



**CITY OF LEON VALLEY
BID #2020-03**

**STREET MAINTENANCE
YEAR 3**

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05/29/20

A handwritten signature in blue ink that reads "Byron G. Sanderfer".

May 2020

STREET MAINTENANCE YEAR 3

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CHECK LIST OF ITEMS TO SUBMIT WITH BID

- Addenda (if any)
- Bid Bond
- Bid Form
- Contractor's Disclosure Statement
- Conflict of Interest Questionnaire
- Proof of Insurance including WC

SECTION 1 - BID ADVERTISEMENT

ADVERTISEMENT FOR **Bid #2020-03 STREET MAINTENANCE YEAR 3** for the City of Leon Valley. The construction estimate is: Base Bid: \$575,000.

Sealed bids will be received until **June 18, 2020 at 10:00 a.m.** by the Purchasing Agent of the City of Leon Valley, Texas, 6400 El Verde, Leon Valley, TX 78238. Bids will be publicly opened and read aloud at **10:00 a.m.** in the City Council Chamber of the City Hall located at 6400 El Verde, Leon Valley, TX 78238.

Specifications are free and only available electronically. Please visit the City of Leon Valley website at www.leonvalleytexas.gov/government/finance/purchasing.php or Public Purchase at www.publicpurchase.com. There will be a non-mandatory pre-bid meeting held at City Hall located at 6400 El Verde **June 9, 2020 at 10:00 a.m.** Temperatures will be taken, masks or other face coverings must be worn, and social distancing will be enforced to prevent the spread of Covid-19.

Bidders must use the bid form provided in the specifications and submit bid in a sealed envelope. The outside of the envelope must be clearly endorsed "**Bid #2020-03 STREET MAINTENANCE YEAR 3**". Each bid shall be accompanied by a bid guarantee in the form of a certified check, cashier's check, or bid bond in the amount of five percent (5%) of the total bid price. Any bid received after closing time will be rejected and returned unopened.

Attention is called to the fact that, pursuant to V.T.C.S. Art. 5159a, not less than the local prevailing wage rate derived from Leon Valley Ordinance #16-005 included herein, must be paid on this locally funded project.

The successful bidder will be required to furnish a one hundred percent (100%) Performance Bond and a one hundred percent (100%) Payment Bond.

The City of Leon Valley reserves the right to reject any and all bids, to award the bid to the lowest responsible bidder or to the bidder who provides the best value to the City, and to waive any informality or technicality in the bid. The City agrees to take action within sixty (60) days after the bid opening.

SECTION 2 - INSTRUCTIONS TO BIDDERS

1 - DEFINED TERMS

1.1 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

- A. Bidder--The individual or entity who submits a Bid directly to OWNER.
- B. Issuing Office--The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- C. Successful Bidder--The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.
- D. Owner - City of Leon Valley
- E. Engineer – LNV, LLC.

2 - BIDDING DOCUMENTS REQUIRED

2.1 Complete Bidding Documents are available electronically only and may be downloaded online at www.leonvalleytexas.gov/government/finance/purchasing.php or Public Purchase at www.publicpurchase.com.

2.2 Complete sets of Bidding Documents must be used in preparing Bids; OWNER assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

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

3 - QUALIFICATIONS OF BIDDERS

3.1 To demonstrate Bidder's qualifications to perform the Work, within five days of OWNER's request Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below:

- A. Name, address and telephone number of the bonding company, authorized to do business in the State of Texas, which would furnish Payment and Performance Bonds in the amount of your bid;
- B. Name, address and telephone number of the insurance company, authorized to do business in the State of Texas, which would furnish Certificate(s) of Insurance per the requirements in the Other Conditions and General Conditions.
- C. If CONTRACTOR plans to utilize subcontractors for this project, also furnish all of the requested information on the subcontractor's firm(s).
- D. CONTRACTOR shall complete and submit with his bid, CONTRACTOR'S Disclosure Statement, which form is included in this document.

E. CONTRACTOR shall submit with his bid, a copy of his Worker's Compensation insurance certificate.

4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.1 Subsurface and Physical Conditions

A. There are no reports of explorations and test of subsurface conditions for this project.

4.2 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to OWNER by owners of such Underground Facilities, including OWNER, or others.

4.3 Hazardous Environmental Condition

A. There are no reports or drawings relating to a Hazardous Environmental Condition identified at the Site.

4.4 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work.

4.5 Reference is made to the identification of the general nature of other work that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, OWNER will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

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

A. examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

D. obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or

performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

E. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

F. become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;

G. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

H. promptly give OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by OWNER is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.7 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given OWNER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by OWNER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

5 - PRE-BID CONFERENCE

5.1 There will be a non-mandatory pre-bid meeting held at the City of Leon Valley City Hall located at 6400 El Verde **June 9, 2020 at 10:00 a.m.** Temperatures will be taken, masks or other face coverings must be worn, and social distancing will be enforced to prevent the spread of Covid-19.

6 - SITE AND OTHER AREAS

6.1 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR.

7 - INTERPRETATIONS AND ADDENDA

7.1 All questions about the meaning or intent of the Bidding Documents are to be submitted to ENGINEER via email with “**BID #2020-03 STREET MAINTENANCE YEAR 3**” placed in the subject line to Byron Sanderfer, LNV, LLC. at BSANDERFER@LNVINC.COM. Once an email is received by the ENGINEER, a received response will be emailed back to the sender. It is the sender’s responsibility to verify receipt of email. Interpretations or clarifications considered necessary by OWNER in response to such questions will be issued as an Addendum and posted on the City of Leon Valley website at: www.leonvalleytexas.gov/government/finance/purchasing.php and on Public Purchase at www.publicpurchase.com. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. For questions unrelated to meaning or intent, you may call Melinda Moritz, Director of Public Works at (210) 681-1232, ext. 203.

7.2 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER.

8 - BID SECURITY

8.1 A Bid must be accompanied by Bid security made payable to OWNER in an amount of 5% of Bidder’s maximum Bid price and in the form of a certified check, a cashier’s check, or a Bid Bond issued by a surety meeting the requirements set forth herewith.

8.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 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 seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

8.3 Within seven days from the date the bid is awarded by City Council, bid securities in the form of a Certified Check or a Cashier’s Check of non-successful Bidders will be returned.

9 - CONTRACT TIMES

9.1 The number of days within which, or the dates by which, the Work is to be (a) Substantially Completed and (b) also completed and ready for final payment are set forth in the Agreement.

10 - LIQUIDATED DAMAGES

10.1 Provisions for liquidated damages, if any, are set forth in the Agreement (Section 6.3 of Performance Bond).

11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.1 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to OWNER, application for such acceptance will not be considered by OWNER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by OWNER is set forth in the General Conditions and may be supplemented in the General Requirements.

12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.1 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by OWNER. If OWNER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

12.2 If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER subject to revocation of such acceptance after the Effective Date of the Agreement.

12.3 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

13 - PREPARATION OF BID

13.1 The Bid form is included with the Bidding Documents.

13.2 All blanks on the Bid form shall be completed by clearly printing in ink or by typewriter and the Bid signed.

13.3 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

13.4 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

13.5 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

13.6 A Bid by an individual shall show the Bidder's name and official address.

13.7 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture must be shown below the signature.

13.8 All names shall be typed or clearly printed in ink below the signatures.

13.9 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid form.

13.10 The address, telephone number, and email address for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the Project, if any, shall also be shown on the Bid form.

14 - BASIS OF BID; EVALUATION OF BIDS

14.1 Lump Sum

A. Bidders shall submit a Lump Sum price for the total project per plans and specifications.

B. Discrepancies between words and figures will be resolved in favor of the words.

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

15 - SUBMITTAL OF BID

15.1 Each prospective Bidder will be furnished with one copy of the Bidding Documents.

15.2 For consideration, a Bid shall be submitted no later than the date and time prescribed and at the place indicated in the bid advertisement and shall be enclosed in an opaque sealed envelope plainly marked with "**BID #2020-03 STREET MAINTENANCE YEAR 3**", the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "**BID ENCLOSED**". A mailed Bid shall be addressed to:

City of Leon Valley
Office of the Public Works
6400 El Verde
Leon Valley, TX 78238

16 - MODIFICATION AND WITHDRAWAL OF BID

16.1 Once a Bid is submitted, it may be withdrawn or retrieved for the purpose of modification prior to the deadline date and time. If a Bid is retrieved for modification, it is the Bidders responsibility to make sure the bid is properly sealed and labeled and resubmitted prior to the deadline.

16.2 If within 24 hours after Bids are opened any Bidder provides a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

17 - OPENING OF BIDS

17.1 Bids will be opened at the time and place indicated in the advertisement or invitation to Bid and, unless obviously non-responsive, read aloud publicly.

18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.1 All Bids will remain subject to acceptance for the period of time stated in the Bid form.

19 - AWARD OF CONTRACT

19.1 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER may also 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 that Bidder. OWNER also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.2 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.3 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.4 In evaluating Bidders, OWNER will consider the qualifications of Bidders and the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted.

19.5 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.6 City Council will either reject any or all bid or award the contract to the lowest responsible bidder or to the bidder who provides goods or services at the best value for the municipality.

20 - CONTRACT SECURITY AND INSURANCE

20.1 When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by such Bonds and certificates of insurance.

21 - SIGNING OF AGREEMENT

21.1 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER. Within ten days thereafter, OWNER shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

22 - SALES AND USE TAXES

22.1 The City is an exempt entity for the purpose of sale tax.

A. The purchase of tangible personal property or a taxable service for this project is exempt from sales tax to the extent allowed by Title 34, Texas Administration Code §3.291.

B. Bidders must include all applicable taxes in their cost of their work.

C. Exemption notice will be provided upon request.

23 - RETAINAGE

23.1 Provisions concerning CONTRACTOR's rights to deposit securities in lieu of retainage are set forth in the Agreement.

24 - CONTRACTS TO BE ASSIGNED

24.1 Bidders may examine the documents for these contracts at the Issuing Office.

25 - PARTNERING

25.1 OWNER does not intend to participate in a partnering process with CONTRACTOR.

SECTION 3 SCOPE OF WORK

1. Description of Work

1.1. BID #2020-03 STREET MAINTENANCE YEAR 3

1.2. **Base Bid**: Mill and overlay certain streets within the city limits. Apply single bituminous slurry seal to certain streets within the city limits. Provide sidewalk ramp improvements along certain streets, remove and replace approximately fifty-one (51) curb ramps. Provide sidewalks across the alleys within the Linkwood Subdivision

1.3. **Additive Alternate Bid**: Mill and overlay certain streets within the city limits.

The scope of work includes street maintenance, sidewalk ramp improvements, signage and pavement markings, and traffic control as necessary per the plans to complete the work.

SECTION 4 PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

1. Unless otherwise noted, modified by this section, or directed by the ENGINEER, all materials and methods of construction shall be in accordance with City of San Antonio, San Antonio Water System and TxDOT Standard Specifications for Construction (most current edition) and associated special provisions.
2. City of San Antonio, San Antonio Water System and TxDOT Standard Specifications for Construction and associated Special Provisions are made a part of this section by reference. It is the responsibility of all bidders to be familiar with these documents prior to submitting a bid. All items are available online at:

<http://www.sanantonio.gov/TCI/CurrentVendorResources/StandardSpecificationsandDetails.aspx>

<http://www.saws.org/>

<https://www.dot.state.tx.us/business/specifications.htm>

2.1.1 Special Specification

Add Item **Technical Specification, Section TS** included in **ATTACHMENT M**

3. All spoil materials salvaged by operations shall become the property of the contractor. Reuse for subsequent items in this contract will require the prior approval of the Engineer.
4. Unless specifically identified with a pay item, excavation and the removal of existing materials shall be considered unclassified excavation and subsidiary to completion of the project.
5. The contractor shall secure TPDES permits prior to mobilization. In addition to measures provided for in the permit, the Contractor also shall provide silt fence, sediment traps and other Sediment Control measures as directed by the ENGINEER. All sediment control measures and cleaning of existing streets impacted by the contractor's work shall be subsidiary to completion of the project.
6. Temporary Traffic Control shall conform to Part 6, Texas Manual on Uniform Traffic Control Devices (TMUTCD), current edition. (No Separate Pay).
7. All questions received in accordance with the email provisions (Instructions to Bidders, 7.1) by 12:00 pm the day prior to the Pre-Bid Conference will be addressed at the conference. An addendum will be issued subsequent to the Pre-

Bid Conference that will address these and other questions that arise at the conference.

SECTION 5 GENERAL CONDITIONS

1 - DEFINITIONS

Defined Terms – Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

- A. Addenda--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.
- B. Agreement--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.
- C. Application for Payment--The form acceptable to OWNER 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.
- D. 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.
- E. Bid--The offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
- F. Bidding Documents--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- G. Bidding Requirements--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.
- H. Bonds--Performance and payment bonds and other instruments of security.
- I. Change Order--A document recommended by OWNER 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.
- J. 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.
- K. 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.

L. Contract Documents--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and OWNER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

M. 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.

N. Contract Times--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by OWNER's approval of final payment.

O. CONTRACTOR--The individual or entity with whom OWNER has entered into the Agreement.

P. Drawings--That part of the Contract Documents prepared or approved by OWNER 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.

Q. 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.

R. OWNER's Consultant--An individual or entity having a contract with OWNER to furnish services as OWNER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

S. Field Order--A written order issued by OWNER which requires minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Times.

T. Hazardous Environmental Condition--The presence at the Site of Asbestos, PCBs, Petroleum,

U. Hazardous Waste or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

- V. 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.
- W. 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.
- X. Liens--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
- Y. 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.
- Z. Notice of Award--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.
- AA. 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.
- BB. OWNER--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.
- CC. Partial Utilization--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.
- DD. PCBs--Polychlorinated biphenyls.
- EE. 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.
- FF. Project--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.
- GG. 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.
- HH. 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.
- II. Resident Project Representative--The authorized representative of OWNER who may be assigned to the Site or any part thereof.

JJ. 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.

KK. 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.

LL. 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.

MM. Specifications--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

NN. 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.

OO. Substantial Completion--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of OWNER, 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.

PP. Supplementary Conditions--That part of the Contract Documents which amends or supplements these General Conditions.

QQ. Supplier--A manufacturer, fabricator, supplier, distributor, material man, 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 any Subcontractor.

RR. 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.

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

TT. Work--The entire completed 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.

UU. Work Change Directive--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER 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.

VV. Written Amendment--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

2 - TERMINOLOGY

A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms “as allowed,” “as approved,” or terms of like effect or import are used, or the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of OWNER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed 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 shall not be effective to assign to OWNER 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 the Contract Documents.

B. Day -- The word “day” shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. Defective -- The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to OWNER’s approval of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion).

D. 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.

E. 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.

3 - PRELIMINARY MATTERS

3.1 Delivery of Bonds

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

3.2 Copies of Documents

A. OWNER shall furnish to CONTRACTOR up to two copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

3.3 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.

3.4 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.

3.5 Before Starting Construction

A. CONTRACTOR’s Review of Contract Documents: 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 OWNER any conflict, error, ambiguity, or discrepancy which CONTRACTOR

may discover and shall obtain a written interpretation or clarification from OWNER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. Preliminary Schedules: Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to OWNER for its 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 Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; 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.

C. 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.

D. The CONTRACTOR shall be responsible for the notifying all property owners within and adjacent to the project twenty-four (24) hours prior to commencing construction operations. Said notice shall be in writing and in a form acceptable to the OWNER.

E. Prior to the start of the project, the CONTRACTOR shall identify to the OWNER, any tree limbs which overly and interfere with the work. Said limbs are to be removed by the OWNER.

3.6 Preconstruction Conference

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, OWNER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules, procedures, processing Applications for Payment, and maintaining required records.

3.7 Initial Acceptance of Schedules

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by

CONTRACTOR, OWNER, and others as appropriate will be held to review for acceptability to OWNER as provided below the schedules submitted. CONTRACTOR shall have an additional ten 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 OWNER.

1. The progress schedule will be acceptable to OWNER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on OWNER 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 values will be acceptable to OWNER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

4 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

4.1 Intent

A. The Contract Documents are complementary; what is called for by one is as binding as if called for 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 may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended 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 OWNER.

4.2 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 or CONTRACTOR, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, or any of OWNER's Consultants, agents, or employees 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.

4.3 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. 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 any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to OWNER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency) until an amendment or supplement to the Contract Documents has been issued; provided, however, that CONTRACTOR shall not be liable to OWNER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known 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 or the provisions of the Contract Documents and:

a. the provisions of any Laws or Regulations

b. the provisions of any standard, specification, 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).

4.4 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 in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) 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: (i) a Field Order; (ii) OWNER's approval of a Shop Drawing or Sample; or (iii) OWNER's written interpretation or clarification.

4.5 Reuse of Documents

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER:

1. shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of OWNER or OWNER's Consultant, including electronic media editions; and

2. shall not reuse any of such Drawings, Specifications, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and specific written verification or adaption by OWNER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

5 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS

5.1 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, CONTRACTOR may make a Claim.

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

C. The CONTRACTOR shall not, except after written consent from proper parties, enter or occupy with men, tools, materials or equipment, any privately-owned land except on easements provided herein.

5.2 Subsurface and Physical Conditions

A. In the preparation of Drawings and Specifications, Owner relied upon the following report of explorations and tests of the subsurface conditions at the site: **NONE**.

B. Notice: If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled 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), notify OWNER 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.

C. OWNER's Review: After receipt of written notice, OWNER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise CONTRACTOR in writing of OWNER's findings and conclusions.

D. 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.

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 in respect of 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 within the required time.

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. However, OWNER and OWNER's Consultants 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.

5.4 Hazardous Environmental Conditions at Site

A. 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.

B. 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); and (iii) notify OWNER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with OWNER'S Consultants concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

C. 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 to CONTRACTOR written notice: (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.

D. 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. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others.

E. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, OWNER's Consultants and the officers, directors, partners, employees, agents, other 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 shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

F. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, OWNER's Consultants, and the officers, directors, partners, employees, agents, other 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 shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

5.5 Damage to Existing Streets

A. The asphalt pavement, curbs and existing sidewalks adjacent to the work area are considered to be in good to excellent condition prior to the start of the project.

B. Any scars, nicks, gasoline, oil, etc., or other defacement or damage to the existing streets, curbs, or sidewalks will be the responsibility of the CONTRACTOR to repair. Before beginning the job, the CONTRACTOR may point out and note to the inspector any specific areas that are already damaged. Thereafter, the CONTRACTOR will not be held responsible for repairs to these areas.

6 - BONDS AND INSURANCE

6.1 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 CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, 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 current 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 must be accompanied by a certified copy of such agent's authority to act.

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, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements.

6.2 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.

6.3 Certificates of Insurance

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured 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. OWNER shall deliver to CONTRACTOR, with copies to each additional insured 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.

6.4 CONTRACTOR's Liability Insurance

A. CONTRACTOR shall purchase and maintain such liability and other 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: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) 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 so required to be purchased and maintained shall:

1. with respect to insurance required, include as additional insured (subject to any customary exclusion in respect of professional liability) OWNER, OWNER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insured, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insured, and the insurance afforded to these additional insured 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 completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty 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 will so provide);

6. 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; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and 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).

6.5 OWNER's Liability Insurance

A. In addition to the insurance required to be provided by CONTRACTOR, 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.

6.6 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, OWNER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, 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 additional insured;
2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, 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, 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 OWNER;
5. allow for partial utilization of the Work by OWNER;
6. include testing and startup; and be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER and CONTRACTOR with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. OWNER shall purchase and maintain such boiler and machinery 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, OWNER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained 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 to whom a certificate of insurance has been issued and will contain waiver provisions.

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified 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, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. 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.

6.7 Waiver of Rights

A. OWNER and CONTRACTOR intend that all policies purchased will protect OWNER, CONTRACTOR, Subcontractors, OWNER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, 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 any loss or damage the insurers will have no rights of recovery against any of the insured or additional insured thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, 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, OWNER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, 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, OWNER's Consultants, 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 or other peril 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, after Substantial Completion, or after final payment.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss 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 OWNER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

6.8 Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required will be adjusted with OWNER and made payable to OWNER as fiduciary for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause. 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 or Written Amendment.

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.

6.9 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 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). 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.

6.10 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, no such use or occupancy shall commence before the insurers providing the property insurance 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.

6.11 Warranty

The Contractor shall warrant the work performed against defect in materials and workmanship for a period of one year after acceptance by the Owner. Warranty work will be performed by the Contractor within a reasonable time of notice given by the Owner. Owner reserves the right to make repairs at the Contractor's expense upon the failure of the Contractor to respond promptly. Repairs under the warranty will carry an additional 90-day warranty period. The Warranty period shall commence at the time the City has made final acceptance of the work done by the Contractor. The City will assume responsibilities for damage to the facility caused by misuse and vandalism after final acceptance.

7 - CONTRACTOR'S RESPONSIBILITIES

7.1 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, but CONTRACTOR shall not be responsible for the negligence of OWNER 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. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

7.2 Labor; Working Hours

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work 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, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to OWNER.

7.3 Services, Materials, and Equipment

A. Unless otherwise specified in the General Requirements, 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 warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by OWNER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.4 Progress Schedule

A. CONTRACTOR shall adhere to the progress schedule established as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to OWNER for acceptance proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements. Such adjustments may only be made by a Change Order or Written Amendment.

7.5 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 OWNER for review under the circumstances described below.

1. "Or-Equal" Items: If in OWNER'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 OWNER as an "or-equal" item, in which case review and approval of the proposed item may, in OWNER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. 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 OWNER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in OWNER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow OWNER to determine that 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 OWNER from anyone other than CONTRACTOR.

c. The procedure for review by OWNER will be as set forth as supplemented in the General Requirements and as OWNER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to OWNER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not 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 work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application,

and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also 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, all of which will be considered by OWNER in evaluating the proposed substitute item. OWNER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by OWNER. CONTRACTOR shall submit sufficient information to allow OWNER, in OWNER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents.

C. Owner's Evaluation: OWNER will be allowed a reasonable time within which to evaluate each proposal or submittal made. OWNER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until OWNER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." OWNER 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. CONTRACTOR's Expense: CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

7.6 Concerning Subcontractors, Suppliers, and Others

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER), 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, or Written Amendment signed. 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 to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER 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 shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER 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 OWNER 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. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, OWNER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other 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.

7.7 Laws and Regulations

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, OWNER shall not 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 primary 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.

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 may 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.

7.8 Taxes

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

7.9 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, OWNER's Consultant, and the officers, directors, partners, employees, agents, and other consultants 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, 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 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.

7.10 Record Documents

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, 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 OWNER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to OWNER.

7.11 Safety and Protection

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. 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. All damage, injury, or loss to any property 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 OWNER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and OWNER has issued a notice to OWNER and CONTRACTOR that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

7.12 Safety Representative

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

7.13 Hazard Communication Programs

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

7.14 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 OWNER 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 OWNER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.15 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 or as OWNER and CONTRACTOR may otherwise agree in writing.

7.16 CONTRACTOR's General Warranty and Guarantee

A. CONTRACTOR warrants and guarantees to OWNER, and OWNER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective for a 12-month period beginning on the date of the final

payment. 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.

B. 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 OWNER;
2. recommendation by OWNER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by OWNER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a Notice of Acceptability by OWNER;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by OWNER.

7.17 Indemnification

To the fullest extent permitted by law the contractor shall indemnify and hold harmless the owner, and agents and employees of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself), but only to the extent caused by the negligent acts or omissions of the contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person.

In claims against any person or entity indemnified under this section, by an employee of the contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation shall not be limited by a limitation on amount or type of damages, compensation or

benefits payable by or for the contractor or a subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

8 - OWNER'S RESPONSIBILITIES

8.1 Communications to Contractor

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR directly.

8.2 Furnish Data

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

8.3 Pay Promptly When Due

A. OWNER shall make payments to CONTRACTOR within thirty (30) days of receipt of an application for payment.

8.4 Insurance

A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance.

8.5 Change Orders

A. OWNER is obligated to execute Change Orders.

8.6 Inspections, Tests, and Approvals

A. OWNER's responsibility in respect to certain inspections, tests, and approvals.

8.7 Undisclosed Hazardous Environmental Condition

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition.

8.8 Evidence of Financial Arrangements

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

9 - OWNER'S STATUS DURING CONSTRUCTION

9.1 Visits to Site

A. OWNER will make visits to the Site at intervals appropriate to the various stages of construction as OWNER deems necessary in order to observe 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, OWNER will determine, in general, if the Work is proceeding in accordance with the Contract Documents. OWNER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. OWNER's efforts will be directed toward providing a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, OWNER will keep informed of the progress of the Work and will endeavor to guard themselves against defective Work.

B. OWNER's visits and observations are subject to all the limitations on OWNER's authority and responsibility, and particularly, but without limitation, during or as a result of OWNER's visits or observations of CONTRACTOR's Work OWNER 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.

9.2 Project Representative

A. OWNER will furnish a Project Manager to assist OWNER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Project Manager and assistants will be in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not OWNER'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.

9.3 Clarifications and Interpretations

A. OWNER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as OWNER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. 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, that should be allowed as a result of a written clarification or interpretation, a Claim may be made.

9.4 Authorized Variations in Work

A. OWNER 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 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, as a result of a Field Order, a Claim may be made.

9.5 Rejecting Defective Work

A. OWNER will have authority to disapprove or reject Work which OWNER believes to be defective, or that OWNER 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. OWNER will also have authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

9.6 Determinations for Unit Price Work

A. OWNER will determine the approximate quantities and classifications of Unit Price Work performed by CONTRACTOR. OWNER will review with CONTRACTOR the OWNER's preliminary determinations on such matter. It will be CONTRACTOR's responsibility to visit the sites and become familiar with the existing conditions and the scope of the project work; verify quantities and become familiar with the surrounding conditions that may affect the cost.

9.7 Decisions on Requirements of Contract Documents and Acceptability of Work

A. OWNER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to OWNER in writing, a request for a formal decision.

B. When functioning as interpreter and judge, OWNER or OWNER's Consultant will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by OWNER with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.8 Limitations on OWNER's Authority and Responsibilities

A. Neither OWNER's authority or responsibility under this or under any other provision of the Contract Documents nor any decision made by OWNER 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 OWNER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by OWNER 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. OWNER 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. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. OWNER 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. OWNER'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 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 shall also apply to OWNER's Consultants, Resident Project Representative, and assistants.

10 - CHANGES IN THE WORK; CLAIMS

10.1 Authorized Changes in the Work

A. Without invalidating the Agreement 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 Written Amendment, 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.

10.2 Unauthorized Changes in the Work

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

10.3 Execution of Change Orders

A. OWNER and CONTRACTOR shall execute appropriate Change Orders (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by OWNER, (ii) required because of acceptance of defective Work or OWNER's correction of defective Work, 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 OWNER; 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.

10.4 Notification to Surety

A. If notice 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) is required by the provisions of any Bond to be given to a surety, 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.

10.5 Claims and Disputes

A. Notice: Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to OWNER's Consultant 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. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the OWNER's Consultant and the other party to the Contract within 60 days after the start of such event (unless OWNER's Consultant allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions. 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 OWNER's Consultant and the claimant within 30 days after receipt of the claimant's last submittal (unless OWNER allows additional time).

B. OWNER'S Consultant's decision: OWNER'S Consultant will render a formal decision within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. OWNER'S Consultant's written decision on such claim, dispute or other matter will be final and binding on the OWNER and CONTRACTOR unless:

1. An appeal from OWNER'S decision is taken within the time limits and in accordance with the dispute resolution procedures, a written notice of intent to appeal from OWNER'S written decision is delivered by OWNER or CONTRACTOR to the other and to OWNER'S Consultant within 30 days after

the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If Owner's Consultant does not render a formal decision in writing within the time stated, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted.

11- COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.1 Cost of the Work

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

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 at the Site. 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 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.

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, 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, 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.

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.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to OWNER an itemized cost breakdown together with supporting data.

11.2 Cash 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 as may be acceptable to OWNER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the 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.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by OWNER to significantly deviate from the estimated quantity of such item indicated in the Agreement; and

1. there is no corresponding adjustment with respect any other item of Work; and
2. if 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.

11.3 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. 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 CONTRACTOR.

B. 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.

12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

12.1 Change of Contract Price

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be

based on written notice submitted by the party making the Claim to the OWNER and the other party to the Contract in accordance with the provisions.

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); 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); 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, on the basis of the Cost of the Work (determined as provided) plus a CONTRACTOR's fee for overhead and profit (determined as provided).

12.2 Delays Beyond CONTRACTOR's Control

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made. 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, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.3 Delays Within CONTRACTOR's Control

A. The Contract Times will not be extended due to 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.

12.4 Delays Beyond OWNER's and CONTRACTOR's Control

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.5 Delay Damages

A. In no event shall OWNER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or

2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work.

B. Nothing bars a change in Contract Price to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible

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

13.1 Notice of Defects

A. Prompt notice of all defective Work of which OWNER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided.

13.2 Access to Work

A. OWNER, OWNER's Consultants, or 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, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.3 Tests and Inspections

A. CONTRACTOR shall give OWNER 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;
2. that costs incurred in connection with tests or inspections conducted shall be paid as provided; 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 OWNER 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 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.

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 OWNER, it must, if requested by OWNER, be uncovered for observation.

F. Uncovering Work shall be at CONTRACTOR's expense unless CONTRACTOR has given OWNER timely notice of CONTRACTOR's intention to cover the same and OWNER has not acted with reasonable promptness in response to such notice.

13.4 Uncovering Work

A. If any Work is covered contrary to the written request of OWNER, it must, if requested by OWNER, be uncovered for OWNER's observation and replaced at CONTRACTOR's expense.

B. If OWNER considers it necessary or advisable that covered Work be observed by OWNER or inspected or tested by others, CONTRACTOR, at OWNER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as OWNER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such 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. If, however, such 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 Milestones), 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.

13.5 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.

13.6 Correction or Removal of Defective Work

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by OWNER, 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).

13.7 Correction Period

A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or 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 is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) 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. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and 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.

B. 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 or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under 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.

D. CONTRACTOR's obligations are in addition to any other obligation or warranty. The provisions shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.8 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so. 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 OWNER as to reasonableness) and 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 OWNER's approval 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. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.9 OWNER May Correct Defective Work

A. If CONTRACTOR fails within a reasonable time after written notice from OWNER to correct defective Work or to remove and replace rejected Work as required by OWNER, 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 and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and 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 OWNER'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 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. 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 (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies.

14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 Schedule of Values

A. The schedule of values established as provided will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to OWNER. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.2 Progress Payments

A. Applications for Payments

1. At least seven (7) days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to OWNER 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. OWNER will, within five (5) days after receipt of each Application for Payment, either indicate in writing an approval of payment or return the Application to CONTRACTOR indicating in writing OWNER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

2. OWNER's approval of any payment requested in an Application for Payment will be based on OWNER's observations on the Site of the executed Work and on OWNER's review of the Application for Payment and the

accompanying data and schedules, that to the best of OWNER'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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work, and to 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 OWNER's responsibility to observe the Work.
3. By recommending any such payment OWNER will not thereby be deemed to have represented that: (i) 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 OWNER in the Contract Documents; or (ii) that 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 OWNER's review of CONTRACTOR's Work for the purposes of approving payments nor OWNER's approval of any payment, including final payment, will impose responsibility on OWNER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on OWNER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.
5. OWNER may refuse to recommend the whole or any part of any payment if, in OWNER's opinion, it would be incorrect to make the representations. OWNER 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 OWNER'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 Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated.

C. Payment Becomes Due

1. Within thirty days (30) after presentation of the Application for Payment to OWNER with OWNER's approval, the amount recommended will (subject to the provisions) 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 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.

2. If OWNER refuses to make payment of the full amount, OWNER must give CONTRACTOR immediate written notice 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 corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due.

14.3 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.

14.4 Substantial Completion

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that OWNER issue a certificate of Substantial

Completion. Promptly thereafter, OWNER and CONTRACTOR shall make an inspection of the Work to determine the status of completion. If OWNER does not consider the Work substantially complete, OWNER will notify CONTRACTOR in writing giving the reasons therefor. If OWNER considers the Work substantially complete, OWNER will prepare 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. If OWNER concludes that the Work is not substantially complete, OWNER will notify CONTRACTOR in writing, stating the reasons therefore. At the time of delivery of the tentative certificate of Substantial Completion OWNER will deliver to 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, aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.5 Partial Utilization

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER 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, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER that such part of the Work is substantially complete and request OWNER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request OWNER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER and CONTRACTOR shall make an inspection of that part of the Work to determine its status of completion. If OWNER does not consider that part of the Work to be substantially complete, OWNER will notify CONTRACTOR in writing giving the reasons therefor. If OWNER considers that part of the Work to be substantially complete, the provisions 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.

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

14.6 Final Inspection

A. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, OWNER will promptly make a final inspection WITH 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.

14.7 Final Payment

A. Application for Payment

1. After CONTRACTOR has, in the opinion of OWNER, 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, 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: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required; (ii) consent of the surety, if any, to final payment; and (iii) 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 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. Review of Application and Acceptance

1. If, on the basis of OWNER's observation of the Work during construction and final inspection, and OWNER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, OWNER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, OWNER will, within ten days after receipt of the final Application for Payment, process payment. At the same time OWNER will also give written notice to CONTRACTOR that the Work is acceptable subject to the provisions. Otherwise, OWNER 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 (30) days after the presentation to OWNER of the approved Application for Payment and accompanying documentation, the final payment amount will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.8 Final Completion Delayed

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if OWNER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment, and without terminating the Agreement, 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, 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 OWNER 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.

15 - SUSPENSION OF WORK AND TERMINATION

15.1 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 which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed 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.

15.2 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 as adjusted from time to time;

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of OWNER; 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 occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, 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), 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 finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. 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 as to their reasonableness and, when so approved, 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.

C. 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.

15.3 OWNER May Terminate For Convenience

A. Upon seven days written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for 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. for 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. for 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. for 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.

15.4 CONTRACTOR May Stop Work or Terminate

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or OWNER fails to act on any Application for Payment within 30 days after it is submitted, or 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 provided OWNER does not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided. In lieu of terminating the Contract and without prejudice to any other right or remedy, if OWNER 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, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions are not intended to preclude CONTRACTOR from making a Claim 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.

16 - DISPUTE RESOLUTION

16.1 Methods and Procedures

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

17 - MISCELLANEOUS

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

17.2 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.

17.3 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, and 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.

17.4 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 Agreement.

17.5 Controlling Law

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

B. For costs incurred, 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 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 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;

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.

SECTION 6 SUPPLEMENTARY CONDITIONS

1 - DEFINITIONS & TERMINOLOGY

1.1 Defined terms

A. Whenever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. OWNER's Representative – The OWNER's Representative shall be the OWNER as described in the General Conditions.

B. The CONTRACTOR shall be responsible for the notifying all property owners within and adjacent to the project twenty-four (24) hours prior to commencing construction operations. Said notice shall be in writing and in a form acceptable to the OWNER.

C. Prior to the start of the project, the CONTRACTOR shall identify to the OWNER, any tree limbs which overly and interfere with the work. Said limbs to be removed by the OWNER.

2 – AVAILABILITY OF LANDS

A. The CONTRACTOR shall not, except after written consent from proper parties, enter or occupy with men, tools, materials or equipment, any privately-owned land except on easements provided herein.

3 – SUBSURFACE AND PHYSICAL CONDITIONS

A. In the preparation of Drawings and Specifications, OWNER relied upon the following report of explorations and tests of the subsurface conditions at the site: None

B. The asphalt pavement, curbs and existing sidewalks in the work area are considered to be in good to excellent condition prior to the start of the project.

C. Any scars, nicks, gasoline, oil, etc., or other defacement or damage to the existing streets, curbs, or sidewalks will be the responsibility of the CONTRACTOR to repair.

D. Before beginning the job, the CONTRACTOR may point out and note to the inspector any specific areas that are already damaged. Thereafter, the CONTRACTOR will not be held responsible for repairs to these areas.

4 – CERTIFICATES OF INSURANCE

4.1 The following types of insurance shall be furnished for the duration of the project and Certificates of Insurance extending the provisions listed below shall be furnished to OWNER prior to or at the time the contract is executed by CONTRACTOR and before a Notice to Proceed is issued:

A. Worker's Compensation

1. Definitions:

a. Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the 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 a project, for the duration of the project.

b. Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

c. Person's providing services on the project ("subcontractor") - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person 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 service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

2. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011 (44) for all employees of the contractor providing services on the project, for the duration of the project.

3. The contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

4. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

5. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

a. a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage for all persons providing services on the project; and

b. no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage

period shown on the current certificate of coverage ends during the duration of the project.

6. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

7. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

8. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

a. provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011 (44) for all of its employees providing services on the project, for the duration of the project;

b. provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided services on the project for the duration of the project;

c. provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

d. obtain from each other person with whom it contracts, and provide to the contractor:

i. certificate of coverage, prior to the other person beginning work on the project; and

ii. a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current coverage ends during the duration of the project;

e. retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

f. notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

g. contractually require each person with whom it contracts, to perform as required, with the certificates of coverage to be provided to the person for whom they are providing services.

10. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting or classification codes and payroll amounts, and that all 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. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or civil actions.

11. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of the notice of breach from the governmental entity.

B. Automobile Liability Insurance with limits of:

1. Bodily Injury \$1,000,000 per person \$3,000,000 per accident
2. Property Damage \$300,000 per accident
3. The Insurance company must have as a minimum a current A.M. Best rating of A.

4. General Requirements for Insurance Coverage:

a. The Certificate of Insurance furnished by the Contractor shall show by specific reference that each of the foregoing items have been provided for;

b. Certificates of Insurance required for each copy of the agreement which specifically set forth evidence of all required coverage will be filed with the City prior to the City's execution of the contract. Worker's Compensation Insurance coverage must be provided to the City prior to the City's award of the contract.

c. The Certificates of Insurance furnished by the contractor as evidence of the Insurance maintained by the contractor will include a clause obligating the Insurer to give the City of Leon Valley thirty (30) days prior written notice of cancellation or any material change in the insurance coverage.

d. Waiver of Subrogation: The City of Leon Valley and the Contractor waive all rights and the rights of their respective insurance companies against each other for damages caused by fire or other perils to the extent such damages are covered by property insurance purchased by either party.

C. Comprehensive General Liability endorsed to include blanket contractual coverage:

1. Bodily Injury - \$ 2,000,000 each occurrence with a deductible of not more than \$ 2,500.

2. Property Damage Liability - \$250,000 each occurrence; \$250,000 aggregate.

3. This insurance shall:

a. Include completed operation coverage which is to be kept in force by the Contractor for a period of not less than one year after the completion of the work provided for or performed under these specifications;

b. Not be subject to any of the special property damage liability exclusions commonly referred to as the XCU exclusions pertaining to blasting or explosion, collapse, or structural damage and underground property;

c. Not be subject to any exclusion of property used by the insured or property in the case, custody or control of the insured or property as to which the insured for any purpose is exercising physical control;

d. The OWNER shall be named as an additional insured for the insurance coverage. In naming the OWNER as an additional insured on our comprehensive General Liability Insurance, the following words apply:

"Contractor shall defend, indemnify and hold harmless the City of Leon Valley from and against any liability, loss, cost and expense ("Liability") claimed by a third party (including reasonable attorney's fees and cost of defense) resulting from Contractor's performance of the Work to the extent that such Liability:

1) is attributable to bodily injury, sickness, disease or death, or to the injury to or destruction of tangible personal property; and,

2) is caused or contributed to by any neglect or fault of Contractor, its subcontractors, or their respective employees.

e. The Insurance company must have as a minimum a current A.M. Best rating of A.

f. Manufacturer's and Contractors' Liability insurance is not an acceptable substitute for Commercial Liability insurance.

D. When explosives are used, Comprehensive General Liability on an occurrence basis endorsed to include blanket contractual coverage:

a. Bodily Injury - \$ 2,000,000 each accident

- b. Property Damage Liability - \$ 300,000 each accident; \$ 3,000,000 aggregate.

E. The OWNER shall be listed as the Certificate Holder, and the OWNER shall be named as Additional Insured in all coverage described in the above paragraphs except Worker's compensation.

F. Insurance and additional Insured requirements shall apply to and be enforced equally upon authorized subcontractors as well as the CONTRACTOR.

- F. In the submission of the Certificate of Insurance, the insurance company in every case must agree to provide notice of cancellation of any insurance to the OWNER ten (10) days prior to such cancellation of policies covered by certificates.

5 – STREET AND DRIVEWAY CLOSING

5.1 After the CONTRACTOR has given the property owners not less than 24 nor more than 72 hours advance notice, he may close ½ of the driveway necessary for the day's operations. The CONTRACTOR will advise the Fire Marshall (684-3219) in advance of each closing. Suitable detour routes must be in place. At the end of each day, the closed driveway areas shall be reopened. All driveways must be accessible during the course of the work except for minimum periods and only after the CONTRACTOR has given property owners 24 hours' notice. CONTRACTOR shall not start work that would keep driveways blocked during the weekends. In the event of inclement weather, the CONTRACTOR must maintain possible access to the owners.

5.2 Barricades and Flagmen

A. The CONTRACTOR is to provide himself with necessary temporary barricades and traffic cones sufficient to alert the traffic in advance. Where lanes of traffic are to be closed, suitable barricades, warning signs and markers are to be provided by the CONTRACTOR.

1. Barricades and traffic control devices shall follow the Texas Uniform Municipal Control Devices standards to the satisfaction of the OWNER.
2. The OWNER has the right to prevent work from starting until suitable traffic control devices are provided, in the opinion of the OWNER.
3. The OWNER may direct the CONTRACTOR to provide additional traffic control devices and/or flagmen as they deem necessary to protect the public. All barricades will have one flashing light at night. All costs for traffic management and barricades will be included in the cost of the work.

6 – HAZARD COMMUNICATIONS PROGRAM

A. In compliance with Article 5182b, Texas Revised Civil Statutes, all employees are required to train and educate employees on the safe use and handling of hazardous materials that employees may be exposed to in the work place. The OWNER's Fire Chief is designated as the OWNER's HazComm

Officer. Subcontractors of the CONTRACTOR are also required to comply with the requirements of the act

1. CONTRACTORS are entitled to a copy of the OWNER's workplace chemical list to which the CONTRACTOR, its employees and agents may be exposed to in the workplace.
2. CONTRACTORS are also entitled to a copy of the MSDS sheets for any hazardous chemicals which the OWNER may have in the work
3. place. CONTRACTORS have the obligation to inform their employees and agents of all these requirements. Prior to the commencement of any work, the CONTRACTOR shall furnish the OWNER's HazComm Officer with the MSDS sheets for any hazardous chemicals brought into the OWNER's work-site that OWNER's employees will have exposure to. The CONTRACTOR shall sign the Attachment, (hazard Communications Contractor Acknowledgment) certifying receipt of this information.

7 – WATER FOR CONSTRUCTION

- A. All water required by the CONTRACTOR for his operations will be furnished without charge by OWNER at a point designated by the OWNER. The CONTRACTOR shall make all necessary connections, including valves and shall transport all water at his expense. If needed, the CONTRACTOR will be required to pay a deposit for a fire hydrant meter, which deposit will be returned when the fire hydrant meter is returned in good condition.
- B. All water furnished by the City shall be subject to the regulations of the City regarding prevention of waste and water conservation.

8 - POWER FOR CONSTRUCTION

- A. The CONTRACTOR shall make his own arrangements for electric service and shall purchase all power required for his operation.

9 - SANITARY PROVISIONS

- A. The CONTRACTOR shall establish and enforce among his employee such regulations in regard to cleanliness and disposal of garbage and waste as shall tend to prevent the inception and spread of infectious or contagious diseases and to prevent effectively the creation of a nuisance about the work on any property either public or private; and such regulations as are required by the OWNER shall be put into immediate force and effect by the CONTRACTOR. The necessary sanitary conveniences for the use of laborers on the work, properly secluded from public observation, shall be constructed and maintained by the CONTRACTOR in such a manner and at such points as shall be approved by the OWNER; and their use shall be strictly enforced by the CONTRACTOR. All sanitary laws and regulations of the State of Texas and the OWNER's jurisdiction shall be strictly complied with.

SECTION 7 WAGES AND COMPENSATION

1 - GENERAL STATEMENT

This is a 100% locally funded and competitively bid Public Works Contract and Article 5159a, Revised Civil Statutes of Texas, as amended, requires that not less than the general prevailing wage rates (minimum hourly base pay and minimum hourly fringe benefits contribution) for work of similar character be paid to CONTRACTOR and subcontractor employees. These local prevailing and adopted wage rates are derived from the most current applicable federal prevailing wage rates as published by the United States Department of Labor, Dallas, Texas pursuant to the original intent and authority of the City of Leon Valley Ordinance passed by the City Council of the City of Leon Valley. Copies of both the current Ordinance and the wage rates, and are included instruments of this Contract and full compliance with same shall be required.

Any deviation from Wage and Labor Standard Provisions compliance may be cause for City's withholding either interim or final payment to the CONTRACTOR until such deviations are properly corrected.

2 - WAGE & HOUR OFFICE, PUBLIC WORKS, RESPONSIBILITIES

A. The City of Leon Valley's Project Manager is primarily responsible for all Wage and Labor Standard Provisions investigation and enforcement and will monitor CONTRACTOR/subcontractors practices to assure the City Manager that:

1. Appropriate weekly compliance statements and payroll records are submitted to the City by the CONTRACTOR/subcontractors and that such are reviewed for compliance with Wage and Labor Standard Provisions.
2. Apprentices/trainees working on the project are properly identified by CONTRACTOR/subcontractor on payroll records and documented as being included in programs currently sanctioned by appropriate federal or state regulatory agencies.
3. Applicable Wage Determination Decisions, including any applicable modifications and related statements are posted at the work-site by the CONTRACTOR and that proper job classifications and commensurate minimum hourly base and fringe wage rates are paid.
4. Employees are periodically interviewed (at random) on each project as required.
5. That no person employed by CONTRACTOR or subcontractor is induced against his will, by any means, to give up any part of the compensation to which he is otherwise entitled.
6. That any and all periodic administrative directives to the Project Manager from the City Manager are being implemented.

3 - CLAIMS & DISPUTES PERTAINING TO WAGE RATES

Claims and disputes not promptly and routinely settled by the CONTRACTOR and/or subcontractor and employees pertaining to wage rates, or to job classifications of labor employed upon the work covered by the Contract, shall be reported by the employee in writing, within 60 calendar days of employee's receipt of any allegedly incorrect classification, wage or benefit report, to the Public Works Department, City of Leon Valley, for further investigation. Claims and disputes not reported by the employee to the Project Manager in writing within sixty (60) calendar day period shall be deemed waived by the employee for the purposes of the City administering and enforcing the City's Contract rights against the CONTRACTOR on behalf of the employee. Waivers by the employee of this City intervention shall not constitute waivers by the City or employee to independently pursue contractual rights it has against the CONTRACTOR/subcontractor for breach of Contract and other sanctions available to enforce the Wage and Labor Standard Provisions.

4 - BREACH OF WAGE & LABOR STANDARDS PROVISIONS

The City of Leon Valley reserves the right to terminate this Contract for cause if the CONTRACTOR/subcontractors shall knowingly and continuously breach, without timely restitution or cure, any of these governing Wage and Labor Standard Provisions. A knowing and un-remedied proven violation of these Wage and Labor Standard Provisions may also be grounds for debarment of the CONTRACTOR/subcontractor from future City of Leon Valley contracts for lack of responsibility, as determined by the City of Leon Valley. Recurrent violations, whether remedied or not, will be considered by the City Manager when assessing the responsibility history of potential CONTRACTOR/subcontractor prior to a competitive award of future Public Work projects. The general remedies are not exhaustive and not cumulative, for the City reserves legal and contractual rights to others specific remedies outlined herein below and in other parts of this Contract and as are allowed by applicable City of Leon Valley Ordinances, State and Federal statutes.

5 - EMPLOYMENT OF LABORERS/MECHANICS NOT LISTED IN WAGE DETERMINATION DECISION

In the event that a Contractor/subcontractor discovers that construction of a particular work element requires a certain employee classification and skill that is not listed in the wage determination decision contained in the original Contract Documents, Contractor/subcontractors will make prompt inquiry (before bidding, if possible) to the Wage and Hour Monitor identifying that class of laborers/mechanics not listed in the wage determination decision who are intended to be employed, or who are being employed, under the contract Using his best judgment and information resources available to him at the time, and any similar prior decisions, the City Manager, City of Leon Valley, shall classify said laborers/mechanics by issuing a special local wage determination decision to the Contractor or subcontractor, which shall be enforced by the Wage and Hour Monitor.

6 - OVERTIME COMPENSATION ON NON-FEDERALLY FUNDED PROJECTS

No CONTRACTOR/subcontractor contracting for any part of the non-federally funded Contract Work (except for work site related security guard services), which may require or involve the employment of laborers/mechanics, shall require or permit any laborer/mechanic in any seven (7) calendar day work period in which he/she is

employed on such work, to work in excess of 40 hours in such work period, unless said laborer/mechanic receives compensation at a rate not less than one and one-half times the basic hourly rate of pay for all hours worked in excess of 40 hours in a seven (7) calendar day work period. Any applicable fringe benefits must be paid for straight time and overtime; however, fringe benefits are not included when computing the overtime rate.

7 - PAYMENT OF CASH EQUIVALENT FRINGE BENEFITS

A. All laborers/mechanics employed to construct the work governed by this Contract shall be paid not less than weekly the full amount of wages due (minimum hourly base pay and any applicable minimum hourly fringe benefit contribution for all hours worked, including overtime) for the immediately preceding pay period, computed at wage and fringe rates not less than those contained in the wage determination decision included in this Contract. Only payroll deductions as are mandated by state or federal law and those legal deductions previously approved in writing by the employee, or as are otherwise permitted by state or federal law, may be withheld by the CONTRACTOR/subcontractor.

B. Should the CONTRACTOR/subcontractor subscribe to fringe benefit programs for employees, such programs shall be fully approved by the City in adopting a previous United States Department of Labor decision on such fringe benefit programs or by applying DOL criteria, in rendering a local decision on the adequacy of the fringe benefit programs. The approved programs shall be in place at the time of City Contract execution and provisions thereof disclosed to the Wage and Hour Monitor, City of Leon Valley, for legal review prior to project commencement.

C. Regular CONTRACTOR/subcontractor contributions made to, or costs incurred for, approved fringe benefit plans, funds or other benefit programs that cover periods of time greater than the one week payroll period (e.g., monthly or quarterly, etc.) Shall be prorated by the CONTRACTOR/subcontractor on weekly payroll records to reflect the equivalent value of the hourly and weekly

C. The CONTRACTOR/subcontractor is allowed to pay a minimum hourly cash equivalent of any applicable minimum hourly fringe benefits listed in the wage determination decision, in lieu of the contribution of benefits to a permissible fringe benefit plan, for all hours worked, including overtime. An employee is not allowed to receive less than the minimum hourly basic rate of pay specified in the wage determination decision.

8 - WORK CONDUCTED ON HOLIDAYS – NON-FEDERALLY FUNDED PROJECTS

If a laborer/mechanic is employed in the normal course and scope of his or her work on the job site on New Year's Day, Martin Luther King Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, or Christmas Day, or the calendar days observed as such in any given year, work shall be paid for at a no less than one and one half times the regular minimum hourly base pay regardless of the total number of hours the laborer/mechanic has accumulated during the pay period.

9 - UNDERPAYMENT OF WAGES OR SALARIES

A. When a "full investigation" (as called for in and as construed under Article 5159a, Section 2, and as further generally described in an administrative directive to the City's Project Manager from the City Manager entitled "Conducting Wage and Labor Standards Investigations on 100% Locally-funded City Construction Project", as may be amended) evidences' underpayment of wages by CONTRACTOR or subcontractor to laborers/mechanics employed upon the work covered by the Contract, the City of Leon Valley, in addition to such other rights as may be afforded it under State and/or Federal law and/or this Contract, shall withhold from the CONTRACTOR, out of any payments (interim progress and/or final) due the CONTRACTOR, so much thereof as the City of Leon Valley may consider necessary to secure ultimate payment by the appropriate party to such laborers/mechanics, of full wages required by the Contract, plus a possible penalty (See B. below). The amount so withheld, excluding any possible penalty to be retained by the City, may be disbursed at an appropriate time after "full investigation" by the City of Leon Valley, for and on behalf of the CONTRACTOR/subcontractor (as may be appropriate), to the respective laborers/mechanics to whom the same is due, or on their behalf to fringe benefit plans, funds, or programs for any type of minimum fringe benefits prescribed in the applicable wage determination decision.

B. Article 5159a, Revised Civil Statutes of Texas, as amended, states that CONTRACTOR shall forfeit as a penalty to the City of Leon Valley the sum of sixty dollars (\$60.00) for each calendar day, or portion thereof, for each laborer, workman, or mechanic, who is paid less than the said stipulated rate for any work done under this Contract whether by the CONTRACTOR himself, or by any subcontractor working under him. Pursuant to and supplemental of this statutory authority, the City of Leon Valley and the CONTRACTOR/subcontractor contractually acknowledges and agrees that said sixty dollars (\$60.00) a statutory penalty shall be construed by and between the City of Leon Valley and the CONTRACTOR/subcontractor as liquidated damages, and not as a penalty, and will apply to any violations herein, resulting from CONTRACTOR/subcontractor underpayment violations.

D. If unpaid or underpaid workers cannot be located by the CONTRACTOR or the City after diligent efforts to accomplish same, unpaid or underpaid wages shall be reserved by the City in a special "unfound worker's account" established by the City of Leon Valley, for such employees. If after one (1) year from the final acceptance of the project by the City, workers still cannot be located, in order that the City can make effective interim re-use of the money, such wages, and any associated liquidated damages may be used to defray actual costs incurred by the City in attempting to locate said workers, and any remaining monies may then revert back to the City's original funding source for the project. However, unpaid or underpaid workers for whom money was originally reserved are eligible to claim recovery from the City for a period of not to exceed three (3) years from the final acceptance of the project by the City. Recovery after expiration of the three (3) year period is prohibited.

10 - POSTING WAGE DETERMINATION DECISIONS AND NOTICE TO LABORERS'/ MECHANICS' STATEMENTS

The applicable wage determination decision as described in the "General Statement" (and as specifically included in each project contract), outlining the various workers' classifications and mandatory minimum wages and minimum hourly fringe benefits deductions, if any, of laborers/mechanics employed and to be employed upon the work covered by this Contract, shall be displayed by the CONTRACTOR/subcontractor at the site of work a conspicuous and prominent public place, readily and routinely accessible to workmen for the duration of the project. In addition, the CONTRACTOR / subcontractor agrees with the contents of the following statement, and shall display same, in English and Spanish, near the display of the wage determination decision at the site of work:

"NOTICE TO LABORERS/MECHANICS

Both the City of Leon Valley and the CONTRACTOR/subcontractor agree that you must be compensated with not less than the minimum hourly base pay and minimum hourly fringe benefit contribution in accordance with the wage rates publicly posted at this job site, and as are applicable to the classification of work you perform.

Additionally, you must be paid not less than one and one-half times your basic hourly rate of pay for any hours worked over 40 in any seven (7) calendar day work period, and for any work conducted on New Year's Day, Martin Luther King Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day or the calendar days observed as such in any given year.

Apprentice and trainee hourly wage rates and ratios apply only to apprentices and trainees recognized under approved Federal, or State, apprenticeship training programs registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

If you believe that your employer is not paying the posted minimum wage for the type of work you do, you must make direct inquiry to the employer and inquire in writing, within 60 days calendar days of your receipt of any allegedly incorrect wage or benefit check or report, to the City of Leon Valley Wage & Hour Monitor, 6400 El Verde, Leon Valley, Texas 78238.

It is mandatory that you promptly file written inquiry of any allegedly incorrect wage or benefit checks or reports with the City of Leon Valley Project Manager within the sixty (60) calendar day period, so that you do not waive your potential right of recovery under the provisions of the City of Leon Valley Public Works Contract that governs this project."

Both the City of Leon Valley and the CONTRACTOR/subcontractor agree that no laborer/mechanic who files a complaint or inquiry concerning alleged underpayment of wages or benefits, shall be discharged by the employer, or in other manner be discriminated against by the employer, for filing such complaint or inquiry.

11 - PAYROLLS & BASIC PAYROLL RECORDS

A. The CONTRACTOR and each subcontractor shall prepare payroll reports in accordance with the "General Guideline" instructions furnished by the Wage & Hour Monitor of the City of Leon Valley. Such payroll submittals shall contain the name and address of each such employee, his correct labor classification, rate of pay, daily and weekly number of hours worked, any deductions made, and actual basic hourly and fringe benefits paid. The CONTRACTOR shall submit payroll records each week and no later than seven (7) working days following completion of the work week being processed to the Project Manager, City of Leon Valley. These payroll records shall include certified copies of all payrolls of the CONTRACTOR and of his subcontractors, it being understood that the CONTRACTOR shall be responsible for the submission and general mathematical accuracy of payroll from all of his subcontractors. Each such payroll submittal shall be on forms deemed satisfactory to the City's Project Manager and shall contain a "Weekly Statement of Compliance", as called for by the Contract Documents. Such payrolls will be forwarded to Public Works, Project Manager, City of Leon Valley, 6400 El Verde, Leon Valley, Texas 78238.

B. Copies of payroll submittals and basic supporting payroll records of the CONTRACTOR/subcontractors accounting for all laborers/mechanics employed under the work covered by this Contract, shall be maintained by CONTRACTOR/subcontractor during the course of the work, and preserved for a period of three (3) years after completion of the project. The CONTRACTOR/subcontractor shall maintain records which demonstrate: any CONTRACTOR commitment to provide fringe benefits to employees as may be mandated by the applicable wage determination decision; that the plan or program is adjudged financially responsible by the appropriate approving authority, (i.e. United States Department of Labor, United States Department of Treasury, etc.); and that the provisions, policies, certificates, and description of benefits of the plan or program as may be periodically amended, have been clearly communicated in a timely manner and in writing, to the laborers/mechanics affected prior to their performing work on the project.

C. The CONTRACTOR/subcontractor shall make the above records available for inspection, copying, or transcribing by authorized representatives of the City of Leon Valley at reasonable times and locations for purposes of monitoring compliance with this Contract.

12 - LABOR DISPUTES

The CONTRACTOR/subcontractor shall immediately notify the City Manager or his designated representative of any actual or impending CONTRACTOR/subcontractor labor dispute which may affect, or is affecting, the schedule of the CONTRACTOR's or any other CONTRACTOR's or subcontractor's work. In addition, the CONTRACTOR/subcontractor shall consider all appropriate measures to eliminate or minimize the effect of such labor disputes on the schedule, including but not limited to such measures as: promptly seeking injunctive relief if appropriate; seeking appropriate legal equitable actions or remedies; taking such measures as establishing a reserved gate, as appropriate; if reasonable feasible, seeking other sources of supply or service; and any other measures that may be appropriately utilized to mitigate or eliminate the job site and scheduling effects of the labor dispute.

13 - COMPLAINTS, PROCEEDINGS, OR TESTIMONY BY EMPLOYEES

No laborers/mechanics to whom the wage, salary, or other labor standard provisions of this Contract are applicable shall be discharged, or in any other manner discriminated against by the CONTRACTOR/subcontractors, because such an employee has filed any formal inquiry or complaint or instituted or caused to be instituted, any legal or equitable proceeding, or has testified, or is about to testify, in any such proceeding under or relating to the wage and labor standards applicable under this Contract.

14 - "ANTI-KICKBACK" PROVISION

No person employed in the construction or repair of any City of Leon Valley Public Works Project shall be induced, by any means, to give up to any CONTRACTOR/subcontractor or public official or employee, any part of the hourly and/or fringe benefit compensation to which he or she is otherwise entitled.

15 - "FALSE INFORMATION"

Any person employed by the CONTRACTOR/subcontractor in the construction or repair of any City of Leon Valley Public Works Project, who is proven to have knowingly and willfully falsified, concealed or covered up by any deceptive trick, scheme, or device a material fact, or made any false, fictitious or fraudulent statement or representation, or made or used any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be permanently removed from the job site by CONTRACTOR/subcontractor. The City of Leon Valley reserves the right to terminate this Contract for cause as a result of serious and uncured violations of this provision.

16 - JOB SITE CONDITIONS

CONTRACTORS/subcontractors will not allow any person employed for the project to work in surroundings or under construction conditions which are unsanitary, unhealthy, hazardous, or dangerous as governed by industry standards and appropriate local, state and federal statutes, ordinances, and regulatory guidelines.

17 - EMPLOYMENT OF CERTAIN PERSONS PROHIBITED

A. The CONTRACTOR/subcontractor shall knowingly only employ persons of appropriate ages commensurate with the degree of required skill, strength, maturity and judgment associated with the activity to be engaged in, but not in less than the age of 14 years, as governed by Chapter 51 "Employment of Children", Texas Labor code, (Vernon's Texas Code Annotated) (as may be amended), and Texas Department of Labor and Standards rulings and interpretations associated with that statute. It is hereby noted that in some circumstances generally governed by this section, a federal statute (see: Fair Labor Standards Act, 29 USCS Section 212; Volume 6A of the Bureau of National Affairs Wages Hour Manual at Paragraph 96:1; "Child Labor Requirements in Non-agricultural Occupations" WH Publication 1330, July 1978 as may be amended), could pre-empt the Texas Statute and therefore be the controlling law on this subject. The CONTRACTOR/subcontractor should seek classification from state and federal agencies and legal counsel when hiring adolescent employees for particular job classifications.

B. Prohibited persons not to be employed are also those persons who, at the time of employment for this Contract, are serving sentence in a penal or correctional institution, except that prior approval by the City Manager is required to employ any person participating in a supervised work release or furlough program that is sanctioned by appropriate state and federal correctional agencies.

C. The CONTRACTOR/subcontractors shall be responsible for compliance with the provisions of the "Immigration Reform and Control Act of 1986" Public Law 99-603, and any related State enabling or implementing statutes, especially as they in combination apply to the unlawful employment of aliens and unfair immigration-related employment practices affecting this Contract.

18 - PROVISIONS TO BE INCLUDED IN SUBCONTRACTS

The CONTRACTOR shall cause these Wage and Labor Standard Provisions, or reasonably similar contextual adaptations hereof, and any other appropriate state and federal labor provisions, to be inserted in all subcontracts relative to the work to bind subcontractors to the same Wage and Labor Standards as contained in these terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors or sub-tier subcontractors, and to give the CONTRACTOR similar, if not greater, general contractual authority over the subcontractor, or sub-tier subcontractors, as the City of Leon Valley may exercise over the CONTRACTOR.

19 - GENERAL INDEPENDENT CONTRACTOR CLAUSE

This agreement does not create an employer relationship between parties. It is parties' intention that the CONTRACTOR will be an independent CONTRACTOR and not the City of Leon Valley employee for all purposes, including, but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, Texas workers compensation law and Texas unemployment insurance law. The CONTRACTOR will retain sole and absolute discretion in the judgment of the manner and means of carrying out the CONTRACTOR's activities and responsibilities hereunder. The CONTRACTOR agrees that it is a separate and independent enterprise from the City of Leon Valley, that it has a full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This agreement shall not be construed as creating any joint employment relationship between the CONTRACTOR and the City of Leon Valley and the City of Leon Valley will not be liable for any obligation incurred by the CONTRACTOR, including, but not limited to unpaid minimum wages, and/or overtime premiums.

20 - HOT GOODS CLAUSE

The CONTRACTOR hereby certifies that the execution of the work he will perform, that he will comply with all applicable provisions of Sections 6, 7 and 12 of the Fair Labor Standards Act of 1938, as amended, and that there will be no violations of the "hot goods" or "hot cargo" provisions of the Act involving restrictions on the use of the underage employees.

21 - PROTECTION OF LIVES AND HEALTH

The CONTRACTOR shall comply with the U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (Public Law 91-596 and all subsequent amendments) and under Section 107 of the Contract Work Hours and Safety Standards Act (Public Law 91-54 and all subsequent amendments).

The CONTRACTOR shall have a competent person or persons, as required under the Occupational Safety and Health Act, on the site to inspect the work and to supervise the conformance of the CONTRACTOR's operations with the regulations of the Act.

This project is subject to all of the Safety and Health Regulations CFR 29, Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974, and CFR 29, Part 1910 and all subsequent amendments of General Industry Safety and Health Regulations identified as applicable to construction. CONTRACTORS are urged to become familiar with the requirements of these regulations.

22 - ANTI-DISCRIMINATION IN EMPLOYMENT

A. The CONTRACTOR and/or any subcontractor(s), if permitted, certifies complete compliance with the Federal Civil Rights Law and the Americans with Disabilities Act, agreeing to nondiscrimination based on race, age, color, religion, disability, gender, ancestry, national origin, or place of birth.

In employment practices, programs and services shall include but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other compensation; and selection for training, including apprenticeship.

B. The CONTRACTOR shall 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, age, color, religion, disability, gender, ancestry, national origin, or place of birth.

SECTION 8 OTHER CONDITIONS

1 - MATERIAL SUBMITTAL

The Contractor will supply three copies of submittal data for approval prior to ordering any material for the project.

2 - SCHEDULE OF WORK

At the Preconstruction Conference, the sequence of work will be proposed by the Contractor to the City and is subject to City approval. Work will be allowed from 7:30 a.m. to 6:00 p.m., Monday through Friday. No work on Saturday, Sunday, or City Holidays will be permitted, unless approved by the Director of Public Works. The contractor will not receive a notice to proceed with the work until utility and City preparation work is complete.

3 - SEQUENCE OF WORK

The Contractor shall proceed with work in a manner which completes the work in one area before advancing to another area. The Contractor may have under construction several sites so as to be efficient; however, the sequence must proceed in an orderly manner to completion. The Contractor's sequence must also include traffic flow consideration. Sequences of work which do not include orderly progression through these stages before advancing to additional work areas will not be approved.

4 - NOTIFICATION

It shall be the Contractor's responsibility to notify all property owners adjacent to the project seven (7) days prior to the starting of construction operations. This notice shall be in writing in a form acceptable to the City. Additionally, 48 hours prior to beginning work, notify the following departments: U.S. Post Office (210) 641-0248, N.I.S.D. Transportation (210) 695- 3800, Waste Management Co. (210) 368-5005, Leon Valley Dispatch (210) 684-3215.

5 - STREET CLOSING

The contractor is to properly barricade each segment of street to be worked on after giving property owners no more than 72-hour notice, but no less than 24-hour notice. Barricades will not be set before 7:30 a.m. Each street shall be opened at the end of day.

6 - BARRICADES AND FLAGMEN

The Contractor is to provide himself with necessary temporary barricades and traffic cones sufficient to alert the traffic in advance. If the present lanes of traffic are to be closed, suitable barricades, warning signs and markers are to be provided by the Contractor. Unless otherwise approved by the City, barricades for this work shall be provided by a barricade company familiar with the requirements of TMUTCD.

Barricades and traffic control devices including advance warning signs etc, shall follow the Texas Uniform Municipal Control Devices standards to the satisfaction of the City must be utilized. The City has the right to prevent work from starting until suitable traffic control devices are provided, in the opinion of the City. Included advance warning signs.

The City may direct the Contractor to provide additional traffic control devices and/or flagmen as they deem necessary to protect the public. All barricades will have one flashing light at night. All cost for traffic management and barricades will be included in the cost of the work.

7 - WATER FOR CONSTRUCTION

All water required by the Contractor for his operations will be available without charge at the City Public Works yard. The Contractor shall make all necessary connections and shall transport all water at his own expense. If needed, the Contractor will be required to pay a deposit for a fire hydrant meter, which deposit will be returned when the fire hydrant meter is returned in good condition.

8 - BID QUANTITIES

The Owner may elect to increase or decrease the amount of work units authorized to be completed as much as 25% without affecting the unit price of the project. The Contractor agrees that the final contract amount will be computed by extension of these unit prices and the quantity of work authorized and accepted by the Owner.

9 - UTILITY AND SIGN ADJUSTMENT

The Contractor is required to make all arrangements and coordinate with the various utility companies for preserving and adjusting the various valves and manholes on the project. The City of Leon Valley shall adjust all water valves and sewer manholes. Those valves and manholes which do not belong to the City of Leon Valley will be adjusted by the utility owner. In every case, the contractor shall protect these utilities from being damaged.

10 - WATER VALVE COVERS, MANHOLES, AND STREET REFLECTORS

The Contractor shall protect existing water valve covers, manhole lids, and street reflectors from being coated by work. Before completion of the work, the contractor shall remove any material placed over these facilities.

11 - INSPECTION

This work will be inspected by the City and all change orders or communication concerning the work shall be directed to the City.

12 - DAMAGE TO EXISTING STREETS

The asphalt pavement, curbs and existing sidewalks in the work area are considered to be in good to excellent condition prior to start of the project.

Any scars, nicks, gasoline, oil, etc., or other defacement or damage to the existing streets, curbs or sidewalks will be a responsibility of the contractor to repair.

Before beginning the job, the contractor may point out and note to the inspector any specific areas that are already damaged. Thereafter, the contractor will not be held responsible for repairs to these areas.

13 - CONDITION OF THE SITE

Site of the proposed work will be pointed out to the prospective bidders by the City Public Works Director. The Contractor shall provide his own material and equipment yard at his cost. Upon completion of the work, all excess materials shall be removed from the site by the Contractor and the area around the work shall be returned to its original condition. Disposal sites will be a responsibility of the Contractor.

14 - PROTECTION OF WORK, PROPERTY AND PERSONS

The Contractor shall, at all times, safely guard the Owner's property from injury or loss in connection with this Contract. He shall at all times safely guard and protect his own work and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such is caused directly by errors contained in the Contract, or by the Owner or his duly authorized representatives.

The Contractor shall take all necessary precautions for the safety of employees on the work and shall comply with all applicable provisions of Federal, State and Municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. He shall erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of workmen and the public, and shall post danger signs warning against the hazards created by such features of construction as protruding nails, hoists, well holes, elevator hatchways, scaffolding, window openings, stairways, trenches and other excavations, and falling materials, and he shall designate a responsible member of his organization on the work site whose duty shall be the prevention of accidents. The name and position of any person so designated shall be reported to the Owner by the Contractor. The person so designated shall be available by phone during non-working hours.

In case of an emergency which threatens loss or injury of property and/or safety of life, the Contractor will be allowed to act without previous instructions from the Owner in a diligent manner. He shall notify the Owner immediately thereafter.

15 - CARE AND PROTECTION OF PROPERTY

The Contractor expressly undertakes at his own expense: To assume full responsibility for the preservation of all public and private property and use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar to or equal to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the Owner. No representations are made concerning the conditions, locations or state of repair of existing sewers, drains, water mains and other underground structures;

To store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractor;

To provide suitable storage facilities for all materials which are liable to injury by exposure to weather, theft, and breakage or otherwise;

To place upon the work, or any part thereof, only such loads as are consistent with safety of that portion of the work;

To clean up frequently all refuse, rubbish, scrap materials and debris caused by his operations to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;

To remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations and to put the site in a neat, orderly condition before final payment; to effect all cutting, fitting or patching of his work required to make the same conform to the plans and specifications and, except with the consent of the Owner, not to cut or otherwise alter the work of any other contractor.

The Contractor shall not, except after written consent from proper parties, enter or occupy with men, tools, materials or equipment, any privately owned land except on easements provided herein.

16 - PROTECTION OF LIVES AND HEALTH

The Contractor shall comply with the U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (Public Law 91 - 596 and all subsequent amendments) and under Section 107 of the Contract Work Hours and Safety Standards Act (Public Law 91-54 and all subsequent amendments).

The Contractor shall have a competent person or persons, as required under the Occupational Safety and Health Act, on the site to inspect the work and to supervise the conformance of the Contractor's operations with the regulations of the Act. This project is subject to all of the Safety and Health Regulations (CFR 29, Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974, and CFR 29, Part 1910 and all subsequent amendments of General Industry Safety and Health Regulations identified as applicable to construction. Contractors are urged to become familiar with the requirements of these regulations.

17 - PROJECT CONSTRUCTION SITE

The contractor shall provide his own temporary yard for stock pile of materials and storage of vehicle. City property may not be available for this purpose.

AN ORDINANCE REPEALING AND REPLACING ORDINANCE NUMBER 2014-02-10-02 PROVIDING FOR A MINIMUM PREVAILING WAGE BY ADOPTING PREVAILING WAGE RATES FOR PUBLIC WORKS CONSTRUCTION AS DETERMINED BY THE U.S. DEPARTMENT OF LABOR, AND OTHER MATTERS IN CONNECTION THEREWITH.

WHEREAS, the City of Leon Valley (the "City") is required by Chapter 2258 of the Texas Government Code to determine the prevailing rate of per diem, and a prevailing rate for legal holiday and overtime work, in the locality for each craft and type of worker needed to perform a contract for public works construction; and

WHEREAS, Chapter 2258 allow municipalities to use prevailing wage rates as determined by the U.S. Department of Labor in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a, et seq.), and its subsequent amendments, in lieu of conducting wage rate surveys and compiling wage rate schedules;

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LEON VALLEY, TEXAS THAT:

Section 1. The City Council hereby elects to use the prevailing wage rates as determined by the U.S. Department of Labor in accordance with the Davis-Bacon Act (40 U.S.C Section 276a, et seq.), and its subsequent amendments, in lieu of conducting wage rate surveys and compiling wage rate schedules.

Section 2. If and when the U.S. Department of Labor's wages rate schedule may be revised, updated, or amended, such revisions, updates and amendments shall automatically apply for the construction of public works in the City, but shall not be applied or enforced retroactively to any public works project for which a formal agreement has been executed prior to the revision, update or amendment.

Section 3. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Ordinance are hereby repealed to the extent of such conflict, and the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 4. All Ordinances or parts thereof, which are in conflict or inconsistent with any provision of this Ordinance is hereby repealed to the extent of such conflict, and the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 5. This Ordinance shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 6. If any provision of this Ordinance or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Ordinance and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City Council hereby declares that this Ordinance would have been enacted without such invalid provision.

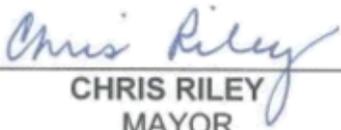
Section 7. It is officially found, determined, and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Ordinance, was given, all as required by Chapter 551, Texas Government Code, as amended.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LEON VALLEY, TEXAS:

That Ordinance Number 2014-02-10-02 is hereby amended by Ordinance No. 16-005 repealing the replacing the existing ordinance and exhibits.

PASSED, ADOPTED AND APPROVED by the City Council of the City of Leon Valley this the 16th day of February, 2016.

APPROVED


CHRIS RILEY
MAYOR

Attest:


SAUNDRA PASSAILAIGUE, TRMC
City Secretary

Approved as to Form:


ROXANN PAIS COTRONEO
City Attorney



"General Decision Number: TX20200007 01/03/2020

Superseded General Decision Number: TX20190007

State: Texas

Construction Types: Heavy and Highway

Counties: Atascosa, Bandera, Bastrop, Bell, Bexar, Brazos, Burleson, Caldwell, Comal, Coryell, Guadalupe, Hays, Kendall, Lampasas, McLennan, Medina, Robertson, Travis, Williamson and Wilson Counties in Texas.

HEAVY (excluding tunnels and dams, not to be used for work on Sewage or Water Treatment Plants or Lift / Pump Stations in Bell, Coryell, McClennon and Williamson Counties) and HIGHWAY Construction Projects

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 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, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 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 calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date
0 01/03/2020

* SUTX2011-006 08/03/2011

Rates Fringes

CEMENT MASON/CONCRETE

FINISHER (Paving and Structures).....	\$ 12.56
ELECTRICIAN.....	\$ 26.35
FORM BUILDER/FORM SETTER	
Paving & Curb.....	\$ 12.94
Structures.....	\$ 12.87
LABORER	
Asphalt Raker.....	\$ 12.12
Flagger.....	\$ 9.45
Laborer, Common.....	\$ 10.50
Laborer, Utility.....	\$ 12.27
Pipelayer.....	\$ 12.79
Work Zone Barricade Servicer.....	\$ 11.85
PAINTER (Structures).....	\$ 18.34
POWER EQUIPMENT OPERATOR:	
Agricultural Tractor.....	\$ 12.69
Asphalt Distributor.....	\$ 15.55
Asphalt Paving Machine.....	\$ 14.36
Boom Truck.....	\$ 18.36
Broom or Sweeper.....	\$ 11.04
Concrete Pavement Finishing Machine.....	\$ 15.48
Crane, Hydraulic 80 tons or less.....	\$ 18.36
Crane, Lattice Boom 80 tons or less.....	\$ 15.87
Crane, Lattice Boom over 80 tons.....	\$ 19.38
Crawler Tractor.....	\$ 15.67
Directional Drilling Locator.....	\$ 11.67
Directional Drilling Operator.....	\$ 17.24
Excavator 50,000 lbs or Less.....	\$ 12.88
Excavator over 50,000 lbs...\$	17.71
Foundation Drill, Truck Mounted.....	\$ 16.93
Front End Loader, 3 CY or Less.....	\$ 13.04
Front End Loader, Over 3 CY.\$	13.21
Loader/Backhoe.....	\$ 14.12
Mechanic.....	\$ 17.10
Milling Machine.....	\$ 14.18
Motor Grader, Fine Grade...\$	18.51
Motor Grader, Rough.....\$	14.63
Pavement Marking Machine...\$	19.17
Reclaimer/Pulverizer.....\$	12.88
Roller, Asphalt.....\$	12.78
Roller, Other.....\$	10.50
Scraper.....\$	12.27
Spreader Box.....\$	14.04

Trenching Machine, Heavy....\$ 18.48

Servicer.....\$ 14.51

Steel Worker

Reinforcing.....\$ 14.00

Structural.....\$ 19.29

TRAFFIC SIGNAL INSTALLER

Traffic Signal/Light Pole
Worker.....\$ 16.00

TRUCK DRIVER

Lowboy-Float.....\$ 15.66

Off Road Hauler.....\$ 11.88

Single Axle.....\$ 11.79

Single or Tandem Axle Dump

Truck.....\$ 11.68

Tandem Axle Tractor w/Semi

Trailer.....\$ 12.81

WELDER.....\$ 15.97

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

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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 www.dol.gov/whd/govcontracts.

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 Regional Office for the area in which the survey was conducted because those Regional Offices have 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.

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END OF GENERAL

ATTACHMENT B BID FORM

PROJECT IDENTIFICATION:

**City of Leon Valley
Bid # 2020-03**

STREET MAINTENANCE YEAR 3

THIS BID IS SUBMITTED TO:

City of Leon Valley
Public Works Director
6400 El Verde
Leon Valley, TX 78238

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

2.1 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. The Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

3.1 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by OWNER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.1 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any 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 individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

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

6.1 Bidder agrees that the Work will be substantially completed and completed and ready for final payment in accordance with the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.2 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

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

- A. Required Bid Bond;
- B. Required bidder qualifications statement with supporting data.
- C. Evidence of Workers Compensation Insurance

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

SUBMITTED on _____, 2020.

State Contractor License No. _____. (If applicable) If Bidder is:

An Individual

Name (typed or clearly printed): _____

By: _____ (SEAL)
(Individual's signature)

Doing business as: _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Partnership

Partnership Name: _____(SEAL)

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or clearly printed): _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Corporation

Corporation Name: _____(SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or clearly printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____
(Signature of Corporate Secretary)

Business address: _____

Phone No.: _____ FAX No.: _____

Date of Qualification to do business is _____

A Joint Venture

Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or clearly printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Joint Venturer Name: _____ (SEAL)

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or clearly printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Phone, Fax number, email, and mail address for receipt of official communications:

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

UNIT PRICE BID ITEMS

Bid # 2020-03 STREET MAINTENANCE YEAR 3

BASE BID

Amounts are to be shown in both words and numeric figures. In case of discrepancy, the amount shown in words will govern.

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
100.1	MOBILIZATION	1	LS	\$	\$

Price/LS _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
100.2	INSURANCE AND BONDS	1	LS	\$	\$

Price/LS _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
101.1	PREPARING ROW	1	LS	\$	\$

Price/LS _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
103.3	REMOVE CONCRETE SIDEWALKS & DRIVEWAYS	307	SF	\$	\$

Price/SF _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
203.1	TACK COAT	786	GAL	\$	\$

Price/GAL _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH)	7,865	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
208.1	SALVAGING HAULING AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (DEPTH VARIES)	7,865	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
230.1	HMAC PAVEMENT STRUCTURE REPAIR (TYPE B) (8" COMP DEPTH)	805	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
502.1	CONCRETE SIDEWALK	90	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
502.1	CONCRETE SIDEWALK (CURB RAMP MODIFIED)	33	EA	\$	\$

Price/EA _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
530.1	BARRICADES, SIGNS & TRAFFIC HANDLING	1	LS	\$	\$

Price/LS _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
536.7	24-INCH WIDE WHITE LINE	222	LF	\$	\$

Price/LF _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
540	TEMPORARY EROSION, SEDIMENTATION & WATER POLLUTION PREVENTION AND CONTROL	1	LS	\$	\$

Price/LS _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
3028	FRICTIONAL ASPHALTIC SURFACE PRESERVATION TREATMENT	57,650	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

Total Base Bid to be shown in both words and numeric figures.

In case of discrepancy, the amount shown in words will govern.

Total Base Bid: _____

_____ Dollars

and _____ cents

ADDITIVE ALTERNATE BID

Amounts are to be shown in both words and numeric figures. In case of discrepancy, the amount shown in words will govern.

ADDITIVE ALTERNATE BID NO. 1 – BALKY ST

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
203.1	TACK COAT	538	GAL	\$	\$

Price/GAL _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP DEPTH)	5,376	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
208.1	SALVAGING, HAULING AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (DEPTH VARIES)	5,376	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
502.1	CONCRETE SIDEWALK (CURB RAMP MODIFIED)	5	EA	\$	\$

Price/EA _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
536.7	24-INCH WIDE WHITE LINE	15	LF	\$	\$

Price/LF _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ADDITIVE ALTERNATE BID NO. 2 – HOOFS LN

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
203.1	TACK COAT	410	GAL	\$	\$

Price/GAL _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP DEPTH)	4,099	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
208.1	SALVAGING, HAULING AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (DEPTH VARIES)	4,099	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
502.1	CONCRETE SIDEWALK (CURB RAMP MODIFIED)	6	EA	\$	\$

Price/EA _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ADDITIVE ALTERNATE BID NO. 3 – POSS RD

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
203.1	TACK COAT	365	GAL	\$	\$

Price/GAL _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP DEPTH)	3,647	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
208.1	SALVAGING, HAULING AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (DEPTH VARIES)	3,647	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
502.1	CONCRETE SIDEWALK (CURB RAMP MODIFIED)	1	EA	\$	\$

Price/EA _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
536.7	24-INCH WIDE WHITE LINE	15	LF	\$	\$

Price/LF _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ADDITIVE ALTERNATE BID NO. 4 – TROTTER LN

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
203.1	TACK COAT	355	GAL	\$	\$

Price/GAL _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP DEPTH)	3,554	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
208.1	SALVAGING, HAULING AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (DEPTH VARIES)	3,554	SY	\$	\$

Price/SY _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
502.1	CONCRETE SIDEWALK (CURB RAMP MODIFIED)	6	EA	\$	\$

Price/EA _____
dollars

and _____ cents

Total Price _____
dollars

and _____ cents

Total Additive Alternate Bids to be shown in both words and numeric figures.

In case of discrepancy, the amount shown in words will govern.

Total Additive Alternate Bid No. 1: _____

Dollars

and _____ **cents**

Total Additive Alternate Bid No. 2: _____

Dollars

and _____ **cents**

Total Additive Alternate Bid No. 3: _____

Dollars

and _____ **cents**

Total Additive Alternate Bid No. 4: _____

Dollars

and _____ **cents**

Total Base Bid + Additive Alternate Bid Nos. 1-4 to be shown in both words and numeric figures.

In case of discrepancy, the amount shown in words will govern.

Total Base Bid + Additive Alternate Bid Nos. 1-4: _____

Dollars

and _____ **cents**

ATTACHMENT C BID BOND

BIDDER (Name and Address):

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

OWNER (Name and Address):

City of Leon Valley
6400 El Verde
Leon Valley, TX 78238

BID

BID DUE DATE: 10:00 a.m., June 18, 2020

City of Leon Valley

BID #2020-03

STREET MAINTENANCE YEAR 3

BOND

BOND AMOUNT: 5% of the total bid price.

BOND NUMBER: _____

DATE (not later than Bid due date): _____

PENAL SUM: _____ (Words) _____ (Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

(SEAL)
Bidder's Name and Corporate Seal

(SEAL)
Surety's Name and Corporate Seal

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: (1) Above addresses are to be used for giving required notice.
(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Bidder the penal sum set forth on the face of this Bond.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 OWNER accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents, or

3.2 All Bids are rejected by OWNER, or

3.3 OWNER fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required).

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by OWNER and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power or Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer or proposal as applicable.

ATTACHMENT D STANDARD FORM OF AGREEMENT

BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between the City of Leon Valley (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

1 - WORK

1.1 CONTRACTOR shall complete all work as specified or indicated in the Contract Documents. The Work is generally described as follows: **BID #2020-03 STREET MAINTENANCE YEAR 3**

2 - THE PROJECT

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

BASE BID:

Mill and overlay certain streets within the city limits. Apply single bituminous slurry seal to certain streets within the city limits. Provide sidewalk ramp improvements along certain streets, remove and replace approximately fifty-three (53) curb ramps. Provide sidewalks across the alleys within the Linkwood Subdivision.

Additive Alternate Bid: Mill and overlay certain streets within the city limits.

The scope of work includes street maintenance, sidewalk ramp improvements, signage and pavement markings, and traffic control as necessary per the plans to complete the work.

3 - OWNER

3.1 The Project has been designed by OWNER.

4 - CONTRACT TIMES

4.1 Time is of the Essence

All time limits for Substantial Completion and completion, and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.2 Dates for Substantial Completion and Final Payment

The Work will be substantially completed within 60 days after issuance of a Notice to Proceed and completed and ready for final payment within 90 days after the issuance of a Notice to Proceed.

5 - CONTRACT PRICE

5.1 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined below:

A. For all Work, at the prices stated in CONTRACTOR's Bid, for the alternatives or base bid indicated in the Notice of Award.

B. As provided in the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by CONTRACTOR as provided in the General Conditions. Unit prices have been computed as provided in the General Conditions.

C. STATEMENT OF MATERIALS AND OTHER CHARGES: For the purposes of complying with the Texas Tax Code, this contract shall be a separate contract. Separate prices for materials and services shall be provided by the CONTRACTOR upon award as provided.

D. The OWNER shall pay the CONTRACTOR for the proper performance of the contract, subject to additions and deductions provided herein.

E. CONTRACTOR hereby acknowledges and understands that this is a "separate contract" pursuant to recently enacted legislation contained in Texas Administrative Code Title 34, I, 3, O, paragraph 3.291. The following amount of money represents that part of the total contract price representative of the value of tangible personal property to be physically incorporated into the project reality:

\$_____.

6 - PAYMENT PROCEDURES

6.1 Submittal and Processing of Payments

CONTRACTOR shall submit Applications for Payment in accordance with the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

6.2 Progress Payments; Retainage

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the 20th day of each month during performance of the Work as provided below. All such payments will be measured by the schedule of values established in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

B. The amount of the payment due the CONTRACTOR shall be determined by adding the total value of work completed to date and deducting of:

1. Ten percent (10%) of the total amount, to be retained by the OWNER until the final payment, and
2. The amount of all previous payments.

The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices contained in the agreement. The estimate may include the value of materials delivered on the ground but not incorporated into the work.

C. Monthly or partial payments made by OWNER to CONTRACTOR are monies for the purpose of assisting CONTRACTOR to expedite the work of construction. The CONTRACTOR shall be responsible for the care and protection of all material and work upon which payments have been made until final acceptance of such work and materials by the OWNER. Such payments shall not constitute a waiver of the right of the OWNER to require the fulfillment of all terms of the agreement and the delivery of all improvements embraced in the agreement, complete and satisfactory to the OWNER in all details.

D. No payment application except the final request will be made for a sum less than Five Hundred Dollars (\$500). It is understood that all payment applications are approximate only and payment shall be subject to correction in subsequent payment applications if any error is discerned.

E. Contractor shall provide a completed IRS form W-9 to the City **BEFORE** any payment is made. The completed W-9 may be submitted in person or may be emailed to the Accounts Payable office at ap@leonvalleytexas.gov with "W-9 from (*insert vendor name*) for Grass Hill Generator Bid". Once the contract is awarded by Council, you may submit your W-9 immediately. Failure to submit a completed W-9 will delay payment. A blank W-9 is available here: <https://www.irs.gov/pub/irs-pdf/fw9.pdf>.

6.3 Final Payment

Upon final completion and acceptance of the Work, OWNER shall pay the remainder of the Contract Price as provided.

7 - INTEREST

7.1 All moneys not paid when due as provided in the General Conditions shall bear interest at the rate of 0 % per annum.

8 - CONTRACTOR'S REPRESENTATIONS

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

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in the General Conditions.

E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

I. CONTRACTOR has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by OWNER is acceptable to CONTRACTOR.

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

K. For the purpose of complying with the Texas Tax Code, this contract shall be a separate contract. The OWNER shall pay the CONTRACTOR for the proper performance of the contract, subject to additions and deductions therein, the contract sum as provided on the Bid Form.

9 - CONTRACT DOCUMENTS

9.1 Contents

A. The Contract Documents consist of the following:

1. Instruction to Bidders
2. Bid Bonds
3. This Agreement
4. Performance Bond
5. Payment Bond
6. General Conditions
7. Supplementary Conditions
8. Special Supplementary Conditions
9. Special Conditions
10. Specifications as listed in the table of contents of the Project Manual
11. Addenda (numbers _____ to _____, inclusive)
12. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Proceed
 - b. CONTRACTOR's Bid;
 - c. Documentation submitted by CONTRACTOR prior to Notice of Award;
 - i. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Written Amendments;
 - b. Work Change Directives;
 - c. Change Order(s).
 - ii. The documents listed are attached to this Agreement (except as expressly noted otherwise above).
 - iii. There are no Contract Documents other than those listed above.
 - iv. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

10 - MISCELLANEOUS

10.1 *Terms* - Terms used in this Agreement will have the meanings indicated in the General Conditions.

10.2 *Assignment of Contract* - No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, 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.

10.3 *Successors and Assigns:*

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

10.4 *Severability*

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

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

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER: City of Leon Valley

CONTRACTOR:

By: _____

By: _____

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest _____

Attest _____

Address for giving notices:

Address for giving notices:

City of Leon Valley

6400 El Verde

Leon Valley, Texas 78238

Designated Representative:

Designated Representative:

Name: _____

Name: _____

Title: City Manager

Title: _____

Address: 6400 El Verde

Address: _____

Leon Valley, Texas 78238

Phone: (210) 684-1391

Phone: _____

Facsimile: (210) 684-4476

Facsimile: _____

ATTACHMENT E NOTICE TO PROCEED

Date: _____

TO: _____

(CONTRACTOR)

ADDRESS: _____

Contract: BID #2020-03 STREET MAINTENANCE YEAR 3

Project: BID #2020-03 STREET MAINTENANCE YEAR 3

OWNER'S CONTRACT NO. 2020-03

You are notified that the Contract Times under the above contract will commence to run on _____. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement the date of Substantial Completion is _____ and the date of readiness for final payment is _____. Before starting any Work at the Site, the General Conditions provides that you and Owner must each deliver to the other certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents. Also, before you may start any Work at the Site, you must:

Attend Preconstruction Conference and give Owner actual notice of start. Provide new Insurance certificate prior to expiration of current insurance.

City of Leon Valley

By: _____

(AUTHORIZED SIGNATURE)

Title: City Manager

ATTACHMENT F PERFORMANCE BOND

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

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

OWNER (Name and Address):

*City of Leon Valley
6400 El Verde
Leon Valley, Texas 78238
(210) 684-1391 ext. 222*

DESCRIPTION (Name and Location):

BID #2020-03 STREET MAINTENANCE YEAR 3

CONTRACT

Date:
Amount:

BOND

Bond Amount: 100%

Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL (Corp. Seal)	SURETY (Corp. Seal)
Company:	Company:
Signature:	Signature:
Name and Title:	Name and Title:
(Attach Power of Attorney)	(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.
2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences.
3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:
 - 3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and
 - 3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided; and
 - 3.3. The OWNER has agreed to pay the Balance of the Contract Price to:
 - 3.3.1. The Surety in accordance with the terms of the Contract;
 - 3.3.2. Another contractor selected to perform the Contract.
4. When the OWNER has satisfied the conditions, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or
 - 4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or
 - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;
 - 4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or
 - 4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety; and

6.3. Liquidated damages will be \$500.00 PER DAY caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

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

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

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

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by

the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

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

ATTACHMENT G PAYMENT BOND

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

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

OWNER (Name and Address):

*City of Leon Valley
Office of the Purchasing Agent
6400 El Verde
Leon Valley, Texas 78238 (210) 684-1391*

CONTRACT

BID #2020-03 STREET MAINTENANCE YEAR 3

PROJECT

BID #2020-03 STREET MAINTENANCE YEAR 3

BOND

Bond Amount: 100%
Date (Not earlier than Contract Date): Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

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

Signature: Signature:
Name and Title: Name and Title:
(Attach Power of Attorney)
(Space is provided below for signatures of additional parties, if required.)

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

Signature: Signature:
Name and Title: Name and Title:
(Attach Power of Attorney)

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

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:
 - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.
3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
 - A. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 - B. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
 - C. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.
 - D. If a notice required is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.
5. When the Claimant has satisfied the conditions, the Surety shall promptly and at the Surety's expense take the following actions:
 - 5.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 5.2. Pay or arrange for payment of any undisputed amounts.
6. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
7. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all

funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.

8. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

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

10. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

11. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

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

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

14. DEFINITIONS

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

14.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

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

11. What equipment do you own that is available for the proposed work?
(Description, Quantity, Capacity, Size, Years in Service, Present Condition, Location)

12. Have you received firm offers from suppliers or manufacturers for all major items
of material and/or equipment within the price totals used in preparing your proposal?

Yes

No

Credit Available: \$ _____ Bank Reference: _____

Bonding capacity available: \$ _____

The undersigned hereby authorizes and requests any person, firm or corporation to
furnish any information requested by the Owner in verification of the recitals comprising
this Bidders Disclosure Statement. The signatory of this questionnaire guarantees the
truth and accuracy of all statements herein made and all answers herein expressed.

Date this _____ day of _____, 20 _____.

By: _____

Title: _____

STATE OF _____ COUNTY OF _____

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

Notary Public

My commission expires:

ATTACHMENT I TERMS & CONDITIONS

THE CONTRACTOR SHALL MAINTAIN THE FOLLOWING INSURANCE:

1. Workers' Compensation Insurance Coverage.

The insurance carrier shall be an admitted carrier in the State of Texas.

A. Definitions:

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the 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 a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Person's providing services on the project ("subcontractor" in section 406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person 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 service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011 (44) for all employees of the contractor providing services on the project, for the duration of the project.

C. The contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

(1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage for all persons providing services on the project; and

(2) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

(1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011 (44) for all of its employees providing services on the project, for the duration of the project;

(2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided services on the project for the duration of the project;

(3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(4) obtain from each other person with whom it contracts, and provide to the contractor:

(a) a certificate of coverage, prior to the other person beginning work on the project; and

(b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current coverage ends during the duration of the project;

(5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

(6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

(7) contractually require each person with whom it contracts, to performs as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

J. By signing this contract or providing or causing to be a provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting or classification codes and payroll amounts, and that all 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. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or civil actions.

K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of the notice of breach from the governmental entity.

2. Comprehensive General Liability Insurance

This insurance shall:

A. Be in an amount not less than \$1,000,000 per occurrence, with a deductible of not more than \$2,500;

B. Include coverage for the liability assumed by the Contractor under Item F. (Indemnity);

C. Include completed operation coverage which is to be kept in force by the Contractor for a period of not less than one year after the completion of the work provided for or performed under these specifications;

D. Not be subject to any of the special property damage liability exclusions commonly referred to as the XCU exclusions pertaining to blasting or explosion, collapse, or structural damage and underground property;

E. Not be subject to any exclusion of property used by the insured or property in the case, custody or control of the insured or property as to which the insured for any purpose is exercising physical control;

F. In naming the City of Leon Valley as an additional insured on your comprehensive General Liability Insurance, the following words apply:

“Contractor shall defend, indemnify and hold harmless the City of Leon Valley, its agents and employees from and against any liability, loss, cost and expense (“Liability”) claimed by a third party (including reasonable attorney’s fees and cost of defense) resulting from Contractor’s performance of the Work to the extent that such Liability:

(1) is attributable to bodily injury, sickness, disease or death, or to the injury to or destruction of tangible personal property; and,

(2) is caused or contributed to by any neglect or fault of Contractor, its subcontractors, or their respective employees.

Where liability is attributable to the joint negligence or fault of Contractor and any other person (including Owner), Contractor’s duty of indemnification shall be limited to Contractor’s allocable share of such joint negligence or fault.”

G. The Insurance company must have as a minimum a current A.M. Best rating of A.

3. Comprehensive Automobile Liability in the following amounts:

Bodily Injury	\$1,000,000 per person
	\$3,000,000 per accident
Property Damage	\$300,000 per accident

4. General Requirements for Insurance Coverage

A. The Certificate of Insurance furnished by the Contractor shall show by specific reference that each of the foregoing items have been provided for;

B. Certificates of Insurance required for each copy of the agreement which specifically set forth evidence of all required coverage will be filed with the City prior to the City’s execution of the contract. Worker’s Compensation Insurance coverage must be provided to the City prior to the City’s award of the contract.

C. The Certificates of Insurance furnished by the contractor as evidence of the Insurance maintained by the contractor will include a clause obligating the Insurer to give the City of Leon Valley ten (10) days prior written notice of cancellation or any material change in the insurance coverage.

D. Waiver of Subrogation: The City of Leon Valley and the Contractor waive all rights and the rights of their respective insurance companies against each other for damages caused by fire or other perils to the extent such damages are covered by property insurance purchased by either party.

5. Anti-Discrimination in Employment

A. The contractor (successful bidder) and/or any subcontractor(s), if permitted, certifies complete compliance with the Federal Civil Rights Law and the Americans with Disabilities Act, agreeing to non-discrimination based on race, age, color, religion, disability, gender, ancestry, national origin, or place of birth in employment practices, programs and services shall include but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other compensation; and selection for training, including apprenticeship.

B. The contractor shall 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, age, color, religion, disability, gender, ancestry, national origin, or place of birth.

C. Upon request by the City of Leon Valley, the contractor shall furnish all information or reports required to investigate his/her payrolls and personnel records which pertain to current contract(s) with the City for purposes of ascertaining compliance with this non-discrimination certification.

6. General Independent Contractor Clause

This agreement does not create an employer relationship between the parties. It is the parties' intention that the contractor will be an independent contractor and not the City of Leon Valley employee for all purposes, including, but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, Texas workers' compensation law and Texas unemployment insurance law. The contractor will retain sole and absolute discretion in the judgment of the manner and means of carrying out the contractor's activities and responsibilities hereunder. The contractor agrees that it is a separate and independent enterprise from the City of Leon Valley, that it has a full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This agreement shall not be construed as creating any joint employment relationship between the contractor and the City of Leon Valley and the City of Leon Valley will not be liable for any obligation incurred by the contractor, including but not limited to unpaid minimum wages and/or overtime premiums.

7. Hot Goods Clause

The bidder hereby agrees that in the execution of the work he or she will comply with all applicable provisions of Sections 6, 7, and 12 of the Fair Labor Standards Act of 1938, as

amended, and that there will be no violations of the “hot goods” or “hot cargo” provisions of the Act involving restrictions on the use of underage employees.

8. Fire Safety

The contractor shall comply with all City regulations including those regarding Fire Safety. In this regard he shall comply with all instructions of the City Fire Marshall during the course of the work.

9. Hazard Communications Act

In compliance with Article 5182b, Texas Revised Civil Statutes, all employers are required to train and educate employees on the safe use and handling of hazardous materials that employees may be exposed to in the work place. The City of Leon Valley's Fire Chief is designated as the City's HazComm Officer. Contractors of the City are also required to comply with the requirements of this Act.

Contractors are entitled to a copy of the City's workplace chemical list to which the contractor, its employees and agents may be exposed to in the workplace. Contractors are also entitled to a copy of all MSDS sheets for any hazardous chemicals which the City may have in the work place. Contractors have the obligation to inform its employees and agents of all of these requirements. Contractor shall furnish the City with the MSDS sheets for any hazardous chemical brought into the City workplace that City employees will have exposure to. Contractors shall sign the Attachment 5, "Hazard Communications Contractor Acknowledgment" certifying receipt of this information.

10. FIRE SAFETY

The contractor shall comply with all City regulations including those regarding Fire Safety. In this regard, he shall comply with all instructions of the City Fire Marshall during the course of the work.

ATTACHMENT J HAZARD COMMUNICATIONS

CONTRACTOR ACKNOWLEDGMENT

IT IS HEREBY UNDERSTOOD AND AGREED THAT _____
_____, a Contractor under Contract dated the _____
day of _____, 20_____,

with the City of Leon Valley has received from the City notice of the Contractor's rights under the Texas Hazards Communications Act, the chemical list and material safety data sheets for hazardous chemicals that will be present in the City work area.

Contractor with the City of Leon Valley, understands our obligation to inform our employees and agents of the information provided. Material safety data sheets have been received for the following chemicals.

CONTRACTOR NAME: _____

NAME OF AUTHORIZED AGENT: _____

TITLE OF AUTHORIZED AGENT: _____

SIGNATURE OF AUTHORIZED AGENT: _____

DATE: _____

ATTACHMENT K CONFLICT OF INTEREST QUESTIONNAIRE

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

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

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).

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.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY
Date Received

1 Name of vendor who has a business relationship with local governmental entity.

2 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.

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?

Yes No

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?

Yes No

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 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 L FORM 1295 - TEXAS ETHICS COMMISSION

This document is available on-line at the following link:

<https://www.ethics.state.tx.us/forms/1295.pdf>

NOTE: The successful vendor, upon award of contract by City Council, shall file Form 1295 with the Texas Ethics Commission and supply a completed copy to the Purchasing Agent within one week. This form must be filed on-line at <https://www.ethics.state.tx.us/forms/1295.pdf>.

TECHNICAL SPECIFICATIONS

SECTION TS – STREET MAINTENANCE YEAR 3

DIVISION I - EARTHWORK

ITEM

100 MOBILIZATION

100.1. DESCRIPTION: *Establish and remove offices, plants, and facilities. Move personnel, equipment, and supplies to and from the project or the vicinity of the project site to begin work or complete work on Contract Items.*

100.2. MEASUREMENT: This Item will be measured by the lump sum as the work progresses.

100.3. PAYMENT: Partial payments of the lump sum bid for mobilization will be as follows. The adjusted Contract amount for construction Items as used below is defined as the total Contract amount less the lump sum for mobilization.

- A. Payment will be made upon presentation of a paid invoice for the payment bond, performance bond, and required insurance. The combined payment for bonds and insurance will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
- B. Payment will be made upon verification of documented expenditures for plant and facility setup. The combined amount for all these facilities will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
- C. When 1% of the adjusted Contract amount for construction Items is earned, 50% of the mobilization lump sum bid or 5% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- D. When 5% of the adjusted Contract amount for construction Items is earned, 75% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under the Item will be deducted from this amount.
- E. When 10% of the adjusted Contract amount for construction Items is earned, 90% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- F. Payment for the remainder of the lump sum bid for "Mobilization" will be made on the next estimate cycle after the initial retainage estimate or at final acceptance for projects without retainage.

100.4. BID ITEM:

Item 100.1 - Mobilization - lump sum

Item 100.2 - Insurance and Bond - lump sum

ITEM

101 PREPARING RIGHT-OF-WAY

101.1. DESCRIPTION: *Prepare the right of way and designated easements for construction operations by removing and disposing of all obstructions when removal of such obstructions is not specifically shown on the plans to be paid by other Items.*

101.2. MATERIALS:

A. Obstructions. Obstructions shall be considered to include, but not limited to, remains of houses not completely removed by others, foundations, floor slabs, concrete, brick, lumber, plaster, cisterns, septic tanks, basements, abandoned utility pipes or conduits, equipment or other foundations, fences, retaining walls, outhouses, shacks, and all other debris as well as buried concrete slabs, curbs, gutters, driveways, and sidewalks.

This item shall also include the removal of trees, stumps, bushes, shrubs, brush, roots, vegetation, logs, rubbish, paved parking areas, miscellaneous stone, brick, drainage structures, manholes, inlets, abandoned railroad tracks, scrap iron and all debris, whether above or below ground, except live utility facilities.

It is the intent of this specification to provide for the removal and disposal of all obstructions to the new construction together with other objectionable materials not specifically provided for elsewhere by the plans and specifications.

B. Explosives. This item shall not govern for the demolition of buildings by the use of explosives. Such demolition work shall be governed by the use of a special specification controlling the work.

C. Fences. Unless shown otherwise on the plans, all fences along the right-of-way which are damaged or removed temporarily by the Contractor shall be replaced by the Contractor to an equal or better condition at no additional cost to the City.

D. Hazardous Materials. If the Contractor encounters hazardous substances, industrial waste, other environmental pollutants, underground storage tanks, or conditions conducive to environmental damage, Contractor shall immediately stop work in the area affected and report the condition to the Owner's representative in writing. Contractor shall not be responsible for or required to conduct any investigation, site monitoring, containment, cleanup, removal, restoration or other remedial work of any kind or nature (the "remedial work") under any applicable level, state or federal law, regulation or ordinance, or any judicial order. If the Contractor agrees in writing to commence and/or prosecute some or all of the remedial work, all costs and expenses, to include any extension of the contract time, of such remedial work shall be paid by Owner to Contractor as additional compensation.

101.3. EQUIPMENT: Provide applicable equipment to conduct work as described in this specification or as specified on the plans.

101.4. CONSTRUCTION: Protect designated features on the right of way and prune trees and shrubs as directed. Do not park equipment, service equipment, store materials, or disturb the root area under the branches of trees designated for preservation. When shown on the plans, treat cuts on trees with an approved tree wound dressing within 20 min. of making a pruning cut or otherwise

causing damage to the tree. Follow all local and state regulations when burning. If burning of brush is approved, pile and burn at approved locations. When working in state or national forests or parks, coordinate work with state and federal authorities. Testing, removal, and disposal of hazardous materials will be in accordance with 101.2.D, "Hazardous Materials."

Clear areas shown on the plans of all obstructions, except those landscape features that are to be preserved. Such obstructions include but are not limited to those identified in 101.2.A, "Obstructions" and other items as specified on the plans. Remove vegetation and other landscape features not designated for preservation. Removal of live utility facilities is not included in this Item. Remove culverts, storm sewers, manholes, and inlets in proper sequence to maintain traffic and drainage.

Unless otherwise indicated on the plans, all underground obstructions shall be removed to the following depths:

- In areas receiving embankment, remove obstructions not designated for preservation to 2 ft. below natural ground.
- In areas to be excavated, remove obstructions to 2 ft. below the excavation level.
- In all other areas, remove obstructions to 1 ft. below natural ground.

When allowed by the plans or directed, cut trees and stumps off to ground level.

Holes remaining after removal of all obstructions, objectionable materials, vegetation, etc. shall be backfilled and tamped and the entire area bladed, to prevent ponding of water and to positive provide drainage. Backfill materials deemed unacceptable by the Engineer shall be removed and replaced at no additional cost to the City. In areas that are to be immediately excavated, backfilling and blading may be eliminated if approved by the Engineer. Areas to be used as borrow sites and material sources shall have all obstructions, objectionable materials, vegetation, etc., removed to the complete extent necessary to prevent such objectionable matter from becoming mixed with the material to be used in the construction.

Where a conduit is shown to be replaced, it shall be removed in its entirety and all connections to the existing conduit shall be extended to the new line. Where an existing conduit is to be cut and plugged, the line shall be cut back not less than 2 feet and a plug of concrete not less than 2 feet long shall be poured and held in the end of the pipe or the plug may be accomplished by using a precast stopper grouted into place.

Material to be removed will be designated as "salvageable" or "non-salvageable" on the plans prior to bidding by the Contractor. All "salvageable" material will remain the property of the City and will be stored at the site as directed by the Engineer. All "non-salvageable" materials and debris removed shall become the property of the Contractor and shall be removed from the site and shall be disposed of properly and in accordance with local, state, and federal requirements.

All asphaltic material shall be deposited or recycled at a facility authorized to accept the asphalt for such purposes.

Dispose of wells in accordance with TxDOT Item 103, "Disposal of Wells."

101.5. MEASUREMENT: "Preparing Right-of-Way" for new construction will be measured by the lump sum.

101.6. PAYMENT: This item will be paid for at the contract lump sum price bid for “Preparing Right-of-Way,” which price shall be full compensation for work herein specified, including the furnishing of all materials, equipment, tools, labor, and incidentals necessary to complete the work. The lump sum price will be pro-rated based on the number of phases in the project. A phase will be eligible for payment when street excavation is completed for that phase.

101.7. BID ITEM:

Item 101.1 - Preparing Right-of-Way - lump sum

ITEM

103 REMOVE CONCRETE

103.1. DESCRIPTION: *This item shall govern the breaking up, removing, and satisfactorily disposing of existing concrete, as classified, at locations shown on the plans or as directed by the Engineer. Existing concrete not shown on the plans, located beneath the natural ground surface, not indicated by the Engineer or not obvious to the naked eye will not be covered under this item. Such materials will be removed as needed and paid for under Item 104 "Street Excavation," Item 105 "Channel Excavation," or Item 306 "Structural Excavation."*

103.2. CLASSIFICATION: Existing concrete to be removed under this item will be classified as follows:

- A. Concrete Curb.** "Concrete Curb" will include curb, curb and gutter, and low curb at driveways, and combinations thereof. The removal of monolithic concrete curb or doweled concrete curb will be included in the concrete pavement measurement.
- B. Concrete Traffic Barrier.** "Concrete Traffic Barrier" will include permanent concrete barrier used for channeling or dividing traffic that is not considered salvageable.
- C. Sidewalks and Driveways.** "Sidewalks and Driveways" will include concrete sidewalks and driveways.
- D. Miscellaneous Concrete.** "Miscellaneous Concrete" will include all other items that are not noted above or covered by other items.

103.3. EQUIPMENT: Provide the machinery, tools and equipment necessary for proper prosecution of the work. All machinery, tools and equipment used shall be maintained in a satisfactory and workmanlike manner.

103.4. CONSTRUCTION:

- A. General.** The existing concrete shall be broken up, removed, and disposed of by the Contractor in accordance with federal, state, and local regulations.
- B. Partial Removal of Concrete.** When only a portion of the existing concrete is to be removed, care shall be exercised to avoid damage to that portion to remain in place. The existing concrete shall be cut to neat lines shown on the plans or as established by the Engineer, by sawing with an appropriate type circular concrete saw to a minimum depth of ½-inch. Any existing concrete which is damaged or destroyed beyond the neat lines so established shall be replaced at the Contractor's expense. Where reinforcement is encountered in the removed portions of the concrete, a minimum of 1-foot shall be cleaned of all old concrete and left in place to tie into the new concrete construction.

103.5. MEASUREMENT: Measurement for this item will be conducted as follows:

- A. Concrete Curb.** Concrete curb removed as prescribed above will be measured by the linear foot in its original position regardless of the thickness and reinforcing steel encountered.
- B. Concrete Traffic Barrier.** Concrete Traffic Barrier as prescribed above will be measured by the linear foot in its original position regardless of the type or size encountered.

C. Concrete Sidewalk and Driveway. Concrete sidewalks and driveways removed as prescribed above will be measured by the square foot in its original position regardless of the thickness of the concrete and reinforcing steel encountered.

D. Miscellaneous Concrete. Miscellaneous Concrete will be measured by the square foot in its original position regardless of the thickness of the concrete and reinforcing steel encountered.

103.6. PAYMENT: This item will be paid for at the contract unit price bid for “Remove Concrete Curb,” “Remove Concrete Traffic Barrier,” “Remove Concrete Sidewalks and Driveways,” or “Remove Miscellaneous Concrete” which price shall be full compensation for all work herein specified, including the furnishing of all materials, equipment, tools, labor and incidentals necessary to complete the work.

103.7. BID ITEM:

Item 103.1 - Remove Concrete Curb - per linear foot

Item 103.2 - Remove Concrete Traffic Barrier - per linear foot

Item 103.3 - Remove Sidewalks and Driveways - per square foot

Item 103.4 - Remove Miscellaneous Concrete - per square foot

- Obtain appropriate permits and apply provisions pertaining to soil erosion and stream pollution, when necessary, to meet federal and/or local regulations, rules, and procedures.

- A. Rock Cuts.** Excavate to finished subgrade elevation using equipment appropriate for the conditions encountered. Manipulate and compact subgrade in accordance with Section 104.4.C., “Compaction,” unless excavation is to clean homogenous rock at finished subgrade elevation. If excavation extends below finished subgrade, use approved material compacted in accordance with Section C to replace undercut material at no additional cost. All unstable or otherwise objectionable material shall be removed from the subgrade and replaced with approved material in loose lifts not to exceed 12 inches in depth. Removal and replacement of unstable material will be paid by the Engineer.
- B. Earth Cuts.** All earth cuts shall be scarified to a uniform depth of at least 6-inches below the required finished subgrade elevation. All holes, ruts, and depressions shall be filled with approved material in loose lifts not to exceed 12 inches in depth. Compact the scarified subgrade in accordance with Section 104.4.C., “Compaction.”

If the Engineer determines that the subgrade is unsuitable, the contractor shall remove the unsuitable material to the limits directed by the Engineer and replace it with suitable material. Removal and replacement of unsuitable material will be paid by the Engineer.

- C. Compaction.** Subgrade materials shall be compacted to the required density and moisture content as shown below, unless otherwise shown on the plans:

Subgrade Material	Density	Moisture Content
PI ≤ 20	≥ 95% of Max Dry Density	- 2% of Opt. or greater
PI > 20	≥ 95% of Max Dry Density	≥ Opt. Moisture

The maximum dry density and optimum moisture content shall be determined in accordance with TxDOT Test Method Tex-114-E. Tests for in place density shall be made in accordance with TxDOT Test Method Tex-115-E and within 24 hours after compacting operations are completed. If the material fails to meet the density specified, it shall be re-worked as necessary to obtain the density required.

For materials with a PI > 20, just prior to placing any base materials or stabilization, the top 3 inches of compacted subgrade shall be tested for density and moisture content. If tests show the density to be more than 2% below the specified minimum or the moisture content to be more than 3% above or below the optimum, the course shall be reworked as necessary to obtain the specified compaction and moisture content.

If the material used to replace undercuts or unsuitable material contains more than 30% oversize fraction (i.e. 30% or more retained on the ¾-inch sieve) or is gap-graded (many large particles with limited small particles), the maximum density determined by Tex-114-E may not be appropriate for field compaction. If this situation is encountered, the Engineer may elect to accept the material without density testing. With the approval of the Engineer, place layers in loose lifts not to exceed 12 inches. Before and during rolling operations, bring each layer to the moisture content directed. Compact each layer until there is no evidence of further consolidation. Maintain a level layer to aid in uniform compaction. If the required stability or finish is lost for any reason, recompact and refinish the subgrade at no additional expense to the City.

ITEM**203 TACK COAT**

203.1. DESCRIPTION: *Apply asphaltic material on the completed base course after the prime coat has sufficiently cured, existing pavement, bituminous surface, or in the case of a bridge, on the prepared floor slab in accordance with these specifications and/or as directed by the Engineer.*

203.2. MATERIALS: The asphaltic material used for Tack Coat shall meet the requirements for “Asphalt Cement”, “Cut-Back Asphalt” or “Emulsified Asphalt” in Item No. 300, “Asphalts, Oils and Emulsions” of the Texas Department of Transportation Standard Specifications. The asphaltic material used for Tack Coat shall be the type or grade shown in the referring specification, or on the plans, or as directed/approved by the Engineer.

203.3. EQUIPMENT: Provide equipment that conforms to the requirements of Item 202, “Prime Coat,” Part 3, “Equipment.”

203.4. CONSTRUCTION: Before the tack coat is applied, the surface shall be cleaned thoroughly with a vacuum sweeper to the satisfaction of the Engineer. The asphaltic material shall be applied on the clean surface by an approved type of self-propelled pressure distributor evenly and smoothly under a pressure necessary for proper distribution.

The tack coat shall be applied at the rate specified by the referring specification or on the plans. Unless otherwise stated or allowed by the Engineer the application rate shall not exceed 0.10 gallon per square yard of surface.

Where the pavement mixture will adhere to the surface on which it is to be placed without the use of a tack coat, the tack coat may be eliminated by the Engineer. All contact surfaces of curbs and structures and all joints shall be painted with a thin uniform coat of the asphaltic material used for tack coat. During the application of tack coat, care shall be taken to prevent splattering of adjacent pavement, curb and gutters or structures.

203.5. MEASUREMENT: The asphaltic material for tack coat will be measured at point of delivery on the project in gallons at the applied temperature. The quantity to be paid for shall be the number of gallons of asphaltic material used, as directed, in the accepted tack coat. Water used with Emulsions will not be measured for payment.

203.6. PAYMENT: The work performed and materials furnished as prescribed by this item will be paid for at the contract unit price bid per gallon for “Tack Coat” which price shall be full compensation for cleaning the surface, for furnishing, heating, hauling and distributing the tack coat as specified; for all freight involved; and for all manipulations, labor, tools, equipment, and incidentals necessary to complete the work.

203.7. BID ITEM:

Item 203.1 - Tack Coat - per gallon

ITEM

205 HOT MIX ASPHALTIC CONCRETE PAVEMENT

205.1. DESCRIPTION: *Construct a leveling-up course, a surface course or any combination of these courses as shown on the plans, each to be composed of a compacted mixture of mineral aggregate and asphaltic material. The pavement shall be constructed on the newly constructed subgrade or base course, existing pavement, bituminous surface or in the case of bridges, on the prepared floor slab, as herein specified and in accordance with the details shown on the plans.*

205.2. MATERIALS: Materials used in Hot Mix Asphaltic Concrete Pavement shall meet the requirements as set forth herein. If shown on the plans, materials may also meet the requirements as described in Item 340, "Dense-Graded Hot-Mix Asphalt (Method)" or Item 341, "Dense-Graded Hot-Mix Asphalt (QC/QA)" of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges.

Unless otherwise shown on the plans, provide aggregates that meet the aggregate quality requirements of TxDOT's Bituminous Rated Source Quality Catalog (BRSQC). Unapproved sources may be used if accepted by the Engineer and approved prior to use.

Furnish aggregates from sources that conform to the requirements shown in Table 1 herein, and as specified in this Section, unless otherwise shown on the plans. Provide aggregate stockpiles that meet the definition in this Section for either a coarse aggregate or fine aggregate. When reclaimed asphalt pavement (RAP) is used, provide RAP stockpiles in accordance with this Section. Aggregate from RAP is not required to meet Table 1 requirements unless otherwise shown on the plans.

Document all test results on a mixture design report and submit to the Engineer for approval. The Engineer may perform tests on independent or split samples to verify Contractor mix design results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in TxDOT standard laboratory test procedure Tex-200-F, Part II. Do not add material to an approved stockpile from other sources, unless otherwise approved by the Engineer.

Unless otherwise shown on the plans, reclaimed asphalt pavement (RAP) may be used in asphalt pavement maintenance or rehabilitation applications and shall be limited to a maximum of 20% RAP for surface or wearing courses and 30% RAP for courses below the surface or wearing course. Higher percentages of RAP may be used if requested in writing and approved by the Engineer prior to use.

A. Coarse Aggregate. Coarse aggregate stockpiles must have no more than 20% passing the #8 sieve. Provide aggregates with a surface aggregate classification (SAC) as shown below:

<u>Street Classification</u>	<u>Minimum Surface Aggregate Classification</u>
Primary and Secondary Arterials	A
Collector and Local Type B Streets	B
Local Type A Street With Bus Traffic	B
Local Type A Street Without Bus Traffic	C

SAC requirements apply only to aggregates used on the surface of travel lanes, unless otherwise shown on the plans. Blending aggregates to meet SAC criteria is allowable. Class B aggregate meeting all other requirements in Table 1 may be blended with a Class A aggregate in order to meet requirements for Class A materials. When blending Class A and B aggregates to meet a Class A requirement, ensure that at least 50% by weight of the material retained on the No. 4 sieve comes from the Class A aggregate source. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. When blending, do not use Class C or D aggregates. For blending purposes, coarse aggregate from RAP will be considered as Class B aggregate.

- B. Reclaimed Asphalt Pavement (RAP).** RAP is defined as a salvaged, pulverized, broken or crushed asphalt pavement. The RAP to be used in the mix shall be crushed or broken to the extent that 100% will pass the two inch sieve.

The stockpiled RAP shall not be contaminated by dirt or other objectionable materials. Unless otherwise shown on the plans, stockpiled, crushed RAP shall have a decantation of 5% or less and a plasticity index of eight (8) or less, when tested in accordance with TxDOT standard laboratory test procedures Tex-406-A, Part I, and Tex-106-E, respectively. This requirement applies to stockpiles from which the asphalt has not been removed by extraction. When RAP is used, determine asphalt content and gradation for mixture design purposes.

- C. Fine Aggregate.** Fine aggregates may consist of manufactured sands, screenings and field sands. Supply fine aggregates that are free from organic impurities. Field sands and other uncrushed aggregates shall be limited to 15% of the total aggregate.

If 10% or more of the fine aggregate stockpile is retained on the No. 4 sieve, test the stockpile and verify that it meets the requirements in Table 1 for coarse aggregate angularity (TxDOT standard laboratory test procedure Tex-460-A) and flat and elongated particles (TxDOT standard laboratory test procedure Tex-280-F).

- D. Asphalt Binder.** Unless shown on the plans, provide the type and grade of performance-graded asphalt binder in accordance with TxDOT Item 300.2.J. "Performance-Graded Binders" and as specified below:

Street Classification	Minimum PG Asphalt Cement Grade		
	Surface Courses	Binder & Level Up Courses	Base Courses
Primary and Secondary Arterials	PG 76-22	PG 70-22	PG 64-22
Collector and Local Type B Streets	PG 70-22		
Local Type A Street With Bus Traffic		PG 64-22	
Local Type A Street Without Bus Traffic	PG 64-22		

- E. Mineral Filler.** Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, hydrated lime, cement, or fly ash. Mineral filler is allowed unless otherwise shown on the plans. Do not use more than 2% hydrated lime or cement, unless otherwise shown on the plans. The plans may require or disallow specific mineral fillers. When used, provide mineral filler that:

- is sufficiently dry, free-flowing, and free from clumps and foreign matter;

- does not exceed 3% linear shrinkage when tested in accordance with Tex-107-E; and
 - meets the gradation requirements of Table 3 herein.
- F. Baghouse Fines.** Fines collected by the baghouse or other dust collecting equipment may be reintroduced into the mixing drum.
- G. Tack Coat.** Unless otherwise shown on the plans or approved, furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder and in accordance with Item 203, "Tack Coat." Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- H. Additives.** When shown on the plans, use the type and rate of additive specified. Other additives that facilitate mixing or improve the quality of the mixture may be allowed when approved. If lime or a liquid antistripping agent is used, add in accordance with TxDOT Item 301, "Asphalt Antistripping Agents." Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream, unless the plant has a baghouse or dust collection system that reintroduces the lime back into the drum.

Table 1
Aggregate Quality Requirements

Property	TxDOT Standard Laboratory Test Procedure	Surface Courses	Binder, Level Up, & Base Courses
Coarse Aggregate			
Deleterious Material, %, max	Tex-217-F, Part I	1.0	1.5
Decantation, %, max	Tex-217-F, Part II	1.5	1.5
Micro-Deval Abrasion, %, max	Tex-461-A	Screening Only	Screening Only
Los Angeles Abrasion, %, max	Tex-410-A	35	40
Magnesium Sulfate Soundness, 5 cycles, %, max	Tex-411-A	25	30
Coarse Aggregate Angularity, 2 crushed faces, %, min	Tex-460-A, Part I	95 ¹	85 ¹
Flat and Elongated Particles @ 5:1, %, max	Tex-280-F	10	10
Fine Aggregate			
Linear Shrinkage, %, max	Tex-107-E	3	3
Combined Aggregate²			
Sand Equivalent, %, min	Tex-203-F	45	45

Note 1: Applies to Gravel Only

Note 2: Aggregate without mineral filler, RAP, or additives combined as used in the job-mixed formula (JMF)

Table 2
Gradation Requirements for Fine Aggregates

Sieve Size, in	% Passing by Weight or Volume
3/8	100
#8	70 – 100
#200	0 – 30

Table 3
Gradation Requirements for Mineral Filler

Sieve Size, in	% Passing by Weight or Volume
#8	100
#200	55 – 100

205.3. EQUIPMENT: All equipment for the handling of all materials, mixing, placing and compacting of the mixture shall be maintained in good repair and operating condition and subject to the approval of the Engineer. Any equipment found to be defective and potentially having a negative effect on the quality of the paving mixture or ride quality will not be allowed.

A. Spreading and Finishing Machine. The spreading and finishing machine shall be approved by the Engineer and shall meet the requirements indicated below.

- 1. Screed Unit.** The spreading and finishing machine shall be equipped with a heated compacting screed. It shall produce a finished surface meeting the requirements of the typical cross sections and the surface test.

Extensions added to the screed shall be provided with the same compacting action and heating capability as the main screed unit, except for use on variable depth tapered areas and/or as approved by the Engineer.

The spreading and finishing machine shall be equipped with an approved automatic dual longitudinal screed control system and automatic transverse screed control system. The longitudinal controls shall be capable of operating from any longitudinal grade reference including a stringline, ski, mobile stringline, or matching shoe.

The Contractor shall furnish all equipment required for grade reference. It shall be maintained in good operating condition by personnel trained in the use of this type of equipment.

The grade reference used by the Contractor may be of any type approved by the Engineer. The contractor shall set the grade reference to have sufficient support so that the maximum deflection shall not exceed 1/16 inch between supports.

- 2. Tractor Unit.** The tractor unit shall be equipped with a hydraulic hitch sufficient in design and capacity to maintain contact between the rear wheels of the hauling equipment and the pusher rollers of the finishing machine while the mixture is being unloaded.

No portion of the weight of hauling equipment, other than the connection, shall be supported by the asphalt paver. No vibrations or other motions of the loading equipment, which could have a detrimental effect on the riding quality of the completed pavement, shall be transmitted to the paver.

The use of any vehicle which requires dumping directly into the finishing machine and which the finishing machine cannot push or propel to obtain the desired lines and grades without resorting to hand finishing will not be allowed.

B. Material Transfer Equipment. Equipment to transfer mixture from the hauling units or the roadbed to the spreading and finishing machine will be allowed unless otherwise shown on the plans. A specific type of material transfer equipment shall be required when shown on the plans.

C. Motor Grader. The motor grader, when used, shall meet the requirements as shown in Item 220, "Blading."

D. Rollers. Rollers provided shall meet the requirements for their type as shown in Item 210, "Rolling."

205.4. CONSTRUCTION: It shall be the responsibility of the Contractor to design, produce, transport, place and compact the specified paving mixture in accordance with the requirements herein. The Engineer will perform verification testing as needed. Provide quality control (QC) testing as needed to meet the requirements of this Item. Provide a certified Level I-A specialist at the plant during production hours. Provide a certified Level I-B specialist to conduct placement tests.

A. Quality Control Plan (QCP). Unless otherwise shown on the plans, develop and follow a QCP. Obtain approval from the Engineer for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

Submit a written QCP to the Engineer and receive the Engineer's approval of the QCP before beginning production. Include the following items in the QCP.

1. Project Personnel. Provide:

- a. a list of individuals that will conduct tests as well their associated certifications (i.e. Level IA, IB, and II certifications), including when certifications will expire for each individual; and
- b. a list of individuals responsible for QC with authority to take corrective action and the contact information for each individual listed.

2. Material Delivery and Storage. Provide:

- a. the sequence of material processing, delivery, and minimum quantities to assure continuous plant operations;
- b. aggregate stockpiling procedures to avoid contamination and segregation;
- c. frequency, type, and timing of aggregate stockpile testing to assure conformance of material requirements before mixture production; and
- d. procedure for monitoring the quality and variability of asphalt binder.

3. Production. Detail:

- a. loader operation procedures to avoid contamination in cold bins;
- b. procedures for calibrating and controlling cold feeds;
- c. procedures to eliminate debris or oversized material;
- d. procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate, asphalt binder, RAP, lime, liquid antistriper);
- e. procedures for reporting job control and acceptance test results; and
- f. procedures to avoid segregation and drain-down in the silo.

4. Loading and Transporting. Provide:

- a. the type and application method for release agents; and

- b. truck loading procedures to avoid segregation.

5. Placement and Compaction. Provide:

- a. the proposed agenda for mandatory pre-paving meeting including date and location;
- b. the type and application method for release agents in the paver and on rollers, shovels, lutes, and other utensils;
- c. procedures for the transfer of mixture into the paver while avoiding segregation and preventing material spillage;
- d. the process to balance production, delivery, paving, and compaction to achieve continuous placement operations;
- e. the paver operations (e.g., operation of wings, height of mixture in auger chamber) to avoid physical and thermal segregation and other surface irregularities; and
- f. procedures to construct quality longitudinal and transverse joints.

- B. Mixture Design.** Use a Level II specialist certified by a TxDOT-approved hot-mix asphalt certification program to develop the mixture design. Have the Level II specialist sign the design documents. Unless otherwise shown on the plans, use the typical weight design example given in TxDOT standard laboratory test procedure Tex-204-F, Part I or Part III, to design a mixture meeting the requirements listed in Tables 1 through 5. At the request of the Engineer, furnish representative samples of all materials used in the mixture design for verification. If the design cannot be verified by the Engineer, furnish another mixture design.

The Contractor may submit a new mixture design at anytime during the project. The Engineer will approve all mixture designs before the Contractor can begin production.

Provide the Engineer with a mixture design report that includes the following items:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- results of all applicable tests;
- the mixing and molding temperatures;
- all applicable correlation and correction factors;
- the signature of the Level II person or persons who performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

The Hamburg Wheel Test is not required, unless otherwise shown on the plans. When required through plan note, the minimum number of passes shown in Table 6 shall be met, unless otherwise approved by the Engineer. The contractor will be responsible for submitting the results of the Hamburg Wheel test to the Engineer with the other mixture design data. Use an approved laboratory to perform the Hamburg Wheel test. The TxDOT Construction

Division maintains a list of approved laboratories that may be referenced. Hamburg Wheel Testing will not be performed or required for any Type “F” mixtures.

Table 4
Master Gradation Bands (% Passing by Weight or Volume) and Volumetric Properties

Sieve Size	A Coarse Base	B Fine Base	C Coarse Surface	D Fine Surface	F Fine Mixture
1-1/2”	98.0–100.0	–	–	–	–
1”	78.0–94.0	98.0–100.0	–	–	–
3/4”	64.0–85.0	84.0–98.0	95.0–100.0	–	–
1/2”	50.0–70.0	–	–	98.0–100.0	–
3/8”	–	60.0–80.0	70.0–85.0	85.0–100.0	98.0–100.0
#4	30.0–50.0	40.0–60.0	43.0–63.0	50.0–70.0	70.0–90.0
#8	22.0–36.0	29.0–43.0	32.0–44.0	35.0–46.0	35.0–50.0
#30	8.0–23.0	13.0–28.0	14.0–28.0	15.0–29.0	12.0–27.0
#50	3.0–19.0	6.0–20.0	7.0–21.0	7.0–20.0	6.0–19.0
#200	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0
Design Voids in the Mineral Aggregate (VMA), % minimum					
	12.0	13.0	14.0	15.0	16.0
Plant-Produced Voids in the Mineral Aggregate (VMA), % minimum					
	11.0	12.0	13.0	14.0	15.0

Table 5
Laboratory Mixture Design Properties

Property	TxDOT Standard Laboratory Test Procedure	Required	
Target laboratory-molded density, %	Tex-207-F	96.5	Base, Binder, and Level Up Courses
		Surface or Wearing Courses	
		96.5	Primary and Secondary Arterials
		97.0	Collectors, Local Type B Streets, and Local Type A Street With Bus Traffic
		97.5	Local Type A Street Without Bus Traffic
Boil test ¹	Tex-530-C	–	

1. Used to establish baseline for comparison to production results. May be waived when approved.

Table 6
Hamburg Wheel Test Requirements¹

High-Temperature Binder Grade	Minimum # of Passes ² @ 0.5" Rut Depth, Tested @ 122°F
PG 64 or lower	5,000
PG 70	10,000
PG 76 or higher	20,000

1. Tested in accordance with Tex-242-F.
2. May be decreased if shown on the plans.

C. Job-Mix Formula. The laboratory mixture design shall be submitted to the Engineer for approval prior to production and placement. The submittal shall provide the laboratory

designed mixture target properties and data that demonstrate the contractor's ability to produce the mixture within the tolerances specified in Table 7 herein either through a trial batch or by submittal of previous production data from a City or TxDOT project.

Once approved, the contractor may begin production and placement of the approved JMF. Results from Lot 1 of the JMF may be used to modify the optimum mixture properties as long as the tested properties are within the tolerances specified in Table 7 herein. Further adjustments to the JMF may be allowed by the Engineer during production and placement, if warranted. JMF adjustment requests must be made in writing to the Engineer and the mixture must conform to the master gradation limits for the mixture type and be within the operational limits of Table 7 noted above for the initial JMF approved by the Engineer.

Table 7
Operational Tolerances

Description	Test Method	Allowable Difference from Current JMF Target
Individual % Retained for #8 Sieve or Larger	Tex-200-F or Tex-236-F	±5.0 ¹
Individual % Retained for Sieves Smaller than #8 and Larger than #200		±3.0 ¹
% Passing the #200 Sieve		±2.0 ¹
Asphalt Content, %	Tex-236-F	±0.3 ²
Laboratory-Molded Density, %	Tex-207-F	±1.0
VMA, % minimum		Note 3

Note 1: When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the % passing the #200 sieve will be considered out of tolerance when outside the master grading limits.

Note 2: Tolerance between Laboratory Mix and Plant Trial Batch may exceed ±0.3.

Note 3: Test and verify that Table 4 requirements are met.

- D. Production.** Do not heat the asphalt binder above the temperatures specified in TxDOT Item 300, "Asphalts, Oils, and Emulsions," or outside the manufacturer's recommended values. Do not store an asphaltic mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr.

Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed 350°F. The Engineer will not pay for, or allow placement of, any mixture produced at more than 350°F. Control the mixing time and temperature so that moisture is removed from the mixture before discharging from the plant. If requested, determine the moisture content by oven-drying in accordance with TxDOT standard laboratory test procedure Tex-212-F, Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck, and perform the test promptly.

Perform a new trial batch when the plant or plant location is changed. The Engineer may suspend production for noncompliance with this Item. Take corrective action and obtain approval to proceed after any production suspension for noncompliance.

- E. Tack Coat.** The surface upon which the tack coat is to be placed shall be cleaned thoroughly to the satisfaction of the Inspector. The surface shall be given a uniform application of tack coat using asphaltic materials of this specification. Unless otherwise shown on the plans, tack

coat shall be applied with an approved sprayer at a rate directed by the Engineer between 0.04 and 0.10 gallon residual asphalt per square yard of surface.

F. Transporting Asphaltic Concrete. The asphaltic mixture shall be hauled to the work site in vehicles previously cleaned of all foreign material and with beds that do not discharge or lose materials during the haul. Trucks that do not meet the satisfaction of the Engineer or Inspector will not be allowed to deliver materials to City projects. The dispatching of the vehicles shall be arranged so that all material is delivered, placed, and rolled during daylight hours unless otherwise shown on the plans. In cool weather, or for long hauls, covering and insulating of the truck bodies may be required. If necessary, to prevent the mixture from adhering to the inside of the truck body, the inside of the truck may be given a light coating of release agent satisfactory to the Engineer.

G. Placement.

1. Weather Conditions. Place mixture, when placed with a spreading and finishing machine, or the tack coat when the roadway surface temperature is 60°F or higher unless otherwise approved. Measure the roadway surface temperature with a handheld infrared thermometer. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable in the opinion of the Engineer.

The asphaltic mixture, when placed with a motor grader, shall not be placed when the surface temperature is below 65°F and is falling, but may be placed when the surface temperature is above 55°F and is rising. The maximum depth of asphalt mixture placed with a motor grader will not exceed 5 inches of compacted material.

Mat thicknesses of 1-½ inches and less shall not be placed when the temperature of the surface on which the mat is to be placed is below 60°F.

It is further provided that the tack coat or asphaltic mixture shall be placed only when the humidity, general weather conditions, temperature and moisture condition of the base are suitable.

2. Placement Temperature. If, after being discharged from the mixer and prior to placing, the temperature of the asphaltic mixture falls below 200°F, all or any part of the load may be rejected and payment will not be made for the rejected material.

3. Placement Operations. Placement and laydown operations shall be in conformance with this section and Section 205.4.H. - "Quality Control and Acceptance."

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges.

The asphaltic mixture shall be dumped and spread on the approved prepared surface with the spreading and finishing machine. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. In addition, the placing of the asphaltic mixture shall be completed without tearing, shoving, gouging or segregating the mixture and without producing streaks in the mat.

Unloading into the finishing machine shall be controlled so that bouncing or jarring the spreading and finishing machine shall not occur and the required lines and grades shall be obtained without resorting to hand finishing.

When approved by the Engineer, level-up courses may be spread with a motor grader.

Construction joints of successive courses of asphaltic material shall be offset at least 6 inches. Construction joints on surface courses shall coincide with lane lines, or as directed by the Engineer.

The spreading and finishing machine shall be operated at a uniform forward speed consistent with the plant production rate, hauling capability, and roller train capacity to result in a continuous operation. The speed shall be slow enough that stopping between trucks is not ordinarily required. If, in the opinion of the Inspector, sporadic delivery of material is adversely affecting the mat, the Inspector may require paving operations to cease until acceptable methods are provided to minimize starting and stopping of the paver.

The hopper flow gates of the spreading and finishing machine shall be adjusted to provide an adequate and consistent flow of material. These shall result in enough material being delivered to the augers so that they are operating approximately 85 percent of the time or more. The augers shall provide means to supply adequate flow of material to the center of the paver. Augers shall supply an adequate flow of material for the full width of the mat, as approved by the Engineer. Augers should be kept approximately one-half to three-quarters full of mixture at all times during the paving operation.

When the asphaltic mixture is placed in a narrow strip along the edge of an existing pavement, or used to level up small areas of an existing pavement, or placed in small irregular areas where the use of a finishing machine is not practical, the finishing machine may be eliminated when authorized by the Engineer.

Adjacent to flush curbs, gutters and structures, the surface shall be finished uniformly high so that when compacted, it will be slightly above the edge of the curb or structure.

If a pattern of surface irregularities or segregation is detected, the Contractor shall make an investigation into the causes and immediately take the necessary action. With the approval of the Inspector, placement may continue for no more than one full production day from the time the Contractor is first notified and while corrective actions are being taken. If the problem still exists after that time, paving shall cease until the Contractor further investigates the causes and the Engineer approves further corrective action to be taken.

Place mixture within the compacted lift thickness shown in Table 8, unless otherwise shown on the plans or allowed.

Use the guidelines in Table 9 to establish the temperature of mixture delivered to the paver.

Table 8
Compacted Lift Thickness and Required Core Height

Mixture Type	Compacted Lift Thickness		Minimum Untrimmed Core Height (in.) Eligible for Testing
	Minimum (in.)	Maximum (in.)	
A	3.00	6.00	2.00
B	2.50	5.00	1.75
C	2.00	4.00	1.50
D	1.50	3.00	1.25
F	1.25	2.50	1.25

Table 9
Suggested Minimum Mixture Placement Temperature

High-Temperature Binder Grade	Minimum Placement Temperature (Before Entering Paver)
PG 64 or lower	260°F
PG 70	270°F
PG 76	280°F
PG 82 or higher	290°F

4. **Compaction.** The pavement shall be compacted thoroughly and uniformly with the necessary rollers to obtain the compaction and cross section of the finished paving mixture meeting the requirements of the plans and specifications.

The edges of the pavement along curbs, headers and similar structures, and all places not accessible to the roller, or in such positions as will not allow thorough compaction with the rollers, shall be thoroughly compacted with lightly oiled tamps.

Rolling with a trench roller will be required on widened areas, in trenches and other limited areas where satisfactory compaction cannot be obtained with the approved rollers.

- a. **In-Place Compaction Control.** Use density control unless ordinary compaction control is specified on the plans. Use the control strip method given in Tex-207-F, Part IV, to establish the rolling pattern for density controlled areas.

Where specific density or air void requirements are waived, furnish and operate compaction equipment as approved.

Do not use pneumatic-tire rollers if excessive pickup of fines by roller tires occurs. Unless otherwise directed, use only water or an approved release agent on rollers, tamps, and other compaction equipment. Keep diesel, gasoline, oil, grease, and other foreign matter off the mixture.

When rolling with the three-wheel, tandem or vibratory rollers, it is recommended that rolling start by first rolling the joint with the adjacent pavement and then continue by rolling longitudinally at the sides and proceed toward the center of the pavement, overlapping on successive trips by at least 1 foot. Alternate trips of the roller should be slightly different in length. On super-elevated curves, rolling should begin at the low side and progress toward the high side.

When rolling with vibratory steel-wheel rollers, equipment operation shall be in accordance with Item 210, "Rolling", and the manufacturer's recommendations, unless otherwise directed by the Engineer. Vibratory rollers shall not be left vibrating

while not rolling or when changing directions. In addition, vibratory rollers shall not be allowed in the vibrating mode on mats with a plan depth of less than 1-½ inches, unless approved by the Engineer.

The motion of the rollers shall be slow enough to avoid other than usual initial displacement of the mixture. If any displacement occurs, it shall be corrected to the satisfaction of the Inspector. Ensure pavement is fully compacted before allowing rollers to stand on the pavement.

(1) Ordinary Compaction Control. One three-wheel roller, one pneumatic-tire roller, and one tandem roller shall be furnished for each compaction operation except as provided below or approved by the Engineer. The use of a tandem roller may be waived by the Engineer when the surface is already adequately smooth and further steel-wheel rolling is shown to be ineffective. With approval of the Engineer, the Contractor may substitute a vibratory roller for the three-wheel roller and/or the tandem roller. Use of at least one pneumatic-tire roller is required unless approved by the Engineer. Additional or heavier rollers shall be furnished if required by the Engineer.

Rolling patterns shall be established by the Contractor to achieve the maximum compaction. The selected rolling pattern shall be followed unless changes in the mixture or placement conditions occur which affect compaction. When changes in the mixture or placement conditions occur, a new rolling pattern shall be established.

(2) Density Compaction Control. Place and compact asphaltic concrete materials in accordance with the method specified in Section 205.4.H, “Quality Control and Acceptance.”

- 5. Compaction Cessation Temperature.** Regardless of the method required for in-place compaction control, all rolling for compaction shall be completed before the mixture temperature drops below 175°F.
- 6. Opening to Traffic.** Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. When directed, sprinkle the finished mat with water or limewater to expedite opening the roadway to traffic.

If the surface ravel, flushes, ruts or deteriorates in any manner prior to final acceptance of the work, it will be the Contractor's responsibility to correct this condition at their expense, to the satisfaction of the Inspector and in conformance with the requirements of this specification.

H. Quality Control and Acceptance. Control and acceptance of hot mixed asphaltic concrete pavement shall be followed as specified herein or as directed on the plans. The contractor shall conduct production and placement operations in accordance with the method specified. All testing will be conducted in accordance with the testing methods shown in Table 10.

Table 10
Acceptable Production and Placement Testing Methods

Description	Test Method
Gradation including % passing the #200 sieve	Tex-200-F or Tex-236-F
Laboratory-molded density	Tex-207-F
VMA	
Laboratory-molded bulk specific gravity	
In-Place air voids	
Segregation (density profile)	Tex-207-F, Part V
Longitudinal joint density	Tex-207-F, Part VII
Moisture content	Tex-212-F, Part II
Theoretical maximum specific (Rice) gravity	Tex-227-F
Asphalt content	Tex-236-F
Hamburg Wheel test	Tex-242-F
Thermal profile	Tex-244-F
Asphalt binder sampling and testing ¹	Tex-500-C
Boil test ¹	Tex-530-C

1. The Engineer may waive the sampling and testing requirements at their discretion.

- 1. Production Sampling and Testing.** For a given project, sample asphaltic concrete materials at the production facility every 500 tons for each mixture type supplied or as directed by the Engineer. Unless otherwise shown on the plans, a production facility that supplies the same mixture to multiple City projects on the same day will not be required to sample and test at the required frequency for every project. A single test report may be used on two or more projects to represent the quality of the mixture for that day's production.

During production, do not exceed the operational tolerances in Table 7. Stop production if testing indicates tolerances are exceeded on:

- 3 consecutive tests on any individual sieve,
- 4 consecutive tests on any of the sieves, or
- 2 consecutive tests on asphalt content.

Suspend production and shipment of mixture if the asphalt content deviates from the current JMF by more than 0.5% for any test.

Begin production only when test results or other information indicate, to the satisfaction of the Engineer, that the next mixture produced will be within Table 7 tolerances.

The Contractor shall perform a Hamburg Wheel test at the direction of the Engineer at any time during production, including when the boil test indicates a change in quality from the materials submitted for the initial JMF. If the production sample fails the Hamburg Wheel test criteria in Table 6, suspend production until further Hamburg Wheel tests meet the specified values. The Engineer may require up to the entire subplot of any mixture failing the Hamburg Wheel test to be removed and replaced at the Contractor's expense.

If the Hamburg Wheel test results in a "remove and replace" condition, the Contractor may request that the Engineer confirm the results by retesting the failing material. An Independent laboratory retained by the Engineer will perform the Hamburg Wheel tests

and determine the final disposition of the material in question based on the initial test results.

2. Placement Sampling and Testing.

- a. **In-Place Density.** For every 500 tons of compacted asphaltic material or as directed by the Engineer, test the in place density. The in place density shall be in the range of 92.0% to 97.0% of the maximum density. Do not increase the asphalt content of the mixture to increase pavement density.

Unless otherwise shown on the plans, obtain 2 roadway specimens at each location selected by the Engineer for in-place density determination. Unless otherwise determined, the Engineer will witness the coring operation and measurement of the core thickness. Unless otherwise approved, obtain the cores within 1 working day after placement is completed. Obtain two 6 inch diameter cores side-by-side from within 1 foot of the location provided by the Engineer. For Type C, D and F mixtures, 4 inch diameter cores are allowed. Mark the cores for identification.

Visually inspect each core and verify that the current paving layer is bonded to the underlying layer. If an adequate bond does not exist between the current and underlying layer, take corrective action to insure that an adequate bond will be achieved during subsequent placement operations.

Immediately after obtaining the cores, dry the core holes and tack the sides and bottom. Fill the hole with the same type of mixture and properly compact the mixture. Repair core holes with other methods when approved.

If the core heights exceed the minimum untrimmed values listed in Table 8, trim the cores within 1 working day following placement operations unless otherwise approved. If the core height before trimming is less than the minimum untrimmed value shown in Table 8, decide whether or not to include the pair of cores in the density determination for that subplot. If the cores are to be included in density determination, trim the cores. If the cores will not be included in density determination, store untrimmed cores for the Engineer.

The Engineer will measure density in accordance with Tex-207-F and Tex-227-F. Before drying to a constant weight, cores may be predried using a vacuum device, or by other methods approved by the Engineer, to remove excess moisture. The Engineer will use the average density of the 2 cores to calculate the in-place density at the selected location.

If the in-place density in the compacted mixture is below 92% or greater than 97%, change the production and placement operations to bring the in-place density within requirements. The Engineer may suspend production until the in-place density is brought to the required level, and may require a test section as described below, before proceeding.

At the onset of production, or after production and placement operations have been altered to bring the in-place density into conformance, construct a test section of 1 lane-width and at most 0.2 miles in length to demonstrate that compaction to between 92.0% and 97.0% in-place density can be obtained. Continue this procedure until a test section with the correct density can be produced. The Engineer will allow only 2

test sections per day. When a test section producing satisfactory in-place air void content is placed, resume full production.

- (1) **Shoulders and Ramps.** Shoulders and ramps are subject to in-place density testing, unless otherwise shown on the plans.
- (2) **Miscellaneous Areas.** Miscellaneous areas include areas that are not generally subject to primary traffic, such as driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Miscellaneous areas also include level-ups and thin overlays if the layer thickness designated on the plans is less than the compacted lift thickness shown in Table 8.

Miscellaneous areas will not be included in the in place density testing. Compact areas that are not subject to in-place air void determination in accordance with ordinary compaction control.

- b. **Segregation (Density Profile).** If shown on the plans, test for segregation using density profiles in accordance with Tex-207-F, Part V. Provide the Engineer with the results of the density profiles as they are completed. Areas defined as “Miscellaneous Areas,” are not subject to density profile testing.

If density profiles are required by the plans, perform a density profile every time the screed stops, on areas that are identified by either the Contractor or the Engineer as having thermal segregation, and on any visibly segregated areas. If the screed does not stop, and there are no visibly segregated areas or areas that are identified as having thermal segregation, perform a minimum of 1 profile per 500 tons of compacted material or as directed by the Engineer.

Reduce the test frequency to a minimum of 1 profile per 2,000 tons of compacted material, or as directed by the Engineer, if 4 consecutive profiles are within established tolerances. Continue testing at this frequency unless a profile fails, at which point resume testing at a minimum frequency of 1 per 500 tons or as directed by the Engineer. The Engineer may further reduce the testing frequency based on a consistent pattern of satisfactory results.

Unless otherwise shown on the plans, the density profile is considered failing if it exceeds the tolerances in Table 11. No production or placement bonus will be paid for any subplot that contains a failing density profile. The Engineer may make as many independent density profile verifications as deemed necessary. The Engineer’s density profile results will be used when available.

Investigate density profile failures and take corrective actions during production and placement to eliminate the segregation. Suspend production if 2 consecutive density profiles fail, unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

Table 11
Segregation (Density Profile) Acceptance Criteria

Mixture Type	Maximum Allowable Density Range (Highest to Lowest)	Maximum Allowable Density Range (Average to Lowest)
Type A & Type B	8.0 pcf	5.0 pcf
Type C, Type D, & Type F	6.0 pcf	3.0 pcf

c. Longitudinal Joint Density.

- (1) Informational Tests.** While establishing the rolling pattern, perform joint density evaluations and verify that the joint density is no more than 3.0 pounds per cubic foot below the density taken at or near the center of the mat. Adjust the rolling pattern if needed to achieve the desired joint density. Perform additional joint density evaluations at least once per subplot unless otherwise directed.
- (2) Record Tests.** If shown on the plans, for each 500 tons of compacted material or as directed by the Engineer, perform a joint density evaluation at each pavement edge that is or will become a longitudinal joint. Determine the joint density in accordance with Tex-207-F, Part VII. Record the joint density information and submit results to the Engineer. The evaluation is considered failing if the joint density is more than 3.0 pounds per cubic foot below the density taken at the core random sample location and the correlated joint density is less than 90.0%. The Engineer may make independent joint density verifications at the random sample locations. The Engineer's joint density test results will be used when available.

Investigate joint density failures and take corrective actions during production and placement to improve the joint density. Suspend production if 2 consecutive evaluations fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

- d. Recovered Asphalt DSR.** The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Engineer. The aging ratio is the dynamic shear rheometer (DSR) value of the extracted binder divided by the DSR value of the original unaged binder (including RAP binder). DSR values are obtained according to AASHTO T 315 at the specified high temperature performance grade of the asphalt. The binder from RAP will be included proportionally as part of the original unaged binder. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores using Tex-211-F.
- e. Irregularities.** Immediately take corrective action if surface irregularities, including but not limited to segregation, rutting, raveling, flushing, fat spots, mat slippage, color, texture, roller marks, tears, gouges, streaks, or uncoated aggregate particles, are detected.

The Engineer may allow placement to continue for at most 1 day of production while taking appropriate action. If the problem still exists after that day, suspend paving until the problem is corrected to the satisfaction of the Engineer.

At the expense of the Contractor and to the satisfaction of the Engineer, remove and replace any mixture that does not bond to the existing pavement or that has other surface irregularities identified above.

- 3. Individual Loads of Hot Mix.** The Engineer can reject individual truckloads of hot mix. When a load of hot mix is rejected for reasons other than temperature, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances shown in Table 7, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load and the Engineer may require removal.
 - 4. Ride Quality.** When required by the plans, measure ride quality in accordance with TxDOT Standard Specification Item 585, "Ride Quality for Pavement Surfaces." Surface Test Type A or B as well as Pay Schedule 1, 2, or 3 shall also be indicated on the plans.
- 205.5. MEASUREMENT:** Hot Mix Asphaltic Concrete Pavement shall be measured by square yard, complete in place, for the thickness specified on the plans. Limits of payment will be from face of curb to face of curb. Pavement area shall not exceed the limits shown on the plans without written authorization.
- 205.6. PAYMENT:** The work performed and materials furnished, as described by this item and measured as provided herein, shall be paid for at the contract unit bid price per square yard specified on the plans of "Hot Mix Asphaltic Concrete Pavement," which price shall be full compensation for furnishing and placing all materials, and for all labor, tools, equipment, and incidentals necessary to complete the work. The prime coat and tack coat, when required, shall be paid under the provisions of Item Nos. 202 and 203, respectively.

Trial batches will not be paid for unless they are incorporated into pavement work approved by the Engineer.

Pay adjustment for ride quality, when required on the plans, will be determined in accordance with TxDOT Standard Specification Item 585, "Ride Quality for Pavement Surfaces."

205.7. BID ITEM:

Item 205.1 - Hot Mix Asphaltic Pavement Type A - per square yard __ inches pavement thickness

Item 205.2 - Hot Mix Asphaltic Pavement Type B - per square yard __ inches pavement thickness

Item 205.3 - Hot Mix Asphaltic Pavement Type C - per square yard __ inches pavement thickness

Item 205.4 - Hot Mix Asphaltic Pavement Type D - per square yard __ inches pavement thickness

Item 205.5 - Hot Mix Asphaltic Pavement Type F - per square yard __ inches pavement thickness

ITEM**208 SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT**

208.1. DESCRIPTION: *Salvage, by milling existing asphalt concrete pavement or asphalt-stabilized base, haul, and stockpile existing asphalt material.*

208.2. EQUIPMENT: The Engineer may require demonstration of the equipment's capabilities.

A. Milling (Planing) Machine. Use milling (planing) machines that:

1. have a minimum 6 foot cutting width except for work areas less than 6 feet wide;
2. are self-propelled with sufficient power, traction, and stability to maintain an accurate depth of cut and slope;
3. can cut in 1 continuous operation:
 - a. 4 inches of asphalt concrete pavement,
 - b. 1 inch of concrete pavement,
 - c. or a combination of 2 inches of asphalt concrete pavement and ½ inch of concrete pavement;
4. use dual longitudinal controls capable of operating on both sides automatically from any longitudinal grade reference, which includes string line, ski, mobile string line, or matching shoe;
5. use transverse controls with an automatic system to control cross slope at a given rate;
6. use integral loading and reclaiming devices to allow cutting, removal, and discharge of the material into a truck in one operation; and
7. include devices to control dust created by the cutting action.

B. Manual System. Use a manual system that can achieve a uniform depth of cut, flush to all inlets, valve covers, manholes, and other appurtenances within the paved area. Use of a manual system is allowed for areas restricted to self-propelled access and for detail pavement removal.

C. Sweeper. Unless otherwise approved, use a street sweeper to remove cuttings and debris from the planed or textured pavement. Equip the sweeper with a water tank, dust control spray assembly, both a pick-up and a gutter broom, and a debris hopper.

208.3. CONSTRUCTION: Remove dirt, raised pavement markings, and other debris, as directed. Unless otherwise shown on the plans, ensure that 95% of the reclaimed material passes a 2 inch sieve. Do not contaminate asphalt material during its removal, transportation, or storage. Repair pavement to remain that is damaged by the removal operations. Work performed under this item shall be prosecuted in such a manner as to cause minimum inconvenience to traffic or to the owners of adjacent property.

- A. Grade Reference.** When required, place grade reference points at maximum intervals of 50 feet. Use the control points to set the grade reference. Support the grade reference so the maximum deflection does not exceed 1/16 inch between supports.
- B. Milling (Planing).** Vary the speed of the machine to leave a grid or other pattern type with discontinuous longitudinal reach. Remove the pavement surface for the length, depth, and width shown on the typical section and to the established line and grades. Remove pavement to vertical lines adjacent to curbs, gutters, inlets, manholes, or other obstructions. Do not damage appurtenances or underlying pavement.

Provide a milled (planed) surface that has a uniform textured appearance and riding surface. Surface should be free from gouges, continuous longitudinal grooves, ridges, oil film, and other imperfections of workmanship. Leave a uniform surface of concrete pavement free of asphalt materials when removing an asphalt concrete pavement overlay.

When an overlay on the milled (planed) pavement is not required, provide a minimum texture depth of not less than 0.05 inch. Stop milling (planing) operations when surface texture depth is not sufficient.

When located within 4 inches of steep curbs, water valves, draw grates, bridge joints, etc., asphaltic concrete that cannot be removed by the milling (planing) machine shall be removed by a manual system conforming to 208.2.B. "Manual System" or other methods acceptable to the Engineer.

When milling (planing) over a bridge deck, the milling depth shall not exceed 3/16 inch into the original deck surface of the bridge. Do not damage armor joints, sealed expansion joints, and other appurtenances.

Provide a pavement surface that, after milling (planing), has a smooth riding quality and is true to the established line, grade, and cross section. Provide a pavement surface that does not vary more than 1/8 inch in 10 feet. Evaluate this criterion with a 10 foot straightedge placed parallel to the centerline of the roadway. Deviations will be measured from the top of the texture. Correct any point in the surface not meeting this requirement.

Sweep pavement and gutter. The pavement and curb surfaces shall be cleaned of all debris and left in a neat and presentable condition.

- C. Edge Treatments.** At the end of the day and for areas under traffic, slope vertical or near vertical longitudinal faces in the pavement surface in accordance with the requirements in the plans. Taper transverse faces to provide an acceptable ride.
- D. Salvaged Materials.** The loose material resulting from the operation shall become the property of the contractor. If the material is designated to remain the property of the City, it shall be as stockpiled by the Contractor at locations as shown on the plans. Prepare the stockpile site by removing vegetation and trash and by providing proper drainage. Keep salvaged paving material free from contamination during its removal, transportation, and storage. Place different types or quality of salvaged asphalt paving material into separate stockpiles. Silt fencing around stockpile areas shall be provided in accordance with Item 542, "Temporary Sediment Control Fence."

The plans or the Engineer may allow or require the use of salvaged material for other Items in the Contract.

Dispose of unsalvageable material in accordance with applicable federal, state, and local regulations.

208.4. MEASUREMENT: Measurement under this bid item shall include removal of asphaltic concrete pavement by the cubic yard (loose vehicle measurement) of material, or by the square yard in its original position at a depth as shown on the plans.

208.5. PAYMENT: The work performed in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid per cubic yard for “Salvaging, Hauling and Stockpiling Reclaimable Asphaltic Pavement” or at the Unit price bid per square yard for “Salvaging, Hauling and Stockpiling Reclaimable Asphaltic Pavement” of the depth specified. This price shall be full compensation for cleaning and removing existing pavement; for any necessary stockpile area preparation; for loading, crushing or breaking, hauling and stockpiling of the material; and for furnishing all materials, labor, tools, equipment, supplies and all incidentals necessary to satisfactorily complete the work.

When plans call for the installation of silt fencing protection around stockpile areas, the fencing will be measured and paid for under Item No. 542.

208.6. BID ITEM:

Item 208.1 - Salvaging, Hauling, and Stockpiling Reclaimable Asphaltic Pavement (___inches depth) - per square yard

Item 208.2 - Salvaging, Hauling, and Stockpiling Reclaimable Asphaltic Pavement - per cubic yard (loose vehicle measurement)

ITEM**230 BASE AND PAVEMENT REPLACEMENT**

- 230.1. DESCRIPTION:** *Repair localized sections of flexible pavement and full depth repair of concrete pavement including subgrade, base, and surfacing as shown on the plans due to distress from traffic loading, environment, or other causes. Cutting and replacing existing pavements for utility trench construction (cuts up to 6 feet in width) is specified in Item 511, "Cutting and Replacing Pavements (Trench Repair)."*
- 230.2. MATERIALS:** Furnish materials in accordance with the requirements herein unless otherwise shown on the plans. Provide materials of the type and grade as shown on the plans and in accordance with the pertinent Items listed below:
- A. Embankment.** Item 107, "Embankment."
 - B. Lime Treated Subgrade.** Item 108, "Lime Treated Subgrade."
 - C. Cement Treated Subgrade.** Item 109, "Cement Treated Subgrade."
 - D. Flexible Base.** Item 200, "Flexible Base."
 - E. Cement Treated Base.** Item 201, "Cement Treated Base."
 - F. Asphalt Treated Base.** Item 206, "Asphalt Treated Base."
 - G. Prime Coat.** Item 202, "Prime Coat."
 - H. Surface Treatments.** Item 204, "Surface Treatments."
 - I. Hot Mix Asphaltic Concrete Pavement.** Item 205, "Hot Mixed Asphaltic Concrete Pavement."
 - J. Concrete Pavement.** Item 209, "Concrete Pavements."
 - K. Concrete.** Item 300, "Concrete."
 - L. Reinforcing Steel.** Item 301, "Reinforcing Steel."
 - M. Epoxy.** TxDOT DMS 6100, "Epoxies and Adhesives."
- 230.3. EQUIPMENT:** Furnish equipment in accordance with the pertinent Items. Use of a motor grader will be permitted for asphalt concrete pavement unless otherwise shown on the plans.
- 230.4. CONSTRUCTION:** Repair using one or more of the following operations as shown on the plans. Cut neat vertical faces around the perimeter of the work area when removing pavement structure layers. Removed materials are the property of the Contractor unless otherwise shown on the plans. Dispose of removed material in accordance with federal, state, and local regulations. Provide a smooth line and grade conforming to the adjacent pavement.
- A. Removing Pavement Structure.** All concrete and asphaltic concrete pavements shall be cut with a concrete saw or other approved equally capable equipment. If necessary, remove

adjacent soil and vegetation to prevent contamination of the repair area, and place it in a windrow. Do not damage adjacent pavement structure during repair operations.

1. **Existing Flexible Pavement.** The depth of the cut shall be such that upon removal of asphaltic concrete, the sides of the cut will be straight and square. Where existing base materials are to remain, pavements shall be removed to their full depth up to the top of the base material. Care shall be taken not to damage the existing base. If subgrade work is required, remove flexible pavement structure layers from work area.
2. **Existing Concrete Pavement.** Remove areas identified by the Engineer. Make repair areas rectangular, at least 6 feet long and at least $\frac{1}{2}$ a full lane in width unless otherwise shown on the plans. Saw-cut and remove existing asphalt concrete overlay over the repair area and at least 6 inches outside each end of the repair area. Saw-cut full depth through the concrete around the perimeter of the repair area before removal. Do not spall or fracture concrete adjacent to the repair area. Schedule work so that concrete placement follows full-depth saw cutting by no more than 7 days unless otherwise shown on the plans or approved.

Remove or repair loose or damaged base material, and replace or repair it with approved base material to the original top of base grade. Place a polyethylene sheet at least 4 mils thick as a bond breaker at the interface of the base and new pavement. Allow concrete used as base material to attain sufficient strength to prevent displacement when placing pavement concrete.

- B. Preparing Subgrade.** Fill holes, ruts, and depressions with approved material. If required, thoroughly wet, reshape, and compact the subgrade as directed.

Where subgrade has failed, remove unstable subgrade material to the depth directed and replace with an approved material.

- C. Mixing and Placing Base Material.** Place, spread, and compact material in accordance with the applicable Item to the required or directed depth. For flexible pavement repair, when bituminous material is to remain in the pavement structure, pulverize to a maximum dimension of 2- $\frac{1}{2}$ inches and uniformly mix with existing base to the depth shown on the plans.

1. **Flexible Base.** Use existing base and add new flexible base as required in accordance with Item 200, "Flexible Base," and details shown on the plans to achieve required section.
2. **Cement-Treated Base.** Use existing base, add flexible base, and stabilize with a minimum cement content of 4% by weight of the total mixture. Construct in accordance with details shown on the plans and Item 201, "Cement Treated Base," to achieve required section.
3. **Asphalt-Treated Base.** Place asphalt-treated base in accordance with details shown on the plans and Item 206, "Asphalt Treated Base," or Item 205, "Hot Mix Asphaltic Concrete Pavement," to achieve required section.
4. **Concrete Base.** Unless otherwise shown on the plans or permitted, furnish pavement concrete for replacement base material when required. The Engineer may waive quality control tests for base material.

- D. Curing Base.** Cure in accordance with the appropriate Item unless otherwise directed or approved by the Engineer. Maintain completed base sections until surfacing.
- E. Surfacing.** Apply surfacing with materials as shown on the plans to the completed base section.
- 1. Prime Coat.** Protect the compacted, finished, and cured flexible or cement-treated base mixtures with a prime coat of the type and grade shown on the plans. Apply the prime coat at the rate shown on the plans.
 - 2. Surface Treatments.** Apply surface treatment with the type and grade of asphalt and aggregate as shown on the plans in accordance with Item 204, "Surface Treatments."
 - 3. Asphalt Concrete Pavement.** Apply tack coat of the type and grade and at the rate shown on the plans unless otherwise directed. Construct in accordance with Item 205, "Hot Mix Asphaltic Concrete Pavement," to achieve required section.
 - 4. Portland Cement Concrete Pavement.** Use only drilling operations that do not damage the surrounding operations when drilling holes for replacement steel. Place new deformed reinforcing steel bars of the same size and spacing as the bars removed or as shown on the plans. Lap all reinforcing steel splices in accordance with Item 301, "Reinforcing Steel." Place dowel bars and tiebars as shown on the plans. Epoxy-grout all tiebars for at least a 12 inch embedment into existing concrete. Completely fill the tiebar hole with Type III, Class A or Class C epoxy before inserting the tiebar into the hole.

Provide grout retention disks for all tiebar holes. Provide and place approved supports to firmly hold the new reinforcing steel, tiebars, and dowel bars in place. Demonstrate, through simulated job conditions, that the bond strength of the epoxy-grouted tiebars meets a pullout strength of at least $\frac{3}{4}$ of the yield strength of the tiebar when tested in accordance with ASTM E 488 within 18 hr. after grouting. Increase embedment depth and retest when necessary to meet testing requirements. Perform tiebar testing before starting repair work.

If the time frame designated for opening to traffic is less than 72 hours after concrete placement, provide Class HES concrete designed to attain a minimum average flexural strength of 255 psi or a minimum average compressive strength of 1,800 psi within the designated time frame. Otherwise provide Class P concrete conforming to Item 209, "Concrete Pavement." Type III cement is permitted for Class HES concrete. Mix, place, cure, and test concrete to the requirements of Item 209, "Concrete Pavement," and Item 300, "Concrete," unless otherwise shown on the plans. Broom-finish the concrete surface unless otherwise shown on the plans.

Match the grade and alignment of existing concrete pavement. After concrete strength requirements have been met, replace any asphalt overlay and shoulder material removed with new asphalt concrete material in accordance with Item 205, "Hot Mixed Asphaltic Concrete Pavement."

For repair areas to be opened to traffic before 72 hours, use curing mats to maintain a minimum concrete surface temperature of 70°F when air temperature is less than 70°F. Cure repaired area for at least 72 hours or until overlaid with asphalt concrete, if required, or until the area is opened to traffic. Saw and seal contraction joints in the repair area in

accordance with Item 209, "Concrete Pavement." Remove repair area debris from the right of way each day.

- F. Finishing.** Regrade and compact disturbed topsoil. Clean roadway surface after repair operations.

230.5. MEASUREMENT:

- A. Flexible Pavement.** This Item will be measured by the square yard. In areas where material is excavated, as directed, to depths greater than those specified on the plans, measurement will be made by dividing the actual depth of such area by the plan depth and then multiplying this figure by the area in square yards of work performed. Calculations for each repaired area will be rounded up to the nearest 1/10 square yard. At each repair location, the minimum area for payment purposes will be 1 square yard.
- B. Concrete Pavement.** This Item will be measured by the square yard of concrete surface area repaired. No measurement will be made for areas damaged because of Contractor negligence.

230.6. PAYMENT:

- A. Flexible Pavement.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Flexible Pavement Structure Repair" of the specified depth. This price is full compensation for scarifying, removing, hauling, spreading, disposing of, and stockpiling existing pavement structure; removing objectionable or unstable material; furnishing and placing materials; maintaining completed section before surfacing; applying tack or prime coat; hauling, sprinkling, spreading, and compacting; and equipment, labor, tools, and incidentals.
- B. Concrete Pavement.** The work performed and the materials furnished in accordance with this Item and measured as specified under "Measurement" will be paid for at the unit price bid for "Concrete Full-Depth Repair" of the type and depth specified. This price is full compensation for removal, stockpiling, and disposal of waste material and for equipment, materials, labor, tools, and incidentals. Asphalt concrete, base material, and curbing will not be paid for directly but will be considered subsidiary to this Item.

230.7. BID ITEM:

Item 230.1 - Flexible Pavement Structure Repair - __ inches compacted depth - per square yard

Item 230.2 - Concrete Pavement Full-Depth Repair - __ inches compacted depth - per square yard

ITEM

502 CONCRETE SIDEWALKS

502.1. DESCRIPTION: *Construct or repair hydraulic cement concrete sidewalks.*

502.2. MATERIALS: Furnish materials conforming to the following:

- A. Hydraulic Cement Concrete.** Item 300, "Concrete." Use Class A concrete or other concrete as specified. Use Grade 8 course aggregate for extruded Class A concrete. Use other grades if approved by the Engineer.
- B. Reinforcing Steel.** Item 301, "Reinforcing Steel."
- C. Wire Mesh.** Item 303, "Welded Wire Flat Sheets."
- D. Expansion Joint Material:** Item 304, "Expansion Joint Materials."
- E. Membrane Curing Compound:** Item 305, "Membrane Curing."
- F. Concrete Structures.** Item 307, "Concrete Structures."

502.3. EQUIPMENT: Furnish equipment as required and/or in accordance with the pertinent Items.

502.4. CONSTRUCTION: Routing and location of sidewalks shall be indicated by plans or as directed by the Engineer. Grading of sidewalks shall be a minimum of two feet wider than sidewalk width on straight sections and three feet wider than sidewalk at turns. Grading for sidewalks shall be in accordance with direction by the Engineer. Generally, where sidewalks occur on slopes, grading shall be performed so as to result in curved contours rather than abrupt banks. Fine grading shall prevent pocketing of water. Contractor shall complete final excavation and preparation of subgrade achieving slope, drainage and compaction.

Where a sidewalk crosses a concrete driveway, confirm that the sidewalk depth and reinforcement are not less than the driveway cross-sectional details shown on the plans.

A. Trees and Roots.

- 1. Tree Protection.** Trees that are near sidewalk construction shall be protected from construction equipment through the use of fencing or boarding in accordance with *City of San Antonio Tree Protection Details – Tree Preservation Standard Details 1.1.3, "Level II A Fence Protection," 1.1.4, "Level II B Fence Protection,"* or as shown on the plans. Whenever possible, the entire drip line of the tree should be protected from construction activities in accordance with *Tree Preservation Standard Details 1.1.2, "Level I & Fence Protection."*
- 2. Root Barriers.** When shown on the plans, install root barriers near the edge of the sidewalk to reduce potential future damage to the sidewalk in accordance with the locations and depths shown on the plans. Unless otherwise shown on the plans, the root barrier shall be thermoplastic panels or sheets.
- 3. Root Damage to Existing Sidewalks.** When roots have damaged the sidewalk and repairs are undertaken, the tree roots causing the damage shall be removed. Unless

otherwise shown on the plans, retain the City Arborist to review the trees affected before sidewalk reconstruction begins. The City Arborist will identify roots to be removed and branches to be pruned, if required. Utilize equipment that will provide a sharp clean cut to minimize damage to the tree roots and branches. Prune the tree in accordance with the City Arborist's requirements.

- B. Removal of Existing Sidewalk.** If an existing sidewalk is to be reconstructed or repaired, remove existing sidewalk to the depths and limits shown on the plans or identified by the Engineer. All concrete sidewalks to be repaired shall be cut with a concrete saw or other equipment approved by the Engineer from existing sidewalks, driveways or other concrete structures. If necessary, remove adjacent soil and vegetation to prevent contamination of the sidewalk area, and place it in a windrow or stockpile. Do not damage adjacent sidewalk or other structures during removal and reconstruction operations. Remove and dispose of existing concrete and other materials from the work area.
- C. Subgrade Preparation.** Shape and compact subgrade to the line, grade, and cross-section shown on the plans. Mechanically tamp and sprinkle foundation when placement is directly on subgrade.
- D. Subbase Placement.** A cushion, 2 inch minimum thickness, of crusher screenings, gravel, crushed rock or flexible base material shall be spread, wetted thoroughly, tamped and leveled. The cushion shall be moist at the time the concrete is placed. Where the subgrade is rock or gravel, 70% of which is rock, the 2 inch cushion need not be used. The Engineer will determine if the subgrade meets the above requirement.

If the subgrade is undercut, or the natural ground is below "top of subgrade," the necessary backfill shall be made with an approved material and compacted with a mechanical tamper. Hand tamping will not be permitted.

The foundation shall be level and uniformly compacted to prevent future settlement.

- E. Reinforcement.** Concrete sidewalks shall be reinforced as shown in the plans. Concrete reinforcement for sidewalks may consist of longitudinal reinforcing steel without traverse reinforcement or as specified by the manufacturer or the Engineer. Steel reinforcement may be omitted if approved by the Engineer.

An alternate method of reinforcing using nylon or polypropylene fibers may be used if approved by Engineer or slip-form paver equipment manufacturer. Nylon fibers shall be used at a rate of one pound (1 lb) per cubic yard or polypropylene fibers at one and a half pounds (1.5 lbs) per cubic yard, unless otherwise specified by the Engineer or slip-form paver manufacturer.

- F. Joints.** Unless otherwise specified on plans or as agreed to by Engineer, tooled joints with rounded edges will be placed every ten feet (10') and will be opened with one-half inch ($\frac{1}{2}$ ") radius by one and one-half inch ($1\frac{1}{2}$ ") depth and closed by one-half inch ($\frac{1}{2}$ ") radius by one-inch (1") depth.
- 1. Expansion Joints.** Provide sidewalk sections separated by pre-molded or board joint $\frac{1}{2}$ inch thick, or as shown on the plans, in lengths greater than 8 feet but less than 50 feet, unless otherwise directed. Terminate workday production at an expansion joint. Expansion joint material shall also be placed where the new construction abuts the existing curbs or driveways if the Engineer deems it necessary. The expansion joint

material shall be placed vertically and shall extend the full depth and width of the concrete.

2. **Expansion Joint Dowels.** Unless otherwise shown on the plans, a minimum of two (2) round smooth dowel bars $\frac{3}{8}$ inch in diameter and 18 inches in length shall be spaced 18 inches apart at each expansion joint. Nine inches (9") of each dowel shall be thoroughly coated with hot oil asphalt or greased, so that it will not bond to the concrete. Approved types of slip joints may be used in lieu of coating ends of dowels.
 3. **Transverse Joints.** Sidewalks shall be marked with transverse "dummy" joints as shown on detail sheets, by the use of City approved jointing tools.
- G. Curb Ramps.** Curb ramps must include a detectable warning surface and conform to details shown on the plans. Confirm that abrupt changes in sidewalk elevation do not exceed $\frac{1}{4}$ inch, sidewalk cross slope does not exceed 2%, curb ramp grade does not exceed 8.3%, and flares adjacent to the ramp do not exceed 10% slope.
- H. Concrete Placement.** Provide a smooth, uniform surface free of debris and loose foundation material for concrete placement. Lightly sprinkle subgrade or foundation material immediately before concrete placement. Mix and place concrete in accordance with the pertinent Items. Hand-finishing is allowed for any method of construction. Finish exposed surfaces to a uniform transverse broom finish surface.
1. **Conventionally Formed Concrete.** Forms shall be of metal or wood and shall extend for the full depth of the concrete. All forms shall be free from warp and of sufficient strength to resist the pressure of the concrete without displacement. Bracing and staking of forms shall be such that the forms remain in both horizontal and vertical alignment until their removal. All forms shall be cleaned and coated with an approved form release agent or form oil before concrete is placed. Divider plates shall be of metal. Forms shall conform to the specified radius when placed on curves.
 2. **Extruded or Slip-Formed Concrete.** A slip form paver approved by the Engineer shall lay the sidewalk. Contractor shall set guidelines or guide-rails from survey marks established by the Engineer. Guidelines shall be set to avoid obstacles in the path that may interfere with operation of equipment and overall quality of sidewalk. Sidewalk outline shall strictly conform to the details shown on the plans or as set by Engineer. Slip form equipment shall be operated according to machine specifications and manual for paving accuracy. Slip form equipment shall spread, consolidate and finish the concrete to produce a dense homogeneous concrete true to grade and cross section. Concrete shall be consolidated by the use of internal vibrators. The concrete shall be of such consistency that it will maintain the shape of the sidewalk section without support.

Where forms are required for transitional zones the forms shall conform to 502.4.G.2. "Conventionally Formed Concrete."

- I. **Finish and Curing.** Provide finished work with a well-compacted mass, a surface free from voids and honeycomb, and the required true-to-line shape and grade. After finishing each portion of the sidewalk, the surface shall be textured with heavy broom finish. Within twenty minutes of broom finish, a curing compound shall be used to protect the sidewalk. The curing compound shall be of a high solid content, greater than thirty percent (+30%). All edges shall be tooled to have slight radius. Surface water retention is not acceptable. Finished surface of

sidewalks shall generally be one-half inch ($\frac{1}{2}$ inch) to one inch (1 inch) above existing grade. Concrete must be cured and protected from freezing temperatures for at least three (3) days.

J. Exposed Aggregate Surface. For exposed Aggregate finished sidewalks, wash concrete surface after initial set with stiff bristle brush and water to remove matrix and clean each piece of exposed coarse aggregate. Unless otherwise acceptable to the Engineer, perform washing and brushing 3 - 4 hours after casting. Care shall be taken to uniformly expose about a third of each piece of coarse aggregate, removing no more of the matrix than necessary across the panel surface and as required to achieve appearance similar to adjacent existing work. After seven days, follow with a final cleaning with a mild acid solution and final rinsing with clear water.

K. Backfilling. Once sidewalk has cured, sidewalk will need to be backfilled to the full height of the sidewalk with material approved by the Engineer. The top 4 inches of fill shall be tamped and sloped using clean topsoil. Heavy equipment must remain off sidewalks at all times.

All necessary excavation for the sidewalk section, will be considered incidental work pertaining to this item, and will not be paid for directly. The adjacent excavation and grading of the slopes shall be done in a manner acceptable to the Engineer.

502.5. MEASUREMENT: Sidewalks will be measured by the square yard of surface area at the depth specified. Curb ramps will be measured by the square yard of surface area or by each unit. The unit will consist of the curb ramp, landing, adjacent flares or side curb, and detectable warning surface as shown on the plans.

502.6. PAYMENT: The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid per square yard for "Concrete Sidewalks - Conventionally Formed" or "Concrete Sidewalks - Machine Laid" an includes curb ramps where applicable. This price is full compensation for surface preparation of base; materials; removal and disposal of existing concrete; excavation, hauling and disposal of excavated material; drilling and doweling into existing concrete curb, sidewalk, and pavement; repair of adjacent street or pavement structure damaged by these operations; and equipment, labor, materials, tools, and incidentals.

Sidewalks that cross and connect to concrete driveways will be measured and paid for in accordance with Item 503, "Asphaltic Concrete, Portland Cement Concrete, and Gravel Driveways."

502.7. BID ITEM:

Item 502.1 - Concrete Sidewalks - Conventionally Formed - per square yard

Item 502.2 - Concrete Sidewalks - Machine Laid - per square yard

ITEM

530 BARRICADES, SIGNS, AND TRAFFIC HANDLING

530.1. DESCRIPTION: *This item shall govern for providing, installing, moving, repairing, maintaining, cleaning and removing upon completion of work, all barricades, signs, cones, lights and other such type devices and of handling traffic as indicated on the plans or as directed by the Engineer.*

530.2. GUIDELINES FOR BARRICADING ON CITY RIGHT-OF-WAY: The barricade contractor must locally maintain sufficient materials in stock to accommodate three or more construction phases per project. These will include all applicable traffic control sign types, trucks, trailers, arrow boards, and all other traffic control devices assigned to the Contractor's barricading operation.

The *Texas Manual on Uniform Traffic Control Devices (TMUTCD)*, Section 6A-6, requires the appropriate training for all personnel who are involved in the selection, placement, and maintenance of traffic control devices on construction projects. The City of San Antonio requires that all personnel associated with barricading operations and traffic handling possess certificates from either of the two groups listed in Table 1 below. Each certificate will be valid for four years.

**Table 1
Barricading Training**

Texas Engineering Extension Service	American Traffic Safety Service Association
Work Zone Traffic Control	Training Course for Worksite Traffic Supervisors

The Contractor shall have a minimum of one barricade supervisor and three persons who are responsible for construction work zone traffic control. These persons shall be based in the San Antonio metropolitan area and their sole tasks shall be implementing and maintaining construction work zone traffic control devices.

The Contractor shall have a commercial telephone answering service during non-working hours. The Contractor shall provide the City during working hours with an office telephone number, pager number, and cellular telephone number to contact the barricading supervisor. The contractor must be able to respond to any call within two hours. The barricading contractor or General Contractor must possess liability insurance in the minimum amount of one million dollars. A copy of the liability policy must be sent to the City Traffic Engineer for approval 48 hours prior to starting barricading operations.

The contractor shall comply with all standards set forth in the plan barricade detail sheets. One noncompliance letter issued by the City to the Contractor in regard to construction work zone traffic control, and not corrected within 48 hours, will be cause for delay of payment for this item.

If the general contractor elects to do his own barricading, he must comply with all the foregoing requirements. Additionally, a general contractor will be required to submit a traffic control plan (TCP) at least 72 hours in advance (excluding weekends and holidays) of starting work in each construction phase. Upon satisfactory evidence of competent barricading expertise, this requirement for a traffic control plan may be waived by the City Traffic Engineer.

530.3. EQUIPMENT: Provide the machinery, tools and equipment necessary for proper prosecution of the work. All machinery, tools and equipment used shall be maintained in a satisfactory and workmanlike manner.

530.4. CONSTRUCTION: All barricades, signs, and other types of devices listed above shall conform to the requirements of the TMUTCD. It is the contractor's responsibility to see that all traffic control devices are properly installed and maintained at the job site. If it is determined by the Traffic Engineering Representative that the traffic control devices do not conform to the established standards, or are incorrectly placed to protect the general public, the Traffic Engineer shall have the option to stop the work, at no expense to the City, until the situation is corrected by the Contractor. If it is determined that additional temporary traffic control devices, special directional devices, and/or business name signs are required, they will be provided by the contractor at no additional cost. As work progresses, the location of temporary traffic control devices will be adjusted and modified as necessary by the Contractor.

All retro reflective traffic control devices such as barricades, vertical panels, signs, etc., shall be maintained by cleaning, replacing or a combination thereof such that during darkness and rain, the retro reflective characteristics shall equal or exceed the retro reflective characteristics of the standard reflective panels in the Inspector's possession.

The contractor shall contact the City of San Antonio Traffic Operations Section prior to removing any traffic signs or traffic signals. Prior to completion of the contract and removal of barricades, all applicable permanent traffic signs and signals must be in place and functioning properly. All permanent signs or traffic control devices missing or damaged during construction shall be replaced at the contractor's expense. Permanent pavement marking shall be applied prior to the opening of any street to traffic. Temporary short-term expendable pavement markings may be provided prior to application of permanent markings.

The contractor must maintain all streets open to through traffic by repairing trenches, potholes, etc., at no direct payment. The contractor shall provide reasonable access to residences and all businesses within all phases of the work, as well as providing suitable access accommodations for school children, pedestrians, garbage pick-up and mail delivery by the US Postal Service. Temporary pedestrian crossing will be determined in the field by the Police Department School Services Unit. Temporary pedestrian crossings shall be 4 feet wide by 4 inches thick asphalt treated base or asphaltic concrete and will be paid for under Item 206, "Asphalt Treated Base" or Item 205, "Hot Mix Asphaltic Concrete Pavement," respectively.

When flagging is required by the plans or Traffic Control Plan, provide a Contractor representative who has been certified as a flagging instructor through courses offered by the Texas Engineering Extension Service, the American Traffic Safety Services Association, the National Safety Council, or other approved organizations. Provide the certificate indicating course completion when requested. This representative is responsible for training and assuring that all flaggers are qualified to perform flagging duties. A qualified flagger must be independently certified by one of the organizations listed above or trained by the Contractor's certified flagging instructor. Provide the Engineer with a current list of qualified flaggers before beginning flagging activities. Use only flaggers on the qualified list.

Flaggers must be courteous and able to effectively communicate with the public. When directing traffic, flaggers must use standard attire, flags, signs, and signals and follow the flagging procedures set forth in the TMUTCD.

530.5. MEASUREMENT: This item will be measured by "Lump Sum" as indicated on the plans.

530.6. PAYMENT: This item will be paid for at the contract lump sum price bid for “barricades, signs, and traffic handling”. This price shall be full compensation for furnishing all labor, materials, supplies, equipment and incidentals necessary. To complete the work as specified. The lump sum price will be pro-rated based on the number of workdays in the project contract. Failure to complete the work within time allowed in the project contract due to approving designs, testing, material shortages, closed construction season, curing periods, and testing periods will not qualify for additional compensation. When additional work is added by an approved field alteration or when work is suspended for the convenience of the City, through no fault of the contractor, additional compensation may be paid to the Contractors.

530.7. BID ITEM:

Item 530.1 - Barricades, Signs and Traffic Handling - lump sum

ITEM

536 PREFORMED PAVEMENT MARKINGS

- 536.1. DESCRIPTION:** Provide a long-term tape and sheeting pavement marking material to be used for permanent type longitudinal or transverse lines and word/symbol legends.
- 536.2. MATERIALS:** All materials shall conform to the requirements of TxDOT DMS-8240 "Permanent Prefabricated Pavement Markings" as shown on the plans. Type A, B, or C prefabricated markings shall be indicated on the plans based upon the traffic conditions of the roadway and the placement method indicated.
- 536.3. EQUIPMENT:** Provide the necessary equipment to conduct the work specified herein.
- 536.4. CONSTRUCTION:** All markings shall be located as shown in the plans.

The contractor shall install the preformed plastic pavement markings to newly paved hot-mix asphaltic concrete pavements by the in-laid method unless the temperature of the pavement has reached or fallen below the minimum allowable pavement temperature shown in Table 1.

Table 1
Acceptable Pavement Temperatures for Application of Pavement Markings.

Hot Mix Asphalt Mixture Type Upon Which the Preformed Pavement Marking is to be Applied	Surface Temperature Range for Inlaid Method, °F	Minimum Allowable Pavement Temperature for Inlaid Method, °F	Surface Temperature Range for Cold-Laid Method, °F
Open-Graded Friction Course (OGFC)	160 °F to 180 °F	160 °F	60 °F to 120 °F
Stone Matrix Asphalt (SMA)			
Dense Graded Hot Mixed Asphalt w/PG 76- or 82-XX Asphalt Cement			
Dense Graded Hot Mixed Asphalt w/PG 70-, 64-, or 58-XX Asphalt Cement	120 °F to 155 °F	120 °F	

All material shall be placed according to the manufacturer's instructions, and in accordance with the surface condition, moisture and temperature requirements listed below:

A. Inlaid Preformed Pavement Markings.

This installation procedure shall apply to streets with newly paved asphaltic concrete surfaces that have attained the temperature ranges shown in Table 1 from initial placement. If at any time after initial placement the pavement cools to below the minimum allowable temperature as shown in Table 1, the markings shall be installed as Hot Applied Thermoplastic Pavement Marking per Item 535 requirements. For portland cement concrete streets, see Cold-Laid Preformed Pavement Markings (next section) below.

The contractor shall place and inlay all pavement markings on the newly placed asphaltic concrete pavement prior to the final rolling of the asphalt.

The preformed pavement markings shall be applied after the newly placed asphaltic concrete pavement has been adequately compacted and within the temperature range specified in Table 1. The Contractor will be required to install temporary pavement markings at no additional cost to the City if the cold-laid method is used. Preformed pavement line markings shall be installed with a mechanical applicator which shall be capable of placing pavement lines in a neat, accurate and uniform manner. The mechanical applicator shall be equipped with a film cut-off device. Word legends and arrows shall be installed by hand and result in neat, accurate and uniform words and arrows.

The preformed pavement markings shall be inlaid into the asphaltic concrete surface by means of a mechanical roller. The roller shall be of sufficient weight capacity to inlay the pavement marking to a minimum depth of 65% of the material thickness, and to not more than 80% of the material thickness while the temperature range of the pavement surface is within the ranges specified in Table 1. In the event the inlaid markings are distorted or discolored to the point that cleaning does not restore its initial appearance by the contractor's operations, fail to provide a uniform appearance, or are installed improperly, such markings shall be removed and replaced in the finished surface of the pavement as Hot Applied Thermoplastic Pavement Marking per Item 535 requirements at no additional expense to the City.

B. Cold-Laid Preformed Pavement Markings.

This installation procedure applies to all portland cement concrete pavements, existing asphaltic concrete pavement, and newly placed asphaltic concrete that at any time has fallen below the minimum allowable temperature specified in Table 1 after initial placement.

Pavement on which pavement markings are to be placed shall be cleaned and prepared prior to placement of markings. Cleaning shall be in conformance with Item 533, "Cleaning and Removal of Pavement Markings and Markers" such that contaminants, loose materials, and conditions deleterious to proper adhesion are removed. When blast cleaning is required, it shall be done to the extent that a sound pavement surface is exposed. Surfaces shall be further prepared after cleaning by sealing or priming, as recommended by the manufacturer.

Pavement to which materials to be applied shall be completely dry. Materials shall not be applied until concrete pavement has appeared to be dry for a minimum of four hours and until asphaltic concrete pavement has appeared to be dry for a minimum of two hours.

Pavement and ambient air temperature requirements recommended by the manufacturer shall be observed. If no temperature requirements are established by the manufacturer, material shall not be placed if the surface temperature is outside the acceptable range shown in Table 1 (see column 4 of this table).

- 536.5. MEASUREMENT:** Measurement shall be made by the length of satisfactorily installed line, in feet, the number of and types of symbols and other pavement legends in accordance with the plans and specifications.
- 536.6. PAYMENT:** The accepted quantities shall be paid at the contract unit price for the type of line or legend applicable in the bid list which shall be full compensation for materials, surface preparation, labor and incidentals.

536.7. BID ITEM:

Item 536.1 - 4 inch Wide Yellow Line

Item 536.2 - 4 inch Wide White Line

Item 536.3 - 8 inch Wide Yellow Line

Item 536.4 - 8 inch Wide White Line

Item 536.5 - 12 inch Wide White Line

Item 536.6 - 16 inch Wide White Line

Item 536.7 - 24 inch Wide White Line

Item 536.8 - Right White Arrow (per each)

Item 536.9 - Left White Arrow (per each)

Item 536.10 - Combination Thru/Right White Arrow (per each)

Item 536.11 - Combination Thru/Left White Arrow (per each)

Item 536.12 - Word "ONLY" (per word)

Item 536.13 - Straight White Arrow (per each)

Item 536.14 - Railroad Crossing Symbol, including two R's, crossbuck and 3 transverse bars (per each)

Item 536.15 - White Diamond (per each)

Item 536.16 - Straight White Arrow Bicycle Facility (per each)

Item 536.17 - Solid White Yield Lines (6" x 9") per each)

Item 536.18 - Word "STOP" (per word)

Item 536.19 - Word "YIELD" (per word)

Item 536.20 - Word "BUS" (per word)

ITEM**540 TEMPORARY EROSION, SEDIMENTATION AND WATER POLLUTION PREVENTION AND CONTROL**

540.1. DESCRIPTION: *This item shall govern the control measures necessary to prevent and control soil erosion, sedimentation and water pollution which may degrade receiving waters including rivers, streams, lakes, reservoirs, tidal water, groundwater and wetlands.*

Note: The control measures contained herein shall be installed and maintained throughout the construction contract and coordinated with the permanent or existing temporary pollution control features specified elsewhere on the plans and in the specifications to assure effective and continuous water pollution control throughout the construction and post construction period. These control measures shall not be used as a substitute for the permanent pollution control measures unless otherwise directed by the Engineer in writing. The controls may include sediment control fences, inlet protection, baled hay, rock filter dams, dikes, swales, sediment traps and basins, pipe slope drains, paved flumes, construction exits, temporary seeding, sodding, mulching, soil retention blankets or other structural or non-structural water pollution controls. This item does not apply to commercial operations.

540.2. MATERIALS: The items, estimated quantities and locations of the control measures are shown on the plans; however, the Engineer may increase or decrease the quantity of these items as the need arises. The materials will be shown on the plans and in this specification. The Engineer may allow other materials and work as the need arises and as approved in writing. Pollution control measures may be applicable to contractor operations outside the right of way where such work is necessary as a result of roadway related construction such as construction and haul roads, field offices, equipment and supply areas, and materials sources.

Unless otherwise shown on the plans, provide materials that meet the following requirements:

A. Rock Filter Dams.

1. **Aggregate.** Furnish aggregate with hardness, durability, cleanliness, and resistance to crumbling, flaking, and eroding acceptable to the Engineer. Provide the following:
 - **Types 1, 2, and 4 Rock Filter Dams.** Use 3 to 6 in. aggregate.
 - **Type 3 Rock Filter Dams.** Use 4 to 8 in. aggregate.
2. **Wire.** Provide minimum 20 gauge galvanized wire for the steel wire mesh and tie wires for Types 2 and 3 rock filter dams. Type 4 dams require:
 - a double-twisted, hexagonal weave with a nominal mesh opening of 2½ in. x 3¼ in.;
 - minimum 0.0866 in. steel wire for netting;
 - minimum 0.1063 in. steel wire for selvages and corners; and
 - minimum 0.0866 in. for binding or tie wire.
3. **Sandbag Material.** Furnish sandbags meeting Section 540.2.I, "Sandbags," except that any gradation of aggregate may be used to fill the sandbags.

- B. Temporary Pipe Slope Drains.** Provide corrugated metal pipe, polyvinyl chloride (PVC) pipe, flexible tubing, watertight connection bands, grommet materials, prefabricated fittings, and flared entrance sections that conform to the plans. Recycled and other materials meeting these requirements are allowed if approved. Furnish concrete in accordance with Item 505, "Concrete Riprap."
- C. Baled Hay.** Provide hay bales weighing at least 50 lb., composed entirely of vegetable matter, measuring 30 in. or longer, and bound with wire, nylon, or polypropylene string.
- D. Temporary Paved Flumes.** Furnish asphalt concrete, hydraulic cement concrete, or other comparable non-erodible material that conforms to the plans. Provide rock or rubble with a minimum diameter of 6 in. and a maximum volume of ½ cu. ft. for the construction of energy dissipaters.
- E. Construction Exits.** Provide materials that meet the details shown on the plans and this Section.
- 1. Rock Construction Exit.** Provide crushed aggregate for long and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft, or flaky materials and organic and injurious matter. Use 4- to 8- in. rock for Type 1 and 2- to 4- in. rock for Type 3. Unless otherwise shown on the plans, provide a light weight (4 oz.) non-woven filter fabric below the ballast to prevent mud and sediment migration.
 - 2. Timber Construction Exit.** Furnish No. 2 quality or better railroad ties and timbers for long-term construction exits, free of large and loose knots and treated to control rot. Fasten timbers with nuts and bolts or lag bolts, of at least ½ in. diameter, unless otherwise shown on the plans or allowed. For short-term exits, provide plywood or pressed wafer board at least ½ in. thick.
 - 3. Foundation Course.** Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.
- F. Embankment for Erosion Control.** Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.
- G. Pipe.** Provide pipe outlet material in accordance with TxDOT Standard Specification Item 556, "Pipe Underdrains," and details shown on the plans.
- H. Construction Perimeter Fence.**
- 1. Posts.** Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in. or use 2 x 4 boards. Furnish hardwood posts with a minimum cross-section of 1½ x 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 0.95 lb. per foot.
 - 2. Fence.** Provide orange construction fencing as approved by the Engineer.
 - 3. Fence Wire.** Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

4. **Flagging.** Provide brightly-colored flagging that is fade-resistant and at least $\frac{3}{4}$ in. wide to provide maximum visibility both day and night.
 5. **Staples.** Provide staples with a crown at least $\frac{1}{2}$ in. wide and legs at least $\frac{1}{2}$ in. long.
 6. **Used Materials.** Previously used materials meeting the applicable requirements may be used if accepted by the Engineer.
- I. Sandbags.** Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%. Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1
Sand Gradation

Sieve #	Maximum Retained (% by Weight)
4	3%
100	80%
200	95%

- J. Temporary Sediment Control Fence.** Provide a net-reinforced fence using woven geotextile fabric. Logos visible to the traveling public will not be allowed.
1. **Fabric.** Provide fabric materials in accordance with TxDOT DMS-6230, "Temporary Sediment Control Fence Fabric."
 2. **Posts.** Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Soft wood posts must be at least 3 in. in diameter or nominal 2 x 4 in. Hardwood posts must have a minimum cross-section of $1\frac{1}{2}$ x $1\frac{1}{2}$ in. T- or L-shaped steel posts must have a minimum weight of 0.95 lb. per foot.
 3. **Net Reinforcement.** Provide net reinforcement of at least 14 gauge galvanized welded wire mesh, with a maximum opening size of 2 x 4 in., at least 24 in. wide, unless otherwise shown on the plans.
 4. **Staples.** Provide staples with a crown at least $\frac{3}{4}$ in. wide and legs $\frac{1}{2}$ in. long.
 5. **Used Materials.** Use recycled material meeting the applicable requirements if accepted by the Engineer.
- K. Curb Inlet Gravel Filters.**
1. **Gravel Filter Bags.** Furnish gravel filter bags meeting Section 540.2.I, "Sandbags." Gravel bags shall be filled with $\frac{3}{4}$ inch gravel.
 2. **Concrete Masonry Units.** Hollow, Non-Load-Bearing Concrete blocks of 1500-2000 psi, 28-day compressive strength concrete shall be used with dimensions of 8" x 6" x 6" width, height, and length, respectively.
 3. **Wood Blocks.** Wolmanized treated 2" x 4" lumber with the length as per inlet size.

- 540.3. EQUIPMENT.** Provide a backhoe, front end loader, blade, scraper, bulldozer, or other equipment as required when “Earthwork for Erosion Control” is specified on the plans as a bid item.
- 540.4. CONSTRUCTION:** The contractor shall provide control measures to prevent or minimize the impact to receiving waters as required by the plans and/or as directed by the Engineer in writing.

A. Contractor Responsibilities.

- 1. SW3P.** Implement the City’s Storm Water Pollution Prevention Plan (SWP3) for the project site in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site. The Contractor shall effectively prevent and control erosion and sedimentation on the site at the earliest practicable time as outlined in the approved schedule. Control measures, where applicable, will be implemented prior to the commencement of each construction operation or immediately after the area has been disturbed.
- 2. Preconstruction Submittals.**
 - a. Operations on Right of Way.** Prior to the start of construction, the Contractor shall submit to the Engineer, for approval, schedules for accomplishment of the pollution control measures in accordance with the Storm Water Pollution Prevention Plan (SW3P). A plan for the disposal of waste materials generated on the project site must be submitted for approval, also. The Contractor shall submit to the Engineer, for approval, the proposed SW3P for the industrial activities (such as hot mix plants, concrete batch plants, or material handling areas) on the right of way.
 - b. Operations off Right of Way.** The Contractor shall provide the Engineer, for information purposes only, proposed methods of pollution control for Contractor operations in areas which are outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, and material sources).

Pollution control measures for the Contractor's facilities off the right of way are not covered by the City's Environmental Protection Agency (EPA) NPDES general permit. The Contractor shall obtain his own Notice of Intent for the off-site operations. These pollution controls will not be measured for payment but shall be performed at the Contractor's expense.

B. General.

- 1. Phasing.** Implement control measures in the area to be disturbed before beginning construction, or as directed. Limit the disturbance to the area shown on the plans or as directed. If, in the opinion of the Engineer, the Contractor cannot control soil erosion and sedimentation resulting from construction operations, the Engineer will limit the disturbed area to that which the Contractor is able to control. Minimize disturbance to vegetation.
- 2. Rainfall Events.** A rain gauge shall be provided by the Contractor and located at the project site. Within 24 hours of a rainfall event of ½ inch or more as measured by the project rain gauge, the Contractor and Inspector will inspect the entire project to

determine the condition of the control measures. Maintain control measures in accordance with Item 540.4.B.3, "Maintenance."

3. **Maintenance.** Correct ineffective control measures in accordance with this section. Implement additional controls as directed. Remove excavated material within the time requirements specified in the applicable storm water permit.

Following a rain event as described in Item 540.4.B.2, "Rainfall Event," sediment will be removed and devices repaired as soon as practicable but no later than 7 days after the surrounding exposed ground has dried sufficiently to prevent further damage from equipment needed for repair of control measures.

In the event of continuous rainfall over a 24-hour period, or other circumstances that preclude equipment operation in the area, the Contractor will hand carry and install additional backup devices as determined by the Engineer. The Contractor will remove silt accumulations and deposit the spoils in an area approved by the Engineer as soon as practical. Any corrective action needed for the control measures will be accomplished in the sequence directed by the Engineer; however, areas adjacent to waterbodies shall generally have priority followed by devices protecting storm sewer inlets.

4. **Stabilization.** Stabilize disturbed areas where construction activities will be temporarily stopped, or construction becomes inactive, in accordance with the applicable storm water permit. Inactive construction areas are defined as areas in which no construction activity will occur for a period of 30 days or longer. Inactive construction areas which have been disturbed will require stabilization through the use of vegetation, mulch, erosion control matting or structural methods within 7 calendar days from the last construction activity in the area. At all times prior to stabilization, inactive construction areas shall be considered as active, disturbed construction area, contributing to the sediment loading at the site control systems. After stabilization, inactive construction areas will be considered undisturbed areas, eliminating the contribution of sediment to the erosion control devices.
5. **Finished Work.** Upon acceptance of vegetative cover, remove and dispose of all temporary control measures, temporary embankments, bridges, matting, falsework, piling, debris, or other obstructions placed during construction that are not a part of the finished work, or as directed. Soil retention blankets shall be removed only when, in the opinion of the Engineer, final permanent perennial seeding would be adversely affected by the presence of an existing soil retention blanket.

The project will not be accepted until a 70% density of existing adjacent undisturbed areas is obtained, unless otherwise shown on the plans. When shown on the plans, the Engineer may accept the project when adequate controls are in place that will control erosion, sedimentation, and water pollution until sufficient vegetative cover can be established.

6. **Restricted Activities.** Do not locate disposal areas, stockpiles, or haul roads in any wetland, water body, or streambed. Do not install temporary construction crossings in or across any water body without the prior approval of the appropriate resource agency and the Engineer. Restrict construction operations in any water body to the necessary areas as shown on the plans or applicable permit, or as directed. Use temporary bridges, timber mats, or other structurally sound and non-eroding material for stream crossings.

Provide protected storage area for paints, chemicals, solvents, and fertilizers at an approved location. Keep paints, chemicals, solvents, and fertilizers off bare ground and provide shelter for stored chemicals.

C. Installation, Maintenance, and Removal Work. Perform work in accordance with the specific or general storm water permit. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until earthwork construction and permanent erosion control features are in place or the disturbed area has been adequately stabilized as determined by the Engineer. If a device ceases to function as intended, repair or replace the device or portions thereof as necessary. Remove sediment, debris, and litter. When approved, sediments may be disposed of within embankments, or in the right of way in areas where the material will not contribute to further siltation. Dispose of removed material in accordance with federal, state, and local regulations. Remove devices upon approval or when directed. Upon removal, finish-grade and dress the area. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. The Contractor retains ownership of stockpiled material and must remove it from the project when new installations or replacements are no longer required.

1. Rock Filter Dams for Erosion Control. Remove trees, brush, stumps, and other objectionable material that may interfere with the construction of rock filter dams. Place sandbags as a foundation when required or at the Contractor's option. For Types 1, 2, 3, and 5, place the aggregate to the lines, height, and slopes specified, without undue voids. For Types 2 and 3, place the aggregate on the mesh and then fold the mesh at the upstream side over the aggregate and secure it to itself on the downstream side with wire ties, or hog rings, or as directed. Place rock filter dams perpendicular to the flow of the stream or channel unless otherwise directed. Construct filter dams according to the following criteria, unless otherwise shown on the plans:

a. Type 1 (Non-reinforced).

(1) **Height.** At least 18 in. measured vertically from existing ground to top of filter dam.

(2) **Top Width.** At least 2 ft.

(3) **Slopes.** At most 2:1.

b. Type 2 (Reinforced).

(1) **Height.** At least 18 in. measured vertically from existing ground to top of filter dam.

(2) **Top Width.** At least 2 ft.

(3) **Slopes.** At most 2:1.

c. Type 3 (Reinforced).

(1) **Height.** At least 36 in. measured vertically from existing ground to top of filter dam.

(2) **Top Width.** At least 2 ft.

- (3) **Slopes.** At most 2:1.
- d. **Type 4 (Sack Gabions).** Unfold sack gabions and smooth out kinks and bends. For vertical filling, connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing. At one end, pull the end lacing rod until tight, wrap around the end, and twist 4 times. At the filling end, fill with stone, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times. For horizontal filling, place sack flat in a filling trough, fill with stone, and connect sides and secure ends as described above. Lift and place without damaging the gabion. Shape sack gabions to existing contours.
- e. **Type 5.** Provide rock filter dams as shown on the plans.
2. **Temporary Pipe Slope Drains.** Install pipe with a slope as shown on the plans or as directed. Construct embankment for the drainage system in 8-in. lifts to the required elevations. Hand-tamp the soil around and under the entrance section to the top of the embankment as shown on the plans or as directed. Form the top of the embankment or earth dike over the pipe slope drain at least 1 ft. higher than the top of the inlet pipe at all points. Secure the pipe with hold-downs or hold-down grommets spaced a maximum of 10 ft. on center. Construct the energy dissipaters or sediment traps as shown on the plans or as directed. Construct the sediment trap using concrete in accordance with Item 505, “Concrete Riprap,” when designated on the plans. Rubble riprap in accordance with TxDOT Standard Specification Item 432, “Riprap” may also be used when designated on the plans or as directed by the Engineer.
3. **Baled Hay for Erosion and Sedimentation Control.** Install hay bales at locations shown on the plans by embedding in the soil at least 4 in. and, where possible, approximately $\frac{1}{2}$ the height of the bale, or as directed. Fill gaps between bales with hay.
4. **Temporary Paved Flumes.** Construct paved flumes as shown on the plans or as directed. Provide excavation and embankment (including compaction of the subgrade) of material to the dimensions shown on the plans, unless otherwise indicated. Install a rock or rubble riprap energy dissipater, constructed from the materials specified above to a minimum depth of 9 in. at the flume outlet to the limits shown on the plans or as directed.
5. **Construction Exits.** When tracking conditions exist, prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits. Construct exits for either long or short-term use.
- a. **Long-Term.** Place the exit over a foundation course, if necessary. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.
- (1) **Type 1.** Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.
- (2) **Type 2.** Construct using railroad ties and timbers as shown on the plans or as directed.

- b. Short-Term.**
 - (1) **Type 3.** Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.
 - (2) **Type 4.** Construct as shown on the plans or as directed.
- 6. Earthwork for Erosion and Sediment Control.** Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.
 - a. Excavation and Embankment for Erosion Control Features.** Place earth dikes, swales or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed. Where required, create a sediment basin providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.
 - b. Excavation of Sediment and Debris.** Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.
- 7. Construction Perimeter Fence.** Construct, align, and locate fencing as shown on the plans or as directed.
 - a. Installation of Posts.** Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.
 - b. Wire Attachment.** Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.
 - c. Flag Attachment.** Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.
- 8. Sandbags for Erosion Control.** Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags $\frac{1}{2}$ the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.
- 9. Temporary Sediment-Control Fence.** Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

- a. **Installation of Posts.** Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the run-off source.
- b. **Fabric Anchoring.** Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 x 6 in. Place the fabric against the side of the trench and align approximately 2 in of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.
- c. **Fabric and Net Reinforcement Attachment.** Unless otherwise shown under the plans, attach the reinforcement to wooden posts with staples, or to steel posts with T-clips, in at least 4 places equally spaced. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.
- d. **Fabric and Net Splices.** Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced, unless otherwise shown under the plans. Do not locate splices in concentrated flow areas. Requirements for installation of used temporary sediment control fence include the following:
 - fabric with minimal or no visible signs of biodegradation (weak fibers),
 - fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
 - posts without bends, and
 - backing without holes.

10. Curb Inlet Gravel Filter.

- a. **Installation.** Install the curb inlet gravel filters in the following manner:
 - (1) Place the 2" x 4" treated lumber in front of and parallel with the opening of the inlet.
 - (2) Place the Concrete Masonry Units (CMUs) around the inlet, to be protected, in front of the 2" x 4" lumber, with the openings of the CMUs facing the inlet.
 - (3) Surround the CMUs with gravel bags, making certain that there are no gaps are evident between the gravel bags.
- b. **Sediment Control.** When the accumulated sediment deposit reaches a depth of approximately 6 inches, it shall be removed and disposed of at approved sites in a manner that will not contribute to additional siltation. If the structure ceases to function as intended, the Engineer may direct that the Filter bag be replaced. Such replacement will not be measured for payment. Torn or punctured bags shall be replaced with a new Filter bag.

540.5. MEASUREMENT: If the Contractor is required to install temporary erosion, sediment and water pollution control measures due to his negligence, carelessness, lack of maintenance, or failure to install permanent controls as a part of the work as scheduled, and measures are ordered in writing by the Engineer, such work shall not be measured for payment, but shall be performed at the Contractor's expense.

In case of failure on the part of the Contractor to prevent and control soil erosion, sedimentation and water pollution which may degrade receiving water, the Engineer reserves the right to employ outside assistance or to use City forces to provide the necessary corrective measures. All costs including engineering costs will be deducted from any moneys due or to become due to the Contractor.

When the need for control measures can not be attributed to the contractor's negligence, carelessness, lack of maintenance or failure to install permanent water pollution control measures and these measures are shown on the plans and/or directed by the Engineer, these measures shall be measured and paid for in accordance with contract bid items shown under this section.

- A. Rock Filter Dams.** Installation or removal of rock filter dams will be measured by the foot or by the cubic yard. The measured volume will include sandbags, when used.
 - 1. Linear Measurement.** When rock filter dams are measured by the foot, measurement will be along the centerline of the top of the dam.
 - 2. Volume Measurement.** When rock filter dams are measured by the cubic yard, measurement will be based on the volume of rock computed by the method of average end areas.
 - a. Installation.** Measurement will be made in final position.
 - b. Removal.** Measurement will be made at the point of removal.
- B. Temporary Pipe Slope Drains.** Temporary pipe slope drains will be measured by the foot.
- C. Baled Hay.** Baled hay will be measured by each bale.
- D. Temporary Paved Flumes.** Temporary paved flumes will be measured by the square yard of surface area. The measured area will include the energy dissipater at the flume outlet.
- E. Construction Exits.** Construction exits will be measured by the square yard of surface area.
- F. Earthwork for Erosion and Sediment Control.** Earthwork for erosion and sediment control will not be measured directly but will be considered subsidiary to this or other pertinent items.
- G. Construction Perimeter Fence.** Construction perimeter fence will be measured by the foot.
- H. Sandbags for Erosion Control.** Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.
- I. Temporary Sediment-Control Fence.** Temporary sediment-control fence will be measured by the foot.
- J. Curb Inlet Gravel Filter.** Curb inlet gravel filter will be measured by the linear foot, as measured on the centerline of the gravel bags installed.

540.6. PAYMENT: The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

The Contractor will be reimbursed for maintenance, repair, or reinstallation of devices and features when the need for additional control measures cannot be attributed to the above, as determined by the Engineer. Stabilization of disturbed areas will be paid for under pertinent Items. Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

Pollution control measures outside the right of way will not be measured for payment but shall be performed at the Contractor's expense.

Control measures as shown on the plans will be paid for in accordance with applicable bid items as shown below:

A. Rock Filter Dams. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

- 1. Installation.** Installation will be paid for as "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.
- 2. Removal.** Removal will be paid for as "Rock Filter Dams (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

When the Engineer directs that the rock filter dam installation or portions thereof be replaced, payment will be made at the unit price bid for "Rock Filter Dams (Remove)" and for "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals

B. Temporary Pipe Slope Drains. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Pipe Slope Drains" of the size specified. This price is full

compensation for furnishing materials, removal and disposal, furnishing and operating equipment, labor, tools, and incidentals.

Removal of temporary pipe slope drains will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the pipe slope drain installation or portions thereof be replaced, payment will be made at the unit price bid for "Temporary Pipe Slope Drains" of the size specified, which is full compensation for the removal and reinstallation of the pipe drain.

Earthwork required for the pipe slope drain installation, including construction of the sediment trap, will be measured and paid for under Section 540.5.F, "Earthwork for Erosion and Sediment Control." Riprap concrete or stone, when used as an energy dissipater or as a stabilized sediment trap, will be measured and paid for in accordance with Item 505, "Concrete Riprap" or TxDOT Item 432, "Riprap," respectively.

- C. Baled Hay.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Baled Hay." This price is full compensation for furnishing and placing bales, excavating trenches, removal and disposal, equipment, labor, tools, and incidentals.

When the Engineer directs that the baled hay installation (or portions thereof) be replaced, payment will be made at the unit price bid for "Baled Hay," which is full compensation for removal and reinstallation of the baled hay.

- D. Temporary Paved Flumes.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Paved Flume (Install)" or "Temporary Paved Flume (Remove)." This price is full compensation for furnishing and placing materials, removal and disposal, equipment, labor, tools, and incidentals.

When the Engineer directs that the paved flume installation or portions thereof be replaced, payment will be made at the unit prices bid for "Temporary Paved Flume (Remove)" and "Temporary Paved Flume (Install)." These prices are full compensation for the removal and replacement of the paved flume and for equipment, labor, tools, and incidentals.

Earthwork required for the paved flume installation, including construction of a sediment trap will be considered subsidiary to this item and will not be measured or paid for directly.

- E. Construction Exits.** Contractor-required construction exits from off right-of-way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right-of-way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the

removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be considered subsidiary to this item and will not be measured or paid for directly.

- F. Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item will not be paid for directly but is subsidiary to pertinent Items unless otherwise shown on the plans.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

- G. Construction Perimeter Fence.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

- H. Sandbags for Erosion Control.** Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

- I. Temporary Sediment-Control Fence.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Sediment-Control Fence." This price is full compensation for furnishing and placing the fence; trenching, fence posts, fabric and backfill; removal and disposal; and equipment, labor, tools, and incidentals.

Removal of temporary sediment-control fence will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the temporary sedimentation control fence installation or portions thereof be replaced, payment will be made at the unit price bid for "Temporary Sediment-Control Fence," which is full compensation for the removal and reinstallation of the temporary sediment-control fence.

- J. Curb Inlet Gravel Filter.** The work performed and the materials furnished as specified herein, measured as provided under "Measurement" will be paid for at the unit price bid per linear foot for "Curb Inlet Gravel Filter," which payment shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work as specified, including maintaining and replacing the gravel bags as required by these

specifications, removal of accumulated silt, and removal and proper disposal of the “Curb Inlet Gravel Filter” upon completion of site stabilization.

540.7. BID ITEM:

Item 540.1 - Rock Filter Dams (Install/Remove) - per linear foot (Type _)

Item 540.2 - Rock Filter Dams (Install/Remove) - per cubic yard (Type _)

Item 540.3 - Temporary Pipe Slope Drains - per foot (_ inches in diameter)

Item 540.4 - Baled Hay - per bale

Item 540.5 - Temporary Paved Flume (Install/Remove) - per square yard

Item 540.6 - Construction Exits (Install/Remove) - per square yard

Item 540.7 - Construction Perimeter Fence - per foot

Item 540.8 - Sandbags for Erosion Control - per foot (_ inches high)

Item 540.9 - Temporary Sediment-Control Fence - per foot

Item 540.10 - Curb Inlet Gravel Filters - per linear foot

Special Specification 3028

Frictional Asphaltic Surface Preservation Treatment



1. DESCRIPTION

Apply a surface preservation treatment consisting of one or more applications of a single layer of asphaltic and aggregate material.

2. MATERIALS

Furnish materials in accordance with the following:

2.1. Asphalt.

Furnish an emulsified asphalt in accordance with Table 1. Provide water in accordance with Article 204.2., "Materials."

Table 1. Emulsified Asphalt

Property	Test Procedure	Min	Max
Viscosity	T 59	20	100
Particle Charge Test	T 59	Positive	
Sieve, %	T 59	0	0.1
Residue by Distillation, percent	T 59	60	-
Penetration at 77°F, 100 g, 5 sec.	T 49	40	150

Use a quantity of emulsified asphalt in the mixture, expressed as a percentage of total weight, the percentage shown on the plans, or as directed.

2.2. Aggregate.

Furnish aggregate meeting Item 302, "Aggregates for Surface Treatments," of the grade shown in Table 2.

Table 2. Aggregates

Physical Properties ¹			
Property	Test Procedure	Min.	Max.
Water Absorption, %	T 84	-	4
Micro-Deval, %	D 7428 ²	-	20
Gradation ³			
Sieve	Standard	Master Grading Band Limits Percent Passing	Target Tolerance
No. 8	C 136	100	
No. 16	C 136	85-100	
No. 30	C 136	75-100	± 5
No. 60	C 136	10-40	± 5
No. 100	C 136	0-10	± 5
No. 200	C 117	0-5	± 1

1. Perform physical property tests on aggregates that are received before blending into sealer.
2. Micro-Deval on aggregate larger than No. 60 sieve U.S.

2.3. Additives.

Add clay, polymers, water, and other additives as required. Use a minimum of 4% polymer by weight. Furnish water free of industrial wastes and other objectionable matter.

or:

Other Additives. Use approved additives as recommended by the Frictional Asphaltic Surface Preservation Treatment manufacturer when necessary to adjust mix time in the field.

3. MIX DESIGN

3.1 Furnish a laboratory mix design meeting the requirements shown in Table 3:

Table 3. Laboratory Mix Design

Test	Test Procedure	Min	Max
Wet-Track Abrasion Loss, 3 day soak, g/m ²	D 3910 ¹	--	80
Asphalt Content by Ignition Method, %	T 308	30	--
Dynamic Friction Test Number, 20 kph	E 1911 ²	0.90	--

1. Use the modified method to account for realistic application depth and fine emulsion mixture.
2. Establish base friction value using prepared laboratory compacted slab of approved mix as surface to be tested. The Dynamic Friction Test (DFT) number ratio should indicate that after application of the mastic seal, the surface retains required minimum percentage DFT number of the original pavement surface.

3.2 Furnish a production or field sample meeting the requirements shown in Table 4:

Table 4. Production or Field Sample

Test	Test Procedure	Min	Max
Solids Content by Evaporation, %	T 59 ¹	48	--
Asphalt Content by Ignition Method, %	T 308 ³	30	--
Rotational Viscosity, 20 rpm, RV spindle, 25°C, cP	D 2196 ²	800	4000
Temperature for storage and application, °F	--	60	130

1. Dry specimens to a state where measurements taken 20 minutes apart do not change.
2. Test samples within 7 days.
3. Reduce sample size to achieve asphalt quantity. It is very important that this test be performed on a completely dry sample.

4. EQUIPMENT

4.1 **Mixing Plant.** Provide a stationary pugmill, weigh-batch, or continuous mixing plant as approved. Equip plants with digital proportioning and metering devices that produce a uniform mixture of asphalt, aggregate and additives in the specified proportions.

4.2 **Distributor.** Provide applicable equipment in accordance with Article 316.3., "Equipment." Furnish the necessary facilities and equipment for determining the temperature of the mixture, regulating the application rate, and securing uniformity at the junction of 2 distributor loads. Furnish a distributor capable of keeping the Frictional Asphaltic Surface Preservation Treatment in uniform suspension and adequately mixing the asphalt, aggregate and additives.

4.3 **Asphalt Storage and Handling Equipment.** When using storage tanks, furnish a thermometer in each tank to continuously indicate the asphalt temperature. Keep equipment clean and free of leaks. Keep asphalt material free of contamination. Furnish storage tanks capable of keeping the Frictional Asphaltic Surface Preservation Treatment in uniform suspension and adequately mixing the asphalt, aggregate and additives.

5. CONSTRUCTION

5.1 **Adverse Weather Conditions.** Do not place mixture when, in the Engineer's opinion, general weather conditions are unsuitable. Meet the requirements for air and surface temperature shown below.

5.1.1 **Standard Temperature Limitations.** Apply mixture when air temperature is above 50°F and rising. Do not apply mixture when air temperature is 60°F and falling. In all cases, do not apply mixture when surface temperature is below 60°F.

- 5.1.2. **Cool Weather Night Air Temperature.** The Engineer reserves the right to review the **National Oceanic and Atmospheric Administration (NOAA)** weather forecast and determine if the nightly air temperature is suitable for mixture placement.
- 5.1.3. **Cold Weather Application.** When mixture application is allowed outside of the above temperature restrictions, the Engineer will approve the mixture and the air and surface temperatures for application. Apply mixture at air and surface temperatures as directed.
- 5.2. **Surface Preparation.** Remove existing raised pavement markers. Repair any damage incurred by removal as directed. Remove dirt, dust, or other harmful material before applying. When shown on the plans, remove vegetation and blade pavement edges.
- 5.3. **Application.** Apply the mixture when the air temperature is at or above 60°F, or above 50°F and rising. Measure the air temperature in the shade away from artificial heat. The Engineer will determine when weather conditions are suitable for application.
- Distribute material at the following rates or as directed:
- First application: 1.0 to 1.5 lbs per SY.
 - Second application: 1.0 to 1.5 lbs per SY.
 - Total application after the second application: 2.5 lbs per SY minimum.
- 5.4. **Edges.** Adjust the shot width so operations do not encroach on traffic or interfere with the traffic control plan, as directed. Use paper or other approved material at the beginning and end of each shot to construct a straight traverse joint. Unless otherwise approved, match longitudinal joints with the lane lines. The Engineer may require a string line if necessary to keep the edge straight. Use sufficient pressure to flare the nozzles fully.
- 5.5. **Workmanship.** Immediately take corrective action if treatment material is exhibiting evidence of poor workmanship, delayed opening to traffic, or surface irregularities, including streaks, uncoated, and blotchy areas. The Engineer may allow placement to continue for no more than one day of production while taking appropriate action. Suspend application if the problem still exists after one day until the problem is corrected to the satisfaction of the Engineer.
- 5.6. **Opening to Traffic.** Open the treated surface to traffic when directed. Furnish and uniformly distribute clean, fine sand on the surface to blot the excess when an excessive quantity of mixture is applied. Maintain ingress and egress as directed by applying sand to freshly treated areas.

6. MEASUREMENT

Frictional Asphaltic Surface Preservation Treatment will be measured by the ton or by the square yard of the composite Frictional Asphaltic Surface Preservation Treatment mixture, which includes asphalt emulsion, aggregate, and additives. At the completion of the project, any unused Frictional Asphaltic Surface Preservation Treatment will be weighed back and deducted from the accepted Frictional Asphaltic Surface Preservation Treatment quantity delivered.

7. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price per ton or square yard for "Frictional Asphaltic Surface Preservation Treatment." This price is full compensation for preparing the existing surface (including removing existing raised pavement markers); furnishing, hauling, preparing, and placing materials; and equipment, labor, tools, and incidentals.