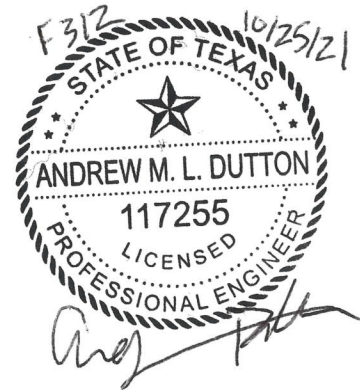


**BRUSHY CREEK
MUNICIPAL UTILITY DISTRICT**

Southern Cross Pond at Highland Horizon

October 2021

AVO #38713



HALFF ASSOCIATES, INC.

**ENGINEERS – SURVEYORS – SCIENTISTS
PRELIMINARY – FOR INTERIM REVIEW ONLY**

**These documents are for Interim Review and not intended
for Regulatory Approval, Permit, Bidding, or Construction purposes.**

**They were prepared by or under the supervision of:
Andrew Dutton, P.E. TBPE #117255**

Prepared by:



Texas Registered Engineering Firm #312

9500 Amberglen Blvd., Bldg. F, Suite 125

Austin, TX 78729-1102

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**BRUSHY CREEK MUD
SOUTHERN CROSS POND AT HIGHLAND HORIZON
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700 Mobilization

Wherever reference is made to City of Round Rock, such reference shall be taken to mean the Brushy Creek Municipal Utility District (BCMUD) and its representatives.

CITY OF AUSTIN

1301S Granite Gravel Trail

Wherever reference is made to City of Austin, such reference shall be taken to mean the Brushy Creek Municipal Utility District (BCMUD) and its representatives. Wherever reference is made to a City of Austin specification and a City of Round Rock specification exists for said reference specification, such reference shall instead refer to the corresponding City of Round Rock specification.

SPECIAL SPECIFICATION

SS1000 Pedestrian Bridge

The Texas Department of Transportation (TxDOT) standard specifications below, adopted by TxDOT on November 1, 2014, are incorporated into the contract by reference.

TXDOT STANDARD SPECIFICATIONS

104	Removing Concrete
110	Excavation
132	Embankment
247	Flexible Base
216	Proof Rolling
360	Concrete Pavement
421	Hydraulic Cement Concrete
440	Reinforcement for Concrete
502	Barricades, Signs & Traffic Handling

Wherever reference is made to TxDOT, such reference shall be taken to mean the Brushy Creek Municipal Utility District (BCMUD) and its representatives. Wherever reference is made to a TxDOT specification and a City of Round Rock specification exists for said reference specification, such reference shall instead refer to the corresponding City of Round Rock specification. References within the TxDOT specification that refer to Department shall herein denote the BCMUD.

**EXHIBIT F - WATER POLLUTION ABATEMENT PLAN EXCEPTION
REQUEST (TCEQ)**

**BRUSHY CREEK MUNICIPAL UTILITY DISTRICT
ROUND ROCK, TEXAS
SOUTHERN CROSS POND AT HIGHLAND HORIZON**

ADVERTISEMENT FOR BIDS

Sealed Bids for the construction of the Southern Cross Pond at Highland Horizon project will be received by Brushy Creek Municipal Utility District, at the office of the Brushy Creek Municipal Utility District, 16318 Great Oaks Drive, Round Rock, Texas 78681, until **12:00 PM** local time on **November 30, 2021**. A general description of the work is as follows:

Work includes proposed granite trail around existing pond, benches, fencing, and design and construction of pedestrian bridge over pond outfall and all associated items.

Bids shall be provided as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is:

Halff Associates, Inc
9500 Amberglen Blvd, Building F, Suite 125
Austin, TX 78729

Bid Documents and Specifications may be obtained electronically by the prospective bidders or suppliers at www.civcastusa.com at no charge. Project ID – “Southern Cross Pond at Highland Horizon”. Bidding Documents obtained from any other source are for examination only, are not considered complete, and are not valid for bidding purposes. Neither Brushy Creek Municipal Utility District nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than those issued through Civcast.

The Brushy Creek Municipal Utility District, Williamson County, Texas, reserves the right to reject any or all bids, or to waive any informalities, or to make an award to other than the low bidder. It further reserves the right to limit the amount of the award.

Attention of the bidders is particularly directed to the requirements of the conditions of employment to be observed and minimum Wage Rates to be paid under the Contract.

The Brushy Creek Municipal Utility District does not discriminate on the basis of handicapped status in admission or access to, or treatment or employment in, its programs and activities.

A Pre-Bid Conference (Trail Walk-Through) will be held **November 15, 2021 at 10:00 AM** local time at the Brushy Creek Municipal Utility District Community Center Lobby - 16318 Great Oaks Drive, Round Rock, Texas 78681. Representatives of Owner and Engineer will be present to discuss the Project. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

Bid security shall be furnished in accordance with the Request for Proposals.

Owner: Brushy Creek Municipal Utility District

By: Nora Dinsmore

Dated: October 29, 2021

++ END OF ADVERTISEMENT FOR BIDS ++

INVITATION FOR BIDS
FOR
SOUTHERN CROSS POND AT HIGHLAND HORIZON
FOR



Response Deadline

November 30, 2021

12:00 p.m. Central Standard Time (CST)

To:

**Nora Dinsmore
Brushy Creek MUD**

**16318 Great Oaks Drive
Round Rock, TX 78681**

n.dinsmore@bcmud.org

BRUSHY CREEK MUNICIPAL UTILITY DISTRICT
INVITATION FOR BIDS FOR
SOUTHERN CROSS POND AT HIGHLAND HORIZON

1. INTRODUCTION

Brushy Creek Municipal Utility District (the “District”) is accepting bids from qualified Contractors to provide the improvements to the Southern Cross Pond at Highland Horizon located within the District, Round Rock, TX 78681. The project construction documents were created and provided by Halff Associates, Inc., (the “Engineer”), and are available for download at www.civcast.com, Project ID “Southern Cross Pond at Highland Horizon”. Documents are also available upon request by contacting the District. You may e-mail Nora Dinsmore at: n.dinsmore@bcmud.org or contact her by phone at 512-255-7871 x407.

The District reserves the right to reject any or all bids, to waive technical or legal deficiencies, and to accept any Bid Response that may deem to be in the best interest of the District.

2. SCOPE OF SERVICES

2.1 General

The District’s Board of Directors has approved the Engineer’s project construction plans and specifications for the Southern Cross Pond at Highland Horizon. The District is seeking bids from qualified contractors to provide the complete construction of the trails. The contractors will provide all labor, equipment and machinery required for the proper completion of the Project in accordance with the project construction documents, specifications, and applicable legal requirements (the “Work”).

3. GENERAL INSTRUCTIONS TO BIDDER:

3.1 General Instructions to Bidder:

1. Acceptance Period: Unless otherwise specified herein, Bid Responses are firm for a period of 90-days.
2. Authorized Signatures: Every bid must be signed by the person or persons legally authorized to bind the Contractor to a contract for the execution of the services. The name, address and telephone number of the contractor must also be specified.
3. Award of Bid: Award will be made to the Contractor offering the most advantageous bid and that results in the best and most economical completion of the work after consideration of all evaluation criteria set forth within. The criteria are not listed in any order of preferences. The District will evaluate all bids received in accordance with the evaluation criteria. The District shall not be obligated to accept the lowest priced bid, but will make an award in the best interests of the District after all factors have been evaluated.
4. Cancellation of Solicitation: The District may cancel this solicitation at any time.
5. Compliance with Laws: All bids shall comply with current federal, state, and other laws relative thereto.
6. Disclosure of Interested Parties: Under Section 2252.908 of the Government Code, governmental entities may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties. If applicable, the District shall not enter into a contract with a contractor unless the contractor submits the required disclosure.

7. Documents to be returned with the Bid: Failure to completely execute and submit required documents before the Submittal Deadline may render a Bid Response to be deemed non-responsive. The documents that must be returned by the Submittal Deadline are listed in *Section 4.2: Items to be Provided with Bid Responses*.

8. Prices: All Bids shall give the price proposed, both in writing and in figures; shall give all other information requested herein; and shall be signed by the Contractor's authorized representative. Bid prices shall include everything necessary for the completion and fulfillment of the Work, including insurance, bonds and equipment warranty.

9. Location of Work Site: The trail system is located within the Highland Horizon neighborhood at the corner of Great Oaks Dr. and Nautical St.

Included in the bid package, upon request, is a set of construction plans that show project location.

3.2 Specifications

Specifications and complete Bid Documents are available for download at www.civcast.com, Project ID "Southern Cross Pond at Highland Horizon". Specifications and complete Bid Documents are also available to Contractors upon request from the District. Please contact Nora Dinsmore, Administrative Services Specialist, at n.dinsmore@bcmud.org or by phone at 512-255-7871 x407.

Contractors shall be responsible for providing the equipment and installation that meets or exceeds all of the requirements as set forth in the specifications.

4. PROCEDURAL INSTRUCTIONS

4.1. Intent

This procurement is intended to result in the selection of a Contractor that is most advantageous to the District and will result in the best and most economical completion of the Work. The Bid should be presented in a format that corresponds to, and references, the sections outlined in the Section 4.2 below. Responses to each section and subsection should be labeled to indicate which item is being addressed. Bids should be straightforward and concise. Emphasis should be concentrated on conforming to the Invitation to Bid instructions, responding to the bid requirements, and on providing a complete and clear description of the offer.

The District is not liable for any costs incurred by Contractors in responding to this solicitation. Costs of developing the bids and any other such expenses incurred by the Contractor in responding to the Invitation to Bid are entirely the responsibility of the Contractor and shall not be reimbursed in any manner by the District.

4.2. Items to be Provided with Bid Responses:

All bids must include the following set forth below. Failure to completely execute and submit the required documents before the Submittal Deadline may render a Bid Response non-responsive:

1. Company Overview - Contractor shall provide company summary of qualifications and contact information, company overview including Company ownership, length of time in business, qualifications, office location(s), number of employees, and key staff assigned to this project if awarded, for general contractor and all major subcontractors.

2. Bid Schedule & Project Bid Page - Contractor shall complete and submit the detailed bid schedule page provided. Contractor shall also complete the Project Bid Page. Please make sure this is Page #1 when submitting your bid response
3. Warranty Information – All Work shall be subject to the warranty terms set forth in the Construction Contract.
4. Project References - Contractor shall complete and submit the detailed reference spreadsheet as set forth in **Exhibit B**. Contractor must identify three (3) references, including the name, title, daytime telephone number of the references, and project description, with starting and end dates.
5. Conflict of Interest Statement – Contractor shall submit their responses to the Conflict of Interest Statement in Section 5.0.
6. Questionnaire and Information Form - The Questionnaire form set forth as **Exhibit C** must be completed in its entirety.
7. Completed and signed W-9 Tax Form.
8. Work Plan/Approach/Timeline – Contractor shall submit a detailed narrative project work plan and detailed timeline outlining the project plans and the timeline of each step; including target completion date.
9. Experience - Contractor must identify at least two examples of similar work to the Project that the Contractor is currently performing or has performed within the past 24 months.
10. Signed Forms and Other Required Documentation - Contractor shall provide all signed, notarized, and other documentation as required in the Project Manual, Drawings and Specifications document.
11. Liability Insurance Information – Contractor shall furnish evidence of insurance that meets or exceeds the requirements set forth in the Construction Contract, see **Exhibit A (Contract)**.
12. Performance Bond and Payment Bond Information – see **Exhibit A (Contract)**.
13. Deposit or Bid Bond - Contractor must submit a certified or cashier's check on a responsible bank in the state equal to at least two percent of the total amount of the bid, or a bid bond of at least two percent of the total amount of the bid issued by a surety legally authorized to do business in this state, as a good faith deposit to ensure execution of the contract.

4.3 Questions

Questions regarding this project must be in writing via e-mail to Nora Dinsmore at n.dinsmore@bcmud.org or on the Civcast website, no later than **12:00 PM** (CST) November 22, 2021. The subject line shall read: ***“Questions for Southern Cross Pond at Highland Horizon”***. Answers, if any, will be posted to the Civcast website.

4.4. Timeline

Invitation to Bid published on District website:

October 29, 2021

Bid Advertisement in the Williamson County Sun

November 3rd & November 10th

Trail Walk-Through

November 15, 2021 @ 10:00 a.m.

Meet at the Brushy Creek MUD Community Center Lobby
16318 Great Oaks Drive
Round Rock, TX 78681

Questions Due from Contractors By:

12:00 p.m. November 22, 2021

Bid Response due from Contractors:

12:00 p.m. November 30, 2021

Brushy Creek Community Center
16318 Great Oaks Drive
Round Rock, TX 78681

Staff Recommendation to Board of Directors:

December 9, 2021

Estimated Start Date of Trail Repairs:

January 17, 2022

4.5. Contractor Bid Response

Prospective Contractors must provide contact information, and the information set forth in Section 4.2 above, or risk being disqualified from bidding. Bid Responses must conform to the requirements set forth in this Invitation. Sealed Bid Responses and required information must be submitted in writing either by postal service mail or by hand delivery to the attention of:

Nora Dinsmore, Administrative Services & Purchasing Specialist
Brushy Creek Municipal Utility District
16318 Great Oaks Drive
Round Rock, TX 78681
n.dinsmore@bcmud.org

by **12:00 PM (CST) on November 30, 2021**. Any Bid Responses received after the above date and time will not be considered. No oral Bid Response information or modifications will be accepted.

All Bid Responses shall be signed and dated by an official authorized to bind the contractor in legal matters. All submitted Bid Responses become the property of the District.

4.6. Selection Process

All Bid Responses will be evaluated by the District management team. Recommendations for award of the contract for the Work will be submitted to the Board of Directors for consideration at a regularly scheduled meeting following the Bid Response deadline. The District shall award the contract based on a determination by its Board of Directors as to what bid is most advantageous to the District and results in the best and most economical completion of the Work. Criteria used to make the selection will include

cost, construction process, timeline, qualifications, and references. If the District has experience with your firm and you do not list the District as a reference, the District reserves the right to use past experience for this Bid.

The successful bidder will be required to execute the District's standard agreement (included in these bid documents) and all other qualifications as described in these bid documents. Contractors and subcontractors shall pay to laborers, workmen, and mechanics the prevailing wage rate as determined by the District. The Williamson County section, of the website listed below, has the applicable prevailing wages. You may visit <https://wdolhome.sam.gov/>.

4.7 Rejection of Bid Responses

The District reserves the right to reject any or all Bids.

4.8 Confidential Information

The District is subject to the Texas Public Information Act (PIA). Any information submitted to the District by a Contractor shall be available to the public, unless it is clearly marked "CONFIDENTIAL". If another party requests access to information marked confidential, then the District shall ask the Contractor if the information may be released. If the release is agreed to, the District shall release the information. If the release is denied, the matter shall be referred to the Texas Attorney General's Office where the Contractor shall be responsible for substantiating its request for confidentiality. The Attorney General's office shall rule on the matter. Pricing information contained in Bid Responses or contracts is not considered confidential under the PIA and will be disclosed without making a request to the Texas Attorney General.

4.9 Taxes, Exempt

The District is exempt from Federal Excise and State Sales Tax.

4.10 Standard Agreement

The form of the Agreement to be entered into regarding the work is a part of this request. Upon selection of a Contractor by the Board of Directors, the Contractor must execute the contract. Failure to do so may constitute cause for the District to enter into a contract with another Contractor.

5.0 CONFLICT OF INTEREST

The Board of Directors of Brushy Creek Municipal Utility District (the "District"), in compliance with Section 49.199 of the Texas Water Code, has adopted a Code of Ethics Policy. In accordance with this policy, please disclose the following information:

1. Whether or not any of the Board of Directors or Management Team listed below has a substantial interest in the Contractor or its affiliates.
2. Whether or not any of the Board of Directors or Management Team listed below has a direct or indirect contractual relationship with the Contractor or its affiliates.
3. Whether or not contractor has provided any gifts, payments or other benefits to any members of the Board of Directors or Management Team listed below, or their family members.

2021
Board of Directors
Brushy Creek Municipal Utility District

- Rebecca B. Tullos, Treasurer
- Michael Tucker, Vice President
- Kim Filiatrault, Secretary
- Donna B. Parker, President
- Ken Reifschlager, Assistant Secretary Treasurer

District Staff

- Shean Dalton, General Manager
- Nora Dinsmore, Administrative Services & Purchasing Specialist
- Betsy Schultz, District Project Manager
- Rachel Hagan, Property Maintenance Manager
- Angela Niemiec, Parks & Recreation Manager

6.0 REQUIRED STATUTORY PROVISIONS ADDENDUM

The Required Statutory Provisions Addendum attached hereto is incorporated into the Standard Form of Agreement to be executed by the District and selected contractor. By execution of the Standard Form of Agreement, the Contractor acknowledges and agrees to the terms of the Required Statutory Provisions Addendum in the capacity of “Contractor” thereunder.

BID SCHEDULE
For
Southern Cross Pond at Highland Horizon
Brushy Creek Municipal Utility District

The Bidder, _____ hereby offers to complete the Work as shown on the Plans and Specifications for the Project and in accordance with the Construction Contract at the prices set forth below:

TOTAL PROPOSED BASE BID: Bidder proposes to provide all labor and materials for the Work in accordance the contract documents for the stipulated sum of

_____ and 00/100 Dollars

(\$ _____) Bidder to provide bid amount in both written and numerical format.

The cost includes the following subdivisions:

BIDDER will complete the Work in accordance with the Contract Documents for the following prices and will include a minimum one-year warranty period starting at the time of Owner Acceptance:

BRUSHY CREEK M.U.D.
SOUTHERN CROSS POND AT HIGHLAND HORIZON

PAY ITEM #	SPEC. NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1	RR 101	PREPARING ROW	1.8	ACRE		
2	TXDOT 104	REMOVE CONCRETE SIDEWALK	14.8	SY		
3	TXDOT 110	EXCAVATION - OVERLOOK	12.7	CY		
4	TXDOT 110	EXCAVATION - MAIN TRAIL	112.2	CY		
5	TXDOT 132	EMBANKMENT - OVERLOOK	12.7	CY		
6	TXDOT 132	EMBANKMENT - MAIN TRAIL	29.9	CY		
7	RR 641	STABILIZED CONSTRUCTION ENTRANCE	1	EA		
8	RR 700	MOBILIZATION (10%)	1	LS		
9	TXDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING	2	MO		
10	TXDOT 247	FLEX BASE	5.2	CY		
11	TXDOT 360	5-IN CONCRETE PAVEMENT	23.3	SY		
12	1301S	5-IN GRANITE TRAIL	564.3	SY		
13	PLANS	CONCRETE RECEIVING WELL	3.0	CY		
14	RR 201	SUBGRADE PREPARATION	739.2	SY		
15	PLANS	IRON FENCE	261	LF		
16	PLANS	NO BIKE SIGN	3	EA		
17	PLANS	INTERPERATIVE SIGNAGE	2	EA		
18	RR 604	NON-NATIVE SEEDING FOR EROSION CONTROL METHOD, HYDROMULCH	1891	SY		
19	RR 610	TREE PROTECTION FENCE (TY A)	1407	LF		
20	RR 642	SILT FENCE	1974	LF		
21	SS 1000	PEDESTRIAN BRIDGE (COMPLETE IN PLACE. INCLUDING GEOTECH, STRUCTURAL DESIGN)	1	LS		

TOTAL BASE BID _____

ADD ALT - OVERLOOK - DEPENDENT ON ASSESSMENT BY ARBORIST AFTER EXCAVATION

22	TXDOT 247	FLEX BASE	6.4	CY		
23	TXDOT 360	5-IN CONCRETE PAVEMENT	5.3	SY		
24	1301S	4-IN GRANITE TRAIL	40.4	SY		
25	RR 201	SUBGRADE PREPARATION	57.0	SY		
26	PLANS	BENCH	2	EA		
27	TXDOT 132	DEDUCT - EMBANKMENT OVERLOOK	-12.7	CY		

TOTAL ADD ALT _____

TOTAL BASE BID + ADD ALT _____

The Bidder shall furnish Unit Price Schedule with this Bid Proposal for all items necessary to complete the Work. These unit prices are to be used to adjust the Base Bid as needed, in case a greater or lesser amount of work is done. The indicated unit prices cover the cost of Work including all materials, equipment, labor, taxes, overhead, profit, maintenance and guarantee required to render the project complete.

Signature Sheet

By submitting a bid for this project, the contractor is acknowledging the insurance requirements found herein, and the bidder is asserting that, if awarded the contract, he can comply with all insurance requirements as specified within 30 days of award of the contract.

Receipt is hereby acknowledged of the following addenda to the contract documents.

Addendum No. 1 dated _____ Received _____

Addendum No. 2 dated _____ Received _____

Addendum No. 3 dated _____ Received _____

Contractor

Seal and Authorization
(if a corporation)

By

Title

Address

Telephone Number

Attest:

E-Mail Address

Secretary

END OF BID SCHEDULE

Southern Cross Pond at Highland Horizon

Please make this Page #1 when submitting your Bid Response.

Vendor Name	Contact Information
Telephone	Email
Total Project Cost	
(Written)	\$ _____

III. ADDENDA

EXHIBIT A

**STANDARD FORM OF AGREEMENT
GENERAL CONDITIONS
SUPPLEMENTARY CONDITIONS**

**SECTION #00500
STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT**

THIS AGREEMENT is by and between the Brushy Creek Municipal Utility District, a political subdivision of the State of Texas with principal offices located at 16318 Great Oaks Drive, Round Rock, Williamson County, Texas 78641 (Owner) and

_____ (Contractor).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

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

Southern Cross Pond at Highland Horizon

Contract Number NA

ARTICLE 2 – THE PROJECT

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

Construct 565 square yards of granite trail. Remove 15 square yards of concrete sidewalk. Place one (1) pedestrian bridge structure, including pedestrian handrailing. Install 261 linear feet of iron fence along the pond. Place two (2) information signs. Place two (2) benches in overlook area (add alternative). All work must be performed in a manner to minimize impact on trees and park vegetation within project limits.

Section #00500

EJCDC C-520 Suggested Form of Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)

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ARTICLE 3 – ENGINEER

3.01 The Project has been designed by: Half Associates, Inc., 9500 Amberglen Blvd., Bldg. F, Suite 125, Austin, TX 78729-1102, (512) 777-4600 (Engineer), which is to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

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

4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be substantially completed within 140 calendar days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within 170 calendar days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$250.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$250.00 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 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 pursuant to Paragraphs 5.01.A below:

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

Section #00500

EJCDC C-520 Suggested Form of Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)

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5.02 Owner agrees to pay Contractor from available funds for satisfactory performance of this Agreement in accordance with Contract Documents, and Owner agrees to make payment on account thereof as provided in the Contract Documents. Lack of funds shall render this Agreement null and void to the extent funds are not available.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

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

6.02 Progress Payments; Retainage

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 15th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of 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.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 90 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

Section #00500

EJCDC C-520 Suggested Form of Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)

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6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 – INTEREST

This section intentionally left blank.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 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) drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data."
 - E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor’s safety precautions and programs.
 - F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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.

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- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 8, inclusive).
 - 2. General Conditions (pages 1 to 48, inclusive).
 - 3. Supplementary Conditions (pages 1 to 12, inclusive).
 - 4. Specifications as listed in the table of contents of the Project Manual.
 - 5. Drawings consisting of 30 sheets with each sheet bearing the following general title: Southern Cross Pond at Highland Horizon.
 - 6. Addenda (numbers _____ to _____, inclusive).
 - 7. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor’s Bid (pages _____ to _____, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).
 - 8. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed (pages 1 to 1, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

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- E. To the extent of any direct conflict or inconsistency between any of the Contract Documents, the Contractor shall immediately seek clarification from the Engineer and notify the Owner that clarification has been requested. The Engineer shall clarify such discrepancy, within a reasonable time under the circumstances.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

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

10.02 Assignment of Contract

- A. 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.

10.03 Successors and Assigns

- A. 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.

10.04 Severability

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

10.05 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

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2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Waiver of Breach*

- A. Waiver of any breach of this Agreement shall not constitute waiver of any subsequent breach.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

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

OWNER:

CONTRACTOR

Brushy Creek Municipal Utility District _____

By: _____

By: _____

Title: Shean Dalton, General Manager

Title: _____

Attest: _____

Title: _____

Address for giving notices:

Address for giving notices:

16318 Great Oaks Drive

Round Rock, TX 78681

Reviewed and approved by:

Signee, Title

STATE OF TEXAS)

CORPORATE ACKNOWLEDGMENT

COUNTY OF _____)

This instrument was acknowledged before me on this _____ day of _____, _____, by _____ in _____ capacity as _____ of _____, a _____ on behalf of said _____.

Notary Public, State of T E X A S

REQUIRED STATUTORY PROVISIONS ADDENDUM

1. Interested Parties. Contractor acknowledges that Texas Government Code Section 2252.908 (as amended, "Section 2252.908") requires disclosure of certain matters by contractors entering into a contract with a local government entity such as the District. Contractor confirms that it has reviewed Section 2252.908 and, if required to do so, will (1) complete a Form 1295, using the unique identification number specified on page 1 of the Contract, and electronically file it with the Texas Ethics Commission ("TEC"); and (2) submit the signed Form 1295, including the certification of filing number of the Form 1295 with the TEC, to the District at the same time the Contractor executes and submits the Contract to the District. Form 1295s are available on the TEC's website at <https://www.ethics.state.tx.us/filinginfo/1295/>. The Contract is not effective until the requirements listed above are satisfied and any approval or award of the Contract by the District is expressly made contingent upon Contractor's compliance with these requirements. **The signed Form 1295 may be submitted to the District in an electronic format.**

2. Conflicts of Interest. Contractor acknowledges that Texas Local Government Code Chapter 176 (as amended, "Chapter 176") requires the disclosure of certain matters by contractors doing business with or proposing to do business with local government entities such as the District. Contractor confirms that it has reviewed Chapter 176 and, if required to do so, will complete and return Form CIQ promulgated by the TEC, which is available on the TEC's website at <https://www.ethics.state.tx.us/forms/conflict/>, within seven days of the date of submitting the Contract to the District or within seven days of becoming aware of a matter that requires disclosure under Chapter 176, whichever is applicable.

3. Verification Under Chapter 2271, Texas Government Code. If required under Chapter 2271 of the Texas Government Code (as amended, "Chapter 2271"), Contractor represents and warrants that, at the time of execution and delivery of the Contract, neither Contractor, nor any wholly or majority-owned subsidiary, parent company, or affiliate of Contractor that exist to make a profit, boycott Israel or will boycott Israel during the term of the Contract. The foregoing verification is made solely to comply with Chapter 2271, to the extent such Chapter does not contravene applicable Federal law. As used in the foregoing verification, "boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes. Contractor understands "affiliate" to mean an entity that controls, is controlled by, or is under common control with Contractor.

4. Verification Under Subchapter F, Chapter 2252, Texas Government Code. For purposes of Subchapter F of Chapter 2252 of the Texas Government Code (as amended, "Subchapter F"), Contractor represents and warrants that, neither Contractor, nor any wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of Contractor that exist to make a profit, are companies identified on a list prepared and maintained by the Texas Comptroller of Public Accounts (the "Comptroller") described within Subchapter F and posted on the Comptroller's internet website at: <https://comptroller.texas.gov/purchasing/docs/sudan-list.pdf>, <https://comptroller.texas.gov/purchasing/docs/iran-list.pdf>, and <https://comptroller.texas.gov/purchasing/docs/fto-list.pdf>.

The foregoing representation is made solely to comply with Subchapter F, to the extent such subchapter does not contravene applicable Federal law, and excludes companies that the United States government has affirmatively declared to be excluded from its federal sanctions regime relating to Sudan, Iran, or a foreign terrorist organization. Contractor understands "affiliate" to mean any entity that controls, is controlled by, or is under common control with Contractor.

5. Verification Under Chapter 2274, Texas Government Code, Relating to Contracts With Companies Boycotting Certain Energy Companies. If required under Chapter 2274 of the Texas Government Code (as amended, "Chapter 2274"), Contractor represents and warrants that, at the time of execution and delivery of the Contract, neither Contractor, nor any wholly or majority-owned subsidiary, parent company, or affiliate of Contractor that exists to make a profit, boycott energy

companies or will boycott energy companies during the term of the contract. The foregoing verification is made solely to comply with Chapter 2274. As used in the foregoing verification, “boycott energy companies” means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: (1) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law or (2) does business with a company described in the preceding section (1).

6. Verification Under Chapter 2274, Texas Government Code, Relating to Contracts with Companies that Discriminate Against the Firearm and Ammunition Industries. If required under Chapter 2274 of the Texas Government Code (as amended, “*Chapter 2274*”), Contractor represents and warrants that, at the time of execution and delivery of the Contract, neither Contractor, nor any wholly or majority-owned subsidiary, parent company, or affiliate of Contractor that exists to make a profit, have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association or will discriminate during the term of the contract against a firearm entity or firearm trade association. The foregoing verification is made solely to comply with Chapter 2274. As used in the foregoing verification, the terms “discriminate against a firearm entity”, “firearm entity”, and “firearm trade association” have the meanings ascribed to them in Section 2274.001, *Texas Government Code*.

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



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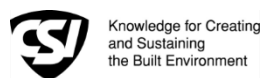
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents. In case of inconsistency between the Contract Documents and any Addenda, the Addenda supersede other Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the

Agreement. Extra Work will not be considered for a Change Order or for an adjustment in the Contract Price or the Contract Times unless the document is executed by both Owner and Contractor. Furthermore, the parties agree that under no circumstances will an act or failure to act on the part of the Owner or the Engineer constitute a waiver of the written Change Order requirement for extra work. A written Change Order is a strict condition precedent for payment of extra work.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral including, without limitation, all prior iterations of these General Conditions, the Supplementary Conditions, or any other document not specifically listed in the Agreement.

12. *Contract Documents*-- The Contract Documents consist of the Agreement between Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Work Change Directive or (4) a Field Order. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or Invitation to Bid, Instructions to Bidders, sample forms, the Contractor's Bid, portions of Addenda relating to bidding requirements), Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement. For purposes of giving or receiving notice, directives, change orders, or any other information from the Engineer or

Owner to the Contractor, the Contractor shall designate one person as Project Manager to receive such notice, directives, change orders, or other information. If the person so identified by the Contractor is not present on the job site during normal working hours for any consecutive 48-hour period, the Contractor shall in writing addressed to the Engineer and Owner identify the individual who is acting as Project Manager.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver. However, Contractor has no rights or remedies arising from execution of the Agreement prior to receiving a Notice to Proceed from Owner or Engineer.

19. *Engineer*--The individual or entity named as such in the Agreement. The Engineer shall identify a specific individual to serve as liaison between the Owner and Contractor and between Engineer and Contractor. The Engineer will notify the Owner and Contractor of the name of an acting replacement as Engineer representative whenever the person so designated is not available. Whenever the Contractor or Owner requires information, direction, or assistance, the Contractor or Owner shall notify the individual designated by the Engineer.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times. The Engineer will promptly obtain the signature of the Contractor on all Field Orders. This signature confirms that the Contractor is not entitled to any change in the Contract Price or the Contract Times. The Engineer will endeavor to obtain the signature of the Contractor on all Field Orders on a weekly basis.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner, if the Owner decides to proceed with the Work, will sign and deliver the Agreement, to the apparent successful bidder. However, the Notice of Award shall not be construed as an agreement, meeting of the minds, contract, or any other legal obligation between Owner and Contractor. Until Contractor receives a Notice to Proceed from the Owner, the Contractor has no remedy against the Owner.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed. As a general matter, the Contractor should utilize the Engineer's designated representative as the liaison between the Contractor and the Owner. However, in an exceptional circumstance, the Contractor can notify Owner's designated representative.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *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.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *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.

42. *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.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *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.

45. *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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

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

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *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.

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

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered”, “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the 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 is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

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

D. *Defective*

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

- a. does not conform to the Contract Documents,
- or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

c. has been damaged prior to Engineer’s - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

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

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor shall each deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which Owner or any additional insured may reasonably request) which Contractor is required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to four (4) printed or hard copies of the Drawings and Project

Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. TIME IS OF THE ESSENCE OF THIS CONTRACT. This is a Calendar Day Contract. The Contract Times will commence to run on the day indicated in the Notice to Proceed. The Owner will provide a Notice to Proceed at a reasonable time after the effective date of the Agreement. In no event will the Owner have any obligations or duties to the Contractor under the Agreement until the Notice to Proceed is given to the Contractor.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run as set forth in the Notice to Proceed. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Owner and Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious, economical, and practicable execution of the Work. The Contractor shall perform all Work in accordance with the most recent Progress Schedule submitted to the Owner and Engineer. Nothing contained herein will impose on Owner or Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

a. The Progress Schedule shall be in a detailed precedence-style critical path method ("CPM") or primavera-type format satisfactory to the Owner. The Progress Schedule shall also (i) provide a graphic representation of all activities and events that will occur during performance of the Work; (ii) identify each phase of construction and occupancy; and (iii) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates"). Upon review and acceptance by the Owner of the Milestone Dates, the Progress Schedule shall be deemed part of the Contract Documents. If not accepted, the Progress Schedule shall be promptly revised by Contractor in accordance with the recommendations of the Owner and resubmitted for acceptance. The Contractor shall monitor the progress of the Work for conformance with the requirements of the Progress Schedule and shall promptly advise the Owner of any delays or potential delays. The accepted Progress Schedule shall be updated to reflect the actual conditions as set forth in Paragraph 2.6.1 or if requested by either the Owner or the Engineer.

b. The parties acknowledge and agree that notwithstanding any theoretical delays or theoretical extensions of time for completion as may be shown on the Progress Schedule, the Interim Completion Dates, Milestone Dates, and the Scheduled Completion Date shall be governed by the Contract and shall be extended only in accordance with the procedures set forth in the Contract Documents.

c. In the event that the Owner or Engineer determines that the Work has not progressed or reached the level of completion required by the Contract Documents, the Owner shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (i) working additional shifts or overtime, (ii) supplying additional manpower, equipment, and facilities, and (iii) other similar measures. Contractor agrees to take such corrective measures to expedite the progress of construction until the progress of the Work complies with the state of completion required by the Contract Documents.

d. In the event Owner or Engineer determines that Contractor is not timely performing any of its Work or that Contractor is not keeping up with the Progress Schedule, Owner may, in addition to Owner's rights stated herein, request Contractor to prepare a Recovery Schedule. In such event, Contractor will prepare a Recovery Schedule in such form and in such detail as Owner may request. Contractor further agrees that it will work as necessary to meet the requirements of the Recovery Schedule and bring its Work into compliance with the current Progress Schedule (all without any additional cost to Owner). No approval by Owner or Engineer of Contractor's Recovery Schedule pursuant to this Paragraph shall constitute a waiver by Owner of any damages or losses which Owner may suffer as a result of Contractor's failure to meet the Scheduled Completion Date.

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

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

4. If required by Owner, Contractor shall also prepare and furnish project cash flow projections, manning charts for all key trades, and schedules for the purchase and delivery of all equipment and materials, together with the periodic updating thereof.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

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

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or

equipment that 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 Engineer as provided in Article 9.

D. In the event of inconsistencies within or between the parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, or ordinances, the Contractor shall (i) provide the better quality or greater quantity of Work or (ii) comply with the more stringent requirement; either or both in accordance with the Engineer's interpretation.

3.02 *Reference Standards*

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

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

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

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Owner and Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover in the Contract Documents, or any condition at the site affecting the Work, and shall obtain a written interpretation or clarification from Owner and Engineer before proceeding

with any Work affected thereby. The Contractor shall be liable to the Owner for failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents which the Contractor knew or reasonably should have known.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and 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 promptly report it to Owner and Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

4. The terms "knowledge," "recognize," and "discover," their respective derivatives, and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows (or should know), recognizes (or should recognize), and discovers (or should discover) in exercising the care, skill, and diligence required by the Contract Documents. Analogously, the expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Project and exercising the care, skill, and diligence required of the Contractor by the Contract Documents.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work can only be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

Any variations and deviations in the Work arising from any of the methods set forth in Paragraph 3.04.B will not authorize any Amendments to the Contract Price or Contract Times. The sole method to amend the Contract Price or Contract Times is pursuant to Paragraph 3.04.A.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

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

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

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

4.02 *Subsurface and Physical Conditions*

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

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

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

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. The Contractor hereby covenants that it has examined the site of the proposed Work and is familiar with all of the conditions surrounding construction of the Project, having conducted all inquiries, tests and investigations for the Work.

1. The Contractor acknowledges that he has satisfied himself as to the nature and location of the Work; the general and local conditions, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads, and uncertainties of weather, river/stream stages, or similar physical conditions at the site; the conformation and conditions of the ground; the character of equipment and facilities needed preliminary to and during the prosecution of the Work and all other matters which can in any way affect the work or the cost thereof under this Contract.

2. The Contractor further acknowledges that he has satisfied himself as to the character, quality, and quantity of surface and subsurface materials to be

encountered from inspecting the Site and from evaluating information derived from exploratory work, if any, that has been presented in any geotechnical report, as well as from information presented in the Supplementary Conditions. Any failure by the Contractor to acquaint himself with all the available information will not relieve him from responsibility for properly estimating the difficulty or cost of successfully performing the Work. Neither the Owner nor the Engineer assume responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner or the Engineer. All risks of differing site conditions shall be borne solely by the Contractor.

4.04 *Underground Facilities*

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

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

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

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents and notifying Texas One Call Service,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

3. Notwithstanding any other provision to the contrary, the Contractor shall be solely responsible for the location and protection of any and all public lines and utility customer service lines in the Work area. For the purposes of this section, "public lines" means the utility distribution and supply system within public rights-of-way or easements, and "utility customer service lines" (service) means any utility line connecting a utility customer to the utility distribution system. Generally, existing service connections within right-of-way or easements are not shown on the Drawings. The

Contractor shall notify the Owner and "Texas One Call Service" and exercise due care to locate and to mark, uncover or otherwise protect all such lines in the construction zone and any of the Contractor's work or storage areas. The Contractor's obligation hereunder shall be primary and non-delegable. **The Contractor shall indemnify or reimburse such expenses or costs (including fines that may be levied against the Owner) that may result from unauthorized or accidental damage to all public lines and utility customer service lines in the Work area.** The Owner reserves the right to repair such damage the Contractor may cause, at the Contractor's expense.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, within 24 hours after the Contractor discovers and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

C. The Contractor shall take reasonable precaution to avoid disturbing primitive records and antiquities of archaeological, paleontological or historical significance. No objects of this nature shall be disturbed without written permission of the Owner and the Texas Department of Antiquities Protection. When such objects are uncovered unexpectedly, the Contractor shall stop all Work in close proximity and notify Owner's Representative and the Texas Department of Antiquities Protection of their presence and shall not disturb them until written permission and permit to do so is granted. All primitive rights and antiquities uncovered on the Owner's property shall remain property of the State of Texas, the Texas Department of Antiquities Protection conforming to the Texas Natural Resources Code. If it is determined by the Owner, in consultation with the Texas Department of Antiquities Protection, that exploration or excavation of primitive records or antiquities on Project site is necessary to avoid loss, the Contractor shall cooperate in salvage work attendant to preservation. If the Work stoppage or salvage work causes an increase in the Contractor's cost of, or time required for, performance of the Work, the Contract Amount and/or Contract Time may be equitably adjusted.

4.05 *Reference Points*

A. Engineer shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior

written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by a Registered Professional Land Surveyor at Contractor's expense.

4.06 *Hazardous Environmental Condition at Site*

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

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

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. The Contractor must take all precautions to discovery and locate any Hazardous Environmental Condition(s) at the site that may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. The Contractor is responsible for any damages caused by such Hazardous Environmental Condition(s) created on the site by a Contractor, Subcontractor, Supplier, or anyone else for whom the Contractor is responsible. Within 24 hours of the time when the Contractor discovers the Hazardous Environmental Condition(s), the Contractor will follow the procedures set forth in Paragraph 4.06.D.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all

Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered 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 therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

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

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the 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 the 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 of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents shall be obtained from solvent surety or insurance companies that are duly licensed by the State of Texas and authorized to issue bonds or insurance policies for the limits and coverages required by the Contract Documents. The bonds shall be in a form acceptable to the Owner and shall be issued by a surety which complies with the requirements of Art. 7.19-1, Texas Insurance Code and which is otherwise acceptable to the Owner. Owner may require the surety to obtain reinsurance for any portion of the risk that exceeds 10% of the surety's capital and surplus. For bonds exceeding \$100,000, the surety must also hold a certificate of authority from the U.S. Secretary of the Treasury or have obtained reinsurance from a reinsurer that is authorized as a reinsurer in Texas and holds a certificate of authority from the U.S. Secretary of the Treasury.

Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured 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.

5.04 *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:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

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 Paragraph 13.07; 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.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Workers' Compensation Insurance Coverage.*

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.

Persons providing services on the project ("subcontractor" in §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 showing 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. This notice does not satisfy other posting requirements imposed by the Act or other commission rules. This notice must be printed with a title in at least 30 point bold type and text in at least 19 point normal type, and shall be in both English and Spanish and any other language common to the worker population. The text for the notices shall be the following text provided by the commission on the sample notice, without any additional words or changes:

"REQUIRED WORKERS' COMPENSATION COVERAGE"

"The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling,

or delivering equipment or materials, or providing labor or transportation or other service related to the project, regardless of the identity of their employer or status as an employee."

"Call the Texas Workers' Compensation Commission at 512-440-3789 to receive information on the legal requirement for coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide 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 for all employees of the person providing 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, 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 certificate of 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 perform 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 provided a certificate of coverage, the Contractor is representing to the Owner 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 of 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 other 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 Owner to declare the Contract void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the Owner.

5.06 *Builder's Risk Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or 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, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

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

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Contractor 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, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional

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

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary

shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers.

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

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

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor

shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. The Contractor shall have an English-speaking, competent Superintendent on the Work at all times that Work is in progress. Upon request of Owner, the Contractor shall present the resume of the proposed Superintendent to Owner showing evidence of experience and successful superintendence and direction of work of a similar scale and complexity. If, in the opinion of Owner, the proposed Superintendent does not indicate sufficient experience in line with the Work, he/she will not be allowed to be the designated Superintendent for the Work. The Superintendent shall not be replaced without Written Notice to Owner. If the Contractor deems it necessary to replace the Superintendent, the Contractor shall provide the necessary information for approval, as stated above, on the proposed new Superintendent. A qualified substitute Superintendent may be designated in the event that the designated Superintendent is temporarily away from the Work, but not to exceed a time limit acceptable to Owner. The Contractor shall replace the Superintendent upon the Owner's request in the event the Superintendent is unable to perform to the Owner's satisfaction. The Superintendent will be the Contractor's representative on the Work and shall have the authority to act on behalf of the Contractor. All communications given to the Superintendent shall be as binding as if given to the Contractor. Either the Contractor or the Superintendent shall provide an emergency and home telephone number at which one or the other may be reached if necessary when work is not in progress.

C. The Contractor agrees to employ only orderly and competent workers, skillful in performance of the type of Work required under the Contract. The Contractor, Subcontractors, Sub-subcontractors, and their employees may not use or possess any firearms, alcoholic or other intoxicating beverages, illegal drugs or controlled substances while on the job or on the Owner's property, nor may such workers be intoxicated, or under the influence of alcohol or drugs, on the job. If the Owner or Owner's Representative notifies the Contractor that any worker is incompetent, disorderly or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms, or has possessed or was under the influence of alcohol or drugs on the job, the Contractor shall immediately remove such worker from performing Contract Work, and may not employ such worker again on Contract Work without the Owner's prior written consent. The Contractor shall at all times maintain good discipline and order on or off the site in all matters pertaining to the Project.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

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

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. The Contractor agrees to assign to the Owner at the time of final completion of the Work any and all manufacturer's warranties relating to materials and labor used in the Work, and the Contractor further agrees to perform the Work in such manner to preserve any and all manufacturer's warranties. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

1. The Contractor shall furnish twenty-four (24) hour callback maintenance service for the equipment provided by the Contractor for a period of three (3) months after completion and acceptance of the Work. This service shall include regular examination of the equipment by competent and trained employees of the Contractor and shall include all necessary adjustments, greasing, oiling, cleaning, supplies, and parts to keep the equipment in proper operation, except parts made necessary by misuse, accident, or negligence not caused by the Contractor or any Subcontractors of any tier.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

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

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine 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 Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Docu-

ments (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether 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;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed seven (7) days within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

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

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer

approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Not later than 14 days after the execution of the Agreement by the Contractor and Owner, the Contractor shall furnish the Owner and the Engineer, in writing, with (1) the name, trade, and subcontract amount for each Subcontractor and (2) the names of all persons or entities proposed as manufacturers of the products identified in the Specifications (including those who are to furnish materials or equipment fabricated to a special design) and, where applicable, the name of the installing Subcontractor. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as

Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, 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, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

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

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

6.08 *Permits*

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

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations. The Contractor shall plan and execute its operations in compliance with all applicable Federal, State and local laws and regulations, including those concerning control and abatement of water pollution and prevention and control of air pollution. The Contractor shall conduct activities in compliance with applicable laws and regulations and other requirements of the Contract relating to the environment, and its protection at all times. Unless otherwise specifically determined, the Contractor is responsible for obtaining

and maintaining permits related to storm water run-off. The Contractor shall conduct operations consistent with storm water run-off permit conditions.

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.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

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

B. The Owner is an exempt organization as defined by Chapter 11 of the Property Tax Code of Texas and is thereby exempt from payment of Sales Tax under Chapter 151, Limited Use Sales, Excise and Use Tax, Texas Tax Code, and Article 1066 (C), Local Sales and Use Tax Act, Revised Civil Statutes of Texas. The Owner may issue a "Texas Sales and Use Tax Exemption Certification" authorizing the Contractor to use same in the purchase of materials for the Project.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

6.12 Record Documents

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

B. The Record Documents shall be updated to show the "As-Constructed" Drawings and Specifications monthly prior to submission of periodic Applications for Payment. Failure to update the "As-Constructed" Drawings and Specifications constitutes cause for denial of a progress payment otherwise due.

C. Upon Substantial Completion of the Work, these record documents, samples and Shop Drawings

shall be promptly delivered to Owner. Prior to requesting a Substantial Completion inspection, Contractor shall furnish a complete set of the marked up "As-Constructed" Drawings and Specifications and one copy of same. Concurrently, Contractor shall submit a preliminary copy of each operating and maintenance manual required by the Contract Documents for review by the Owner and Engineer. Once determined acceptable, Contractor shall provide Mylar prints of professionally drafted "As Constructed" Drawings and Specifications in bound volumes along with electronic copies on CD in a format acceptable to Owner, two (2) sets of photocopies of the Mylar prints, two sets of operating and maintenance manuals, two sets of approved submittals, and any other record documents required by the Contract Documents.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , 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).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

E. When the Work requires excavation which either exceed four (4) feet in depth or results in any worker's upper body being positioned below grade level, the Contractor is required to submit a trenching plan to the Owner prior to commencing trenching operations. The plan is required to be prepared and sealed by a professional engineer registered in the State of Texas, and employed by the Contractor. Said engineer cannot be anyone who is otherwise engaged directly or indirectly with this Project.

F. The Contractor shall erect and maintain, as required by existing conditions and performance of the Contractor, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

G. When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer written notice immediately, and in no instance

more than 24 hours after the alleged emergency, if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

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

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

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

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

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

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

C. Submittal Procedures

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

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

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the

Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

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

6.18 *Continuing the Work*

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

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

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

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

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

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

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

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. CONTRACTOR SHALL INDEMNIFY AND HOLD OWNER HARMLESS AGAINST ANY LOSS OR DAMAGE TO PERSONS OR PROPERTY AS A RESULT OF OPERATIONS GROWING OUT OF THE PERFORMANCE OF THIS CONTRACT AND CAUSED BY THE NEGLIGENCE OR CARELESSNESS OF CONTRACTOR, CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS, AND AGENTS OR LICENSEES. THE CONTRACTOR SHALL UNCONDITIONALLY DEFEND AT ITS OWN COST AND SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER, ENGINEER, ENGINEER'S CONSULTANTS AND SUBCONSULTANTS AND THEIR RESPECTIVE OFFICERS, DIRECTORS, PARTNERS, EMPLOYEES, AGENTS AND OTHER CONSULTANTS AND ANY OF THEM FROM AND AGAINST ALL CLAIMS, JUDGMENTS, COSTS, LIENS, LIABILITIES, LOSSES, DAMAGES, PENALTIES, INTEREST, FEES, FINES, COSTS AND EXPENSES (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS AND OTHER PROFESSIONALS AND ALL COURT OR OTHER DISPUTE RESOLUTION COSTS) IN ANY MANNER ARISING DIRECTLY OR INDIRECTLY OUT OF, OR RESULTING FROM, THE WORK PERFORMED HEREUNDER OR THE MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS, THAT IS:

1. ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH (INCLUDING EMPLOYEES OF CONTRACTOR AND OWNER), OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY (INCLUDING PROPERTY OF CONTRACTOR AND OWNER AND THE WORK ITSELF), INCLUDING THE LOSS OF USE RESULTING THEREFROM, AND

2. CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT ACT, ERROR OR OMISSION; SOLE NEGLIGENCE; CONCURRENT NEGLIGENCE; JOINT NEGLIGENCE; ACTIVE OR PASSIVE NEGLIGENCE; GROSS NEGLIGENCE; NEGLIGENCE PER SE; STRICT LIABILITY; INVERSE CONDEMNATION, PATENT INFRINGEMENT; COPYRIGHT; CONDITION OF PROPERTY OR ITS PREMISES; LATENT DEFECTS; DEFECTS IN MATERIALS,

WORKMANSHIP, OR DESIGN; WORKERS' COMPENSATION CLAIMS; DISABILITY ACT CLAIMS; EMPLOYEE BENEFIT CLAIMS; AND FAILURE TO COMPLY WITH ANY OF THE PROVISIONS OF THE CONTRACT DOCUMENTS; OR OTHER ACT OR OMISSION OF CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS, OR AGENTS OR LICENSEES.

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

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

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications,

certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

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

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for

the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

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

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

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

8.03 *Furnish Data*

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

8.04 *Pay When Due*

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

8.05 *Lands and Easements; Reports and Tests*

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

8.06 *Insurance*

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

8.07 *Change Orders*

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

8.08 *Inspections, Tests, and Approvals*

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be

responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

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

9.04 *Authorized Variations in Work*

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

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The Engineer will obtain on a weekly basis the Contractor's signature on all Field Orders that will contain an acknowledgement by the Contractor that the Field Order does not involve an adjustment in the Contract Price or in the Contract Times.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

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

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

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided). A change in the Contract Price or the Contract Times

shall be accomplished only by written Amendment, a written Change Order, or a written Work Change Directive. Accordingly, no course of conduct or dealings between the parties, no expressed or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alterations or additions to the Work shall be the basis of any claim for an increase in any amount due under the Contract Documents or a change in any time period provided for in the Contract Documents.

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

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

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

Agreements on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of a Change Order, including, but not limited to, all direct and indirect costs associated with

such change and any and all adjustments to the Contract Price and the Contract Times. In the event a Change Order increases the Contract Price, the Contractor shall include the Work covered by such Change Order in Applications for Payment as if such Work were originally part of the Contract Documents.

10.04 *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.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

G. In calculating the amount of any claim or measure of damages for breach of contract (such provision to survive any termination of following such breach), the following standards shall apply:

1. No indirect or consequential damages will be allowed;
2. No recovery shall be based on a comparison of planned expenditures to total actual expenditures, or on estimated losses of labor efficiency, or on a comparison of planned manloading to actual manloading, or any other analysis that is used to show damages indirectly;
3. Damages are limited to extra costs specifically shown to have been directly caused by a proven wrong;
4. No damages shall be allowed for delay;
5. No damages will be allowed for home office overhead or other home office charges or any Eichleay formula calculation; and
6. No profit will be allowed on any damage claim.

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

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to

be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 in writing by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work, but only to the extent authorized and approved in writing by Owner and Engineer.

5. Supplemental costs including the following:

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

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

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

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

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

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

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

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

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

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

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

E. Pricing Information Requirements: The Contractor agrees to provide and require all Subcontractors to provide a breakdown of allowable labor and labor burden cost information as outlined herein.

This information will be used to evaluate the potential cost of labor and labor burden related to Change Order Work. It is intended that this information represent an accurate estimate of the Contractor's actual labor and labor burden cost components. This information is not intended to establish fixed billing or Change Order pricing labor rates. However, at the time Change Orders are priced the submitted cost data for labor rates may be used to price Change Order Work. The accuracy of any such agreed-upon labor cost components used to price Change Orders will be subject to later audit. Approved Change Order amounts may be adjusted later to correct the impact of inaccurate labor cost components if the agreed-upon labor cost components are determined to be inaccurate.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

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

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

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. When "plan quantity" is indicated for a bid item, the Contractor shall be paid the amount specified in the Contract Documents without any measurements.

E. A Major Item is any individual bid item in the Bid that has a total cost equal to or greater than five percent (5%) of the original Contract Amount or \$50,000, whichever is greater, computed on the basis of bid quantities and Contract unit prices.

F. The Owner or the Contractor may make a Claim for an adjustment in the Contract Amount if:

1. the actual quantity of any Major Item should become as much as twenty percent (20%) more than or twenty percent (20%) less than in the Bid; or
2. The Contractor presents proper documentation contesting the accuracy of "plan quantity," and Owner's Representative verifies quantity and determines original quantity is in error by five percent (5%) or more.

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

12.01 Change of Contract Price

A. The Contract Price may only be changed by a Change Order.

1. If the total of amount of all Change Orders, in the aggregate, involves a decrease or an increase of more than \$25,000, no Change Order shall be valid unless it is approved by the Board of Directors of the Brushy Creek MUD. The original Contract Price may not be increased by more than twenty-five percent (25%) under any circumstances and it may not be decreased more than twenty-five percent (25%) without the consent of the Contractor to such decrease.

2. Any claim for an adjustment in the Contract Amount shall be made by Written Notice delivered by the

party making the Claim to the other party promptly (but in no event later than thirty (30) calendar days) after the start of the occurrence or event giving rise to the Claim and stating the general nature of the Claim, but in any case before proceeding to execute the work considered to be additional costs (except for Emergencies as described in Article 6). Notice of the amount of the Claim with supporting data shall be delivered within thirty (30) calendar days after Written Notice of Claim is delivered by claimant, and shall represent that the adjustment claimed covers all known amounts to which claimant is entitled as a result of said occurrence or event.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

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

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 10 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 10 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five

percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

C. All time limits stated in the Contract Documents are of the essence of the Agreement. The Contractor acknowledges and understands that failure by the Contractor to complete the Work in accordance with the construction schedule will cause significant damages to the Owner, and subject Contractor to Liquidated Damages as stated in the Agreement.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract

Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

F. Notwithstanding anything to the contrary in the Contract Documents, an extension in the Contract Times, to the extent permitted under Paragraphs 12.02 and 12.03, shall be the sole and exclusive remedy of the Contractor for any (1) delay in the commencement, prosecution, or completion of the Work; (2) hindrance or obstruction in the performance of the Work; (3) loss of productivity; or (4) other similar claims (collectively referred to in this paragraph as "Delays") whether or not such Delays are foreseeable. In no event shall the Contractor be entitled to any compensation or recovery of any damages, in connection with any Delay, including, without limitation, consequential damages, lost opportunity costs, impact damages, or other similar remuneration. The Owner's exercise of any of its rights or remedies under the Contract Documents (including, without limitation, ordering changes in the Work, directing suspension, rescheduling, or correction of the Work, or terminating this Agreement for its convenience), regardless of the extent or frequency of the Owner's exercise of such rights or remedies, shall not be construed as active interference with the Contractor's performance of the Work. If the Contractor submits a progress report indicating, or otherwise expressing an intention to achieve, completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the

Contractor for any failure of the Contractor to so complete the Work shall be created or implied.

G. Under a Calendar Day Contract, the Contractor may also be granted an extension of time because of unusual inclement weather that is beyond the normal weather expected for the Round Rock, Texas area. Normal weather which prevents the Contractor from performing Work is expected during a Calendar Day Contract, and is not a justification for an extension of time. The following delineates the number of days per month for which, for purposes of Calendar Day Contracts, expected normal weather will prevent performance of Work:

January.....	7 days
February.....	7 days
March.....	7 days
April.....	7 days
May.....	8 days
June.....	6 days
July.....	6 days
August.....	5 days
September.....	7 days
October.....	7 days
November.....	7 days
December.....	7 days

Days per month exceeding the number shown above may be credited as Rain Days if a Claim is made in accordance with this Article 12 and meets the following definition: a "Rain Day" is any day in which a weather event occurs at the site and is sufficient to prevent the Contractor from performing units of Work critical to maintaining the Progress Schedule.

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

13.01 Notice of Defects

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

13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, 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.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted in the time set forth in the Contractor's notice.

13.04 *Uncovering Work*

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

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

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others), unless the Contractor fails to provide written notice as required by Paragraph 13.03.F; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

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

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but

not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

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

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service for the benefit of the Owner before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be

extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

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

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants

access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

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

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other

arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The OWNER will pay to the CONTRACTOR the total amount of approved Application for Payment, less five percent (5%) of the amount thereof, which five percent (5%) or the highest maximum amount of retainage as may be allowed under Government Code Chapter 2253 will be retained until thirty (30) days after Final Completion of the Work, less all previous payments and less all sums that may be retained by the OWNER under the terms of this Contract. The CONTRACTOR, at the OWNER'S option, may be relieved of the obligation to complete the Work and, thereupon, the CONTRACTOR shall receive payment of the balance due under the Contract subject to the conditions stated under paragraph 15.2.

4. Each application for payment shall be accompanied by the following, all in form and substance satisfactory to the Owner:

a. A current Contractor's lien waiver and duly executed and acknowledged sworn statement showing all Subcontractors and material suppliers with whom the Contractor has entered into Subcontracts, the amount of each such Subcontract, the amount requested for any Subcontractor and material supplier in the requested progress payment, and the amount to be paid to the Contractor from such progress payment, together with similar sworn statements from all such Subcontractors and material suppliers;

b. Duly executed waivers of mechanics' and material suppliers' liens from all Subcontractors and, when appropriate, from material suppliers and lower-tier Subcontractors establishing payment or satisfaction of payment of all amounts requested by the Contractor on behalf of such entities or persons in any previous application for payment;

c. updated Progress Schedule;

d. monthly subcontractor report;

e. Contractor's estimate of the amount of the Work performed, labor furnished, and materials included in the Work using the agreed schedule of values; and

f. any other documentation required under the Supplementary Conditions or elsewhere in the Contract Documents; and

g. All information and materials required to comply with the requirements of the Contract Documents or reasonably requested by the Owner or the Engineer.

5. The Contractor shall also comply with the following specific requirements:

a. With each application for payment, the Contractor shall submit to the Owner a written list identifying each location where materials are stored off the project site and the value of the materials at each location. The Contractor shall procure insurance satisfactory to the Owner for material stored off the project site in an amount not less than the total value thereof.

b. The consent of any surety shall be obtained to the extent required prior to payment for any materials stored off the project site.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, 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 under Paragraph 9.07, 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 Engineer's responsibility to observe the Work.

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

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. 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 Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

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

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

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

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

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

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

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

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

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A;

e. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Amount;

f. damage to the Owner or another contractor;

g. reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

h. failure of the Contractor to submit a schedule of values in accordance with the Contract Documents;

i. failure of the Contractor to submit a submittal schedule in accordance with the Contract Documents;

j. failure of the Contractor to submit or update construction schedules, including Progress Schedule(s), in accordance with the Contract Documents;

k. failure of the Contractor to maintain a Record Documents;

l. failure of the Contractor to maintain weekly payroll reports;

m. failure of the Contractor to submit monthly Subcontractor reports;

n. the Contractor's neglect or unsatisfactory prosecution of the Work, including failure to clean up;

o. assessment of fines and/or penalties for violations of any federal or state law;

p. notice of potential claims by subcontractors or suppliers; or

q. failure of the Contractor to comply with any provision of the Contract Documents.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor 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 as determined by Paragraph 14.02.C.1.

E. No money shall be paid by the Owner upon any claim, debt, demand or account whatsoever, to any person, firm or corporation who is in arrears to the Brushy Creek MUD for taxes; and the Brushy Creek MUD shall be entitled to counterclaim and offset against any such debt, claim, demand or account in the amount of taxes so in arrears and no assignment or transfer of such debt, claim, demand or account after said taxes are due, shall affect the right of the Owner to so offset said taxes, and associated penalties and interest if applicable, against the same.

14.03 *Contractor's Warranty of Title*

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

(1) The Contractor further expressly undertakes to defend the Owner and Engineer, at the Contractor's sole expense, against any actions, lawsuits, or proceedings brought against the Owner, Engineer, or any third party as a result of liens filed against the Work, the site of any of the Work, the project site and any improvements thereon, payments due the Contractor, or any portion of the property of the Owner, Engineer, or third party. The Contractor hereby agrees to indemnify and hold the Owner, Engineer, and third parties harmless against any such liens or claims of lien and agrees to pay any judgment or lien resulting from any such action, lawsuit, or proceeding.

(2) The Owner shall release any payments withheld due to a lien or claim of lien if the Contractor obtains security acceptable to the Owner or a lien bond that is (i) issued by a surety acceptable to the Owner; (ii) in a form and substance satisfactory to the Owner; and (iii) in an amount not less than two hundred percent (200%) of such lien claim. By posting a lien bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under this paragraph, including, without limitation, the duty to defend and indemnify the Owner and Engineer. The cost of any premiums incurred in connection with such bonds and securities shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Price.

(3) The Contractor agrees to waive any right that it may have to assert a mechanic's or other lien against the project site and any improvements thereon, including without limitation, the Work itself. Furthermore, the Contractor will cause a similar provision, waiving all rights to a mechanic's or other lien against the property, to be included in all of its subcontracts, any sub-subcontracts, and all contracts with material suppliers.

(4) Notwithstanding the foregoing, the Owner reserves the right to settle any disputed mechanic's or material supplier's lien claim by payment to the lien claimant or by such other means as the Owner, in the Owner's sole discretion, determines is the most economical or advantageous method of settling the dispute. The Contractor shall promptly reimburse the Owner, upon demand, for any payment so made.

14.04 *Substantial Completion*

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

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not

substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an

inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

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

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

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

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

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

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

e. Non-Use of Asbestos Affidavit (After Construction);

f. Affidavit that all payrolls, bills for materials

and equipment, subcontracted Work, and all indebtedness connected with the Work, except as specifically noted, are paid or will be paid, or will be otherwise satisfied within the period of time required by Chapter 2251 of the Texas Government Code. Contractor's affidavit shall include documentation establishing payment or satisfaction of all such obligations such as receipts, releases, and waivers of claims and liens arising out of the Contract. The Contractor may not subsequently submit a claim on behalf of a subcontractor or vendor unless the Contractor's affidavit notes that claim as an exception; and

g. Other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance

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

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less

any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and, will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

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

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

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

suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

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

3. Contractor's disregard of the authority of Engineer; or

4. Persistent failure to prosecute the Work in accordance with the Contract, and to insure its completion within the time, or any approved extension thereof, specified in this Contract; and/or

5. Failure to remedy defective Work condemned by the Owner; and/or

6. Failure to pay subcontractors, laborers, and material suppliers pursuant to Tex. Gov't Code Chapter 2251; and/or

7. Persistent endangerment to the safety of labor or of the Work; and/or

8. Failure to supply or maintain statutory bonds or to maintain required insurance, pursuant to the contract; and/or

9. If the CONTRACTOR is adjudged a bankrupt, or makes a general assignment for the benefit of creditors, or if a receiver is appointed for the benefit of creditors, or if a receiver is appointed on account of CONTRACTOR's insolvency, or if CONTRACTOR has otherwise demonstrated financial inability to perform the Work; and/or

10. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be

used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

G. In the event that Owner's termination under Paragraph 15.02 is determined to be wrongful, the termination will automatically become a termination for convenience under Paragraph 15.03, and Contractor's remedy for wrongful termination shall be limited to recovery of payments permitted for termination for convenience under Paragraph 15.03.

15.03 *Owner May Terminate For Convenience*

A. The Owner may, at any time, terminate the Contract in whole or in part for the Owner's convenience

and without cause. Termination by the Owner under this paragraph shall be by a notice of termination delivered to the Contractor specifying the extent of termination and the effective date.

B. Upon receipt of a notice of termination for convenience, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this paragraph:

1. cease operations as specified in the notice;

2. place no further orders and enter into no further subcontracts for materials, labor, service, or facilities except as necessary to complete continued portions of the Contract;

3. terminate all subcontracts and orders to the extent they relate to the Work terminated;

4. proceed to complete the performance of the Work not terminated; and

5. take actions that may be necessary, or that the Owner may direct, for the protection and preservation of the terminated Work.

C. Upon such termination, the Contractor shall recover as its sole remedy payment of the percentage of the Contract Price equal to the percentage of the Work performed satisfactorily and not previously paid for as determined by the Engineer. The Contractor hereby waives and forfeits all other claims for payment and damages, including, without limitation, anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

D. The Owner shall be credited for (1) payments previously made to the Contractor for the terminated portion of the Work; (2) claims that the Owner has against the Contractor under the Contract; and (3) the value of the materials, supplies, equipment, or other items that are to be disposed of by the Contractor that are part of the Contract Price.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Claims shall be made by Written Notice delivered by the party making the Claim to the other party within thirty (30) calendar days after the start of the occurrence or event giving rise to the Claim and stating the general nature of the Claim. Notice of the amount of the Claim with supporting data shall be delivered within thirty (30) calendar days after Written Notice of Claim is delivered by claimant and shall represent that the adjustment claimed covers all known amounts to which

claimant is entitled.

B. Within thirty (30) calendar days of receipt of notice of the amount of the Claim with supporting data, Owner and the Contractor shall meet to discuss the Claim, after which an offer of settlement or notification of no settlement offer will be made to claimant. If claimant is not satisfied with the proposal presented, claimant shall have thirty (30) calendar days in which to:

- .1 submit additional supporting data requested by the other party;
- .2 modify the initial Claim; or
- .3 request Alternative Dispute Resolution.

16.02 *Alternative Dispute Resolution*

A. If a dispute exists concerning a Claim, the parties agree to use the following procedure prior to pursuing any other available remedies. The Owner reserves the right to include Engineer as a party.

B. Either party may give the other party written notification of any dispute not resolved in the normal course of business. Within fifteen (15) days after delivery of the notice, the receiving party shall submit to the other party a written response. The notice and response shall include (a) a statement of that party's position and a summary of arguments supporting that position, and (b) the name and title of the executive who will represent that party and of any other person will accompany that executive.

C. Within thirty (30) days after delivery of the initial notice, the executives of both parties shall meet in Round Rock, Texas at a mutually acceptable time and location, and thereafter as often as they deem reasonably necessary to attempt to resolve the dispute.

D. All reasonable requests for information made by one party to the other will be honored.

E. All negotiations are confidential and shall be treated as compromise and settlement negotiations for purpose of applicable rules of evidence.

F. Each party is required to continue to perform its obligations under the Contract Documents pending final resolution of any dispute arising out of or relating to the Contract Documents.

16.03 *Mediation*

A. If the procedure described in Paragraph 16.02 proves unsuccessful or is waived pursuant to its terms, the parties shall initiate the mediation process, as follows:

B. Any Claim arising out of or related to the Contract, shall be subject to mediation as a condition

precedent to the institution of legal or equitable proceedings by either party.

C. The parties shall endeavor to resolve their Claims by mediation. Request for mediation shall be filed in writing with the other party. The request may be made concurrently with the filing of a lawsuit but, in such event, mediation shall proceed in advance of legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

D. The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in Round Rock, Texas, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

J. Claims not resolved by mediation shall be decided by litigation. Venue shall be proper only in Williamson County, Texas.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

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

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

17.02 *Computation of Times*

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

B. The following legal holidays are observed by the Owner:

<u>Holiday</u>	<u>Date Observed</u>
New Year's Day	January 1
Martin Luther King, Jr.'s Birthday	Third Monday in January

Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	First Monday in September
Thanksgiving Day	Fourth Thursday in November
Friday after Thanksgiving	Friday after Thanksgiving
Christmas Eve	December 24
Christmas Day	December 25

C. If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday. If Christmas Eve falls on a Saturday or a Sunday, the preceding Friday is observed as the Christmas Eve holiday. If Christmas Day falls on a Saturday or a Sunday, the following Monday is observed as the Christmas Day holiday.

17.03 *Cumulative Remedies*

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

tions, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

B. The Contractor and Owner waive all Claims against each other for consequential damages arising out of or relating to this Contract; provided, however, that in no event shall this mutual waiver be deemed to preclude an award of liquidated damages recoverable under the Agreement. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with this Contract.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the State of Texas.

17.06 *Headings*

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

SECTION 00800

SUPPLEMENTARY CONDITIONS

GENERAL

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

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

SC-1.01 DEFINED TERMS

Add the following defined terms to Section 1.01:

- 53** *Calendar Day:* "Calendar Day" is any day of the week or month, no days being excepted.
- 54** *Working Day:* A "Working Day" is defined as any day not including Saturdays, Sundays or any legal holidays, in which weather or other conditions, not under the control of the CONTRACTOR, will permit construction of the principal units of the work for a period of not less than seven (7) hours between 7:00 a.m. and 6:00 p.m.
- 55** *Working Times:* Times of day(s) during which work may be performed. Unless authorized by the Owner, all Work shall be performed between 7:00am and 6:00pm on weekdays and, if previously authorized by as provided for in Section 6.02 herein, as applicable, between 9:00 am and 6:00 pm on Saturdays, Sundays, or Legal Holidays. When the CONTRACTOR has been authorized to perform Work during hours outside Working Times, such hours shall be considered time worked on Working days. Notwithstanding the preceding, emergency work may be done without prior permission only as provided in paragraph 6.16 herein.

SC-5.02 LICENSED SURETIES AND INSURERS

Add the following to Section 5.02 A:

Surety and insurance companies from which the bonds and insurance for this Project are purchased shall have a Best's rating of no less than A:VII, in addition to other requirements specified herein.

SC-5.04 Contractor's Liability Insurance

Replace Paragraph 5.04 with the following SC-5.04

5.04 *Other Requirements: Bond and Insurance.*

A. General Requirements:

1. CONTRACTOR shall purchase and maintain insurance in the types and amounts indicated below for the duration of the Contract (unless a longer duration is specified), which shall include items owned by OWNER in the care, custody and control of CONTRACTOR prior to and during the term of the Contract and all warranty periods. Failure to purchase and maintain the required insurance shall be grounds for Termination of the Contract or Suspension of the Work by OWNER. Except for the Worker's Compensation policy, the other insurance policies required by the Contract to be obtained by CONTRACTOR must state that OWNER, its officials, directors, employees, representatives, and volunteers are added as additional insureds with regard to operations and activities by or on behalf of the named insureds performed under contract with OWNER. The additional insured status must cover completed operations as well, and the policy covering completed work must remain in effect until the expiration of the statute of repose.
2. CONTRACTOR must complete and forward the required Certificates of Insurance to OWNER before the Contract is executed as verification of coverage required below. CONTRACTOR shall not commence Work until the required insurance is obtained and until such insurance has been reviewed by OWNER. Approval of insurance by OWNER shall not relieve or decrease the liability of CONTRACTOR hereunder and shall not be construed to be a limitation of liability on the part of CONTRACTOR. CONTRACTOR must also complete and forward the required Certificates of Insurance to OWNER whenever a previously identified policy period has expired as verification of continuing coverage.
3. Contractor's insurance coverage is to be written by companies licensed to do business in the State of Texas at the time the policies are issued and shall be written by companies with A.M. Best ratings of B+VII or better, except for hazardous material insurance which shall be written by companies with A.M. Best ratings of A- or better.
4. All endorsements naming the OWNER as additional insured, waivers, and notices of cancellation endorsements as well as the Certificate of Insurance shall indicate: Brushy Creek M.U.D., 16318 Great Oaks Drive, Round Rock, Texas 78681, ATTN: Parks & Recreation Manager.
5. The "other" insurance clause shall not apply to the OWNER where the OWNER is an additional insured shown on any policy. It is agreed that the CONTRACTOR's insurance shall be considered primary with respect to any insurance or self-insurance carried by OWNER. The CONTRACTOR'S insurance shall apply separately to each insured against whom a claim is made and/or lawsuits brought, except with respect to the limits of insurer's liability.
6. If insurance policies are not written for amounts specified below, CONTRACTOR shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

7. OWNER shall be entitled, upon request and without expense, to receive certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.
8. OWNER reserves the right to review the insurance requirements set forth during the effective period of this Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by OWNER based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as CONTRACTOR.
9. CONTRACTOR shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.
10. CONTRACTOR shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. All deductibles or self-insured retentions shall be disclosed on the Certificate of Insurance.
11. The policies must contain the following language: “This policy shall not be cancelled, materially changed, or not renewed until after thirty (30) days prior written notice has been given to OWNER.” In addition, CONTRACTOR shall provide OWNER thirty (30) days written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicted within the Contract.
12. If OWNER-owned property is being transported or stored off-Site by CONTRACTOR, then the appropriate property policy will be endorsed for transit and storage in an amount sufficient to protect OWNER’s property.
13. The insurance coverages required under this contract are required minimums and are not intended to limit the responsibility or liability of CONTRACTOR.
14. Subcontractors. Without limiting any of the obligations or liabilities of CONTRACTOR, each subcontractor shall obtain and maintain in full force and effect for the duration of this Contract, Workers’ Compensation Insurance coverage and other stipulated minimum insurance including the required provisions and additional policy conditions as shown above. In addition, each subcontractor shall meet each stipulation required by the Texas Workers’ Compensation Commission. Each subcontractor shall certify in writing that the subcontractor provides Workers’ Compensation insurance to all of the subcontractor’s employees involved in the Project and comply with all applicable laws consistent with industry standards. The subcontractor’s liability insurance shall name the CONTRACTOR as an additional insured. CONTRACTOR shall obtain and monitor the certificates of insurance from each subcontractor. CONTRACTOR shall retain the certificates of insurance for the duration of this Contract and shall have the responsibility of enforcing insurance requirements among its subcontractors. As an alternative, the CONTRACTOR may include its

Subcontractors as additional insureds on its own coverage as prescribed under these requirements. The CONTRACTOR's certificate of insurance shall note in such event that the Subcontractors are included as additional insureds and that CONTRACTOR agrees to provide Workers' compensation for the Subcontractors and their employees. The CONTRACTOR shall retain the certificates of insurance for the duration of the Contract plus 5 years and shall have the responsibility of enforcing these insurance requirements among its subcontractors. The OWNER shall be entitled, upon request and without expense, to receive copies of subcontractor certificates of insurance. All insurance costs will be at the CONTRACTOR or subcontractor's expense.

- B. Business Automobile Liability Insurance. Provide coverage for all owned, non-owned and hired vehicles in an amount not less than \$1,000,000 combined single limit per accident for bodily injury and property damage. The policy shall contain the following endorsements in favor of OWNER:

Waiver of Subrogation endorsement TE 2046A;

30 day Notice of Cancellation endorsement TE 0202A; and

Additional Insured endorsement TE 9901 B.

Provide coverage in the following types and amounts:

A minimum combined bodily injury and property damage limit of \$1,000,000 per occurrence. No aggregate shall be permitted for this type of coverage.

Such insurance shall include coverage for loading and unloading hazards.

- C. Workers' Compensation and Employers' Liability Insurance. Coverage shall be consistent with statutory benefits outlined in the Texas Workers' Compensation Act (Section 401). CONTRACTOR shall assure compliance with this Statute by submitting two (2) copies of a standard certificate of coverage (e.g. ACCORD form) to Owner's Representative for every person providing services on the Project as acceptable proof of coverage. The required Certificate of Insurance must be presented as evidence of coverage for CONTRACTOR. Workers' Compensation Insurance coverage written by the Texas Workers Compensation Fund is acceptable to OWNER. CONTRACTOR's policy shall apply to the State of Texas and include these endorsements in favor of OWNER:

Waiver of Subrogation, form WC 420304; and

30 day Notice of Cancellation, form WC 420601.

The minimum policy limits for Employers' Liability Insurance coverage shall be the minimum amounts required to meet the statutory requirements of Texas Labor Code, Section 401.011(44), or the following, whichever is greater:

\$1,000,000 bodily injury per accident, and

\$1,000,000 bodily injury by disease policy limit; and

\$1,000,000 bodily injury by disease each employee; and

\$1,000,000 Employer's Liability.

D. Commercial General Liability Insurance. The Policy shall contain the following provisions:

Blanket contractual liability coverage for liability and indemnifications assumed under the Contract and all contracts relative to this Project.

Completed Operations/Products Liability until the end the statute of repose period.

Explosion, Collapse and Underground (X, C & U) coverage.

Independent Contractor's coverage.

Aggregate limits of insurance per project, endorsement CG 2503.

OWNER listed as an additional insured, endorsement CG 2010.

30 day notice of cancellation in favor of OWNER, endorsement CG 0205.

Waiver of Transfer of Recovery Against Others in favor of OWNER, endorsement CG 2404

fully insuring CONTRACTOR'S or Subcontractor's liability for bodily injury and property damages with a combined bodily injury (including death) and property damage minimum limit of:

\$1,000,000 per occurrence

\$2,000,000 general aggregate

\$2,000,000 products and completed operations aggregate

Coverage shall be on an "occurrence" basis.

E. Property Floater. Contractor shall obtain and maintain Property Floater in an amount sufficient to cover the replacement value of materials on site.

F. Umbrella Liability Insurance. The CONTRACTOR shall obtain, pay for, and maintain umbrella liability insurance during the contract term, insuring the CONTRACTOR (or subcontractor) for an amount not less than \$2,000,000 that provides coverage at least as broad and applies in excess of and follows the form of the primary liability coverages required in Article 5. The policy shall provide

“drop down” coverage where underlying primary insurance coverages limits are insufficient or exhausted.

G. Asbestos Abatement Liability Insurance. If the Work or the Project involves asbestos containing materials, the CONTRACTOR shall obtain Asbestos Abatement Liability Insurance for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos containing materials. The combined single limit for bodily injury and property damage shall be a minimum of \$1,000,000 per occurrence. If claims made, the claims-made, the claims made form shall provide that the period of coverage shall be: Continuous coverage for the term of the Contract plus the warranty period of at least one (1) year, and an extended discovery period for a minimum of five (5) years, which shall begin at the end of the warranty period.

H. Completed Work Insurance.

SC-5.045 Bonds.

A. *General.*

1. Bonds, when required by the Contract or by Chapter 2253 of the Texas Government Code, shall be executed on forms furnished by or acceptable to OWNER. All bonds signed by an agent must be accompanied by a certified copy of such agent’s authority to act.
2. If the surety on any bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Texas or it ceases to meet the requirements of the preceding paragraph, CONTRACTOR shall within ten (10) days thereafter substitute another bond and surety, both of which must be acceptable to OWNER.
3. When Performance Bonds and/or Payment Bonds are required, each shall be issued in an amount of one hundred percent (100%) of the Contract Amount as security for the faithful performance and/or payment of all CONTRACTOR’s obligations under the Contract Documents. Performance Bonds and Payment Bonds shall be issued by a solvent surety company authorized to do business in the State of Texas, and shall meet any other requirements established by law or by OWNER pursuant to applicable law. Any surety duly authorized to do business in Texas may write Performance and Payment Bonds on a project without reinsurance to the limit of 10 percent of its capital and surplus. Such a surety must reinsure any obligations over 10 percent.

B. *Performance Bond.*

1. If the Contract Amount exceeds \$100,000, CONTRACTOR shall furnish OWNER with a Performance Bond in the form set out by OWNER. The Performance Bond shall be effective for the Contract Time and through all warranty period(s).

2. If the Contract Amount exceeds \$25,000 but is less than or equal to \$100,000, CONTRACTOR shall furnish OWNER with a Performance Bond in the form set out by OWNER, unless the original Contract Time is 60 Calendar Days or less, in which case CONTRACTOR can agree to the following terms and conditions for payment in lieu of providing a Performance Bond: no money will be paid to CONTRACTOR until completion and acceptance of the Work by OWNER; CONTRACTOR shall be entitled to receive 95% of the Contract Amount following Final Completion, and the remaining 5% of the Contract Amount following the one year warranty period.
 3. If the Contract Amount is less than or equal to \$25,000, CONTRACTOR will not be required to furnish a Performance Bond.
 4. If a Performance Bond is required to be furnished, it shall extend for the one year warranty period, or longer if the warranty periods are longer.
- C. *Payment Bond.*
1. If the Contract Amount exceeds \$25,000, CONTRACTOR shall furnish OWNER with a Payment Bond in the form set out by OWNER.
 2. If the Contract Amount is less than or equal to \$25,000, CONTRACTOR will not be required to furnish a Payment Bond; provided that no money will be paid to CONTRACTOR until completion and acceptance of the Work by OWNER.
- D. *Power of Attorney.* Each bond shall be accompanied by a valid Power of Attorney (issued by the surety company and attached, signed and sealed with the corporate embossed seal, to the bond) authorizing the attorney in fact who signs the bond to commit the company to the terms of the bond, and stating any limit in the amount for which the attorney can issue a single bond.
- E. *Bond Indemnification.* The process of requiring and accepting bonds and making claims thereunder shall be conducted in compliance with Tex. Gov't Code, Chapter 2253. IF FOR ANY REASON A STATUTORY PAYMENT OR PERFORMANCE BOND IS NOT HONORED BY THE SURETY, THE CONTRACTOR SHALL FULLY INDEMNIFY AND HOLD THE OWNER HARMLESS OF AND FROM ANY COSTS, LOSSES, OBLIGATIONS OR LIABILITIES IT INCURS AS A RESULT.
- F. *Furnishing Bond Information.* OWNER shall furnish certified copies of the payment bond and the related Contract to any qualified person seeking copies who complies with Tex. Gov't Code, §2253.026.
- G. *Claims on Payment Bonds.* Claims on payment bonds must be sent directly to the CONTRACTOR and his surety in accordance with Tex. Gov't Code § 2253.041. All Payment Bond claimants are cautioned that no lien exists on the funds unpaid to the CONTRACTOR on such Contract, and that reliance on notices sent to the OWNER may result in loss of their rights against the CONTRACTOR and/or his surety. The OWNER is not responsible in any

manner to a claimant for collection of unpaid bills, and accepts no such responsibility because of any representation by any agent or employee.

- H. Payment Claims when Payment Bond not Required. The rights of Subcontractors regarding payment are governed by Tex. Prop. Code, §§53.231 – 53.239 when the value of the Contract between the OWNER and the CONTRACTOR is less than \$25,000.00. These provisions set out the requirements for filing a valid lien on funds unpaid to the CONTRACTOR as of the time of filing the claim, actions necessary to release the lien and satisfaction of such claim.
- I. Minimum Standards for Sureties. Sureties shall be listed on the US Department of the Treasury’s Listing Approved Sureties stating companies holding Certificates of Authority as acceptable sureties on Federal Bonds and acceptable reinsuring companies (Department Circular 570).

SC-6.02 LABOR; WORKING HOURS

Add the following defined terms to Paragraph 6.02:

- C. Regular Working Hours shall be between 7 am and until 30 minutes prior to sunset or 6 pm whichever is earlier, and, if previously authorized in writing by the Owner, between 9:00 am and 6:00 pm on Saturdays, Sundays, or Legal Holidays.
- D. The Contractor shall work Regular Working Hours on normal Working Days as defined in Section 1.01.

Add the following provision on prevailing wages to Paragraph 6.02:

E. PREVAILING WAGE RATES: This Contract is subject to Government Code Chapter 2258 concerning payment of Prevailing Wage Rates. The Contractor will determine what are the general prevailing rates in accordance with the statute. The applicable provisions include, but are not limited to the following:

§ 2258.021. Right to be Paid Prevailing Wage Rates

(a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:

(1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and

(2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.

(b) Subsection (a) does not apply to maintenance work.

(c) A worker is employed on a public work for the purposes of this section if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work

with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

§ 2258.023. Prevailing Wage Rates to be Paid by Contractor and Subcontractor; Penalty

(a) The contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.

(b) A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.

(c) A contractor or subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.

(d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.

(e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

§ 2258.024. Records

(a) A contractor and subcontractor shall keep a record showing:

(1) the name and occupation of each worker employed by the contractor or subcontractor in the construction of the public work; and

(2) the actual per diem wages paid to each worker.

(b) The record shall be open at all reasonable hours to inspection by the officers and agents of the public body.

§ 2258.025. Payment Greater Than Prevailing Rate Not Prohibited

This chapter does not prohibit the payment to a worker employed on a public work an amount greater than the general prevailing rate of per diem wages.

SC-6.13.B Trench and Shoring Safety

Add the following Paragraph 6.13.B.1.

As required by the Texas Health & Safety Code, Title 9, Subtitle A, Chapter 756, Subchapter C, Contractor is required to comply with the trench safety standards of the

Occupational Safety and Health Administration, 29 C.F.R. 1926, Subpart P, Excavations, in effect during the period of construction of the Project. Contractor agrees to comply with, and Owner agrees to include in the Bid Documents, a copy of any special shoring requirements, if any, required for the Project. Owner agrees to furnish to Contractor a copy of any geotechnical information that was obtained by the Owner for use by the Contractor in the design of the trench safety system, if any.

SC-14.02 Article 14 - Payments To Contractor And Completion

Change the 1st sentence in Paragraph 14.02.C.1 from “Ten days after presentation of the Application for Payment to OWNER...” to “Thirty (30) days after presentation of the Application for Payment to OWNER...”

SC-17.02 Delete the second sentence of Paragraph 17.02.

SC-17.07 Independent Contractor

Add the following Paragraph 17.07:

The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. The Contractor’s services shall be those of an independent contractor. The Contractor agrees and understands that the Contract does not grant any rights or privileges established for employees of the Owner.

SC-17.08 Prohibition of Gratuities

Add the following Paragraph 17.08:

The Owner may, by Written Notice to the Contractor, terminate the Contract without liability if it is determined by the Owner that gratuities were offered or given by the Contractor or any agent or representative of the Contractor to any officer or employee of the Owner with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such Contract. In the event the Contract is terminated by the Owner pursuant to this provision, the Owner shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by the Contractor in providing such gratuities.

SC-17.09 Prohibition Against Personal Interest in Contracts

Add the following Paragraph 17.09

No officer, employee, independent consultant, or elected official of the Owner who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that solicitation. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the Owner.

SC-18. Article 18 – Right to Audit

Add the following Article 18.

18.01 Whenever the Owner enters into any type of contractual arrangement with the Contractor, then the Contractor’s “records” shall upon reasonable notice be open to inspection and subject to audit and/or reproduction during normal business working hours. The Owner’s representative, or an outside representative engaged by the Owner, may perform such audits. The Contractor shall maintain all records relating to this Contract for four (4) years from the date of final payment under this Contract, or until pending litigation has been completely and fully resolved, whichever occurs later.

18.02 The Owner shall have the exclusive right to examine the records of the Contractor. The term “records” as referred to herein shall include any and all information, materials and data of every kind and character, including without limitation records, books, papers, documents, contracts, schedules, commitments, arrangements, notes, daily diaries, reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may, in the Owner’s judgment, have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any contract document. Such records shall include (hard copy, as well as electronic data), written policies and procedures, time sheets, payroll registers, cancelled checks, personnel file data, correspondence, e-mail, general ledger entries, and any other record in the Contractor’s possession which may have a bearing on matters of interest to the Owner in connection with the Contractor’s dealings with the Owner (all of the foregoing are hereinafter referred to as “records”). In addition, the Contractor shall permit interviews of employees as well as agents, representatives, vendors, Subcontractors and other third parties paid by the Contractor to the extent necessary to adequately permit evaluation and verification of the following:

- A. The Contractor’s compliance with Contract Documents;
- B. The Contractor’s compliance with the Owner’s business ethics policies; and
- C. If necessary, the extent of the Work performed by the Contractor at the time of Contract termination.

18.03 The Contractor shall require all payees (examples of payees include Subcontractors, insurance agents, material suppliers, etc.) to comply with the provisions of this Article 17 by securing the requirements hereof in a written agreement between the Contractor and payee. Such requirements include a flow-down right of audit provision in contracts with payees that also apply to Subcontractors and Sub-subcontractors, material suppliers, etc. The Contractor shall cooperate fully and shall require Payees and all of the Contractor’s Subcontractors to cooperate fully in furnishing or in making available to the Owner from time to time whenever requested, in an expeditious manner, any and all such information, materials, and data.

18.04 The Owner’s authorized representative or designee shall have reasonable access to the Contractor’s facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Contract, and shall be provided adequate and appropriate work space in order to conduct audits in compliance with this Article 17.

18.05 If an audit inspection or examination in accordance with this Article 17 discloses overpricing or overcharges of any nature by the Contractor to the Owner in excess of one-half of one percent (0.5%) of the total contract billings, then the reasonable actual cost of the Owner’s audit shall be reimbursed to the Owner by the Contractor. Any adjustments and/or payments, which must be made as a result of any such

audit or inspection of the Contractor's invoices and/or records, shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of the Owner's findings to the Contractor.

18.06 The Contractor shall take reasonable actions to prevent any actions or conditions which could result in a conflict with the Owner's best interests. These obligations shall apply to the activities of the Contractor's employees, agents, Subcontractors, etc. in their dealings and relations with the Owner's current and former employees and their relatives. For example, the Contractor's employees, agents or Subcontractors should not make or provide to be made any employment, gifts, extravagant entertainment, payments, loans or other considerations to the Owner's representatives, employees or their relatives.

18.07 It is also understood and agreed by the Contractor that any solicitation of gifts or any other item of value by anyone representing the Owner is to be reported within two (2) business working days to the Owner at the following telephone number: 512-255-7871. Failure to report any such solicitations or offers shall be deemed a material breach of contract entitling the Owner to pursue damages resulting from the failure to comply with this provision.

END OF SECTION

EXHIBIT B
PROJECT REFERENCES

EXHIBIT C
VENDOR INFO QUESTIONNAIRE FORM

Exhibit C

Questionnaire and Information Form

BIDDER QUESTIONNAIRE AND INFORMATION FORM

Bidder MUST complete this form in its entirety. If a question is not applicable, Bidder should state "not applicable".

BUSINESS AND CONTACT INFORMATION

Business Name: _____ Federal Tax ID # _____

Address: _____ City/State/Zip: _____

Contact Name: _____ Phone #: _____ Fax #: _____

E-Mail: _____ Web Site: _____

Number of Years been in Business: _____

Type of Business Entity: Corporation LLC LP LLP Other _____

In What State & Year Did Business Organize in Your Current Structure: _____

Full Legal Name of Parent or Holding Company, if any: _____

(Note: if there are several tiers of ownership, attach a corporate organizational chart)

Services Provided by Business: _____

CONTRACT INFORMATION/PERFORMANCE

In the past three (3) years, has Business:

- (a) Been engaged in any litigation? Yes No If yes, attach explanation.
- (b) Completed all contracts it was awarded? Yes No If no, attach details.
- (c) Been awarded a bonus for early completion of work? Yes No If yes, attach details.
- (d) Defaulted on a contract? Yes No If yes, attach details.
- (e) Been assessed liquidated damages? Yes No If yes, attach details.

The undersigned Bidder declares: (a) that it has reviewed and agrees to the Scope of Work, Agreement and all other documents and terms and conditions incorporated into the District's Invitation for Bids; (b) that through its authorized personnel it has personally examined the location of the proposed work and has determined the amount and character of the proposed work and the supervision, labor, tools, material as identified, and equipment, necessary to complete the same in compliance with the specifications and contract documents (if applicable); and (c) that Bidder has no conflict of interest, as defined in the Invitation for Bids.

SIGNATURE: _____ TITLE: _____

PRINTED NAME: _____ DATE: _____

EXHIBIT D
SAMPLE FORMS

PAYMENT BOND

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

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

OWNER (Name and Address): _____

CONTRACT

Date: _____
Amount: _____
Description (Name and Location): _____

BOND

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
Company: _____ (Corp. Seal)

Signature: _____
Name and Title: _____

SURETY
Company: _____ (Corp. Seal)

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

CONTRACTOR AS PRINCIPAL
Company: _____ (Corp. Seal)

Signature: _____
Name and Title: _____

SURETY
Company: _____ (Corp. Seal)

Signature: _____
Name and Title: _____

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 address described in Paragraph 12) 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 address described in Paragraph 12) 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:
 1. 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
 2. 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
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) 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.
5. If a notice required by Paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, which is sufficient compliance.
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1. 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.
 - 6.2. Pay or arrange for payment of any undisputed amounts.
7. 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.
8. 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 Construction Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the 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.
9. 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.
10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1. or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address 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.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.
14. Upon request by 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.
15. DEFINITIONS.
 - 15.1. 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.
 - 15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
 - 15.3. 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.

PERFORMANCE BOND

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

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

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

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 as provided in paragraph 3.1.
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 in Paragraph 10 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 in paragraph 3.1; 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 pursuant to paragraph 4.3 to perform the Contract.
4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 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 Paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR's 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 in Paragraph 4 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 in paragraph 4.4, 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 4.1, 4.2, or 4.3 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 under Paragraph 4; and
 - 6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages 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 addresses 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 herefrom 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 for any amounts received or to be received by the OWNER in settlement of insurance or other claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the 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.

NOTICE TO PROCEED

Dated _____

TO: _____
(CONTRACTOR)

ADDRESS¹: _____

Contract: _____
(Insert Name of Contract as it appears in the Contract Document)

Project: _____

OWNER'S CONTRACT NO. _____

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 Article 4 of the Agreement the date of Substantial Completion is _____ and the date of readiness for final payment is _____.

Before you may start any Work at the site, paragraph 2.05C of the General Conditions provides that you and Owner must each deliver to the other (with copies to **ENGINEER** and other identified additional insureds) 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
(add other requirements)

Brushy Creek MUD
(OWNER)

By: _____
(AUTHORIZED SIGNATURE)

(TITLE)

Copy to ENGINEER

CHANGE ORDER

No.

PROJECT _____

DATE OF ISSUANCE _____ EFFECTIVE DATE _____

OWNER _____

OWNER'S CONTRACT NO. _____

CONTRACTOR _____ ENGINEER _____

You are directed to make the following changes in the Contract Documents.

Description:

Reason for Change Order:

Attachments:

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price \$ _____	Original Contract Times Substantial Completion: _____ Ready for final payment: _____ days or dates
Net changes from previous Change Orders No. ___ to No. ___ \$ _____	Net change from previous Change Orders No. ___ to No. ___ _____ days
Contract Price prior to this Change Order \$ _____	Contract Times prior to this Change Order Substantial Completion: _____ Ready for final payment: _____ days or dates
Net Increase (Decrease) of this Change Order \$ _____	Net Increase (Decrease) of this Change Order _____ days
Contract Price with all approved Change Orders \$ _____	Contract Times with all approved Change Orders Substantial Completion: _____ Ready for final payment: _____ days or dates

RECOMMENDED:

APPROVED:

ACCEPTED:

By: _____
Engineer (Authorized Signature)

By: _____
Owner (Authorized Signature)

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Date: _____

CERTIFICATE OF SUBSTANTIAL COMPLETION

DATE OF ISSUANCE _____

OWNER _____

CONTRACTOR _____

Contract: _____

Project: _____

OWNER's Contract No. _____

ENGINEER's Project No. _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

TO _____

OWNER

And To _____

CONTRACTOR

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within days of the above date of Substantial Completion.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees shall be as follows:

RESPONSIBILITIES:

OWNER: _____

CONTRACTOR: _____

The following items are attached to and made a part of this Certificate:

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

Executed by ENGINEER on _____
Date

ENGINEER

By: _____
(Authorized Signature)

CONTRACTOR accepts this Certificate of Substantial Completion on _____
Date

CONTRACTOR

By: _____
(Authorized Signature)

OWNER accepts this Certificate of Substantial Completion on _____
Date

OWNER

By: _____
(Authorized Signature)

EXHIBIT E
TECHNICAL SPECIFICATIONS

SECTION 01010 - SUMMARY OF THE WORK

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

PROJECT/WORK IDENTIFICATION:

General: Project name is Southern Cross Pond at Highland Horizon as shown on Contract Documents prepared by Half Associates Inc.

Contract Documents: Indicate the work of the Contract and related requirements and conditions that have an impact on the project. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:

Construct 543 square yards of granite trail. Remove and replace 15 square yards of concrete sidewalk. Place one (1) wooden/composite deck pedestrian bridge structure, including pedestrian handrailing. Install 261 linear feet of wooden fence along the pond berm. Place two (2) benches in overlook area. All work must be performed in a manner to minimize effect on trees and park vegetation within project limits.

Summary by References: Work of the Contract can be summarized by references to the Contract, General Conditions, Supplementary Conditions, Specification Sections, Drawings, addenda and modifications to the contract documents issued subsequent to the initial printing of this project manual and including but not necessarily limited to printed material referenced by any of these. It is recognized that work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the contract documents.

Abbreviated Written Summary: Briefly and without force and effect upon the contract documents, the work of the Contract can be summarized as follows:

CONTRACTORS USE OF PREMISES:

General: During the entire construction period the Contractor shall have the use of the premises for construction operations, including full use of the site.

Use of the Site: Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to corpus rules and regulations affecting the work while engaged in project construction.

Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of equipment in places designated by Owner.

ALTERATIONS AND COORDINATION:

General: The work of this Contract includes coordination of the entire work of the project, including schedule. Control of site utilization, from beginning of construction activity through project close-out and warranty periods.

MISCELLANEOUS PROVISIONS:

General: The Contractor shall provide advance notice to Owner when existing in-service utilities need removed and relocated. Interruption of utility service shall be kept to a minimum.

FLAGMAN AND BARRICADES SHALL BE USED: To insure the publics safety at all times.

END OF SECTION 01010

SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specifications Sections, apply to this Section.

SUMMARY

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

- Coordination
- Administrative and supervisory personnel.
- General installation provisions.
- Cleaning and protection.

Progress meetings, coordination meetings and pre-installation conferences are included in Section "Project Meetings".

Requirements for the Contractor's Construction Schedule are included in Section "Submittals".

Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

Make adequate provisions to accommodate items scheduled for later installation.

Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:

- Preparation of schedules.
- Installation and removal of temporary facilities.
- Delivery and processing of submittals.
- Progress meetings.
- Project Close-out activities.

SUBMITTALS:

Staff Names: Within 15 days of Notice to Proceed, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (NOT APPLICABLE.)

PART 3 - EXECUTION

GENERAL INSTALLATION PROVISIONS

Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

Manufacturer's Instructions: Comply with manufacturer's installation instruction and recommendations, to the extent that those instruction and recommendations are more explicit or stringent than requirements contained in Contract Documents.

Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

Provide attachment and connection devices and methods necessary for securing Work. Secure work true to line and level. Allow for expansion and building movement.

Recheck measurements and dimensions, before starting each installation.

Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

Coordinate temporary enclosures with required inspections and tests, to minimize the necessity for uncovering completed construction for that purpose.

Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Engineer for final decision.

CLEANING AND PROTECTION

During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

- Excessive static or dynamic loading.
- Excessive internal or external pressures.
- Excessively high or low temperatures.
- Thermal shock.
- Excessively high or low humidity.
- Air contamination or pollution.
- Water or ice.
- Solvents.
- Chemicals.
- Light.
- Radiation.
- Puncture.
- Abrasion.
- Heavy traffic.
- Soiling, staining and corrosion.
- Bacteria.
- Rodent and insect infestation.
- Combustion.
- Electrical current.
- High speed operation.
- Improper lubrication.
- Unusual wear or other misuse.
- Contact between incompatible materials.
- Destructive testing.
- Misalignment.
- Excessive weathering.
- Unprotected storage.
- Improper shipping or handling.
- Theft.
- Vandalism.

END OF SECTION 01040

SECTION 01090 - DEFINITIONS AND STANDARDS

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF REQUIREMENTS:

General: This section specifies procedural and administrative requirements for compliance with governing regulations and codes and standards imposed upon the Work. These requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.

The term, "Regulations", is defined to include laws, statutes, ordinances and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the work regardless of whether they are lawfully imposed by governing authority or not.

Governing Regulations: Refer to General and Supplementary Conditions for requirements related to compliance with governing regulations.

DEFINITIONS:

General Explanation: Certain terms used in contract documents are defined in this article. Definitions and explanations contained in this section are not necessarily complete, but are general for the work to the extent that they are not stated more explicitly in another element of the contract documents.

General Requirements: The provisions or requirements of other Division-1 sections apply to entire work of the Contract and, where so indicated, to other elements which are included in the project.

Indicated: The term, "indicated", is a cross-reference to graphic representations, notes or schedules on the drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used in lieu of "indicated", it is for the purpose of helping the reader locate the cross-reference, and no limitation of location is intended except as specifically noted.

Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed", "requested", "authorized", "selected", "approved", "required", "accepted", and "permitted" mean "directed by the Architect/Engineer", "requested by the Architect/Engineer", and similar phrases. However, no such implied meaning will be interpreted to extend the Architect's/Engineer's responsibility into the Contractor's area of construction supervision.

Approve: Where used in conjunction with the Architect's/Engineer's response to submittals, requests, applications, inquiries, reports and claims by the Contractor, the meaning of the term "approved" will be held to limitations of the Architect's/Engineer's responsibilities and duties as specified in General and Supplementary Conditions. In no case will the Architect/Engineer's approval be interpreted as a release of the Contractor from responsibilities to fulfill requirements of contract documents.

Project Site: The term, "project site", is defined as the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other work as part of the project. The extent of the project site is shown on the drawings, and may or may not be identical with the description of the land upon which the project is to be built.

Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."

Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."

Provide: The term "provide" means "to furnish and install, complete and ready for intended use."

Installer: The "installer" is "the entity" (person or firm) engaged by the Contractor, its subcontractor or sub-subcontractor for performance of a particular element of construction at the project site, including installation, erection, application and similar required operations. It is a requirement that installers are experienced in the operations they are engaged to perform.

Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests of the work, either at the project site or elsewhere and to report, and (if required) interpret results of those inspections or tests.

SPECIFICATION FORMAT AND CONTENT EXPLANATION:

General: This article is provided to help the user of these specifications more readily understand the format, language, implied requirements and similar conventions of content. None of the following explanations shall be interpreted to modify the substance of contract requirements.

Production Methods: Portions of these specifications have been produced by editing master specifications; they may contain minor deviations from traditional writing formats. Such deviations are a natural result of this production technique, and no other meaning shall be implied.

Specification Format: These specifications are organized based upon the Construction Specifications Institute's 16-Division format. The organization of these specifications into Divisions, Sections or Trade Headings conforms generally to recognized industry practice.

Divisions are groupings of related or similar sections. The divisions are recognized as the construction industry consensus method of uniform specification organization.

Sections: For convenience "Sections" are considered as the basic units of work. The section title is descriptive only and not intended to limit the meaning or content of a section or to be completely descriptive of requirements specified therein.

Section Numbering is used to facilitate cross-references in the contract documents. Sections are placed in the Project Manual in numeric sequence; however, the numeric sequence is not complete and the listing of the sections in the "Table of Contents" at the beginning of the Project Manual must be consulted to determine the numbers and names of specification sections in the contract documents.

Page Numbering: Pages are numbered independently for each section, and are recorded in the listing of sections (Table of Contents) at the beginning of the Project Manual. The section number is shown

together with the page number at the bottom of each page to facilitate the location of text in the Project Manual.

Text Subordination: Portions of the specification text may be subordinated to other portions of the text in the following manner.

Certain sections may be subordinate to other sections or parts of other sections. When that occurs, the degree of subordination is described in those sections.

Subarticles, which are printed in upper/lower case lettering, are subordinate to Article titles, which are printed entirely in upper case lettering.

Paragraphs and lines of text are subordinate to subarticle titles.

Paragraphs and lines of text that are indented from the left margin are subordinate to the preceding text that is either not indented, or is indented by a lesser amount.

Underscoring is used strictly to assist the reader of specification text in scanning the text of key works. No emphasis on or relative importance is intended for text where underscoring is used.

Specification Content: This project specification has been produced employing certain conventions in the use of language as well as conventions regarding the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

In certain circumstances, the language of the specifications and other contract documents is of the abbreviated type. It implies words and meanings that will be appropriately interpreted. Singular words will be interpreted as plural and plural words will be interpreted as singular where applicable and where the full context of the contract documents so indicates.

Imperative Language is used generally in the specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, contrasting subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor, or by others when so noted.

Methods of Specifying: The techniques or methods of specifying requirements varies throughout the text. The method used for specifying one element of the Work has no bearing on requirements for another element of the Work.

Assignment of Specialists: In certain circumstances, the specification text requires or implies that specific elements of the Work are to be assigned to specialists who must be engaged to perform that element of the Work. Such assignments are special requirements over which the Contractor has no choice or option. Such assignments are intended to establish which party or entity involved in a specific element of the Work is considered as being sufficiently experienced in the indicated construction processes or operations to be recognized as "expert" in those processes or operations. Nevertheless, the ultimate responsibility for fulfilling all contract requirements remains with the Contractor.

These requirements should not be interpreted to conflict with the enforcement of building codes and similar regulations governing the work. They are also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

Trades: The use of certain titles such as "carpentry" in the specification text, is not intended to imply that the Work must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter". It also is not intended to imply that the requirements specified apply exclusively to work by tradespersons of that corresponding generic name.

INDUSTRY STANDARDS:

Applicability of Standards: Except where more explicit or stringent requirements are written into the contract documents, applicable construction industry standards have the same force and effect as if bound into or copied directly into the contract documents. Such industry standards are made a part of the contract documents by reference. Individual specification sections indicate which codes and standards the Contractor must keep available at the project site for reference. Latest revision of each standard, at time of the bid opening, shall prevail.

Referenced standards (standards referenced directly in the contract documents) take precedence over non-referenced standards that are recognized in the industry for applicability to the Work.

Non-referenced Standards: Except as otherwise limited by the contract documents, non-referenced standards recognized in the construction industry are defined as having direct applicability to the Work and will be enforced for the performance of the Work. The decision as to whether an industry code or standard is applicable to the Work, or as to which of several standards are applicable, is the sole responsibility of the Architect/ Engineer.

Conflicting Requirements: Where compliance with two or more standards is specified, and where these standards establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the contract documents specifically indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect/Engineer for a decision before proceeding.

Copies of Standards: The contract documents require that each entity performing work be experienced in that part of the work being performed. Each entity is also required to be familiar with industry standards applicable to that part of the work. Copies of applicable standards are not bound with the contract documents.

Where copies of standards are needed for proper performance of the Work, the Contractor is required to obtain such copies directly from the publication source.

Although certain copies of standards needed for enforcement of the requirements may be required submittals, the Architect/ Engineer reserves the right to require the Contractor to submit additional copies of these standards as necessary for enforcement of requirements.

Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations as referenced in contract documents are defined to mean the associated names. Both names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of contract documents:

AAMA	American Architectural Manufacturer's Association	
	2700 River Road, Suite 118	
	Des Plaines, IL 60018	(312) 699-7310

AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, Suite 225 Washington, DC 20001	(202) 624-5800
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI 48219	(313) 532-2600
ACPA	American Concrete Pipe Association 8320 Old Courthouse Road Vienna, VA 22180	(703) 821-1990
AGA	American Gas Association 1515 Wilson Blvd. Arlington, VA 22209	(703) 841-8400
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740	(301) 277-4258
AIA	American Institute of Architects 1735 New York Ave., NW Washington, DC 20006	(202) 626-7300
AISC	American Institute of Steel Construction 400 N. Michigan Ave., 8th Floor Chicago, IL 60611	(312) 670-2400
AISI	American Iron and Steel Institute 1000 Sixteenth Street, NW Washington, DC 20036	(202) 452-7100
ANSI	American National Standards Institute 655 Fifteenth Street, NW, Suite 300 Washington, DC 20015	(202) 639-4090
API	American Petroleum Institute 1220 L Street, NW Washington, DC 20005	(202) 682-8000
ASC	Adhesive and Sealant Council 1600 Wilson Blvd., Suite 910 Arlington, VA 22209	(703) 841-1112
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329	(404) 636-8400

ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017	(212) 705-7722
ASPE	American Society of Plumbing Engineers 15233 Ventura Blvd., Suite 811 Sherman Oaks, CA 91403	(818) 783-4845
ASSE	American Society of Sanitary Engineering P.O. Box 40362 Bay Village, OH 44140	(216) 835-3040
ASTM	ASTM 1916 Race Street Philadelphia, PA 19103	(215) 299-5400
AWS	American Welding Society P.O. Box 351040 550 Le Jeune Road, NW Miami, FL 33135	(305) 443-9353
AWWA	American Water Works Association 6666 W. Quincy Ave. Denver, CO 80235	(303) 794-7711
BHMA	Builders' Hardware Manufacturers Association 60 East 42nd St., Room 511 New York, NY 10165	(212) 682-8142
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60195	(312) 490-1700
IEEE	Institute of Electrical and Electronic Engineers 345 E. 47th Street New York, NY 10017	(212) 705-7926
IES	Illuminating Engineering Society of North America 345 E. 47th Street New York, NY 10017	(212) 705-7926
ISA	Instrument Society of America P.O. Box 12277; 67 Alexander Drive Research Triangle Park, NC 27709	(919) 549-8411
LPI	Lightning Protection Institute P.O. Box 406; 48 N. Ayer Street Harvard, IL 60033	(815) 943-7211

MBMA	Metal Building Manufacturer's Association 1230 Keith Building Cleveland, OH 44115	(216) 241-7333
NAAMM	National Association of Architectural Metal Manufacturers 221 N. LaSalle Street Chicago, IL 60601	(312) 346-1600
NAPF	National Association of Plastic Fabricators (Now DLPA)	
NEC	National Electric Code (by NFPA)	
NEMA	National Electrical Manufacturers Association 2101 L Street, NW; Suite 300 Washington, DC 20037	(202) 457-8400
NFPA	National Fire Protection Association Batterymarch Park Quincy, MA 02269	(617) 770-3000
NSF	National Sanitation Foundation P.O. Box 1468; 3475 Plymouth Road Ann Arbor, MI 48106	(313) 769-8010
SDI	Steel Deck Institute P.O. Box 3812 St. Louis, MO 63122	(314) 965-1741
UL	Underwriters Laboratories 333 Pfingsten Road Northbrook, IL 60062	(312) 272-8800
WRI	Wire Reinforcement Institute 8361 A Greensboro Drive McLean, VA 22102	(703) 790-9790
WSC	Water Systems Council 221 North LaSalle St. Chicago, IL 60601	(312) 346-1600

Federal Government Agencies: The names and titles of federal government standard or specification producing agencies are frequently abbreviated. The following acronyms or abbreviations as referenced in the contract documents indicate the names of standard or specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up-to-date as of the date of the contract documents.

CE	Corps of Engineers (US Department of the Army) Chief of Engineers-Referral Washington, DC 20314	(202) 693-6456
CFR	Code of Federal Regulations Available from the Government Printing Office North Capitol Street between G and H Streets, NW Washington, DC 20402 (Material is usually first published in the Federal Register)	(202) 783-3238
DOC	Department of Commerce 14th Street and Constitution Avenue, NW Washington, DC 20230	(202) 377-2000
DOT	Department of Transportation 400 Seventh Street, SW Washington, DC 20590	(202) 426-4000
EPA	Environmental Protection Agency 401 M Street, SW Washington, DC 20460	(202) 829-3535
FAA	Federal Aviation Administration (U.S. Department of Transportation) 800 Independence Avenue, SW Washington, DC 20590	(202) 426-4000
FCC	Federal Communications Commission 1919 M Street, NW Washington, DC 20554	(202) 632-7000
FS	Federal Specification (General Services Administration) Specifications Unit (WFSIS) 7th and D Streets, SW Washington, DC 20406	(202) 472-2205 or 472-2140
GSA	General Services Administration F Street and 18th Street, NW Washington, DC 20405	(202) 655-4000
MIL	Military Standardization Documents (U.S. Department of Defense) Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120	

OSHA	Occupational Safety and Health Administration (U.S. Department of Labor) Government Printing Office Washington, DC 20402	(202) 783-3238
REA	Rural Electrification Administration (U.S. Department of Agriculture) 14th Street and Independence Avenue, SW Washington, DC 20250	(202) 382-1255

USDA U.S. Department of Agriculture
 Independence Avenue between
 12th and 14th Streets, SW
 Washington, DC 20250 (202) 447-4929

USPS U.S. Postal Service
 475 L'Enfant Plaza, SW
 Washington, DC 20260 (202) 245-4000

GOVERNING REGULATIONS/AUTHORITIES:

General: The procedure followed by the Architect/Engineer has been to contact governing authorities where necessary to obtain information needed for the purpose of preparing contract documents; recognizing that such information may or may not be of significance in relation to the Contractor's responsibilities for performing the Work. Contact governing authorities directly for necessary information and decisions having a bearing on performance of the Work.

Copies of Correspondence: During the preparation of the contract documents, the Architect/Engineer maintained a file of correspondence with governing authorities. This file is available at the Architect's/Engineer's office for reference by bidders/contractors. The Architect/Engineer will provide, if requested, copies of such applicable correspondence at the cost of reproduction.

Attached Copies: Certain items of correspondence are believed to include information which is generally applicable to performance of the Work. These items have been reproduced and included in the Project Manual at the end of this section, as follows:

Copies of Regulations: Obtain copies of the following regulations and retain at the project site during the Contract Time, available for reference by parties at the site who have a reasonable need for such reference.

Trade Union Jurisdictions: The Contractor shall maintain, and shall require prime subcontractors to maintain, complete current information on jurisdictional matters, regulations actions and pending actions, as applicable to the Work. Discuss new developments at appropriate project meetings at the earliest feasible dates. Record information of relevance along with the actions agreed upon. The manner in which contract documents have been organized and subdivided is not intended to be an indication of jurisdictional or trade union agreements. Assign and subcontract the work, and employ tradesmen and laborers, in a manner which will not unduly risk jurisdictional disputes of a kind which could result in conflicts, delays, claims and losses in the performance of the Work.

SUBMITTALS:

Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01090

SECTION 01300 – SUBMITTALS

GENERAL

SCOPE

- A. The CONTRACTOR shall submit descriptive information to:
1. Allow the CONTRACTOR to advise the OWNER whether the materials and equipment proposed for the project are in general conformance with the design concepts and in conformance with the drawings and specifications with the drawings and specifications.
 2. Provide a record for the OWNER of the materials and equipment which have been incorporated into the project.
 3. Provide a guide for operations and maintenance of equipment.
 4. Provide information required for the administration of the Contract for construction of the project. This section of the specifications provides a more detailed description of the requirements for submittals as outlined in the General Conditions but does not alter any requirement for submittals as described in the General Conditions.

PROCEDURES

CONTRACTOR'S RESPONSIBILITIES

- A. The CONTRACTOR shall be responsible for the accuracy and completeness of the information contained in each submittal and shall insure that the values, material, equipment, or method of work shall be as described in the submittal. All submittals must be stamped by the CONTRACTOR, indicating that they have been checked by the CONTRACTOR for compliance with the Contract Documents and approved by the CONTRACTOR, or contain certifications as required by the Contract Documents. Submittals that do not have the stamp applied or include the required certifications will be returned without processing to the CONTRACTOR.
- B. The CONTRACTOR shall insure that there is no conflict with other submittals and notify the ENGINEER of each case where the proposed change may affect the work. The CONTRACTOR shall insure coordination of submittals among the related crafts and Subcontractors. **Submittals will not be accepted directly from Subcontractors or Suppliers.**
- C. The CONTRACTOR shall provide a written statement stating all pertinent site dimensions were checked and the system can be installed and made operational as proposed.

MARKING OF SUBMITTALS

- A. A number shall be assigned to each submittal provided to the ENGINEER to allow each submittal to be tracked while processing through review procedures.
- B. Assignment of numbers shall be by means of a letter prefix, a sequence number, and letter suffix to indicate re-submittals.
- C. The sequence number shall be issued in chronological order for each type of submittal. Re-submittals shall be followed by a letter of the alphabet to indicate the number of times a submittal has been sent to the ENGINEER for processing. As an example, a submittal with the number 25 indicates that the submittal is the 25th submitted. Submittal number 12-A indicates the submittal is the 12th shop drawing submitted and is being submitted for the second time.

- D. Correct assignment of numbers is essential as different submittal types are processed in different ways. Some submittals received do not require that any response be given for the material. CONTRACTOR and ENGINEER shall both maintain a log of submissions to allow the processing of submittals to be monitored. Logs will be reviewed periodically to determine that all submittals are received and processed.
- E. Submittals shall be marked to show clearly the applicable sections of the specification and sheet number drawings.
- F. Submittals shall be accompanied by a Submittal Transmittal Form provided by the ENGINEER. A separate form shall be used for each specific item, class of material, equipment, and items specified in separate discrete sections, etc., for which a submittal is required. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that they should be checked as a unit.

DEVIATIONS FROM CONTRACT DOCUMENTS

Any change in the contract documents that is requested will be initiated by the CONTRACTOR issuing a Contract Modification Request or by ENGINEER issuing a Proposed Contract Modification on the form provided by the ENGINEER. The CONTRACTOR's Modification Request shall fully identify and describe the deviations and state the reason the change is requested. Any savings in cost related to the substitution is to be stated in the request for consideration. Modification requests will be considered and if found acceptable will be incorporated in a Field Order or Change Order as a change to the CONTRACTOR's scope in accordance with the General Conditions.

All deviations from the Plans and Specifications shall be clearly marked on each submittal. Failure to provide such will result in rejection of the equipment or material. Approval of a submittal does not constitute approval of any deviation, unless each such deviation is clearly requested at the beginning of the submittal and initialized by the Engineer.

SHOP DRAWINGS

A. DEFINITION

- 1. As defined in the General Conditions, shop drawings consist of all drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR to illustrate some portion of the work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams, and other information prepared by a supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the work.
- 2. Shop drawings shall indicate the kind, exact model, size, arrangement, and operation of component materials and devices; materials of construction, external connections, anchorages and supports required; performance characteristics; dimensions, weights, and other information required for installation and correlation with other materials and equipment.

B. SCHEDULE FOR SUBMITTAL OF SHOP DRAWINGS:

- 1. The CONTRACTOR shall submit, in accordance with Paragraph 2.07 of the General Conditions, a schedule indicating the time and sequence in which Shop Drawings are to be submitted. This schedule shall consider the dates for incorporation of the materials or equipment into the project and take into consideration time for delivery and

reasonable time for review of shop drawings. Proposed order and delivery dates shall be incorporated in the Progress Schedule.

2. Shop Drawings will generally be reviewed in the order in which they are received. Drawings marked "Priority" will be reviewed ahead of other shop drawing Submittals not so marked which have already been received but are not yet reviewed. CONTRACTOR shall be aware that checking of "Priority" Shop Drawings may delay the review of other drawings which have already been submitted by the CONTRACTOR and the use of this designation is to be used with discretion.

C. CONTRACTOR'S REVIEW AND CERTIFICATION

The CONTRACTOR shall verify that the material and equipment in each shop drawing conforms to the requirements of the Contract Documents and shall bear an executed statement to that effect by the CONTRACTOR. Shop Drawings without this stamp applied will be returned without review.

D. REQUIREMENT FOR COMPLETE SHOP DRAWINGS

1. Material in shop drawings shall be in sufficient detail to demonstrate compliance with all requirements of the Contract Documents. Shop Drawings shall address material and/or methods of construction, design criteria, performance characteristics, and special provisions of the Specifications.
2. Shop drawings for systems and related equipment shall include information for all components required for a complete and operational system, including electrical, mechanical, and any other information required to indicate how the various components of the system function, and shall be included in the same submittal.
3. Where statements of certification, written guarantees, extended service agreements or extended warranties are required, they will be provided with the Shop Drawing. The effective date of the guarantee and service agreements, however, shall not be until the date of acceptance for the equipment.
4. Shop Drawings shall be clearly marked to show the applicable sections of the specifications and sheet in the drawings. Other identification may also be required on drawings such as layout drawings or schedules to allow the reviewer to determine where a particular item is to be used in the project.
5. A minimum of six (6) copies of each shop drawing shall be submitted. Two (2) copies each will normally be retained by the ENGINEER and OWNER. Any remaining copies will be returned to the CONTRACTOR.
6. Shop Drawings which do not have all of the information required for evaluation will be returned without benefit of review and comment.
7. Shop Drawings shall include written certification that CONTRACTOR visit site of the Project to measure physical dimensions of any existing structure(s).

E. REVIEW OF SHOP DRAWINGS

1. The ENGINEER will review the data for general conformity to the Contract Documents. Comments will be made on items called to the attention of the ENGINEER for review and verification. Markings will be based on this examination and do not constitute a blanket review of the shop drawing. The ENGINEER's review does not relieve the CONTRACTOR from any responsibility for errors or deviations from the Contract requirements. Shop Drawings which contain substantial error or omissions, or which are not clearly legible, will be returned without benefit of review.
2. Shop Drawings will be marked in one of the four following ways:

- a. Accepted: Shop Drawings are acceptable without correction and may be distributed for construction and/or manufacture.
- b. Accepted as Corrected: Shop Drawings are acceptable with minor corrections as marked and may be used with the corrections noted.
- c. Revise and Resubmit: Shop Drawings having significant errors or incomplete data shall be revised and resubmitted for subsequent review after corrections have been made or additional materials are available.
- d. Rejected: Material, equipment, or manufacturer described is not acceptable.

F. APPROVAL OF EQUAL SUBSTITUTIONS

Where Contract Documents allow substitution of material or equipment as an approved equal to the specified product, shop drawings shall be provided. Shop Drawings shall include supporting data to indicate specifically, on a point-by-point basis for each feature of the design, how the proposed product is equal to or better than the specified product. Deviations from the Contract Documents must be requested and expressly approved by the Engineer.

G. SHOP DRAWINGS REQUIRED

Shop Drawings are required for all items of equipment or materials where submittals are listed in the individual specification section and for the determination of substitutions for approval as described in Paragraph F of this section. Only these Shop Drawings will be reviewed. Shop Drawings which are not required may be submitted for "Record Purposes" but may not be reviewed.

H. OWNER SELECTED OPTIONS

Where selections are to be made by the OWNER for color, texture or finish and shop drawings are required for that product, shop drawings will be submitted for approval of the materials of construction, composition, etc., prior to the selection of finishes by the OWNER. Items requiring selection of finish for which shop drawings are not required shall be furnished as record data.

I. CERTIFICATIONS, WARRANTIES AND OTHER REQUIREMENTS

Where indicated in the Contract Documents the following items as defined below are to be provided as part of the shop drawing:

1. Certified Test Report – A report prepared by an approved testing agency on the results of test performed on materials to indicate their compliance with the specifications;. Reports are to be numbered consecutively for reference. Retest required to verify compliance with Contract Documents shall be identified with the same number as the original test with a letter to indicate retest, similar to the numbering system used for Shop Drawings.
2. Certification of Local Field Service – A certified letter stating that field service is available from a factory or supplier approved service organization located within a 500-mile radius of the project site.
3. Extended Warranty – A guarantee of performance for the product or system beyond the one-year warranty repairs; or to perform routine maintenance at some period beyond the warranty period. The Service Agreement is to be issued in the name of the OWNER.
4. Extended Service Agreement – A contract to provide operations and maintenance for equipment as specified beyond that required to full requirements f or warranty repairs; or

to perform routine maintenance at some period beyond the warranty period. The Service Agreement is to be issued in the name of the OWNER.

5. Certification of Adequacy of Design – A certified letter from the manufacturer of the equipment stating that they have designed the equipment offered to account for structural stability to withstand all imposed loads without deformation, failure or adversely affecting the operational requirements of the unit; and operational capability, including mechanical and electrical equipment sizing to be fully operational in accordance with the conditions specified.
6. Certification of Applicator/Subcontractor Qualifications – A certified letter stating that the applicator/subcontractor proposed to perform a specified item of work is duly designated as factory-authorized and trained for the application or installation of the specified product.

RECORD DATA

- A. Record data shall be submitted to provide information as to the general character, style and manufacturer of the equipment to allow the OWNER to adequately identify the materials or equipment incorporated into the Project. Record data shall be provided for all equipment and materials of construction for items for which Shop Drawings are not required.
- B. Record data shall be complete to indicate where the material was incorporated into the project, provide schedules of materials and their use, colors, model numbers and other information which would allow this material to be replaced at some future date. Record data will be received by the ENGINEER and logged for transmittal to the OWNER. Record data will not be reviewed for comment and no response will be made to the CONTRACTOR.

OPERATIONS AND MAINTENANCE MANUALS

- A. For each type of equipment to be furnished and installed under this contract, the CONTRACTOR shall prepare an operation and maintenance manual covering:
 1. Name, address, and telephone number of nearest competent service organization who can supply parts and service.
 2. Equipment function, normal operating characteristics, and limiting conditions, which reflect “as-built” conditions for the equipment furnished.
 3. Assembly, installation, alignment, adjustment, and checking instructions, including field modification made during installation, startup and testing.
 4. Operating instructions for startup, routine and normal operation, regulation and control, shutdown, and emergency conditions.
 5. Lubrication and maintenance instructions with quantities and scheduled intervals.
 6. Guide to “troubleshooting”.
 7. List of spare parts provided, predicted life of parts subject to wear, a recommended spare parts list, and costs.
 8. Outline, cross-section, and assembly drawings, engineering data, control schematics and point-to-point wiring diagrams, and reproductions of all equipment nameplates.
 9. Test data and performance curves, where applicable.
 10. Copy of Equipment Warranty.
 11. Copy of Equipment Installation Report (to be incorporated when completed).

- B. The above information, as applicable, shall be provided for the equipment as indicated in individual specification sections.
- C. The operation and maintenance manuals shall be in addition to any instructions or parts lists packed with or attached to the equipment when delivered.
- D. Manuals shall be printed on heavy, first quality paper, 8 ½ x 11 inch size with standard 3-hole punching. Drawings and diagrams shall be reduced to 8 ½ x 11 inches. Where reduction is not practicable, larger drawings shall be folded separately, and placed in envelopes which are bound into the manual. Each envelope shall bear suitable identification on the outside.
- E. Two preliminary copies of each manual, temporarily bound in heavy paper covers bearing suitable identification, shall be submitted to the ENGINEER at the time of submittal of the shop drawings. After review by the ENGINEER, CONTRACTOR shall prepare five (5) final copies of each operation and maintenance manual and deliver to the ENGINEER not later than 30 days prior to placing the equipment into operation. The final manuals shall be bound in stiff artificial black leather, metal hinged binders of appropriate size, but maximum 3 ½ - inch capacity, three post style.
- F. Digital copy of complete final O&M Manual and CAD drawings shall be provided on CD-ROM.

PROJECT INFORMATION REQUEST

- A. When it is necessary for the CONTRACTOR to request additional information, interpretation of the Contract Documents, or when the CONTRACTOR believes there is a conflict between the drawings and specifications, he shall identify the conflict and request clarification using the Project Information Request form. Use of this form will allow requests for information to be routed to OWNER, design engineers, design consultants or others through the ENGINEER and allow these requests to be monitored to determine that clarification is provided when needed. Sufficient information shall be attached to permit a written response without further information.
- B. The ENGINEER will log each request and will review the request to determine that the information provided is adequate. If information is not adequate, the request will be returned for additional information. When adequate information is provided, the request will be reviewed and a response made. If a change is required, the ENGINEER will initiate a Proposed Contract Modification. If no change is required the ENGINEER will provide additional information required to help the CONTRACTOR comply with the Contract Documents.

SCHEDULE OF VALUES AND PAYMENT ESTIMATES

- A. For contracts based on lump sum amounts with multiple equipment items, the CONTRACTOR is to submit to the ENGINEER for approval, a breakdown of cost for the Project. The breakdown is to provide adequate detail to allow easy determination of the percentage of completion for periodic payment review by the ENGINEER. Specification sections and add or deduct items in the proposal are to be used as a guide for preparing the breakdown. This breakdown is to be incorporated onto a form for the submission of payment request provided by the ENGINEER or in a form approved by the ENGINEER.

- B. The CONTRACTOR is to submit a schedule showing the anticipated schedule of payments for the CONTRACTOR to assist the OWNER in determining when funds are to be made available for payment of periodic payment requests.

EQUIPMENT INSTALLATION REPORT

A written report shall be submitted by the equipment supplier performing the installation check for all major equipment. This report shall certify that 1) The equipment has been properly installed and lubricated, 2) is in the accurate alignment, 3) is free from any undue stress imposed by connecting piping, equipment, or anchor bolts, and 4) has been operated under full load conditions and that is operating satisfactorily. The report shall also indicate if and what operator training and maintenance instruction was provided and for what specific equipment.

NOTIFICATION BY CONTRACTOR

Written notification of the need for testing, observation work by ENGINEER, or intent to work outside of regular working hours, or the request to shut down the facilities or make utility connections shall be given to the ENGINEER by issuance of a Notification By Contractor on a form provided by the ENGINEER.

SELECTION OF FINISH BY OWNER

Items that require that the OWNER select the finish, color, texture, fabric or make other choices related to the appearance of some material or equipment to be provided are to be determined as soon as possible to allow OWNER adequate time to consider available options for selection. Color chips, samples, etc., for all items are to be assembled and submitted to the OWNER through the ENGINEER for selection of finishes at the same time to allow all options to be considered and allow selections to be coordinated with other items of finish. The ENGINEER will meet with the OWNER who will determine the finish to be used within 2 weeks, unless additional samples are required for selection. Materials for which shop drawings are required are to be submitted for approval of material quality prior to selection of finish.

END SECTION 01300

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF REQUIREMENTS:

Definitions: Project closeout is the term used to describe certain collective project requirements, indicating completion of the Work that are to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the Work by the Owner, as well as final payment to the Contractor and the normal termination of the Contract.

Specific requirements for individual units of work are included in the appropriate sections in Divisions 2 through 16.

Time of closeout is directly related to "Substantial Completion"; therefore, the time of closeout may be either a single time period for the entire Work or a series of time periods for individual elements of the Work that have been certified as substantially complete at different dates. This time variation, if any, shall be applicable to the other provisions of this section.

PREREQUISITES FOR SUBSTANTIAL COMPLETION:

General: Complete the following before requesting the Architect/ Engineer's inspection for certification of substantial completion, either for the entire Work or for portions of the Work. List known exceptions in the request.

In the progress payment request that coincides with, or is the first request following, the date substantial completion is claimed, show either 100% completion for the portion of the Work claimed as "substantially complete", or list incomplete items, the value of incomplete work, and reasons for the Work being incomplete.

Include supporting documentation for completion as indicated in these contract documents.

Advise Owner of pending insurance change-over requirements.

Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.

Obtain and submit releases enabling the Owner's full, unrestricted use of the Work and access to services and utilities. Where required, include occupancy permits, operating certificates and similar releases.

Submit record drawings and maintenance manuals.

Deliver tools, spare parts, extra stocks of material and similar physical items to Owner.

Make the final change-over of locks and transmit keys to the Owner. Advise the Owner's personnel of the change-over in security provisions. (Where applicable)

Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities and services from the project site,

along with construction tools and facilities, mock-ups, and similar elements.

Complete final cleaning up requirements, including touch-up painting of marred surfaces.

Touch-up and otherwise repair and restore marred exposed finishes.

Inspection Procedures: Upon receipt of the Contractor's request for inspection, the Architect/Engineer will either proceed with inspection or advise the Contractor of unfilled prerequisites.

Following the initial inspection, the Architect/Engineer will either prepare the certificate of substantial completion, or will advise the Contractor of work which must be performed before the certificate will be issued. The Architect/Engineer will repeat the inspection when requested and when assured that the Work has been substantially completed.

Results of the completed inspection will form the initial "punch-list" for final acceptance.

PREREQUISITES FOR FINAL ACCEPTANCE:

General: Complete the following before requesting the Architect/ Engineer's final inspection for certification of final acceptance, and final payment as required by the General Conditions. List known exceptions, if any, in the request.

Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

Submit an updated final statement, accounting for final additional changes to the Contract Sum.

Submit a copy of the Architect/Engineer's final punch- list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by the Architect/Engineer.

Reinspection Procedure: The Architect/Engineer will reinspect the Work upon receipt of the Contractor's notice that the work, including punch-list items resulting from earlier inspections, has been completed, except for these items whose completion has been delayed because of circumstances that are acceptable to the Architect/Engineer.

Upon completion of reinspection, the Architect/Engineer will either prepare a certificate of final acceptance, or will advise the Contractor of work that is incomplete or of obligations that have not been fulfilled, but are required for final acceptance.

If necessary, the reinspection procedure will be repeated.

RECORD DOCUMENT SUBMITTALS:

General: Specific requirements for record documents are indicated in the individual sections of these specifications. Other requirements are indicated in the General Conditions. General submittal requirements are indicated in the various "submittals" sections.

Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect/Engineer's reference during normal working hours.

Record Drawings: Maintain a record set of blue or black line white-prints of contract drawings and shop drawings in a clean, undamaged condition. Mark-up the set of record documents to show the actual installation where the installed work varies substantially from the work as originally shown. Mark whichever drawing is most capable of showing the actual "field" condition fully and accurately; however, where shop drawings are used for mark-up, record a cross-reference at the corresponding location on the

working drawings. Give particular attention to concealed work that would be difficult to measure and record at a later date.

Mark record sets with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work.

Mark-up new information which is known to be important to the Owner, but for some reason was not shown on either contract drawings or shop drawings.

Note related change-order numbers where applicable.

Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind data into individual binders properly identified and indexed. Bind each set of data in a heavy-duty 2-inch, 3-ring vinyl-covered binder, with pocket folders for folded sheet information. Mark the appropriate identification on both front and spine of each binder.

Include the following types of information in operation and maintenance manuals:

- Emergency instructions.
- Spare parts listing.
- Copies of warranties.
- Wiring diagrams.
- Recommended "turn-around" cycles.
- Inspection procedures.
- Shop drawings and product data.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

CLOSEOUT PROCEDURES:

General Operating and Maintenance Instructions: Arrange for each installer of operating equipment and other work that requires regular or continuing maintenance, to meet at the site with the Owner's personnel to provide necessary basic instruction in the proper operation and maintenance of the entire Work. Where installers are not experienced in the required procedures, include instruction by the manufacturer's representatives.

As part of this instruction provide a detailed review of the following items:

- Maintenance manuals
- Record documents
- Spare parts and materials
- Tools
- Lubricants
- Fuels
- Identification systems
- Control sequences
- Hazards
- Cleaning
- Warranties, bonds, maintenance agreements and similar continuing commitments.

As part of this instruction for operating equipment demonstrate the following procedures:

- Start-up
- Shut-down
- Emergency operations
- Noise and vibration adjustments
- Safety procedures
- Economy and efficiency adjustments
- Effective energy utilization

END OF SECTION 01700

SECTION 01710 - CLEANING

PART 1.00 - GENERAL

1.1 DESCRIPTION:

Keep premises and public properties free from accumulations of waste, debris and rubbish caused by operations.

At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials and clean all exposed surfaces; leave project clean and ready for occupancy.

1.2 STANDARDS:

Maintain Project in accordance with State and local safety, health and insurance standards.

PART 2 - PRODUCTS

NOT REQUIRED

PART 3 - EXECUTION

3.1 GENERAL:

A. Disposal:

Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws:

1. Do not burn or bury rubbish and waste materials on Project site.
2. Do not dispose of construction wastes into sanitary or storm drains.
3. Do not dispose of wastes into streams or waterways.

3.2 DURING CONSTRUCTION

A. Scope:

Keep premises and public properties free from accumulations of waste materials and rubbish.

B. Dust Abatement:

Wet down materials and rubbish to lay dust and prevent it from blowing.

C. Schedule:

At reasonable intervals during progress of work, clean site and dispose of waste materials, debris and rubbish off the site and in a legal manner.

D. Disposal:

Remove waste materials, debris and rubbish from site and legally dispose of at legal public or private dumping areas off Owner's property. In hauling any material from the site, it shall be the responsibility of the Contractor to comply with local ordinance by preventing debris from dropping from vehicles and littering streets and roads; use nets covering debris. The Contractor shall promptly pick up and remove any debris which falls from vehicles.

3.3 FINAL CLEANING

Prior to Final Inspection and the Owner's acceptance of the Project, clean all areas of the project site, performing all operations called for in the various Sections of these Specifications including but not limited to:

1. Removing all trash and debris of any nature from the site.
2. Remove temporary protections.
3. Broom clean all existing paved surfaces including drives, walks and parking areas.

END OF SECTION 01710

ITEM NO. RR 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 shown on plans to be paid for by other items.

101.2 Submittals

The submittal requirements of this Item include:

- A. A Street Cut Permit and Utility Construction Permit when utility adjustments are made in the right-of-way;
- B. A burn permit when materials are disposed of by burning; and,
- C. A plan for removing and disposing of all non-salvageable materials and debris.

101.3 Construction Methods

Prior to commencement of this work, place all required Stormwater Pollution Prevention Plan (SW3P) / erosion control and tree protection measures. Locate and protect existing utilities.

Protect designated features in the right-of-way and prune trees and shrubs as directed. Do not operate equipment, park equipment, service equipment, store materials, or disturb the root area under the branches of trees designated for preservation unless otherwise allowed by the Engineer or City Forestry Manager. Carefully trim trees and shrubs, which are scheduled for preservation, as directed. Protect trees from scarring, debarking or other injuries during construction operations in accordance with Item No. RR 610, "Preservation of Trees and Other Vegetation." Treat all exposed cuts, exposed ends of pruned limbs or scarred bark in accordance with the current Tree Technical Manual: Standards and Specifications approved by the City Council.

Clear areas shown on the plans of all obstructions, except those landscape features that are to be preserved. Such obstructions include remains of houses and other structures, foundations, floor slabs, concrete, brick, lumber, plaster, septic tanks and drain fields, abandoned utility pipes or conduits, equipment, fences, retaining walls and other items as specified on the drawings. Remove vegetation and other landscape features not designated for preservation, curb and gutter, driveways, paved parking areas, miscellaneous stone, sidewalks, drainage structures, manholes, inlets, abandoned railroad tracks, scrap iron, and debris whether above or below ground. 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.

Notify the Engineer in writing when items not shown on the drawings and not reasonably detectable (buried with no obvious indication of presence) are encountered and required to be removed. These items will be handled in accordance with Article 10, Changes in the Work.

Remove obstructions and foundations not designated for preservation to 3 ft. below natural ground in areas receiving embankment. Remove obstructions to 3 ft. below the

excavation level in areas to be excavated. Remove obstructions to 1 ft. below natural ground in all other areas. Cut trees and stumps off to ground level when allowed by the plans or directed. Plug the remaining ends of abandoned underground structures over 3 in. in diameter with concrete to form a tight closure. Backfill, compact and restore areas where obstructions have been removed unless otherwise directed. Use approved material for backfilling in accordance with Item 132 "Embankment". Dispose of wells in accordance with Item 103, "Disposal of Wells."

Accept ownership, unless otherwise directed, and dispose of removed materials and debris at a permitted disposal site in accordance with local, state, and federal requirements. Blasting is not allowed. Burning is not allowed unless otherwise approved. If approved, obtain a burning permit from the City of Round Rock Fire Marshal's office. Pile and burn brush at approved locations as directed.

Where an abandoned underground utility pipe is found, cut and plug the pipe with:

- Concrete, installed in accordance with Item No. 421, "Hydraulic Cement Concrete"; install plug at end of lines prior to placing concrete. Plug shall be adequate to seal line until concrete is set.
- A precast stopper grouted in place, or
- A mechanical plug as approved by the Engineer.

101.4 Measurement

When included in the contract as a pay item, preparing right of way for new construction will be measured by the acre, 100-foot station, or lump sum, regardless of the width of the right of way.

Measurement for payment will be made only on areas specified as "Preparing Right of Way".

101.5 Payment

Payment for this Item will be considered subsidiary to Item No. 110, "Excavation", and Item No. 132, "Embankment" unless included as a separate pay item in the contract. When included as a pay item, it will be paid for at the unit price bid for "Preparing Right of Way." This price is full compensation for pruning of trees and shrubs; removal and disposal of structures and obstructions; backfilling of holes; furnishing and placing concrete for plugs; and equipment, labor, tools, and incidentals.

When included as a pay item, payment will be made under one of the following:

- | | |
|--------------------------|-----------------------|
| Preparing Right of Way - | Per Acre. |
| Preparing Right of Way - | Per 100 foot Station. |
| Preparing Right of Way - | Per Lump Sum. |

End

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
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Specification Item No. RR 101, "PREPARING RIGHT-OF-WAY"

City of Round Rock Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 506	Manholes
Item No. 610	Preservation of Trees and Other Vegetation

Texas Department of Transportation: Current edition of Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 103	Disposal of Wells
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 421	Hydraulic Cement Concrete

ITEM NO. RR 201 SUBGRADE PREPARATION

201.1 Description

Scarify, blade, roll, and compact the subgrade to provide a uniform moisture content and density for the top 8 inches of the subgrade. Repeat grading and compaction until the specified lines, grades, and cross-sections are obtained and the materials are compacted to the specified depth and density.

201.2 Submittals

The submittal requirements of this Item include:

- A. A plan identifying classification and characteristics (P.I., optimum moisture-density, etc.) of in-situ subgrade soils, as well as the source, classification and characteristics of any proposed borrow material;
- B. Type and size of equipment proposed to achieve the required compaction; and
- C. All test results for in-situ subgrade soils and/or borrow materials. Approval of borrow material is required prior to placement.

201.3 Construction Methods

Complete all operations involving Item No. RR 101, "Preparing Right of Way" and/or Item No. RR 102, "Clearing and Grubbing", prior to initiation of subgrade preparation.

Scarify and shape the surface of the subgrade in conformity with the typical sections and the lines and grades shown on the drawings. Correct any deviation in the grade greater than 1/2 inch in a length of 10 feet, measured longitudinally, by loosening, adding or removing material. Reshape and re-compact by sprinkling and rolling.

Remove and replace all unsuitable material, as directed by Engineer, with approved material. Remove all foundations, walls or other objectionable material in accordance with Item No. RR 100, "Preparing Right of Way" to a minimum depth of 24 inches under all structures and 12 inches under areas to be vegetated. Fill all holes, ruts and depressions with approved material and compact.

Prepare subgrade sufficiently in advance to insure satisfactory prosecution of the work. Set blue tops for the subgrade on the centerline, at the quarter points and along the curb lines or edge of pavement at maximum intervals of 50 feet. Proof roll and use density control in accordance with Item No. 216, "Proof Rolling" prior to placement of any embankment, borrow, or base material. Correct any unstable or spongy subgrade areas by additional re-working, drying and compaction, or by removal and replacement with approved material.

When directed by the Engineer, re-work the subgrade as follows (the re-work process will not be allowed for unstable organic subgrade soils. Remove unstable organic soils and replace with material approved by the Engineer):

- A. Remove the unstable subgrade to the full depth of the unstable in-situ material or to a minimum depth of 8 inches, whichever is greater;
- B. Spread the material over a sufficient area to allow reworking of the excavated

material;

- C. Disc, scarify or otherwise breakup the excavated material and allow to dry (Note: If approved by the Engineer, lime or other additive may be used to aid in the drying process or to stabilize the material);
- D. Fill the excavated area with the re-worked material and compact to specified densities; and
- E. Proof-roll the re-worked area.

All suitable material removed in accordance with Item No. 110, "Excavation", may be utilized in the subgrade with the approval of the Engineer. All other material required for completion of the subgrade, including material defined in accordance with Item No. 132, "Embankment", will be subject to approval of the Engineer.

Provide the required density and moisture control for the subgrade based on the plasticity characteristics of the approved material. Sprinkle the subgrade material and compact to the extent necessary to provide the density specified below, unless otherwise shown on the drawings. The Engineer will use TxDOT Tex-114-E to determine the maximum dry density (D_a) and optimum moisture content (W_{opt}). Meet the requirements for field density and moisture content in Table 1 unless otherwise shown on the drawings.

Table 1 - Field Density Control Requirements		
Soil Description	Density, Percent	Moisture Content
	Tex-115-E	
PI < 15	$\geq 98\% D_a^*$ and $\leq 105\% D_a$	N/A
$15 \leq PI \leq 35$	$\geq 98\% D_a$ and $\leq 102\% D_a$	$\geq W_{opt} + 3\%$
PI > 35	$\geq 95\% D_a$ and $\leq 100\% D_a$	$\geq W_{opt} + 3\%$

* Where subgrade material is not conducive to laboratory testing (e.g. solid rock), approval of subgrade shall be based on proof rolling or other information as approved by the Engineer.

Compact subgrade materials, on which planting or turf will be established, to a minimum of 85 percent of the density in accordance with TxDOT Tex-114-E. Conduct field tests for density in accordance with TxDOT Tex-115-E as soon as possible after compaction operations are completed. Rework material that fails to meet the density specified, to obtain the density required.

Check the in-place density and moisture content of the top 8 inches of compacted subgrade prior to placement of any base material. If the tests indicate that the relative density and moisture do not meet the requirements specified in Table 1 above, rework the subgrade, from the closest passing test at one end of the failed area to the closest passing test at the other end of the failed area, to achieve the requirements. The Contractor, at his own expense, may have more tests performed to narrow the limits of the failed area. Unless otherwise accepted by the City of Round Rock, at least two tests shall be taken on each street being worked and at intervals not to exceed 1,000 square yards. If subgrade material changes within the 1,000 square yard interval, two tests shall be taken on each such change in material. Testing locations will be subject to the Engineer's discretion. All initial testing shall be paid by the Owner/Developer. Any retesting of failed areas shall be paid by the Contractor.

201.4 Measurement

When included in the Contract as a pay item, subgrade preparation will be measured by the square yard. The measured area includes the entire width of the roadway for the entire length as indicated on the drawings.

201.5 Payment

Payment for this Item will be considered subsidiary to Item No. 110, "Excavation" unless included as a separate pay item in the contract. When included as a pay item, it will be paid for at the unit price bid for "Subgrade Preparation". This price is full compensation for furnishing all material; hauling; placing, compacting, finishing, and reworking; disposal of waste material; and equipment, labor, tools, and incidentals.

When included as a pay item, payment will be made under:

Subgrade Preparation	Per Square Yard
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All sprinkling and proof rolling will not be paid for directly but will be considered subsidiary to this Item, unless otherwise shown on the drawings.

Where subgrade is constructed under this contract, correction of soft spots will be at the Contractor's expense. Where subgrade is not constructed under this contract, correction of soft spots in the subgrade will be paid in accordance with RR Article 10.

End

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
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Specification Item RR 201, "SUBGRADE PREPARATION"

City of Round Rock Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. RR 101	Preparing Right of Way

Texas Department of Transportation: Current edition of Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 204	Sprinkling
Item No. 210	Rolling
Item No. 216	Proof Rolling

Texas Department of Transportation: Current edition of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-103-E	Determination of Moisture Content of Soil Materials
Tex-104-E	Determination of Liquid Limit of Soils
Tex-105-E	Determination of Plastic limit of Soils
Tex-106-E	Method of Calculating the Plasticity Index of Soils
Tex-114-E	Laboratory Compaction Characteristics & Moisture Density Relationship of Subgrade & Embankment Soil
Tex-115-E	Field Method for Determination of In-Place Density of Soils & Base Materials

Standard Specifications Manual Change Control Record

SERIES 200 - SUBGRADE AND BASE CONSTRUCTION

CoRR Item	Title	Revision	Status	TxDOT Item	Title
RR 201	Subgrade Preparation (<i>Subsidiary-not a pay item</i>)	5/21/2018	Revised	None	
202	Hydrated Lime and Lime Slurry	5/21/2018	Replaced	Item 260	Lime Treatment (Road Mixed)
203	Lime Treatment for Materials in Place	5/21/2018	Replaced	Item 260	Lime treatment (Road Mixed)
204	Portland Cement Treatment for Materials in Place	5/21/2018	Replaced	Item 275	Cement Treatment (Road Mixed)
206	Asphalt Stabilized Base	5/21/2018	Replaced	Item 292	Asphalt Treatment (Plant Mixed)
210	Flexible Base	5/21/2018	Replaced	Item 247	Flexible Base
211	Recycling Existing Aggregate	5/21/2018	Replaced	Item 251	Reworking Base Courses
220	Sprinkling for Dust Control	5/21/2018	Replaced	Item 204	Sprinkling
230	Rolling (Flat Wheel)	5/21/2018	Replaced	Item 210	Rolling
232	Rolling (Pneumatic Tire)	5/21/2018	Replaced	Item 210	Rolling
234	Rolling (Tamping)	5/21/2018	Replaced	Item 210	Rolling
236	Proof Rolling	5/21/2018	Replaced	Item 216	Proof Rolling
281	Termite Control	5/21/2018	Deleted	None	-

**ITEM NO. 601
SALVAGING AND PLACING TOPSOIL**

601.1 Description

This item shall govern the removal, storage and placement of approved topsoil to the depths and area shown on the Drawings or as directed by the Engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text and accompanying tables, the inch-pound units are given preference followed by SI units shown within parentheses.

601.2 Submittals

The submittal requirements of this specification item shall include the test results and soil classification necessary for approval of material as suitable topsoil.

601.3 Materials

A. Topsoil

The topsoil shall be a clean, friable, fertile soil with a relatively high erosion resistance, free of objectionable materials including roots and rocks larger than 1 1/2 inches (37.5 millimeters) and readily able to support the growth of planting (Standard Specification Item No. 608), seeding (Standard Specification Item No. 604) and sodding (Standard Specification Item No. 602).

B. Water

Water shall be furnished by the Contractor and shall be clean and free from industrial wastes and other objectionable matter.

601.4 Sources

The topsoil may be obtained from the right-of-way at sites of proposed excavation or embankment when shown on the Drawings or identified by the Engineer or designated representative. The topsoil may also be obtained from approved sources, which are located outside the right-of-way and have been secured by the Contractor.

601.5 Construction Methods

Precautions will be maintained at all times to protect all trees in the area of construction. Where removal of trees is indicated on the Drawings, they shall be marked as directed by the Engineer or designated representative.

Construction equipment shall not be operated nor construction materials stockpiled under the canopies of trees, unless otherwise approved by the City's Forestry Manager. Topsoil materials shall not be placed within the drip line of trees until tree wells are constructed that conform to Item No. 610, "Preservation of Trees and Other Vegetation" and approved by the City's Forestry Manager. The source and stockpile areas shall be kept drained, insofar as practicable, during the period of topsoil removal.

The existing topsoil to be salvaged shall be removed from areas approved by the Engineer or designated representative, stockpiled in a windrow along the right of way or spread over an area that is ready for topsoil application in accordance with the Drawings or as directed by the Engineer or designated representative.

Trash, wood, brush, stumps, rocks over 1 1/2 inches (37.5 mm) in size and other objectionable material encountered shall be removed and disposed of properly prior to beginning of work required by this item. Grass and other herbaceous plant materials may remain. Large clumps shall be broken up.

After the grading has been completed to the required alignment, grades and cross-sections and prior to the spreading of the salvaged topsoil, any clay or tight soil surfaces shall be scarified by plowing furrows approximately 4 inches (100 mm) deep along horizontal slope lines at 2 foot (600 mm) intervals. The spreading of the salvaged topsoil shall be undertaken as soon as the grading has been completed. The topsoil shall be spread so as to form a cover of uniform thickness indicated. After the topsoil has been placed and shaped, it shall be sprinkled and rolled to provide a suitable seed bed.

601.6 Measurement and Payment

Salvaging, removal and/or placing topsoil materials will not be measured for payment, but shall be considered subsidiary to other items of work.

End

SPECIFIC CROSS REFERENCE MATERIALS

Specification 601, "SALVAGING AND PLACING TOPSOIL"

City of Round Rock Standard Specification Items

<u>Designation</u>	<u>Description</u>
Item No. 602	Sodding for Erosion Control
Item No. 604	Seeding for Erosion Control
Item No. 608	Planting
Item No. 610	Preservation of Trees and Other Vegetation

RELATED CROSS REFERENCE MATERIALS

Specification 601, "SALVAGING AND PLACING TOPSOIL"

City of Round Rock Standard Specification Items

<u>Designation</u>	<u>Description</u>
Item No. 102	Clearing and Grubbing
Item No. 104	Removing Concrete
Item No. 110	Street Excavation
Item No. 111	Excavation
Item No. 120	Channel Excavation
Item No. 132	Embankment
Item No. 606	Fertilizer

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 160	Furnishing and Placing Topsoil
Item No. 164	Seeding for Erosion Control
Item No. 204	Sprinkling

Texas Department of Transportation: Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-103-E	Determination of Moisture Content of Soil Materials
Tex-104-E	Determination of Liquid Limit of Soils
Tex-105-E	Determination of Plastic Limit of Soils
Tex-106-E	Method of Calculating the Plasticity Index of Soils

ITEM NO. 604
SEEDING FOR EROSION CONTROL

604.1 Description

This item shall govern the preparation of a seed bed to the lines and grades indicated on the Drawings, sowing of seeds, fertilizing, mulching with straw, cellulose fiber wood chips, recycled paper mulch and other management practices along and across such areas as indicated in the Drawings or as directed by the Engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, inch-pound units are given preference with SI units shown within parentheses.

604.2 Submittals

The submittal requirements for this specification item shall include:

- A. Identification of the type, source, mixture, PLS and rate of application of the seed.
- B. type of mulch.
- C. type of tacking agent.
- D. type and rate of application of fertilizer.

604.3 Materials

- A. Seed.

All seed must meet the requirements of the Texas Seed Law including the labeling requirements for showing pure live seed (PLS), name and type of seed. The seed furnished shall be of the previous season's crop and the date of analysis shown on each bag shall be within nine months of the time of delivery to the project. Each variety of seed shall be furnished and delivered in separate bags or containers. A sample of each variety of seed shall be furnished for analysis and testing when directed by the Engineer or designated representative.

The amount of seed planted per acre (hectare) shall be of the type specified in sections 604.5 and 604.6.

- B. Water.

Water shall be clean and free of industrial wastes and other substances harmful to the growth of grass or the area irrigated.

- C. Top soil.

Top soil shall conform to Standard Specification Item No. 130, "Borrow".

- D. Fertilizer.

The fertilizer shall conform to Standard Specification Item No. 606, "Fertilizer".

E. Straw Mulch or Hay Mulch.

Straw Mulch shall be oat, wheat or rice straw. Hay mulch shall be prairie grass, Bermuda grass, or other hay approved by the Engineer or designated representative. The straw or hay shall be free of Johnson grass or other noxious weeds and foreign materials. It shall be kept in a dry condition and shall not be molded or rotted.

F. Tacking Agents.

The tacking agent shall be a biodegradable tacking agent, approved by the Engineer or designated representative.

G. Cellulose Fiber Mulch (Natural Wood).

Cellulose Fiber Mulch shall be natural cellulose fiber mulch produced from grinding clean whole wood chips. The mulch shall be designed for use in conventional mechanical planting, hydraulic planting of seed or hydraulic mulching of grass seed, either alone or with fertilizers and other additives. The mulch shall be such, that when applied, the material shall form a strong, moisture-retaining mat without the need of an asphalt binder.

H. Recycled Paper Mulch.

Recycled paper mulch shall be specifically manufactured from post-consumer paper and shall contain a minimum of 85% recycled paper content by weight, shall contain no more than 15% moisture and 1.6% ash, and shall contain no growth inhibiting material or weed seeds. The recycled paper mulch shall be mixed with grass seed and fertilizer for hydro-seeding/mulching, erosion control, and a binder over straw mulch. The mulch, when applied, shall form a strong, moisture-retaining mat of a green color without the need of an asphalt binder.

604.4 Construction Methods

A. Preparing Seed Bed.

After the designated areas have been rough graded to the lines, grades and typical sections indicated in the Drawings or as provided for in other items of this contract and for any other soil area disturbed by the construction, a suitable seedbed shall be prepared. The seedbed shall consist of a minimum of either 4 inches (100 millimeters) of approved topsoil or 4 inches (100 millimeters) of approved salvaged topsoil, cultivated and rolled sufficiently to reduce the soil to a state of good tilth, when the soil particles on the surface are small enough and lie closely enough together to prevent the seed from being covered too deeply for optimum germination. The optimum depth for seeding shall be 1/4 inch (6 millimeters). Water shall be gently applied as required to prepare the seedbed prior to the planting operation either by broadcast seeding or hydraulic planting. Seeding shall be performed in accordance with the requirements hereinafter described.

B. Watering.

All watering shall comply with City Ordinances. Broadcast seeded areas shall immediately be watered with a minimum of 5 gallons of water per square yard (22.5 liters of water per square meter) or as needed and in the manner and quantity as directed by the Engineer or designated representative. Hydraulic seeded areas and native grass seeded areas shall be watered commencing after the tackifier has dried with a minimum of 5 gallons of water per square yard (22.5 liters of water per square meter) or as needed to keep the seedbed in a wet condition favorable for the growth of grass.

Watering applications shall constantly maintain the seedbed in a wet condition favorable for the growth of grass. Watering shall continue until the grass is uniformly 1 1/2 inches (40 mm) in height and accepted by the Engineer or designated representative. Watering can be postponed immediately after a 1/2 inch (12.5 mm) or greater rainfall on the site but shall be resumed before the soil dries out.

604.5 Non-Native Seeding

A. Method A - Broadcast Seeding.

The seed or seed mixture in the quantity specified shall be uniformly distributed over the prepared seed bed areas indicated on the Drawings or where directed by the Engineer or designated representative. If the sowing of seed is by hand, rather than by mechanical methods, the seed shall be sown in two directions at right angles to each other. If mechanical equipment is used, all varieties of seed, as well as fertilizer, may be distributed at the same time, provided that each component is uniformly applied at the specified rate. After planting, the planted area shall be rolled with a corrugated roller of the "Cultipacker" type. All rolling of the slope areas shall be on the contour.

Seed Mixture and Rate of Application for Broadcast Seeding:

From September 15 to March 1, seeding shall be with a combination of unhulled Bermuda Grass at a rate of 2 pounds per 1000 square feet (1.0 kilograms per 100 square meters) and winter rye or cool season cover crop (see Table 4) at a rate of 5 pounds per 1000 square feet (16.6 kilograms per 100 square meters)

From March 1 to September 15, seeding shall be with hulled Bermuda Grass at a rate of 2 pounds per 1000 square feet (1.0 kilograms per 100 square meters) with a PLS = 0.83. Fertilizer shall be applied and shall conform to Item No. 606, "Fertilizer".

B. Method B - Hydraulic Planting. The seedbed shall be prepared as specified above and hydraulic planting equipment, which is capable of placing all materials in a single operation, shall be used.

March 1 to September 15

Hydraulic planting mixture and minimum rate of application pounds per 1000 square feet (kilograms per 100 square meters):

Hulled Bermuda Seed (PLS=0.83)	Fiber Mulch		Soil Tackifier
	Cellulose	Wood	
1 Lbs/1000 ft ² (0.5kgs/100 m ²)	45.9 Lbs/1000 ft ² (22.5kgs/100 m ²)		1.4 Lbs/1000 ft ² (0.7kgs/100 m ²)
		57.4 Lbs/1000 ft ² (28.0kgs/100 m ²)	1.5 Lbs/1000 ft ² (0.75kgs/100 m ²)

September 15 to March 1

Add 5 pounds per 1000 square feet (2.5 kilograms per 100 square meters) of winter rye or cool season cover crop (see Table 4) to above mixture. The fertilizer shall conform to City of Round Rock Standard Specification Item No. 606, "Fertilizer".

604.6 Native Grass Seeding

The seedbed shall be prepared as specified above. The seed mixture and the rate of application shall be as follows:

Table 2: Native Grasses			
Common Name	Botanical Name	Application rates	
		Lbs/1000 feet ²	kg/ 100 meter ²
Indiangrass	<i>Sorghastrum nutans</i>	0.15	0.075
Sideoats grama	<i>Bouteloua curtipendula</i>	0.2	0.10
Green sprangletop	<i>Leptochloa dubia</i>	0.15	0.075
Buffalo Grass	<i>Buchloe dactyloides</i>	0.25	0.125
Little Bluestem	<i>Schizachyrium scoparium</i>	0.2	0.10
Blue Grama Grass	<i>Bouteloua gracilis</i>	0.15	0.075
Canada Wild Rye	<i>Elymus canadensis</i>	0.2	0.10
Eastern gamagrass	<i>Tripsacum dactyloides</i>	0.25	0.125
Purple Three-Awn	<i>Aristida purpurea</i>	0.15	0.075
Switchgrass	<i>Panicum virgatum</i>	0.1	0.05
Bushy Bluestem	<i>Andropogon glomeratus</i>	0.1	0.05
Big Bluestem	<i>Andropogon gerardii</i>	0.1	0.05
Total Grass Seeding Rate		2.0	1.0

Table 3: Native Wildflowers			
Common Name	Botanical Name	Application rates	
		Lbs/1000 feet ²	kg/ 100 meter ²
Black-Eyed Susan	Rudbeckia hirta	0.05	0.025
Bundleflower	Desmanthus illinoensis	0.05	0.025
Scarlet Sage	Salvia coccinea	0.10	0.05
Pink Evening Primrose	Oenothera speciosa	0.05	0.025
Phlox	Phlox Drummondii	0.05	0.025
Coreopsis	Coreopsis tinctoria	0.05	0.025
Greenthread	Thelesperma filifolium	0.05	0.025
Purple Prairie Clover	Petalostemum purpurea	0.05	0.025
Cutleaf Daisy	Engelmannia pinnatifida	0.05	0.025
Partridge Pea	Cassia fasciculata	0.1	0.05
Indian Blanket	Gaillardia pulchella	0.1	0.05
Mexican Hat	Ratibida columnaris	0.05	0.025
Maximilian Sunflower	Helianthus maximiliani	0.1	0.05
Total Wildflower Seeding Rate		1.0	0.5
Total Warm Season Seeding Rate (Grass & Wildflowers)		3.0	1.5

Table 4: Cool Season Cover Crop			
Common Name	Botanical Name	Application rates	
		Lbs/1000 feet ²	kg/ 100 meter ²
Wheat	Triticum aestivum	1	0.5
Oats	Avena sativa	1	0.5
Cereal Rye Grain	Secale cereale	3	1.5
Total Cool Season Cover Crop Seeding Rate		5	2.5
Total Cool Season Seeding Rate (Grass, Wildflowers, & Cover Crop)		8	4

Species substitution as necessary due to availability shall be approved by the Engineer or designated representative. Watering and fertilizer application shall follow procedures outlined above or as otherwise specified on the Drawings.

Seed shall be applied by broadcast or drill method and shall be distributed evenly over the topsoil areas. Mulching shall immediately follow seed application.

September 15 to March 1

Add 5 pounds per 1000 square feet (2.5 kilograms per 100 square meters) of winter rye or cool season cover crop to grass and wildflower mixture. The fertilizer shall conform to City of Round Rock Standard Specification Item No. 606, "Fertilizer".

604.7 Mulch

A. Straw Mulch.

Straw mulch shall be spread uniformly over the area indicated or as designated by the Engineer or designated representative at the rate of 2 to 2 1/2 tons of straw per acre (4.5 to 5.6 megagrams of straw per hectare). The actual rate of application will be designated by the Engineer or designated representative. Straw may be hand or machine placed and adequately secured.

B. Fiber Mulch.

Cellulose and wood fiber mulch shall be spread uniformly over the area indicated or as designated by the Engineer or designated representative at the rate of 45 to 80 lbs. per 1000 square feet (22.5 to 40 kilograms per 100 square meters).

C. Recycled Paper Mulch.

Recycled paper mulch shall be spread over the area indicated on the Drawings or as designated by the Engineer or designated representative at a rate that will provide 100% coverage.

D. Shredded Brush Mulch.

Small brush or tree limbs except Juniper, which have been shredded, may be used for mulching Native Grass seeding.

604.8 Measurement

Work and acceptable material for "Seeding for Erosion Control" will be measured by the square yard (meter: 1 meter equals 1.196 square yards) or by the acre (hectare: 1 hectare equals 2.471 acres), complete in place, with a minimum of 95 percent coverage for the non-native mix, and 75 percent coverage for the native mix. Bare areas shall not exceed 16 square feet (1.5 square meters), and the height of vegetation shall stand at a minimum of 1 1/2 inch (40 millimeters). Bare areas shall be re-prepared and reseeded as required to develop an acceptable stand of grass.

604.9 Payment

The work performed and materials furnished and measured will be paid for at the unit bid price for "Seeding for Erosion Control" of the method specified on the Drawings and type of mulch. The unit bid price shall include full compensation for furnishing all materials, including all topsoil, water, seed, tackifier, fertilizer or mulch and for performing all operations necessary to complete the work.

Payment will be made under one of the following:

Non-Native Seeding for Erosion Control Method, _____ Mulch Per Square Yard.

Non-Native Seeding for Erosion Control Method, _____ Mulch Per Acre.

Native Seeding for Erosion Control Method, _____ Mulch Per Square Yard.

Native Seeding for Erosion Control Method, _____ Mulch Per Acre.

Mulch, _____ Per Square Yard.

Mulch, _____ Per Acre.

End

SPECIFIC CROSS REFERENCE MATERIALS

Specification 604, "SEEDING FOR EROSION CONTROL"

City of Round Rock Technical Specifications

<u>Designation</u>	<u>Description</u>
Item No.130	Borrow
Item No. 606	Fertilizer

RELATED CROSS REFERENCE MATERIALS

Specification 604, "SEEDING FOR EROSION CONTROL"

City of Round Rock Technical Specifications

<u>Designation</u>	<u>Description</u>
Item No. 601	Salvaging and Placing Topsoil
Item No. 602	Sodding for Erosion Control
Item No. 605	Soil Retention Blanket
Item No. 607	Slope Stabilization
Item No. 608	Planting

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 160	Furnishing and Placing Topsoil
Item No. 162	Sodding for Erosion Control
Item No. 164	Seeding for Erosion Control
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering
Item No. 169	Soil Retention Blanket
Item No. 180	Wildflower Seeding
Item No. 192	Roadside Planting and Establishment

ITEM NO. 605
SOIL RETENTION BLANKET

605.1 Description

This item shall govern the provision and placement of wood, straw or coconut fiber mat, synthetic mat, paper mat, jute mesh or other material as a soil retention blanket for erosion control on slopes or ditches or short-term or long-term protection of seeded or sodded areas indicated on the Drawings or as specified by the Engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, inch-pound units are given preference with SI units shown within parentheses.

605.2 Submittals

The submittal requirements for this specification item shall include the soil retention blanket material type and sample, evidence that the material is listed on TxDOT/TTI Approved Products List, one (1) full set of Manufacturer's literature and installation recommendations, and any special details necessary for the proposed application.

605.3 Materials

A. Soil Retention Blankets

All soil retention blankets must be listed on TxDOT Approved Products List or approved by the Engineer or designated representative.

The soil retention blanket shall be one (1) of the following classes and types as shown on the Drawings:

1. Class 1. "Slope Protection"
 - (a) Type A. Slopes 1:3 or flatter - Clay soils
 - (b) Type B. Slopes 1:3 or flatter - Sandy soils
 - (c) Type C Slopes steeper than 1:3 - Clay soils
 - (d) Type D Slopes steeper than 1:3 - Sandy soils
2. Class 1. "Flexible Channel Liner"
 - (a) Type E Short-term duration (Up to 2 years)
Shear Stress (t_d) < 1 pound per square foot [psf] (48 Pa)
 - (b) Type F Short-term duration (Up to 2 years)
Shear Stress (t_d) 1 to 2 psf (48 to 96 Pa)
 - (c) Type G Long-term duration (Longer than 2 years)
Shear Stress (t_d) >2 to <5 psf (>96 to <239 Pa)
 - (d) Type H Long-term duration (Longer than 2 years)
Shear Stress (t_d) 5 psf (239 Pa)

B. Fasteners

The fasteners shall conform to the recommendations of the manufacturer for the selected soil retention blanket.

605.4 Construction Methods

A. General

The soil retention blanket shall conform to the class and type shown on the Drawings. The Contractor has the option of selecting an approved soil retention blanket conforming to the class and type shown on the Drawings which is included on the Approved Products List published by TxDOT/TTI Hydraulics and Erosion Control Laboratory.

B. Site Preparation

Prior to placement of the soil retention blanket, the seedbed area to be covered shall be relatively free of all clods and rocks over 1 1/2 inches (37.5 mm) in maximum dimension and all sticks or other foreign matter that will prevent close contact of the blanket with the soil surface. The area shall be smooth and free of ruts and other depressions. If the prepared seedbed becomes crusted or eroded as a result of rain or if any eroded places, ruts or depressions exist for any reason, the Contractor shall be required to rework the soil until it is smooth and to reseed or resod the area at the Contractor's own expense. After the area has been properly prepared, the blanket shall be laid out flat, even and smooth, without stretching or crimping the material.

C. Installation

The Soil Retention Blanket, whether installed as slope protection or as flexible channel liner in accordance with the TxDOT/TTI Approved Products List, shall be placed within 24 hours after seeding (Standard Specification Item No. 604) or sodding (Standard Specification Item No. 602) erosion control operations have been completed, or as approved by the Engineer or designated representative. The soil retention blanket shall be installed and anchored in accordance with the Manufacturer's recommendations. The Contractor shall contact the Engineer or designated representative three (3) days prior to the installation of the soil retention blanket to allow for inspection of the installation by City of Round Rock personnel.

605.5 Measurement

This work and acceptable material for "Soil Retention Blanket" will be measured by the square yard (square meter: 1 square meter is equal to 1.196 square yards) of surface area covered, complete in place.

605.6 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 bid price for "Soil Retention Blanket" of the class shown on the Drawings or approved by the Engineer or designated representative. The unit price shall include full compensation for furnishing all

materials, labor, tools, equipment and incidentals necessary to complete the work. Anchors, checks, terminal and wire staples will not be paid for directly, but will be considered as subsidiary to this Item.

Payment will be made under the following:

Soil Retention Blanket Class ____; Type ____ - Per Square Yard.

End

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
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Specification 605, "SOIL RETENTION BLANKET"

City of Round Rock Standard Specification Items

<u>Designation</u>	<u>Description</u>
Item No. 602	Sodding for Erosion Control
Item No. 604	Seeding for Erosion Control

<u>RELATED</u> CROSS REFERENCE MATERIALS

Specification 605, "SOIL RETENTION BLANKET"

City of Round Rock Standard Specification Items

<u>Designation</u>	<u>Description</u>
Item No. 101	Preparing Right of Way
Item No. 102	Clearing and Grubbing
Item No. 111	Excavation
Item No. 120	Channel Excavation
Item No. 132	Embankment
Item No. 606	Fertilizer
Item No. 608	Planting
Item No. 610	Preservation of Trees and Other Vegetation

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 158	Specialized Excavation Work
Item No. 160	Furnishing and Placing Topsoil
Item No. 162	Sodding for Erosion Control
Item No. 164	Seeding for Erosion Control
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering
Item No. 169	Soil Retention Blanket
Item No. 204	Sprinkling

ITEM NO. RR 610
PRESERVATION OF TREES AND OTHER VEGETATION

610.1 - Description and Definitions

Description

This item shall govern the proper care, protection and treatment of trees and other vegetation within the construction area or, in the vicinity of the construction. All work shall be performed in accordance with the City approved drawings and specifications or as approved by the Engineer. Tree pruning and/or treatments shall be performed under the direct supervision of a qualified arborist (as defined below) or as allowed by the Engineer. The City of Round Rock Parks and Recreation Department, Forestry Division, Forestry Manager shall be consulted, in conjunction with the Engineer and Transportation Director for the performance of the Work when preservation of trees and other vegetation is required under the Contract.

Definitions

Forestry Manager - City official designated by the Parks and Recreation Department as the manager responsible for monitoring construction activities where trees and other vegetation are to be preserved, or otherwise impacted by construction activities. The Forestry Manager oversees the urban forestry program and all aspects of public tree planting, public tree care, and other duties provided in the City Ordinance.

Oak wilt - a tree disease caused by a fungus "Ceratocystis fagacearum" that infects the vascular system of Oak "genus Quercus" trees and prevents water transport through the trunk and canopy of the tree. This usually fatal tree disease can be spread by certain insects that come into contact with tree wounds or by interconnected tree roots. February through June is a high risk period due to the stage of the fungus and insect activity. See section 610.4(H) for additional requirements for preventing Oak wilt infection.

Certified Arborist/Qualified Arborist - an individual engaged in the profession of arboriculture or closely related field who, through experience, education, and related training, possesses the competence to provide for, or supervise, the management of trees and other woody plants (as defined in the most current version of ANSI A300 (Part 1)-2001, section 4.1).

Engineer – The Transportation Director for transportation projects, the City's Project Manager, the City's Forestry Manager, City's Inspector, Project Arborist/Landscape Architect, or other designated person, as determined by the City of Round Rock.

Protected Trees – Trees of all species that are at least eight (8) inches in diameter, except for Chinaberry, Hackberry, Ashe Juniper, Chinese Tallow, Horse Apple, and exceptions listed in the City Ordinance.

Protective Tree Fencing – a temporary enclosure erected around a tree to be protected at the boundary of the tree protection zone. The fence serves three primary functions 1) to keep the foliage crown, branch structure and trunk clear from direct contact and damage by equipment, materials or disturbances; 2) to preserve roots and soil in an intact and non-compacted state; and 3) to identify the tree protection zone in which no soil disturbance is permitted and activities are restricted.

Critical Root Zone (CRZ) – a radius equal in feet to the number of inches of the tree’s trunk diameter, with a minimum of eight (8) feet.

References

City of Round Rock, “Tree Technical Manual: Standards and Specifications”

City of Round Rock, Code of Ordinances, Chapter 43 - Tree Protection and Preservation.

610.2 - Submittals

The following is a list of the minimum submittal requirements for this specification item shall include:

- A. Identification of the location, type of protective fencing (i.e. A, B or C), materials of construction and installation details;
- B. Qualified Arborist credentials (i.e. proof of certification from the International Society of Arboriculture, licenses, resume and/or references);
- C. Type, location and construction details for proposed tree wells;
- D. Location, type, materials of construction and installation details for permeable paving;
- E. Proposed nutrient mix specifications and when required by the Engineer or Forestry Manager, soil and/or foliar analysis for fertilizer applications.

610.3 - Materials

- A. Protective Fencing and Signage

Protective fencing is designated as the materials used to protect the root zones of trees as illustrated in the plans and Standard Details. Three basic types of protective fencing materials are allowed by the City. Type A and Type B are typical applications and shall be installed where damage potential to a tree root system is high, while Type C shall be installed where damage potential is minimal. The specific type of protective fencing for the work shall be as indicated on the drawings. Type C fence materials shall be subject to approval by the Engineer or Forestry Manager. Type C fencing shall be replaced by Type A or Type B fencing as directed if it fails to perform the necessary function.

- 1. Type A Chain Link fence (Typical Application-high potential damage)

Type A protective fencing shall be installed in accordance with the Standard Details and shall consist of a minimum five-foot high chain link fencing with tubular steel support poles or "T" posts.

2. Type B Wood Fence (Typical Application-high potential damage)

Type B protective fencing shall be installed in accordance with the Standard Details and shall consist of any vertical planking attached to 2x4-inch horizontal stringers which are supported by 2x4-inch intermediate vertical supports and a 4x4-inch vertical support at every fourth vertical support .

3. Type C Other Materials (Limited Application-minimal potential damage)

The following materials may be permitted as alternates for limited or temporary applications (3 days or less) where tree damage potential is minimal (as determined by the Engineer):

(a) High visibility plastic construction fencing.

The fabric shall be 4 feet in width and made of high density polyethylene resin, extruded and stretched to provide a highly visible international orange, non-fading fence. The fabric shall remain flexible from -60°F to 200°F and shall be inert to most chemicals and acid. The fabric pattern may vary from diamond to circular with a minimum unit weight of 0.4 lbs./Ft..

The fabric shall have a 4 foot width minimum tensile yield strength (Horizontal) of 2000 psi, ultimate tensile strength of 2680 psi (Horizontal) and a maximum opening no greater than 2 inches.

(b) Other approved equivalent restraining material.

The fencing materials, identified in (a) and (b) above, shall be supported by steel pipe, tee posts, U posts or 2" x 4" timber posts that are a minimum of 5½ feet in height and spaced no more than 8 feet on centers. The fabric shall be secured to post by bands or wire ties.

4. Signage

A laminated sign, no smaller than 16 X 24 inches, shall be posted on each tree protective device, identifying the following information:

WARNING – CRITICAL ROOT ZONE – ENCROACHMENT MAY RESULT IN PERMANENT TREE DAMAGE RESULTING IN TREE REPLACEMENT .

B. Trunk Protection (Limited Application)

When indicated on the drawings or directed by the Engineer or Forestry Manager tree trunk protection shall be provided in accordance with Standard Details. Tree trunk protection shall consist of any 2 x 4-inch or 2 x 6-inch planking by 8 foot length and plastic strapping and shall be attached in a manner that does not damage the tree.

C. Tree Dressing

Wound treatments should not be used to cover wounds or pruning cuts, except when recommended for disease (see section 610.4 (H)), insect, mistletoe, or sprout control (from ANSI A300 (Part 1)-2001, section 5.4.1).

D. Tree Wells for Raised Grades

When existing grades are raised by more than six (6) inches, the tree root system shall be protected by the installation of tree wells in accordance with the plans and Standard Details. Native stone or non-toxic timber shall be used for the separator wall of the well and PVC conforming to ASTM D-2729, SDR-35 shall be used for the aeration systems in fill areas.

E. Permeable Paving

Permeable segmented pavers in conjunction with PVC pipe aeration system or concrete on gravel base with cored holes shall be used to protect existing tree root zones when indicated on the drawings or directed.

F. Fertilizer

Humate/nutrient solutions with mycorrhizae components or soil injection at recommended rates are to be used when appropriate. Construction which will be completed in less than 90 days may use materials at half the recommended rates. Alternative organic fertilizer materials are acceptable when approved by the Engineer.

610.4 - Construction Methods

Notify the Engineer a minimum of 24 hours in advance of any activity within the CRZ.

A. Protective Fencing

All trees and shrubs in the proximity of the construction site shall be carefully checked for damage prior to initiation of the construction project or permitted development activity.

All individual or groups of trees, shrubs, and natural areas shown to be protected on the drawings or identified to be protected by the Engineer, shall be protected during construction with temporary fencing as indicated on the drawings or as directed.

Protective fences (section 610.4.A) shall be installed prior to the start of any site preparation work (clearing, grubbing, or grading), and shall be maintained in functioning condition throughout all phases of the construction project. For Development projects, the fencing shall remain until a certificate of occupancy has been granted. Remove fencing only when approved by the Engineer.

Protective fence locations in close proximity to intersecting streets or drives shall adhere to the sight distance and sight triangle found in the City of Round Rock Transportation Criteria Manual.

1. Protective fences shall be constructed at the locations (typically the outer limits of the critical root zone) and with materials indicated on the drawings to prevent the following:
 - (a) Soil compaction in the root zone area resulting from vehicular traffic or storage of equipment or materials;
 - (b) Critical root zone disturbances due to grade changes [greater than 6" cut or fill] or trenching not reviewed and authorized by the Engineer;
 - (c) Damage to exposed roots, trunks or limbs by mechanical equipment; and,
 - (d) Other activities detrimental to trees such as chemical storage, concrete truck cleaning, and fires.
2. Exceptions to the installation of protective fences at the tree drip lines may be permitted in the following cases:
 - (a) Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development, the fence shall be erected no more than 2 feet beyond the area of disturbance unless approved by the Engineer;
 - (b) When permeable paving is to be installed within a tree's critical root zone, the fence shall be erected at the outer limits of the permeable paving area (prior to any site grading so that this enclosed area is graded separately to minimize root damage);
 - (c) When trees are located close to a proposed building or other construction activity, the fence shall be erected up to 10 feet to allow work space between the fence and the structure. Apply organic mulch to a depth of eight (8) inches in the unprotected root zone area;
 - (d) When there are street-side pedestrian walkways, fences shall be constructed in a manner that does not obstruct safe passage; and,
 - (e) When there are severe space constraints due to tract size or other special requirements, the Engineer will approve alternative placement locations of the protective fences.

When any of the exceptions listed above will result in a fence being located closer than five (5) feet to a tree trunk, the Contractor shall also protect the trunk with strapped-on planking to a height of 8 feet (or to the limits of lower branching) in addition to the fencing requirement.

B. Pruning and Repair of Damage

Tree pruning, to provide clearance for the work and/or to remove hazards, shall be performed under the direct supervision of a qualified arborist and shall follow standards identified in ANSI A300 (Part 1), "Pruning". A minimum clearance height of eight (8) feet above the street level must be provided and maintained for all existing trees if adjacent to a sidewalk. However, if the limbs of trees overhang the curb line or edge of travel lane of any street, a minimum clearance height of fourteen (14) feet is required. Pruning shall provide the minimum clearance needed

to perform the work or remove a hazard unless otherwise directed to comply with transportation criteria or to mitigate for damage.

If tree damage compromises a tree's structural integrity then the area shall be adequately secured until a qualified arborist makes an assessment of the tree and corrective actions are completed with approval from the Engineer. Damage to oak trees shall be treated immediately, with consideration for site safety, to reduce the risk of Oak Wilt infection (See 610.4.H, "Oak Wilt Prevention"). Tree root wounds shall be treated to remove loose, damaged tissue from in and around the wound or if necessary the root shall be cut cleanly and covered with topsoil, or other material approved by the Engineer, to prevent drying of root tissue and to create a favorable environment for root sprouting. Trunk wounds shall also be treated to remove loose, damaged tissue around the wound. Tree canopy repairs shall be performed in accordance with the most current version of ANSI A300 (Part 1), "Pruning", to prevent further damage to the tree and to promote recovery of the tree to sound condition. The ANSI standard describes proper pruning methods for limb removal and for making finish pruning cuts.

All trees damaged during construction shall receive an application of fertilizer within the drip line at the rate of 4 pounds per caliper inch.

C. Cutting and Filling Around Trees

When the depth of an excavation or embankment exceeds 6 inches within the critical root zone of any tree with a trunk diameter greater than 8 inches, a tree well shall be constructed to protect the tree as shown in the plans.

D. Paving Around Trees

Where new paving within the dripline of any tree greater than six (6) inches in diameter is necessary, a permeable pavement and aeration system must be installed as indicated in the plans, except for street construction.

E. Tree Removal

When a tree or shrub is scheduled for removal, cut to a depth of twelve (12) inches below the surrounding ground line. After removal, place soil to a depth matching the existing grade. An approved permit, or an approved site plan is required for removal of trees 8" and larger (see Code of Ordinances Sec. 43-21 and 43-24).

All trees to be removed shall be performed in a manner that does not damage the canopies, trunks or root systems of remaining trees and that protects all existing facilities, improvements and vegetation. Removal of oak trees shall follow the Oak Wilt Prevention procedures (Section 610.4.(H)). All tree material shall be removed from the site unless directed otherwise, or if it will be used as wood chips or mulch.

All damage resulting from tree removal or pruning shall be repaired at the Contractor's own expense and shall follow guidelines in this specification.

Removal of any other protected trees not scheduled for removal, or trees damaged beyond repair, shall be replaced in accordance with City Ordinance Section 43-25.

F. Final Cleanup

All temporary tree and shrub preservation and protection measures shall be removed when the construction has been completed and any mulch applications shall be removed or reduced to no more than three (3) inches depth.

G. Root Zone Aeration and Fertilization

As a component of an effective remedial tree care program, preserved trees within the limits of construction may require soil aeration and supplemental nutrients. Soil and/or foliar analysis should be used to determine the need for supplemental nutrients. The Engineer may require these analyses as part of a comprehensive tree care plan. Soil pH shall be considered when determining the fertilization composition as soil pH influences the tree's ability to uptake nutrients from the soil. If analyses indicate the need for supplemental nutrients, then humate/nutrient solutions with mycorrhizae components are highly recommended. In addition, soil analysis may be needed to determine if organic material or beneficial microorganisms are needed to improve soil health. Materials and methods are to be approved by the Engineer prior to application. The owner or general contractor shall select a fertilization contractor and ensure coordination with the Engineer.

Pre-construction treatment should be applied in the appropriate season; ideally the season preceding the proposed construction. Minimally, areas to be treated include the entire critical root zone of trees as depicted on the City approved plans. Treatment should include, but not be limited to, fertilization, aeration, soil treatment, mulching, and proper pruning.

Post-construction treatment should occur during final revegetation or as determined by a qualified arborist after construction. Construction activities often result in a reduction in soil macro and micro pores and an increase in soil bulk density. To ameliorate the degraded soil conditions, aeration via water and/or air injected into the soil is needed or by other methods as approved. The proposed nutrient mix specifications and soil and/or foliar analysis results need to be provided to and approved by the Engineer prior to application. Construction which will be completed in less than 90 days may use materials at ½ the recommended rates. Alternative organic fertilizer materials are acceptable when approved by the Engineer. Within seven (7) days after fertilization is performed, the contractor shall provide documentation of the work performed to the Engineer. This note should be referenced as item #1 in the Sequence of Construction.

H. Oak Wilt Prevention Policy

1. Purpose and Scope

The purpose of this Oak Wilt Prevention Policy is to identify measures that city staff and city-hired contractors and their sub-contractors, who perform the

services of removing or trimming trees, will take to prevent the spread of oak wilt.

2. Definitions

Oak Wilt Disease: A tree disease caused by the fungus, *Ceratocystis fagacearum*. The fungus infects the vascular system of a tree. The vascular system contains vessels which transport moisture throughout the tree. The vessels of an infected tree effectively become blocked by the infection of the fungus, and cannot transport adequate moisture to sustain a healthy or living tree. In most cases, the end result is tree mortality.

3. Prevention Policy

- (a) Prior to beginning field work, all city staff associated with projects involving potential contact with oak trees shall be made aware of this specification.
- (b) When possible, city staff and contractors should avoid trimming, pruning, or wounding Live Oaks and Red Oaks (Spanish, Shumard, Texas Red, and Blackjack oaks) from February through June.
- (c) At all times and irrespective of limb size, all cuts and wounds to oak trees shall be dressed immediately using a non-phytotoxic tree wound dressing. Stump cuts and damaged roots (both above and below ground) shall also be dressed.
- (d) Disinfection of pruning tools, saws, and related equipment is mandatory during the trimming or pruning of oak trees. Disinfection of tree removal and trimming equipment shall occur before work begins in a project area, between work in individual oak trees, and again prior to leaving a project area. Acceptable disinfectants include either aerosol disinfectant or a 10 percent bleach-water solution.

*NOTE: Although this policy would require the disinfection of pruning equipment before and between oak trees as a precaution, research does not substantiate disinfection as a means of preventing the transmission of the oak wilt disease.

4. Disposal Policy

- (a) Chipping or shredding the wood from infected trees to use as mulch is an acceptable means of recycling the wood. Chipping or shredding allows the wood to dry out quickly, thereby killing the fungus.
- (b) Burning diseased wood is an acceptable means of disposal. Burning diseased logs will kill the fungus, and the fungus will not spread with the smoke.
- (c) Logs from diseased Red Oaks, that are not chipped, shredded, or burned shall be disposed of at a landfill.
- (d) Firewood from diseased Red Oak trees shall not be stored near healthy trees where fungal spores or insects that carry the spores have the potential to spread the fungus to healthy trees. It is recommended to store

oak firewood under a sheet of clear plastic, tightly sealing the edges of plastic with soil or bricks. Doing so will prevent any spore carrying beetles from escaping and will solarize and heat the stored firewood to speed the drying process. It is also recommended to use clear plastic, as black plastic will reveal any escape holes to the beetles.

- (e) In situations where diseased Red Oak trees are identified and are not accessible for chipping, shredding, or removal, the trunk of the diseased tree should be girdled, and the stem treated with an appropriate herbicide to deaden the tree and hasten the desiccation and drying of the wood below the minimum moisture content that could support the development of fungal spores.

610.5 - Measurement

Tree and shrub pruning, fencing, drains, fertilization, etc. will not be measured for payment unless included as a contract pay item. Tree wells for tree protection will be measured by the units, complete in place, conforming to the Drawings and Standard Details.

Removal of existing trees will be measured per each tree.

610.6 - Payment

The work and materials prescribed herein with the exception of the Protective Fencing and Tree Well (Tree Protection) will not be paid for directly but shall be included in the unit price bid for the item of construction in which this activity is used, unless a payment item is included as a contract pay item.

Payment will be made under:

Protective Fencing Type A Chain Link Fence	Per Lineal Foot
Protective Fencing Type B Wood Fence	Per Lineal Foot
Protective Fencing Type C Other Materials	Per Lineal Foot
Tree Protection	Per Each
Tree Well (Tree Protection)	Per Each
Tree Removal (___" - ___" DIA)	Per Each

End

SPECIFIC CROSS REFERENCE MATERIALS

Specification 610, "Preservation of Trees and Other Vegetation"

City of Round Rock Standard Specifications

<u>Designation</u>	<u>Description</u>
RR 101	Preparing The Right of Way
RR 102	Clearing and Grubbing

Specification Item 102, "CLEARING AND GRUBBING"

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 160	Topsoil
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering

ITEM NO. 641
STABILIZED CONSTRUCTION ENTRANCE

641.1 Description

This item governs the construction of a stabilized pad of crushed stone located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or deposition of sediment onto public right of way or paved areas.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

641.2 Submittals

The submittal requirements for this specification item shall include:

- A. Source, type and gradation of rock
- B. Drainage technique (i.e. drainage swale or entrance grading) proposed to prevent runoff from exiting the construction site.

641.3 Materials

Aggregate for construction shall conform to the following gradation:

Table 1: Aggregate Gradation Chart (TEX 401-A, % Retained per sieve)	
US 5 inch (SI 125 mm)	US 2 inch (SI 50 mm)
0	100

641.4 Construction Methods

All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of in a manner that will not interfere with the excavation and construction of the entrance as indicated on the Drawings. The entrance shall not drain onto public right of way or shall not allow surface water runoff to exit the construction site.

When necessary, vehicle wheels shall be cleaned to remove sediment prior to entrance onto paved areas or public right of way. When vehicle washing is required, it shall be done on an area stabilized with crushed stone, which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch or watercourse through use of sand bags, gravel, boards, silt fence (Standard Specification Item No 642) or other methods approved by the Engineer or designated representative.

The entrance shall be maintained in a condition that will prevent tracking or disposition of sediment onto paved areas or public right of way. This restriction may require

periodic top dressing with additional stone as conditions demand, as well as the repair and/or cleanout of any measures used to trap sediment. All sediment that is spilled, dropped, washed or tracked onto paved areas or public right of way must be removed immediately.

641.5 Measurement

Acceptable work performed as prescribed in this item will be measured by unit of each stabilized construction entrance installed.

641.6 Payment

Work performed and materials furnished under this item shall be paid for at the unit bid price per each.

Payment, when included as a contract pay item, will be made under:

Stabilized Construction Entrance Per Each.

End

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
Specification 641, "STABILIZATION CONTRUCTION ENTRANCE (SCE)"

City of Round Rock Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 642	Silt Fence (SF)

<u>RELATED</u> CROSS REFERENCE MATERIALS
Specification 641, "STABILIZATION CONTRUCTION ENTRANCE (SCE)"

City of Round Rock Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 101	Preparing Right of Way
Item No. 102	Clearing and Grubbing
Item No. 111	Excavation
Item No. 120	Channel Excavation
Item No. 401	Structural Excavation and Backfill
Item No. 610	Preservation of Trees and Other Vegetation

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 158	Specialized Excavation Work
Item No. 168	Vegetative Watering

ITEM NO. 642
SILT FENCE

642.1 Description

This item shall govern the provision and placement of a filter fabric fence including maintenance of the fence, removal of accumulated silt and removal of the silt fence upon completion of the project.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

642.2 Submittals

The submittal requirements for this specification item shall include:

- A. Source, manufacturer, characteristics and test data for the filter fabric,
- B. Manufacturer, characteristics and test data for the posts and wire fence.

642.3 Materials

A. Fabric

1. General:

The filter fabric shall be of nonwoven polypropylene, polyethylene or polyamide thermoplastic fibers with non-raveling edges. The fabric shall be non-biodegradable, inert to most soil chemicals, ultraviolet resistant, unaffected by moisture or other weather conditions, and permeable to water while retaining sediment. The filter fabric shall be supplied in rolls a minimum of 36 inches (0.9 meter) wide.

2. Physical Requirements:

The fabric shall meet the requirements presented in Table 1, when sampled and tested in accordance with the methods indicated herein, and/or on the Drawings.

B. Posts:

Posts shall be painted or galvanized steel Tee or Y-posts with anchor plates, not less than 5 feet (1.5 meters) in length with a minimum weight of 1.3 pounds per foot (1.9 kilograms per meter) with a minimum Brinell Hardness of 143. Hangers shall be adequate to secure fence and fabric to posts. Posts and anchor plates shall conform to ASTM A-702.

C. Wire Fence:

Wire fence shall be welded wire fabric 2 x 4 - W1.0 x W1.0 (50 x 100 - MW7 x MW7) and shall conform to Standard Specification Item No. 406, "Reinforcing Steel".

TABLE 1. Filter Fabric Requirements		
Physical Properties	Method	Requirements
Fabric Weight in ounces per square yard (grams/square meter)	TEX-616-J ¹	4.5 minimum (150 minimum)
Water Flow Rate in gallons/sq. foot/ minute (liters/square meter/minute)	TEX-616-J ¹	40 maximum (1630 maximum)
Equivalent Sieve Opening Size: US Standard (SI Standard sieve size)	CW-02215 ²	40 to 100 (425 to 150 mm)
Mullen Burst Strength: lbs. per sq. inch (psi) megaPascal (mPa)	ASTM D-3786 ³	300 minimum (2 minimum)
Ultraviolet Resistance; % Strength Retention	ASTM D-1682 ⁴	70 minimum

¹ TxDoT Test Method Tex-616-J, "Testing of Construction Fabrics".

² US Army Corps of Engineers Civil Works Construction Guide Specification CW-02215, "Plastic Filter Fabric".

³ ASTM D-3786, "Test Method for Hydraulic Bursting Strength of Knitting Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method".

⁴ ASTM D-1682, "Test Methods for Breaking Load and Elongation of Textile Fabrics".

642.4 Construction Methods

The silt fence fabric shall be securely attached to the posts and the wire support fence with the bottom 12 inches (300 mm) of the filter material buried in a trench a minimum of 6 inches (150 mm) deep and 6 inches (150 mm) wide to prevent sediment from passing under the fence. When the silt fence is constructed on impervious material, a 12-inch (300-mm) flap of fabric shall be extended upstream from the bottom of the silt fence and weighted to limit particulate loss. No horizontal joints will be allowed in the filter fabric. Vertical joints shall be overlapped a minimum of 12 inches (300 mm) with the ends sewn or otherwise securely tied.

The silt fence shall be a minimum of 24 inches (0.6 meter) high. Posts shall be embedded a minimum of 12 inches (300 mm) in the ground, placed a maximum of 8 feet (2.4 meters) apart and set on a slight angle toward the anticipated runoff source. When directed by the Engineer or designated representative, posts shall be set at specified intervals to support concentrated loads.

The silt fence shall be repaired, replaced, and/or relocated when necessary or as directed by the Engineer or designated representative. Accumulated silt shall be

removed when it reaches a depth of 6 inches (150 mm), or lesser depth if the integrity of the silt fence has been jeopardized.

642.5 Measurement

The work performed and the materials furnished under this item will be measured by the lineal foot of "Silt Fence", complete in place.

642.6 Payment

The work performed and materials furnished and measured as provided under "Measurement" will be paid for at the unit bid price per lineal foot of "Silt Fence". The price shall include full compensation for furnishing, hauling and placing all materials, labor, tools, equipment and incidentals necessary to complete the work including inspecting, repairing, replacing and relocating the fence, removal of silt and removal and disposal of all materials at the completion of construction and re-vegetation of disturbed areas.

Payment will be made under:

Silt Fence for Erosion Control

Per Lineal Foot.

END

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
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Specification 642 "SILT FENCE"

City of Round Rock Technical Specifications

<u>Designation</u>	<u>Description</u>
Item No. 406	Reinforcing Steel

American Society For Testing and Materials (ASTM)

<u>Designation</u>	<u>Description</u>
A-702	Specification for Steel Fence Posts and Assemblies, Hot Wrought
D-1682	Test Methods for Breaking Load and Elongation of Textile Fabrics
D-3786	Test Method for Hydraulic Bursting Strength of Knitting Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method

Texas Department of Transportation Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-616-J	Testing of Construction Fabrics

U.S. Army Corps of Engineers

<u>Designation</u>	<u>Description</u>
CW-02215	Civil Works Construction Guide Specification "Plastic Filter Fabric"

RELATED CROSS REFERENCE MATERIALS

Specification 642 "SILT FENCE"

City of Round Rock Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 101	Preparing Right of Way
Item No. 102	Clearing and Grubbing
Item No. 111	Excavation
Item No. 120	Channel Excavation
Item No. 40	Structural Excavation and Backfill
Item No. 610	Preservation of Trees and Other Vegetation

ITEM NO. RR 700 MOBILIZATION

700.1 - Description

Establish and remove offices, plants, and facilities. Move personnel, equipment and supplies to and from the work site or vicinity of the work site to begin work or complete work on contract items. Bonds and insurance are required for performing mobilization.

700.2 - Measurement

This Item will be measured by the lump sum as the Work progresses.

Mobilization is calculated on the base bid only and will not be paid for separately on any additive alternate items added to the Contract.

700.3 - Payment

For this Item, the adjusted Contract amount will be calculated as the total Contract amount less the lump sum for mobilization.

Mobilization will be paid in partial payments as follows:

- Payment will be made upon presentation of a paid invoice for the payment bond, performance bond, and required insurance;
- Payment will be made upon verification of documented expenditures for necessary 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;
- 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;
- When 5% of the adjusted Contract amount for construction Items is earned, 100% 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;
- Payment for the remainder of the lump sum bid for "Mobilization", if any, will be made after all submittals and record drawings/as-builts are received, final quantities have been determined and when any separate vegetative establishment and maintenance, test, and performance periods provided for in the Contract have been successfully completed.

For projects with extended maintenance or performance periods, payment for the remainder of the lump sum bid for "Mobilization" will be made 6 months after final acceptance.

For Contracts with callout or emergency work, "Mobilization" will be paid as follows:

- Payment will be made upon presentation of a paid invoice for the payment of performance bonds and required insurance,

- Mobilization for callout work will be paid for each callout work request, and
- Mobilization for emergency work will be paid for each emergency work request.

Payment will be made under:

Mobilization - Per Lump Sum

End

ITEM NO. 1301S - GRANITE GRAVEL HIKE AND BIKE TRAIL

1301.01 - Description

This standard specification item shall govern furnishing and placing red granite gravel surfacing for hike and bike trails. The granite gravel surface shall be constructed in a single layer on an approved and properly prepared base course, conforming to typical sections and to the lines and grades indicated on the drawings or established by the engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text the inch-pound units are given preference followed by SI units shown within parentheses.

1301S.2 - Submittals

The submittal requirements of this specification item may include:

- (1) Sample of decomposed red granite gravel surface material along with source identification and gradation and plasticity test results for approval, quality assurance and color;
- (2) Sample of red road base material or approved equivalent along with source identification and gradation and plasticity test results for approval, quality assurance and color;
- (3) Optimum moisture-density characteristics for decomposed red granite gravel and red road base sources;
- (4) Proposed trail/path construction sequence and equipment; and
- (5) Field density test results for in-place compacted red granite gravel and red road base.

1301S.3 - Materials

The surface and base layer materials shall be tested by the city's designated laboratory and approved by the engineer or designated representative prior to being hauled to the project.

The decomposed red granite gravel and red road base materials or approved equivalent shall be tested according to the following TxDOT standard test methods:

1. Preparation for Soil Constants and Sieve Analysis	Tex-101-E
2. Moisture Content	Tex-103-E
3. Liquid Limit	Tex-104-E
4. Plastic Limit	Tex-105-E
5. Plasticity Index	Tex-106-E
6. Sieve Analysis	Tex-110-E
7. Laboratory Compaction	Tex-113-E

8. Field Density	Tex-115-E
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The surface layer material shall be from a source approved by the city and shall be composed of a mixture of Texas decomposed unwashed granite aggregate and red clay fines that meets the following requirements:

Sieve Designation		% Passing	
US	SI		
5/8"	19 mm	100	
#40	425µm	40 to 45	
# 200	75µm	15 to 25	
Plasticity Index			12 to 18

The red road base material or approved equivalent shall be from a source approved by the city and shall consist of a hematite, hydrated hematite or limonite "iron" ore, occurring with or without sand, as found at or near the ground surface, which, when loaded at from the material pit, shall not contain an excess of free clay. Material containing gravel or hard pieces of ore exceeding the maximum specified size in their largest dimension shall be broken up and uniformly mixed with the remainder of the material/.

When properly slaked and tested by TxDOT methods the red road base material or approved equivalent shall meet the following requirements.

Sieve Designation		% Passing	
US	SI		
1 1/4"	45 mm	100	
7/8"	22.5 mm	65 to 90	
#40	425 µm	15 to 50	
Liquid Limit			35 maximum

Plasticity Index		12 maximum
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1301S.4 - Construction

(1) General

Prior to commencement of this work, all required erosion controls and tree protection measures indicated on the Drawings shall be in place. All existing utilities shall be located and protected as specified in the Standard Contract Documents, Section 00700, "General Conditions" and/or as specified on the Drawings.

Areas within the construction limits shall be cleared of all obstructions, abandoned structures, and other items as defined above. All vegetation, except trees or shrubs indicated for preservation, shall also be removed. Trees and shrubs, which are scheduled for preservation, shall be carefully trimmed as directed by the engineer or designated representative and shall be protected from scarring, barking or other injuries during construction operations in accordance with Standard Specification Item No. 610S, "Preservation of Trees and Other Vegetation." All exposed cuts over 2 inches (50 millimeters) in diameter, exposed ends of pruned limbs or scarred bark shall be treated with an approved asphalt material within 24 hours of the pruning or injury.

Construction equipment shall not be operated nor construction materials stockpiled under the canopies of trees, unless otherwise indicated on the Drawings and/or specified in the Contract Documents. Excavation or embankment materials shall not be placed within the drip line of trees until tree wells are constructed.

(2) Subgrade Preparation

The subgrade shall be excavated and shaped in conformity with the typical sections shown on the drawings and to the lines and grades as established by the Engineer or designated representative. The subgrade shall be tested by "proof rolling" and shall conform to Standard Specification Item No. 236S, except that a 10-ton roller will be used prior to placement of the red road base material. Any unstable or spongy subgrade areas identified by proof rolling shall be corrected either by additional re-working, drying and compaction, or by removal and replacement of unsuitable materials.

If required the subgrade shall be wetted, reshaped and rolled to the extent directed in order to place the subgrade in an acceptable condition to receive the red road base material. The surface of the subgrade shall be finished true to line and grade as established by the Engineer or designated representative in conformity with the typical section shown on the drawings. Material excavated in the preparation of the subgrade shall be utilized in the construction of adjacent shoulders and slopes or otherwise disposed of as directed by the Engineer or designated representative. Additional material required for completion of the shoulders and slopes shall be secured from sources approved by the City of Austin.

(3) Red Road Base

The Contractor shall not place red road base or approved equivalent until the subgrade has cured to the satisfaction of the Engineer or designated representative, regardless of whether or not the subgrade has been successfully proof rolled. As a minimum, this will be when the surface displays no damp spots and there is no evidence of "sponginess" in the subgrade.

The base material shall be delivered in approved vehicles of uniform capacity and it shall be the responsibility of the Contractor to deliver at each 100-foot (30-meter) station the required amount of specified material to yield the compacted thickness shown on the drawings. Material deposited upon the subgrade shall be spread and shaped the same day unless directed otherwise by the Engineer in writing. All areas and "nests" of segregated coarse or fine material shall be corrected or removed and replaced with well-graded material.

In the event inclement weather or other unforeseen circumstances render impractical the spreading of the base material during the first 24-hour period, it shall be scarified and spread as early as possible as directed by the Engineer or designated representative. If it becomes evident that insufficient material was placed, additional material as necessary shall be delivered and the entire course scarified, mixed and compacted.

The base layer shall be sprinkled as required to bring the material to optimum moisture content, then compacted in accordance with Standard Specification Item No. 210S, "Flexible Base" to the extent necessary to provide not less than 90% of the optimum density. In no case shall the material be worked at more than 2 percent above or below optimum moisture as determined by TxDOT Test Method Tex-113-E. Field density determinations shall be made in accordance with TxDOT Test Method Tex-115-E. In addition to the requirements specified for density, the full depth of base material shall be compacted to the extent necessary to remain firm and stable under construction equipment.

After each section of flexible base material is completed, tests, as necessary, will be made by the Engineer or designated representative. As a minimum, three in-place density tests per section. If the material fails to meet the density requirements, it shall be reworked as necessary to meet these requirements. All initial testing will be paid for by the city. All retesting shall be paid for by the Contractor. Throughout the entire operation, the surface of the material shall be maintained by blading and, upon completion, shall be smooth and shall conform to the typical section indicated on the Drawings and to the established lines and grades.

If the base material, due to any reason or cause, loses the required stability, density or finish before placement of the red granite gravel surface layer, it shall be recompacted and refinished at the Contractor's expense.

(4) Red Granite Gravel Surface

Construction methods for the succeeding red granite gravel layer shall be the same as prescribed for the red road base layer with the exception of the compaction requirements. The surface layer shall be sprinkled as required to bring the material to optimum moisture content, then compacted in accordance with Standard Specification Item No. 210S, "Flexible Base" to the extent necessary to provide not less than 92% of the optimum density. In no case shall the material be worked at more than 2% above or below optimum moisture.

When the thickness of a particular lift of the flexible base is in question, the Contractor shall check the surface of for conformity to the lines and grades by setting "blue tops" at intervals not exceeding 50 feet (15 meters) on the centerline, the edge of the trail/path, and at other points that may be indicated on the Drawings

If the base material and/or surface layer due to any reason or cause, loses the required stability, density or finish prior to acceptance of the project, the base layer and/or surface layer shall be recompacted and refinished at the Contractor's expense.

1301S.5 - Measurement

"Granite Gravel Hike and Bike Trail" will be measured by the cubic yard (cubic meter: 1 cubic meter equals 1.196 cubic yards), complete in place, as indicated in the Contract Documents.

1301S.6 - Payment

This item will be paid for at the contract unit bid price for "Granite Gravel Hike and Bike Trail." The unit bid price shall include full compensation for all work specified herein, including the protection of existing trees, property and public right-of-way, traffic control measures, the furnishing, hauling, placing and compacting of all materials; for rolling, proof rolling, recompacting and refinishing; for all water required; for retesting as necessary; and for all equipment, tools, labor and incidentals necessary to complete the Work.

Payment will be made under the following:

Pay Item No. 1301S-A:	Granite Gravel Hike and Bike Trail	Per Cubic Yard.
Pay Item No. 1301S-B:	Granite Gravel Hike and Bike Trail	Per Square Yard.

End

**SPECIAL SPECIFICATION SS 1000
PEDESTRIAN BRIDGE**

1000.1 DESCRIPTION

This item governs the construction of a pedestrian bridge structure, complete in place as provided by Austin Deck Company or approved equal. Bridge structure, piers, abutments and all other items related to bridge design shall be designed and signed/sealed by a Professional Engineer. Bridge shall meet the general horizontal and vertical layout described in the construction plan. Manufacturer shall provide minimum 3 year warranty on workmanship.

1000.2 ENGINEERING

The following information will be submitted by the contractor:

- A. Geotechnical:
Minimum 2 geotechnical borings (1 for each side of the spillway, at a depth suitable for the design of the structure) shall be obtained, analyzed, signed and sealed by a licensed Professional Geotechnical Engineer in the State of Texas.
- B. Structural:
Provide structural design plans and shop drawings for the bridge (including abutments, piers and bridge decks) signed and sealed by a licensed Professional Engineer in the State of Texas.

1000.3 MATERIALS

Construction materials used for the pedestrian bridge shall be of the type detailed on Detail 4: Typical Bridge Section shown on the Landscape Details sheet in the plans, or approved equals. Wood treatments and other miscellaneous items are also noted in the notes for Detail 4.

1000.4 SUBMITTAL/APPROVAL

Contractor shall submit shop drawings for approval by Engineer and MUD Staff prior to manufacture/construction of structure.

1000.4 MEASUREMENT

Pedestrian Bridge, satisfactorily completed in accordance with the plans and specifications, will be measured by lump sum, complete in place.

1000.5 PAYMENT

Payment for Pedestrian Bridge as shown in plans and in accordance with these specifications and measured as prescribed above will be made at the unit bid price per bridge.

Pay Item No. SS1000	Pedestrian Bridge	Lump Sum
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EXHIBIT F
WPAP EXCEPTION REQUEST

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 3, 2021

Mr. Shean Dalton
Brushy Creek Municipal Utility District
16318 S Great Oaks Dr.
Round Rock, TX 78681

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Southern Cross Pond at Highland Horizon Trail; Located at Navigator Dr. and Southern Cross Dr.; Round Rock, Texas

TYPE OF PLAN: Request for an Exception to the Requirements of a Water Pollution Abatement Plan (WPAP-EXP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002554; Regulated Entity No. RN105093744

Dear Mr. Dalton:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP-EXP application for the above-referenced project submitted to the Austin Regional Office by Halff Associates, Inc. on behalf of Brushy Creek Municipal Utility District on June 16, 2021. Final review of the WPAP-EXP was completed after additional material was received on September 1, 2021. As presented to the TCEQ, the Exception Request proposed in the submittal is in general compliance with the requirements of 30 TAC Chapter 213. Therefore, the request for exception is hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

On September 11, 2007 a WPAP approval letter was issued for Highland Horizon Phase I Subdivision Improvements (EAPP ID: 11-06102402B). The approval was for the construction of 204 homes with associated street, utilities, and drainage improvements on 94.5 acres.

PROJECT DESCRIPTION

The proposed exception will have an area of approximately 4.7 acres. It will include 1,034 linear feet of a six-foot-wide trail with associated seating and a pedestrian bridge. The impervious cover will be 0.19 acre (4.04 percent). No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

This project will not result in a significant increase in the potential for pollution of the Edwards Aquifer based on the minor increase in impervious cover. In addition, water quality protection is provided for the newly paved areas by natural vegetation. The site is within the Recharge Zone.

GEOLOGY

According to the geologic assessment included with the application, the surficial geological unit underlying the site is the Edwards Formation. The TCEQ site assessment that was conducted on August 13, 2021 revealed the site to be generally as described by the geologic assessment.

Natural buffers were proposed for three natural sensitive geologic features. No regulated activities (such as construction or soil disturbing activities) will take place within the natural buffers.

Identification No.	Name	Buffer Description
HH1	Scoot Over Cave	50-foot radius from the interior footprint of the cave
HH2	Sinkhole	50-foot radius
HH3	Leachate Cave	50-foot radius from the interior footprint of the cave

EQUIVALENT WATER QUALITY PROTECTION

The applicant requests an exception to submitting an Edwards Aquifer protection plan or modification required by 30 TAC 213.5. However, the applicant proposes an exception under 30 TAC 213.9. The proposed development demonstrates equivalent water quality protection for the Edwards Aquifer.

SPECIAL CONDITIONS

- I. This exception is subject to all Special and Standard Conditions listed in the WPAP approval letter (EAPP ID 11-06102402B) dated September 11, 2007.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.

3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved Exception is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced Exception application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Exception, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the <Austin/San Antonio> Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
19. An Edwards Aquifer protection plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

Mr. Shean Dalton
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September 3, 2021

20. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ryan Soutter of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,



Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/rts

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Andrew Dutton, P.E.

The full WPAP Exception Request will be available for download at www.civcast.com, Project ID "Southern Cross Pond at Highland Horizon".