bags or bulk containers of a mutually agreed upon quality.

13.2 Labeling

Each container of glass traffic beads shall be distinctly marked and show the following:

- A. The name of the manufacturer
- B. Traffic beads and type
- C. Purchase order number
- D. Identification such as lot or load number so that the traffic beads may be identified with quantities not exceeding 22,000 kilograms (48,000 pounds) in weight, and net weight.

PART 14 – MATERIAL REQUIREMENTS

14.1 Glass traffic beads shall meet the following requirements:

- A. General
1. Manufactured predominately from recycled glass

FENTER RD RECONSTRUCTION

2. Spherical in shape
3. Essentially free of sharp angular particles
4. Essentially free of particles showing milkiness, surface imperfections, or air bubbles,
5. Water white in color.
6. Shall be Type III

14.1 Contaminants

Contain less than 1/4 of one (1) percent moisture by weight

- A. Be free of trash, dirt, etc., and Show no evidence of objectionable static electricity when flowing through a regular traffic-bead dispenser.

14.3 Gradation

All glass traffic beads shall meet gradation requirements when tested in accordance with Test Method "Tex-831-B Determining the Gradation of Glass Traffic Stripe Beads."

- A. Sieve analysis for Types III - Material collected in the pan shall be 2% maximum.

14.4 Irregular Particles

Glass traffic beads, retained on any screen, except the 850 micrometers (No. 20) used to determine gradation requirements, shall not contain more than 30 percent (by weight) of irregular shaped particles when tested in accordance with Test Method "Tex-832-B Determining the Roundness of Glass Spheres."

- A. The 850 micrometers (No. 20 sieve) shall have 35 percent (by weight) maximum allowed irregular particles that shall be determined by visual inspection.

TABLE III Type III

Glass Traffic Bead Gradation Requirement		
Opening (Micrometers)	Openings - U.S. Standard Sieve	Percent Retained
1700	(No. 12 Sieve)	0
1400	(No. 14 Sieve)	0 - 5
1180	(No. 16 Sieve)	5 - 20
1000	(No. 18 Sieve)	40 - 80
850	(No. 20 Sieve)	10 - 40
710	(No. 25 Sieve)	0 - 2

FENTER RD RECONSTRUCTION

14.5 Roundness

Roundness will be determined visually using an aspect ratio of 1.2 maximum according to Test Method "Tex-832-B Determining the Roundness of Glass Spheres." A composite sample of beads retained on sieve numbers 18, 20, and 25 shall contain a minimum of 80% round spheres. A composite sample of the beads retained on sieve numbers 12, 14, and 16 shall contain a minimum of 75% round spheres.

14.6 Adhesion Coating

These beads shall come supplied with an adhesion coating, which will promote adhesion to both waterborne traffic paint and thermoplastic pavement marking material. The presence of the adhesion coating shall be tested according to Texas Test Method "Tex-833-B Identifying Adhesion Coatings on Traffic Beads."

14.7 Index of Refraction

Glass traffic beads, when tested by Test Method "Tex-822-B Determining Refractive Index of Glass Beads," using the liquid immersion method at 25 °C (77 °F), shall show an index of refraction within the range of 1.50 to 1.55.

14.8 Stability

Glass traffic beads shall show no tendency toward decomposition, surface etching, change in retroreflective characteristics, or change in color after:

- A. One-hour exposure to concentrated hydrochloric acid at 25 °C (77 °F), 24-hour exposure to weak alkali, and 100 hours of Weather-Ometer (Atlas Sunshine Type) exposure (ASTM G 23, Method 1, Type EH).

PART 15 – FINISHED PRODUCT REQUIREMENTS

15.1 Physical Characteristics

Unless otherwise specified, the finished thermoplastic pavement marking material shall be a free flowing granular material.

- A. The material shall remain in the free flowing state in storage for a minimum of six months when stored at temperatures of 38 °C (100 °F) or less. The material shall be readily sprayed through nozzles commonly used on thermoplastic spray equipment at temperatures between 205 and 218 °C (400 to 425 °F).

FENTER RD RECONSTRUCTION

15.2 Toxicity

At temperatures up to and including 230 °C (446 °F), materials shall not give off fumes, which are toxic or otherwise injurious to persons, animals, or property.

15.3 Material Stability

The material shall not break down or deteriorate when temperatures are held at 205 °C (400 °F) for four hours.

15.4 Temperature versus Viscosity Characteristics

The temperature versus viscosity characteristics of the material in the plastic state shall remain constant throughout up to four (4) re-heatings to 205 °C (401 °F) and from batch to batch.

15.5 Chemical Resistance

The material shall not be adversely altered by contact with sodium chloride, calcium chloride, or other similar chemicals on the roadway surface; by contact with the oil content of pavement materials; or by contact from oil dropping from traffic.

15.6 Softening Point

The materials shall not soften at 90 °C (194 °F) when tested by the Ball and Ring Method, ASTM E 28.

15.7 Color

The CIE chromaticity coordinates of the material, when determined in accordance with Test Method Tex-839-B Determining Color in Reflective Materials," shall fall within an area having the following corner points:

CIE Chromaticity Coordinate Corner Points									
	1		2		3		4		Brightness
	x	y	x	Y	x	y	x	y	Y
White	.290	.315	.310	.295	.350	.340	.330	.360	Min. 65
Yellow	.470	.455	.510	.489	.490	.432	.537	.462	45-60

- A. The white and yellow material shall meet the above-specified color requirements, for each color, before and after 70 hours of exposure in a Weather-Ometer (Atlas, Sunshine-Type) fitted with an 18-102 (18 minutes of sunshine and rain and 102

FENTER RD RECONSTRUCTION

minutes of sunshine) cyclic gear. Panels for testing shall be prepared with material as supplied.

15.8 Abrasion

Thermoplastic pavement marking material shall have a loss between 4.0 and 12.0 grams when tested for abrasion in accordance with Test Method "Tex-851-B, Evaluating the Abrasion Resistance of Pavement Marking Material," according to steps one (1) through eight (8) of the procedure using the following test parameters:

Abrasion Resistance Test Parameters	
Test	Parameter
Test Distance	127 millimeters (five inches)
Blast Pressure	275 kilopascals (40 psi)
Sample Angle	10 °
Blast Media	1200 grams

15.9 Uniformity

- A. Material shall be manufactured such that, when sampled in accordance with CST/M &P Manual of Testing Procedures, any 100-gram sample will be representative of the batch or lot of material.

Thermoplastic Marking Material			
White	Percent by Weight	Yellow	Percent by Weight
Binder	18 - 23	Binder	18 - 23
Titanium Dioxide	12 - 15	Medium Chrome Yellow	10 - 15
Calcium Carbonate	20 - 42	Calcium Carbonate	20 - 42
Glass Traffic Beads	30 - 45	Glass Traffic Beads	30 - 45
Total	100	Total	100

Note: The above requirements shall be determined by testing in accordance with Test Method Tex-863-B, Material Characteristics of Thermoplastic Pavement Marking Material."

FENTER RD RECONSTRUCTION

PART 16 – ELIMINATING PAVEMENT MARKINGS AND MARKERS

- 16.1 Description. This specification describes the minimum requirements for the elimination of existing pavement markings of the various types and sizes, and raised pavement markers as shown on the plans or as directed, in writing, by the Town Engineer.
- 16.2 Construction Methods. Elimination of existing pavement markings and markers shall be accomplished by one (1) or more of the following methods as approved by the Town Engineer.
- A. Markings on Asphaltic Surfaces.
 - B. Placement of a surface treatment a minimum of 0.6 meter wide to cover the existing marking.
 - C. Placement of a surface treatment, thin overlay or microsurfacing a minimum of one (1) lane in width in areas where directional changes of traffic are involved or other areas as directed by Town Engineer. Construction methods for surface treatments shall conform to Item 316, "Surface Treatments".
 - D. Markings on Concrete Surfaces. Removal by an approved burning method.
 - E. Markings on Asphaltic or Concrete Surfaces. Removal by water, water-sand blasting techniques or by any other method(s) proven satisfactory to the Town.
 - F. Markers on Asphaltic or Concrete Surfaces. Removal by any mechanical method to remove marker and adhesive.
 - G. Existing pavement markings and markers on both concrete and asphaltic surfaces shall be removed in such a manner that color and/or texture contrast of the pavement surface will be held to a minimum.
 - H. Blast cleaning shall be performed in such a manner that damage to the concrete surface is held to a minimum.
 - I. When thermoplastic pavement markings or prefabricated pavement markings are encountered, the application of heat may be used to remove the bulk of the marking material prior to blast cleaning. When heat is used, care shall be taken to prevent spalling of concrete surfaces.
 - J. A burner may be used for complete removal of pavement markings. Broom removal or light blast cleaning may be used for removal of minor residue.
 - K. Damage, such as spalling, shelling, etc. greater than six (6) millimeters in depth, caused to asphaltic surfaces resulting from the removal of pavement markers shall be repaired by the application of a 0.6 meter wide surface treatment for

FENTER RD RECONSTRUCTION

longitudinal markers with no directional change or a minimum of one (1) lane width surface treatment in areas where directional changes of traffic are involved.

- L. Grinding is not an acceptable method of marker or marking removal. However, equipment utilizing special milling flails are considered acceptable in the removal of markings and markers on asphalt and concrete surfaces.

16.3 Temporary Pavement Markings

- A. Temporary tabs shall be installed on any surface where markings are removed and when the replacement of the traffic control devices will not be performed the same day.
- B. Temporary tabs shall be reflectorized.
- C. Temporary tabs shall be placed in such a manner as to not interfere with the re-marking operation or shall be removed before the re-marking operation.
- D. All temporary tabs shall be removed after the completion of the marking operations in each area within two (2) working days.

16.4 Payment

- A. The work performed and material furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Eliminating Existing Pavement Markings and Markers" of the various types specified. This price shall be full compensation for blast cleaning, mechanical cleaning and/or other cleaning methods; for all materials, tools, equipment, labor, traffic control, and incidentals necessary to complete the work, except as shown below.
- B. No payment will be made for the elimination of pavement markers when pavement markers are to be removed in conjunction with the elimination of longitudinal markings.

PART 17 – DETERMINING THICKNESS OF THERMOPLASTIC STRIPE

17.1 Part I, Measuring Thermoplastic Thickness

This part may be used to mechanically measure the thickness of a thermoplastic stripe.

17.2 Apparatus

- A. The following apparatus is required:
 - B. Needlepoint micrometer gauge (Example: Mitutoyo - Model 342-711-30).

FENTER RD RECONSTRUCTION

17.3 Materials

A. The following materials are required:

- Duct tape or metal plate may be used
- Knife.

17.4 Procedures

A. Measuring Line Uniformity and Thickness

B. The following table describes the procedure for preparing samples from actual stripes.

Measuring Line Uniformity and Thickness	
Step	Action
1	Take random samples at 600 m (2,000 ft.) maximum intervals. If at least three successive readings meet the minimum thickness, the engineer may designate an alternative interval.
2	Place a strip of duct tape or metal plate across the path of the intended stripe. NOTE: A metal plate is recommended for rougher surfaces.
3	Perform the application at normal speed and include beads applied at the normal rate. If there is a question concerning the thermoplastic test application, the inspector should monitor the speed of the striping truck and the setting of applicable gauges in the truck during normal operation, and compare them to the speed and gauge settings when the test is done.
4	Make two cuts in the thermoplastic material across the stripe at the edges of the duct tape or plate.
5	Allow the stripe to cool sufficiently so that no deformation to the stripe occurs when the tape or plate is removed from the roadway.
6	Remove the tape. Use the knife to assist with the removal.

17.5 Measuring Thermoplastic Stripe

A. The following table describes the procedure for measuring the line uniformity of thermoplastic pavement-marking striping.

FENTER RD RECONSTRUCTION

Measuring Thermoplastic Stripe	
Step	Action
1	<p>Measure stripe thickness with the needlepoint micrometer gauge by measuring stripe thickness at the center, and at approximately 25 mm (1 in.) intervals to the edge of the stripe.</p> <p>Take the measurement to the top of the thermoplastic, not to the top of the bead.</p> <p>Take care not to indent the thermoplastic film with the micrometer points.</p> <p>The thermoplastic can also be removed from the tape or plate and broken into pieces.</p> <p>The measurement closest to the edge should be taken at least 6 mm (0.25 in.) from the edge of the stripe.</p> <p>Take additional measurements if considered necessary.</p>
2	<p>The average of the readings across each sample must be equal to or above the specified minimum thickness.</p> <p>No reading should be more than 250 μm (10 mils) below the specified minimum thickness.</p>

17.6 Part II, Determining Stripe Thickness

- A. This part may be used to determine stripe thickness from thermoplastic usage rates

17.7 Procedure

- A. Determining Line Thickness from Usage Rates
- B. The following table describes the procedure for determining striping thickness from usage rates.

Determining Striping Thickness from Usage Rates	
Step	Action
1	<p>Determine the amount of thermoplastic and beads the applicator has on hand at the beginning of striping operations.</p> <p style="padding-left: 40px;">NOTE: This is not necessarily at the beginning of the day. For smaller jobs, the amount of material the contractor loads into the melter/striper will be the initial amount.</p>
2	<p>Determine the amount of material the applicator has on hand at the end of striping operations. The conditions in Step 1 may apply.</p>
3	<p>Subtract the final quantities from the initial quantities to determine the amount of materials used.</p>
4	<p>Determine the linear footage of stripe applied. Obtain this quantity from the applicator or from direct measurements.</p>
5	<p>Divide the quantity used by the linear footage applied and compare the value to the theoretical usage rate.</p>

FENTER RD RECONSTRUCTION

17.8 Theoretical Usage Rate Table

- A. The following table details the usage rates required to produce a solid 100 mm (4 in.) wide stripe. For 200 mm (8 in.) wide stripe, multiply the usage rate by 2.

Theoretical Usage Rates					
Specification Thickness		Minimum Pounds of Thermoplastic			
Mils	Micrometers	Pounds per Mile	Kilograms per Kilometer	Pounds	
60	1500	1000	282	0.189	282
75	2250	1300	366	0.246	366
100	2500	1800	507	0.341	507

17.9 Report

- A. Contractor shall report locations and results to the Town of Clint inspector at the end of each workday

FENTER RD RECONSTRUCTION

SECTION 33 05 13 - ADJUSTMENTS OF WATER VALVES AND WATER METERS

PART 1 – GENERAL

- 1.1 This item shall govern for the furnishing of materials and for adjusting water valves and water meters where required by the plans. Water valves and meters shall be adjusted to elevations as shown on the plans or as ordered by the Engineer and in accordance with these specifications.

PART 2 – MATERIALS AND EQUIPEMENT

- 2.1 Water meter boxes/manholes, water valve boxes/manholes, rings, frames, and covers and brick in good conditions, removed from may be reused.

PART 3 – EXECUTION

- 3.1 Construction. Manholes rings or valve boxes, covers and frames shall be removed carefully and the contact areas shall be cleaned of all mortar and grease. Rings, covers, and frames broken in the process of removal and cleaning shall be replaced in kind, by the Contractor, at the Contractor's expense.
- 3.2 The adjustment involves lowering the top of the manhole. A sufficient depth of concrete or brick courses shall be removed to permit reconstruction on a batter not exceeding 1 inch horizontal to 2 inches vertical. In the case of brickwork, the mortar shall be cleaned from the top course of brick remaining in place and from all brick to be re-used and the manhole rebuilt to the original top dimensions. The manhole ring, frame and cover shall then be installed with the top conforming to the proposed new surface of street or parkway.
- 3.3 Salvage and reuse existing valve box.

Remove and replace ductile iron riser pipe with suitable length for depth of cover required to establish the adjusted elevation to accommodate actual finish grade.

Reinstall in-kind adjustable valve box and riser piping plumbed in vertical position.

After valve box has been set, aligned, adjust so that the top lid is level with final grade.

FENTER RD RECONSTRUCTION

SECTION 34 00 00 – STONE COMMON DRY

PART 1 – GENERAL

- 1.1 Furnish and place stone as shown on the plans.

PART 2 – MATERIALS

- 2.1 Use stones that are 4 to 6 inches in diameter.

PART 3 – EXECUTION

- 3.1 Dress slopes and protected areas to the line and grade shown on the plans before the placement of stones. Place stones according to details and dimensions shown on the plans or as directed.
- 3.2 Excavate to provide the depth necessary for stone placement and swale slopes indicated in the plans. Place stones well into the ground with the edges in contact. Bed and place each succeeding course in even contact with the preceding course. Use spalls and small stones to fill any open joints and voids. Ensure the finished surface presents an even, tight surface, true to the line and grades of the typical sections. Wet the stones thoroughly after they are in place; and pack. Ensure the entire mass of stones in their final position is free from objectionable pockets of small stones and clusters of larger stones.