



B R O W N S V I L L E
PUBLIC UTILITIES BOARD

Date: October 17, 2023
To: All Vendors
Subject: Addendum #1

REFERENCE: P001-24 Downtown Wastewater Improvements-ARPA Project 1

This Addendum forms part of the contract and clarifies, corrects or modifies original proposal document.

See attached changes to contract documents.

The signature of the company agent, for the acknowledgement of this addendum, shall be required. **Complete information below and return via e-mail to: dsolitaire@brownsville-pub.com.**

I hereby acknowledge receipt of this addendum.

Company: _____

Agent Name: _____

Agent Signature: _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone Number: _____ **E-mail address:** _____

If you have any further questions about the Bid, call 956-983-6366.

BY: *Diane Solitaire*
Purchasing



12500 San Pedro, STE. 450
 San Antonio, TX 78216
 TBPE Registration Number: F-1741

Project Addendum No.1

Project:	Brownsville PUB – Downtown Wastewater Improvements ARPA Project 1 BPUB Bid No. B001-24	Addendum Date:	October 17, 2023
From:	Javier A. Esquivel, PE	Project No.:	BPUB2200025.01

ADDENDUM No. 1

RESONSES TO QUESTIONS

No questions were received with this Addendum.

CHANGES TO CONTRACT DOCUMENTS

1. Bid Due Date: Bid due date was modified from October 18, 2023 to October 20, 2023. All bids are due to the PUB Purchasing Department office by 2:00 PM October 20, 2023.
2. Bid Form: Delete entire bid form and replace with attached bid form. Six (6) new bid items have been added. Bid items have been renumbered accordingly. See the table below for additional bid items:

ITEM NO.	SPEC NO.	DESCRIPTION	UNIT	QTY
18	32 11 26	GEOGRID (TYPE I)	SY	1987
57	33 31 50	REMOVAL OF SANITARY SEWER MANHOLES	EA	16
58	33 40 00	REMOVAL OF STORM SEWER PIPING (15" DIA. AND LESS)	LF	64
59	33 40 00	REMOVAL OF STORM SEWER PIPING (GREATER THAN 15" DIA.)	LF	462
60	33 40 00	REMOVAL OF GRATE INLETS (APPROX. 4' X 6')	EA	2
61	33 40 00	REMOVAL OF GRATE INLETS (APPROX. 1' X 2')	EA	4

3. Table of Contents: The Table of Contents has been updated to reflect Specification 33 31 50 – Removal and Abandonment of Sanitary Sewer Mains and Manholes/Structures. All other parts of the Table of Contents remain the same.
4. Legal Notice and Invitation to Bid: Update document to reflect new bid due date of October 20, 2023. Corresponding times shall remain unchanged. See attached for updated Legal Notice and Invitation to Bid.
5. Special Instructions: Update all dates in the Special Instructions (page 4) document to reflect new bid due date of October 20, 2023. See attached for updated Special Instructions.
6. Bid Schedule: Update bid due date to October 20, 2023. Update language on page 30 to read "TOTAL AMOUNT OF BID (ITEMS 1 – 74)". See attached for updated Bid Schedule.

7. Special Conditions: Add **SC-10 Allowance Items** to the end of the Special Conditions. All other special conditions shall remain the same. SC-10 Allowance Items to read:
 - **SC-10 Allowance Items:** This Project includes allowances for repairs and/or relocations to existing utility crossings and disposal of contaminated water/soil during construction that are not directly called out in the plans. The assumptions and corresponding budget shown on bid form made when determining allowance items are presented below. Anticipated crossings are based on GIS/Record information and should be verified by the CONTRACTOR prior to excavation.
 - Contaminated Soil/Water Disposal: Allowance is based on estimated 44 CY and 1000 GAL quantities of disposal.
 - Power Pole Bracing: Allowance is based on 82 power poles that require bracing during construction.
 - Relocation and Repair of Existing Water Main: Allowance is based on 16 (various diameter & depth) water main crossings.
 - Relocation and Repair of Existing Fiber Optic: Allowance is based on 24 (various diameter & depth) fiber optic and communications cable crossings.
 - Relocation and Repair of Existing Gas: Allowance is based on 34 (various diameter & depth) gas line crossings (both mains and service laterals).

8. Specification 01 01 50 – Sequence of Construction: Make the following edits to Specification 01 01 50.
 - Modify section 3.02 (A) of Sequence of Construction to read:
 - A. CONTRACTOR is to develop a detailed sequence for discussion with OWNER prior to beginning construction. CONTRACTOR can submit an alternate construction sequence for OWNER's review and acceptance. Some construction activities may be conducted concurrently. Completion dates of the various stages shall be in accordance with the accepted construction schedule submitted by the CONTRACTOR.
 - Add the following to the end of section 3.02 (B)
 - a. Required contract completion date is December 31, 2024.

9. Specification 01 10 00 – Summary of Work: Modify section 1.07 (I) of Summary of Work to read:
 - Applicable Codes are designated within the technical specifications.

10. Specification 01 15 00 – Measurement and Payments: Make the following modifications to Specification 01 15 00.
 - Remove section 1.06 Schedule of Estimated Progress Payments in its entirety.
 - Remove section 1.07 (I) in its entirety.
 - Modify Part 2 Base Bid Items to read the following:
 - 2.01 ITEM NO. 68 – Contaminated Soil/Water Disposal
 - a. Description – The Contractor shall provide all labor, supervision, tools, equipment, materials, and disposal fees necessary to remove and properly dispose of any contaminated soils or groundwater encountered during construction. No contract days will be added due to delays.
 - b. Payment – Payment for this item will be made by the CY for contaminated soils and GAL for contaminated water encountered during construction. Payment for these items will be made utilizing the allowances included in the bid.

- 2.02 Item No. 69 - Power Pole Bracing
 - a. Description – The Contractor shall coordinate with utility company and provide all labor, supervision, tools, equipment, and materials necessary to brace and /or relocate power poles as required to complete work. No contract days will be added due to delays.
 - b. Payment – Payment for this item will be made under the allowance included in the bid.
- 2.03 Item No. 70 - Relocation and Repair of Existing Water Main
 - a. Description – Waterline crossings are expected throughout this project. The CONTRACTOR is responsible for protecting existing waterlines during construction. Should the existing waterline require relocation or repair for the construction of the proposed sanitary sewer line, the CONTRACTOR shall coordinate with BPUB and provide all labor, supervision, tools, equipment, and materials necessary to relocate water lines as required to complete work. This item includes all work associated with, including but not limited to, trenching, bedding and backfill, removal of existing utility, disposal of existing utility, relocation of existing utility, connections to existing infrastructure, testing, and all required surface restoration. No contract days will be added due to delays
 - b. Payment – Payment for this item will be made under the allowance included in the bid.
- 2.04 Item No. 71 - Relocation and Repair of Existing Fiber Optic
 - a. Description – Telecommunication crossings are expected throughout this project. The CONTRACTOR is responsible for protecting existing utilities during construction. Should the existing line require relocation or repair for the construction of the proposed sanitary sewer line, the CONTRACTOR shall coordinate with the appropriate utility owner and provide all labor, supervision, tools, equipment, and materials necessary to relocate all diameters and all depths of the existing utility as required to complete work. This includes all work associated with, including but not limited to, trenching, bedding and backfill, removal of existing utility, disposal of existing utility, relocation of existing utility, connections to existing infrastructure, testing, and all required surface restoration. No contract days will be added due to delays
 - b. Payment – Payment for this item will be made under the allowance included in the bid.
- 2.05 Item No. 72 - Relocation and Repair of Existing Gas
 - a. Description – Gas line crossings are expected throughout this project. The CONTRACTOR is responsible for protecting existing utilities during construction. Should the existing line require relocation or repair for the construction of the proposed sanitary sewer line, the CONTRACTOR shall coordinate with the appropriate utility owner and provide all labor, supervision, tools, equipment, and materials necessary to relocate all diameters and all depths of the existing utility as required to complete work. This includes all work associated with, including but not limited to, trenching, bedding and backfill, removal of existing utility, disposal of existing utility, relocation of existing utility, connections to existing infrastructure, testing, and all required surface restoration. No contract days will be added due to delays
 - b. Payment – Payment for this item will be made under the allowance included in the bid.

11. Specification 01 33 00 – Submittal Procedure: Make the following edits to Specification 01 33 00.
 - Modify section 1.02 (G) of Submittal Procedures to read:
 - G. For each submittal review, allow 15 business days excluding delivery time to and from Contractor.
 - Remove section 1.15 Erection Drawings in its entirety,
12. Specification 01 35 13.43 – Special Procedures for Contaminated Sites: Modify section 1.02 (A) (2) of Special Procedures for Contaminated Sites to read:
 - 2. RG-022 – Texas Commission of Environmental Quality. Classifying and Coding of Industrial and Hazardous Waste. Austin, TX.
13. Specification 01 50 00 – Temporary Facilities and Controls: Remove section 1.14 Enclosures and Fencing in its entirety. Remove section 1.15 (C) Personnel Identification in its entirety.
14. Specification 04 41 10 – Dry-Placed Bricks: Make the following modifications to Specification 04 41 00.
 - Modify section 1.03 (B) (1) of Dry-Placed Bricks to read:
 - 1. Installation of Brick Pavers (Salvage, Reuse, and Replacement of Existing Pavers) – per square yard.
 - Update bid form line item 10 to read the following:
 - “Installation of Brick Pavers (Salvage, Reuse, and Replacement of Existing Pavers”
15. Specification 32 11 26 – Asphaltic Base Course: Modify section 1.06 of Asphaltic Base Course to read:
 - A. MEASUREMENT:

Flexible base will be measured by the square yard method per thickness shown in the plans.

Geogrid will be measured by the square yard for pavement restoration in the alleyways.

The quantity to be paid for is the quantity shown in the proposal unless modified by the Engineer. Additional measurements or calculations will be made if adjustments of quantities are required.

Measurement is further defined for payment by the square yard of surface area in the completed and accepted final position. The surface area of the base course is based on the width of flexible base as shown on the plans.
 - B. PAYMENT: The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for the types of work shown below. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans for square yard measurement.

Sprinkling and rolling will not be paid for directly but will be subsidiary to this Item unless otherwise shown on the plans.

Where subgrade is constructed under this Contract (Subgrade Treatment), correction of soft spots in the subgrade will be at the Contractor’s expense. Where subgrade is not constructed under this project, correction of soft spots in the subgrade will be paid in accordance with pertinent Items.

Payment for flexible base will be made for the type and grade specified. For square yard measurement, a depth will be specified. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, spreading, blading, mixing, shaping, placing, compacting, reworking, finishing, correcting locations where thickness is deficient, curing, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals.

Payment for geogrid will be made for the type and grade specified. For the square yard measurement. This price is full compensation for furnishing materials, temporary stockpiling, loading, hauling, delivery of materials, placing, and labor for measuring, and equipment, labor, tools, and incidentals.

All other sections of Specification 32 11 26 shall remain the same.

16. Specification 32 12 16 – Asphalt Paving: Modify section 1.07 (B) (1) of Asphalt Paving to read:

- 1. Hot Mix Asphaltic Pavement Type _____ - per square yard ____” thickness.

All other sections of Specification 32 12 16 shall remain the same.

17. Specification 32 16 33 – Driveways: Modify sections 1.04 (B) (1&2) of Driveways to read:

- 1. Concrete Driveway – per square yard
- 2. Concrete Driveway – Commercial – per square yard

All other sections of Specification 32 16 33 shall remain the same.

18. Specification 33 31 50 – Abandonment of Sanitary Sewer Mains and Manholes/Structures: Replace specification with 33 31 50 – Removal and Abandonment of Sanitary Sewer Mains and Manholes/Structures (attached to this addendum).

19. Specification 33 40 00 – Stormwater Utilities: Make the following modifications to Specification 33 40 00.

- Modify section 1.01 (A) to read:
 - A. Furnish all labor materials, equipment and incidentals required to remove, install, test, complete and ready for operation all storm drainage systems as shown on the Drawings and as specified herein.
- Modify section 1.06 to read:
 - A. All storm drainage system, including manholes, junction boxes, and inlet structures satisfactorily completed in accordance with the plans and specifications will be measured and paid for based on the unit price each.
 - B. Storm sewer piping will be measured by the linear foot. Measurement of spurs, branches, or new connecting pipe will be made from the intersection of the flow line with the outside surface of the pipe into which it connects. Where inlets, headwalls, catch basins, manholes, junction chambers, or other structures are included in lines of pipe, the length of pipe tying into the structure wall will be included for measurement, but no other portion of the structure length or width will be included. For multiple pipes, the measured length will be the sum of the lengths of the barrels
 - C. Removal of storm sewer piping will be measured and paid for by the linear foot. These prices are full compensation for all work and materials associated with removal of existing storm sewer pipe for the sizes specified, including hauling and disposing.
 - D. These prices are full compensation for concrete, reinforcing steel, brick, mortar, aluminum and cast iron castings, frames, grates, rings and covers, excavation, and backfill and for all other materials, tools, equipment, labor, and incidentals. The work performed and materials furnished in accordance with this specification will be paid for as follows:

1. Complete Inlets. Payment for inlets will be made at the unit price bid for "Inlet (Complete)," of the type specified.
 - a. Inlet (Complete) 4' x 6' - per each
 - b. Inlet (Complete) 1' x 2' - per each
2. Reinforced Concrete Pipe. The work performed and materials furnished in accordance with this item and provided will be paid for at the unit price bid for "Reinforced Concrete Pipe," "Reinforced Concrete Pipe (Arch)," or "Reinforced Concrete Pipe (Elliptical)" of the size and D-load specified or of the size and class specified. This price is full compensation for constructing, furnishing, transporting, placing, and joining pipes; shaping the bed; cutting pipes on skew or slope; connecting to new or existing structures; breaking back, replacing portions of the existing structure; cutting pipe ends on skew or slope; and equipment, labor, tools, and incidentals.
 - a. Reinforced Concrete Pipe – per linear foot (Class IV) (varying dia.)

CHANGES TO PLANS

No changes were made to the plans with this Addendum.

END OF ADDENDUM

This Addendum is one hundred-seven (107) pages in its entirety including attachments.

Attachments:

Pre-Bid Meeting Notes, 2 page

Bid Form, 2 pages

Table of Contents, 4 pages

Legal Notice and Invitation to Bid, 2 pages

Special Instructions, 24 pages

Bid Schedule, 4 pages

Special Conditions, 2 pages

Specification 01 01 50 – Sequence of Construction, 3 pages

Specification 01 10 00 – Summary of Work, 5 pages

Specification 01 15 00 – Measurement and Payments, 5 pages

Specification 01 33 00 – Submittal Procedure, 6 pages

Specification 01 35 13.43 – Special Procedures for Contaminated Sites, 8 pages

Specification 01 50 00 – Temporary Facilities and Controls, 6 pages

Specification 04 41 10 – Dry-Placed Bricks, 1 page

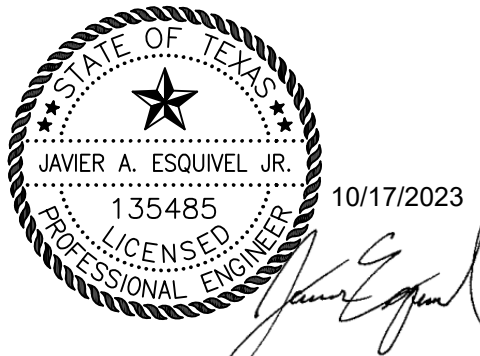
Specification 32 11 26 – Asphaltic Base Course, 5 pages

Specification 32 12 16 – Asphalt Paving, 7 pages

Specification 32 16 33 – Driveways, 4 pages

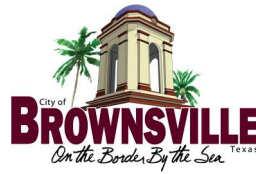
Specification 33 31 50 – Removal and Abandonment of Sanitary Sewer Mains and Manholes/Structures, 3 pages

Specification 33 40 00 – Stormwater Utilities, 7 pages



STV, INC.

Texas Registration No. F-1741
12500 San Pedro Avenue Suite 450
San Antonio, Texas 78258



**City of Brownsville/ Brownsville Public Utilities Board
ARPA Project 1
Downtown Water and Wastewater Improvements
Non-Mandatory Pre-Bid Meeting**

Meeting Location: Call in Number
Meeting Date: October 10, 2023
Time: 10:00 am

Meeting Notes

1. Meeting Attendees

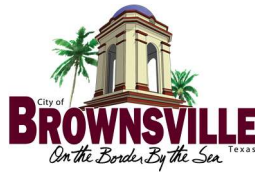
- Brownsville PUB – Michael Anzaldua & Hugo Lopez
- Halff – Anne Whitko & Mario Lopez
- City of Brownsville– Carlos Lastra
- STV – Luis Cuellar & Koy Dieckow
- Contractor
 - Mark Marroquin – Jimmy Closner & Sons Construction
 - Roberto Munoz – Reiner Construction

2. Project Overview

STV provided a brief overview of the project. This project consists of approximately 5,500 LF of 12-inch SDR-26 PVC wastewater mains along various alleys between E. Elizabeth and E. St. Francis. These improvements will consist of removal and replacement of the existing wastewater lines, connections to the existing infrastructure, installation of manholes, connections to existing service laterals, and pavement surface restoration. In areas of waterline crossings pressure rated PVC will be required.

An overview of the special/unique items was then presented:

- Contractor will be responsible for developing and implementing their own traffic control plan during construction.
- Contractor to be aware that work is to occur in public ROW/easements. Work corridors along project are narrow and bordered by structures. STV encourages all Contractors to complete site visits to view work conditions prior to submitting a bid.



- Archeological monitoring will be required. This will be managed and paid for by the Owner. If any items with historical significance is found then work must stop in the area of findings. Work may continue along other areas of the project if any findings occur. The duration of archeological monitoring will be determined based on findings.
- Contractor to be aware that project corridors are utilized by several other utilities in the area. Refer to contract documents for potential conflicts/utility locations.
- Contractor to be aware that project corridor contains overhead electric. Due to the depths of the proposed improvements it is anticipated that power poles will require bracing. An allowance is included for bracing cost.
- Brick pavers are present along segments of the project area. Removal and replacement of in-kind brick pavers is required.
- Discussed what material is required for pipe bedding and backfill (sand, gravel, etc.) and what standards must the material conform to. Contractors are to submit questions in for formal response to be issued via addendum 1.
- Discussed the Engineers Opinion of Probable Cost. City and BPUB agreed with sharing OPCC estimate. Engineers estimate was \$5,287,000.00

PRICE PROPOSAL LINE ITEMS

ITEM NO.	SPEC NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	01 56 10	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	12	\$ _____	\$ _____
2	02 41 13.13	REMOVE CONCRETE PAVING (INCL. SAW CUTTING)	SY	286	\$ _____	\$ _____
3	02 41 13.13	REMOVE ASPHALT PAVING (INCL. SAW CUTTING)	SY	1753	\$ _____	\$ _____
4	02 41 13.13	SURFACE MILLING (2")	SY	6578	\$ _____	\$ _____
5	3 41 13.13	SURFACE MILLING (3")	SY	2267	\$ _____	\$ _____
6	02 41 13.13	REMOVE BRICK PAVING	SY	400	\$ _____	\$ _____
7	02 45 00	REMOVE CONCRETE CURB & GUTTER (INCL. SAW CUTTING)	LF	753	\$ _____	\$ _____
8	02 45 00	REMOVE CONCRETE SIDEWALKS AND DRIVEWAYS (INCL. SAW CUTTING)	SY	149	\$ _____	\$ _____
9	03 30 10	CONCRETE JOINING COLLARS	EA	23	\$ _____	\$ _____
10	04 41 10	INSTALLATION OF BRICK PAVERS (SALVAGE, REUSE, AND REPLACEMENT OF EXISTING PAVERS)	SY	400	\$ _____	\$ _____
11	31 23 19	TRENCH DEWATERING	LF	4394	\$ _____	\$ _____
12	31 23 23.33	FLOWABLE FILL (LOW STRENGTH)	CY	1291	\$ _____	\$ _____
13	31 25 00	TEMPORARY EROSION, SEDIMENTATION AND WATER POLLUTION PREVENTION AND CONTROL (SWPPP)	MO	12	\$ _____	\$ _____
14	31 41 33	TRENCH EXCAVATION SAFETY PROTECTION	LF	4394	\$ _____	\$ _____
15	32 11 13.13	LIME TREATED SUBGRADE (12" COMPACTED DEPTH)	SY	286	\$ _____	\$ _____
16	32 11 26	ASPHALTIC BASE COURSE (10" COMPACTED DEPTH)	SY	1425	\$ _____	\$ _____
17	32 11 26	ASPHALTIC BASE COURSE (12" COMPACTED DEPTH)	SY	329	\$ _____	\$ _____
18	32 11 26	GEOGRID (TYPE I)	SY	1987	\$ _____	\$ _____
19	32 12 16	HOT MIX ASPHALTIC CONCRETE PAVEMENT, TYPE D (2" COMPACTED DEPTH)	SY	6578	\$ _____	\$ _____
20	32 12 16	HOT MIX ASPHALTIC CONCRETE PAVEMENT, TYPE D (3" COMPACTED DEPTH)	SY	2267	\$ _____	\$ _____
21	32 12 16.01	PRIME COAT	GAL	454	\$ _____	\$ _____
22	32 12 16.02	TACK COAT	GAL	114	\$ _____	\$ _____
23	32 12 16.16	4" WIDE WHITE LINE	LF	60	\$ _____	\$ _____
24	32 12 16.16	8" WIDE WHITE LINE	LF	640	\$ _____	\$ _____
25	32 12 16.16	STRAIGHT WHITE ARROW	EA	3	\$ _____	\$ _____
26	32 12 16.16	RIGHT WHITE ARROW	EA	1	\$ _____	\$ _____
27	32 13 13	CONCRETE PAVEMENT (8" DEPTH)	SY	286	\$ _____	\$ _____
28	32 13 13.10	CONCRETE CURB AND GUTTER	LF	753	\$ _____	\$ _____
29	32 13 13.10	CONCRETE SIDEWALK - CONVENTIONALLY FORMED (4" THICKNESS)	SY	10	\$ _____	\$ _____
30	32 16 33	CONCRETE DRIVEWAY (4" THICKNESS)	SY	27	\$ _____	\$ _____
31	32 31 13	CHAIN LINK WIRE FENCE (4' HIGH)	LF	20	\$ _____	\$ _____
32	32 31 13	CHAIN LINK WIRE FENCE (6' HIGH)	LF	30	\$ _____	\$ _____
33	33 21 20	SANITARY SEWER LATERALS (ONE-WAY CLEAN-OUT)	EA	162	\$ _____	\$ _____
34	33 31 00	SANITARY SEWER (6", PVC, SDR 26, OPEN CUT, 0'-8' DEPTH)	LF	10	\$ _____	\$ _____
35	33 31 00	SANITARY SEWER (8", PVC, SDR 26, OPEN CUT, 0'-8' DEPTH)	LF	10	\$ _____	\$ _____
36	33 31 00	SANITARY SEWER (8", PVC, SDR 26, OPEN CUT, 8'-10' DEPTH)	LF	10	\$ _____	\$ _____
37	33 31 00	SANITARY SEWER (8", PVC, SDR 26, OPEN CUT, 10'-12' DEPTH)	LF	10	\$ _____	\$ _____
38	33 31 00	SANITARY SEWER (10", PVC, SDR 26, OPEN CUT, 0'-8' DEPTH)	LF	10	\$ _____	\$ _____
39	33 31 00	SANITARY SEWER (10", PVC, SDR 26, OPEN CUT, 12'-14' DEPTH)	LF	10	\$ _____	\$ _____
40	33 31 00	SANITARY SEWER (12", PVC, SDR 26, OPEN CUT, 0'-8' DEPTH)	LF	305	\$ _____	\$ _____
41	33 31 00	SANITARY SEWER (12", PVC, SDR 26, OPEN CUT, 8'-10' DEPTH)	LF	1313	\$ _____	\$ _____
42	33 31 00	SANITARY SEWER (12", PVC, SDR 26, OPEN CUT, 10'-12' DEPTH)	LF	1177	\$ _____	\$ _____
43	33 31 00	SANITARY SEWER (12", PVC, SDR 26, OPEN CUT, 12'-14' DEPTH)	LF	931	\$ _____	\$ _____
44	33 31 00	SANITARY SEWER (12", PVC, SDR 26, OPEN CUT, 14'-16' DEPTH)	LF	480	\$ _____	\$ _____
45	33 31 00	SANITARY SEWER (12", PVC, SDR 26, OPEN CUT, 16'-18' DEPTH)	LF	124	\$ _____	\$ _____
46	33 31 00	SANITARY SEWER (12", PVC, 150 PSI PRESSURE RATED, OPEN CUT, 0'-8' DEPTH)	LF	65	\$ _____	\$ _____
47	33 31 00	SANITARY SEWER (12", PVC, 150 PSI PRESSURE RATED, OPEN CUT, 8'-10' DEPTH)	LF	397	\$ _____	\$ _____
48	33 31 00	SANITARY SEWER (12", PVC, 150 PSI PRESSURE RATED, OPEN CUT, 10'-12' DEPTH)	LF	121	\$ _____	\$ _____

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49	33 31 00	SANITARY SEWER (12", PVC, 150 PSI PRESSURE RATED, OPEN CUT, 12'-14' DEPTH)	LF	40	\$ _____	\$ _____
50	33 31 10	SANITARY SEWER MANHOLE (4' DIA., 8'-10' DEPTH)	EA	7	\$ _____	\$ _____
51	33 31 10	SANITARY SEWER MANHOLE (4' DIA., 10'-12' DEPTH)	EA	5	\$ _____	\$ _____
52	33 31 10	SANITARY SEWER MANHOLE (4' DIA., 12'-14' DEPTH)	EA	2	\$ _____	\$ _____
53	33 31 10	SANITARY SEWER MANHOLE (4' DIA., 14'-16' DEPTH)	EA	2	\$ _____	\$ _____
54	33 31 10	SANITARY SEWER MANHOLE (4' DIA., 16'-18' DEPTH)	EA	1	\$ _____	\$ _____
55	33 31 40	BYPASS PUMPING SMALL DIAMETER SANITARY SEWER MAINS	LS	1	\$ _____	\$ _____
56	33 31 50	ABANDONMENT OF SANITARY SEWER MAINS (GROUT FILL)	LF	1235	\$ _____	\$ _____
57	33 31 50	REMOVAL OF SANITARY SEWER MANHOLES	EA	16	\$ _____	\$ _____
58	33 40 00	REMOVAL OF STORM SEWER PIPE (15" DIA. AND LESS)	LF	64	\$ _____	\$ _____
59	33 40 00	REMOVAL OF STORM SEWER PIPE (GREATER THAN 15" DIA.)	LF	462	\$ _____	\$ _____
60	33 40 00	REMOVAL OF GRATE INLETS (APPROX. 4' X 6')	EA	2	\$ _____	\$ _____
61	33 40 00	REMOVAL OF GRATE INLETS (APPROX. 1' X 2')	EA	4	\$ _____	\$ _____
62	33 40 00	REINFORCED CONCRETE PIPE (CLASS IV) (W/ STD. DIAMETERS OF 8", 12" AND 15")	LF	64	\$ _____	\$ _____
63	33 40 00	REINFORCED CONCRETE PIPE (CLASS IV) (W/ STD. DIAMETERS OF 18" AND 24")	LF	462	\$ _____	\$ _____
64	33 40 00	INLET (4' X 6')(GRATE INLET)	EA	2	\$ _____	\$ _____
65	33 40 00	SPECIAL INLETS (1' X 2') (GRATE INLET)	EA	4	\$ _____	\$ _____
66	34 41 10	R6-2 ONE WAY (18" X 24")	EA	1	\$ _____	\$ _____
67	34 41 10	R7-1 NO PARKING ANYTIME (18" X 24")	EA	1	\$ _____	\$ _____
SUBTOTAL (ITEMS 1-67)					\$ _____	
68	01 35 13.43	CONTAMINATED SOIL/WATER DISPOSAL	ALW	1	\$ <u>55,000</u>	\$ <u>55,000</u>
69	01 15 00	POWER POLE BRACING	ALW	1	\$ <u>100,000</u>	\$ <u>100,000</u>
70	01 15 00	RELOCATION AND REPAIR OF EXISTING WATER MAIN	ALW	1	\$ <u>65,000</u>	\$ <u>65,000</u>
71	01 15 00	RELOCATION AND REPAIR OF EXISTING FIBER OPTIC	ALW	1	\$ <u>100,000</u>	\$ <u>100,000</u>
72	01 15 00	RELOCATION AND REPAIR OF EXISTNG GAS	ALW	1	\$ <u>50,000</u>	\$ <u>50,000</u>
SUBTOTAL (ITEMS 1-72)					\$ _____	
73	01 10 10	MOBILIZATION AND DEMOBILIZATION (MAX 5% OF LINE ITEMS 1-67)	LS	1	\$ _____	\$ _____
74	31 10 10	PREPARING RIGHT OF WAY (MAX 5% OF LINE ITEMS 1-67)	LS	1	\$ _____	\$ _____
TOTAL BID PRICE (TOTAL ITEMS 1-74)					\$ _____	

Mobilization shall be limited to the maximum percentage shown. If the percentage exceeds the allowable maximum stated for mobilization, Owner reserves the right to cap the amount at the percentage shown and adjust the extensions of the bid items accordingly.

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**LEGAL NOTICE
AND
INVITATION TO BID
BID #B001-24**

Notice Date:

1 Sealed bids will be received by the PUBLIC UTILITIES BOARD of the City of Brownsville, Texas ("BPUB", "OWNER"), at the PUB Purchasing Department office; 1155 FM511, Olmito, TX 78575 **until 2:00 PM, local prevailing time, on October 20, 2023** for the Project described in the Contract Documents and Specifications entitled:

DOWNTOWN WASTEWATER PROJECT 1

Bids received after this time will not be considered.

1 Bids will be publicly opened and read aloud on October 20, 2023 at 2:15 PM. Bidders can request a copy of the bid tabulation by emailing dsolitaire@brownsville-pub.com. Vendors can call in at 2:15 PM, October 20, 2023 to (956) 214-6020 to listen to the bid opening.

The Work in general includes, but is not limited to:

- 1) Segment A:
 - a. Rehabilitation or reconstruction of approximately 2,300 LF of 10-inch wastewater gravity mains with 12-inch wastewater gravity mains and seven (7) manholes. Segment A runs within an alleyway located between E. Elizabeth St. and E. Levee St. from E. 7th St. to International Blvd.
- 2) Segment B:
 - a. Rehabilitation or reconstruction of approximately 1,050 LF of 8-inch wastewater gravity mains with 12-inch wastewater gravity mains and four (4) manholes. Segment B runs within an alleyway located between E. Levee St. and E. St. Charles St. from E. 7th St. to E. 10th St.
- 3) Segment C:
 - a. Rehabilitation or reconstruction of approximately 1,350 LF of 8-inch wastewater gravity mains with 12-inch wastewater gravity mains and five (5) manholes. Segment C runs within an alleyway located between E. St. Francis St. and E. St. Charles St. from E. 8th St. to E. 11th St., as well as a section that runs down E. 8th St.
- 4) Segment D:
 - a. Rehabilitation or reconstruction of approximately 300 LF of 8-inch wastewater gravity mains with 12-inch wastewater gravity mains and two (2) manholes. Segment D runs along E. 11th St. near E. St. Charles St.

Copies of the Contract Documents and Specifications may be obtained at the following website https://www.brownsville-pub.com/rfp_status/open/. A non-mandatory pre-bid conference shall be held at the BPUB Purchasing Department via conference call (956-214-6020) at 10:00 AM, local prevailing time, on October 10, 2023.

1

Each bid, with 1 signed original, and 1 copy shall be enclosed in a sealed envelope and shall be plainly marked on the outside of the envelope: **“BID B001-24 Downtown Wastewater Project 1, October 20, 2023, 2:00 PM”**. This envelope shall be addressed to Diane Solitaire; Brownsville Public Utilities Board; Purchasing Department; 1155 FM 511, Olmito, Texas 78575. Bids may be delivered by mail, in person or special delivery. If forwarded by mail, the sealed envelope containing the bid itself must be enclosed in another mailing envelope addressed as specified in the bid form.

Each bid shall constitute an offer to the Board, as outlined therein, and shall be irrevocable for at least ninety (90) calendar days after the time announced for the opening thereof.

Each bid shall be accompanied by a Certified or Cashier's check payable to the order of the Brownsville Public Utilities Board, City of Brownsville, Texas for a sum not less than five (5%) percent of the total amount bid. In lieu of a check, a Bid Bond with a Corporate Surety licensed to do business in the State of Texas, may be submitted in an amount not less than five (5%) percent of the total amount bid conditioned that the BIDDER will pay the BPUB, as mutually agreed to liquidated damages, and not as a penalty, the amount specified in the Bond, unless he enters into a BPUB contract in accordance with his bid. BIDDER is required to execute a contract and furnish a Performance Bond, Payment Bond and a Certificate of Insurance. If the BIDDER fails to execute the contract and to furnish satisfactory Performance and Payment Bonds and Insurance Certificates within ten (10) calendar days from the date on which he is notified that his bid has been accepted, the amount of his check or bid bond shall be forfeited to the BPUB as mutually agreed to liquidated damages, and not as a penalty. **No bid will be considered if the Bid Security is not submitted.**

The BPUB will not be responsible in the event that the U.S. Postal Service or any other courier system fails to deliver the sealed bids to the Brownsville Public Utilities Board, Purchasing Office by the given deadline above. **No bids will be accepted via facsimile or electronic transmission.**

The BPUB specifically reserves the right to reject any or all bids, to waive irregularities or informalities in any or all bids and to accept any bid which is deemed to be in the best interest of the Board or to reject the bids. The award will be made to the responsive and responsible bidder submitting the lowest bid as determined by the BPUB.

Equal Opportunity in Employment - All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin. Bidders will be required to comply with the President's Executive Order No. 11246, as amended by Executive Order 11375, and as supplemented in Department of Labor regulations 41 CFR, Part 60. The requirements for bidders and contractors under this Order are explained in the Specifications.

Diane Solitaire
Purchasing Department
(956) 983-6366

Special Instructions

Contract Information

- **Interpretation**

All requests, questions concerning terms, conditions, and technical specifications, or other communication about this solicitation shall be made in writing and addressed to the Entity's Sole Point of Contact. Only the Sole Point of Contact may be contacted regarding required elements for this IFB. The sole point of contact for this solicitation is

Diane Solitaire, Materials/Warehouse Manager
email: dsolitaire@brownsville-pub.com

Tentative Time Line

- 
1. September 24, 2023 through October 20, 2023 – Vendor bid preparation.
 2. October 20, 2023 at 2:00 PM - **Vendor must submit bid, in duplicate, sealed in an envelope to:**

Diane Solitaire, Materials/Warehouse Manager
1155 FM 511
Olmite, TX 78575

- 
- 1 Bid #B001-24 – Downtown Wastewater Project 1
Due October 20, 2023 at 2:00 PM

The above noted information must be included on bid envelope and on any carrier's envelope/package. The Brownsville Public Utilities Board will not be held responsible for missing, lost or late mail. Brownsville Public Utilities Board will not accept electronic transmissions or facsimiles of sealed bids.

3. October 10, 2023 – Pre-Bid Conference at 10:00 AM
4. Pre-Bid Site Visit: Non-Mandatory, Highly Recommended to be completed by the bidder independently
5. DATE QUESTIONS DUE- October 12, 2023 at 5:00 PM
6. October 20, 2023 - Open bids at 2:15 PM
7. 24 Days - Evaluate bids
8. October 27, 2023 - Deadline to provide final recommendations for Board approval.
9. 7 Calendar days within written notice- Send to Utilities Board for formal and possible Contract award approval

- **“Or Equal”**

Brand name and/or manufacturer’s references used in this Request are descriptive – not restrictive – they are intended to generally indicate type and quality desired. Brands of like nature and quality will generally be considered. If bidding on other than referenced Specifications, please provide complete descriptive information of said material/equipment article. BPUB also reserves the legal right to specify a “sole source” component if such component is critical for integration to a larger BPUB assembly and alternative manufactured items will not meet the design and/or performance needs of the BPUB, in BPUB’s sole discretion.

- **Pricing**

Bid unit prices on BPUB estimated quantities specified, extend and show total. In case of errors in extension, unit prices expressed in written words and not numerals, shall govern. Prices shall remain firm throughout the Contract.

All fields (UNIT PRICE & TOTAL PRICE) in the Bid Schedule must be filled in. The data must be complete to identify any bidding brand called for specifically.

Failure to submit any of the above information with the sealed bid may disqualify bid as non-responsive.

- **Contractor Representative**

The successful contractor agrees to send a personal representative with binding authority for the company to the Brownsville Public Utilities Board, upon request, to make any minor clarifications or adjustments and/or assist with coordination of all transactions as needed to allow Contract entry.

- **Quality of Products**

All material and equipment items specified must be new, in first class condition, including containers suitable for shipment and storage. No substitutions in standard grades or lesser quality will be accepted.

- **Determining Factors for Award**

1. Price
2. Responsibility of contractor to perform the intended work and responsiveness to the bid request.
3. Compliance with requirements of the Technical Specifications
4. Quality of performance on previous work on similar contracts
5. Recent successful completion of similar projects
6. BPUB financial and legal responsibility evaluations of any identified teaming arrangements involving significant joint ventures, sub-contractors and suppliers
7. Safety record will be considered when determining the responsibility of the bidder

- **Contract with Vendor/Entity Indebted to BPUB**

It is a policy of the BPUB to refuse to enter into a contract or other transaction with an individual, sole proprietorship, joint venture, Limited Liability Company or other entity indebted to BPUB.

- **Vendor ACH (Direct Deposit) Services**

The BPUB has implemented a payment service for vendors/contractors by depositing the contract payment directly to the contractor's/vendor's bank account. Successful vendor(s)/contractors will be required to receive payments directly through Automated Clearing House (ACH) in lieu of a paper check. **The awarded vendor must agree to receive payments via ACH (Direct Deposit).**

- **Tax Identification Number (TIN)**

In accordance with IRS Publication 515, a W9 form, or a W8 form in cases of a foreign vendor, will be required of all vendors doing business with the Brownsville PUB. If a W9 or W8 form is not made available to Brownsville PUB, the first payment will be subject to income tax withholding at a rate of 28% or 30% depending on the U.S. status and the source of income as per IRS Publication 515. **The W9 or W8 form must be included with bid response.** Attached are sample forms.

- **Unique Entity Identifier through Sam.gov**

The Unique Entity ID is a 12-character alphanumeric ID assigned to an entity by SAM.gov and is required for all contractors and subcontractors.

- **Taxes**

The City of Brownsville and its Brownsville Public Utilities Board are exempt from Federal Excise Tax, State Tax and local sales Taxes. Do not include any taxes in the bid proposal. If it is later determined that tax was included in the bid it will not be included in the tabulation or any awards. Tax exemption certificates will be furnished by BPUB upon request.

- **Signing of Bid**

Failure to sign bid will disqualify it. Person signing bid should show title or legal authority to bind their firm to a Contract.

- **EEOC Guidelines**

During the performance of this Contract, the contractor agrees not to discriminate against any employee or applicant for employment because of race, national origin, age, religion, gender, sexual preference, marital or veteran status, or physically challenging condition.

- **Texas Prevailing Wage Rate**

This project is subject to the Texas Prevailing Wage Rates as described in Texas Government Code, Chapter 2258. In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. See Exhibit C for the prevailing wages applicable to this project. Workers employed by or on behalf of the Entity shall be paid (1) not less than the general prevailing wage 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. Section 2258.023 – Penalty – A contractor or subcontractor who violates this section shall pay penalty to the Entity on whose behalf the contract is made. A public body awarding a contract shall specify this penalty in the contract. Section 2258.024 – Records – 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. The record shall be open at all reasonable hours to inspection by the officers and agents of the Entity.

- **Contract and Purchase Order**

The services shall be completed in a timely manner as specified in Specifications. A Contract for the services will be placed into effect by means of a purchase order and/or Construction Agreement issued by the Brownsville Public Utilities Board after tabulation and final Contract approval by the Board.

- **Brownsville Public Utilities Board Rights**

1. If only one or no bid is received by "submission date", the BPUB has the right to reject, re-bid, accept and/or extend the bid by up to an additional two (2) weeks from original submission date.
2. The right to reject any/or all bids and to make award as it may appear to be advantageous to the Brownsville Public Utilities Board.
3. The right to hold bid for 90-calendar days from submission date without action, and to waive all informalities in any bid.
4. The right to extend the total bid beyond the original 90-calendar day period prior to an award, if agreed upon in writing by all parties (BPUB and vendor/contractor) and if bidder/vendor holds original bid prices firm.
5. The right to terminate for cause or convenience all or any part of the unfinished portion of the Project resulting from this solicitation within seven (7) calendar days written notice; for cause: upon default by the vendor/contractor, for delay or non-performance by the vendor/contractor; or if it is deemed in the best interest of the BPUB for BPUB's convenience. (See, General Conditions Article 15)

- **Corrections**

Any interpretation, correction, or change of the Invitation to Bid will be made by written ADDENDUM. Changes or corrections will be issued by the Brownsville PUB Purchasing Department. **Addenda will be emailed to all who have returned the Bid Acknowledgment form.** Addenda will be issued as expeditiously as possible. It is the responsibility of the vendors/contractors to determine whether all Addenda have been received. It will be the responsibility of all respondents to contact the Brownsville PUB prior to submitting a response to the Invitation to Bid to ascertain if any/all Addenda have been issued, and to obtain any all Addenda, execute them, and return Addenda with the response to the Invitation to Bid. Addenda may also be posted on BPUB's website.

1. RECEIPT AND OPENING OF BIDS:

The Brownsville Public Utilities Board, City of Brownsville, Texas (hereinafter called OWNER), invites bids on the form attached hereto, all blanks of which must be appropriately filled in, in ink, for Project entitled **"Bid B001-24, Downtown Wastewater Project 1"**.

The OWNER may consider informal and non-responsive, any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn by vendor/contractor prior to the above scheduled time for the opening of bids or OWNER authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No BIDDER may withdraw a bid within at least ninety (90) calendar days after the actual date of the opening thereof.

2. INSPECTION OF SITE:

Each BIDDER shall visit the Project site of the proposed Work and fully acquaint himself with the existing conditions there relating to construction and labor, and shall fully inform himself as to the facility involved, the difficulties and restrictions attending the performance of the Contract. The BIDDER shall thoroughly examine and familiarize himself with the Drawings, Technical Specifications, and all other Contract Documents. The Contractor, by the execution of the Contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument, or to visit the Project site and acquaint himself with the conditions there existing and the OWNER will be justified in rejecting any claim for extra time, or compensation, or both, based on facts regarding which Contractor should have been on notice as a result of such a diligent Project site visitation.

3. PREPARATION OF BID AND USE OF SEPARATE BID FORMS:

These Contract Documents include a complete set of bidding documents. The BIDDER shall copy all Documents listed in the table of contents under the heading BIDDING DOCUMENTS and shall submit two sets (original signed and one signed photocopy) of his bid on these forms. A bid shall be comprised of the BIDDING DOCUMENTS completed by the BIDDER plus supplemental information required by the Specifications and Contract Documents.

If any of the information submitted as part of the bid is considered to be proprietary by the BIDDER, he shall conspicuously identify such intended confidential information in his bid. BPUB

is subject to the provisions of the Texas Public Information Act and cannot legally guarantee confidentiality of submittals and may need to consult with its legal counsel and the Texas Attorney General in rendering decisions on any requested disclosures.

- a) Preparation. Each bid shall be carefully prepared using the bid and bid data forms included as a part of the bidding documents. Entries on the bid and bid data forms shall be typed, using dark black ink, or legibly written in black ink. All prices shall be stated in written words and numeric figures, except where the forms provide for figures only. In case of discrepancy, especially in any sum total extensions, the amount shown in written words will generally prevail over numeric unit prices.

The BIDDER shall acknowledge, in the space provided in the bid form, receipt of each Addendum issued for the Specifications and Documents during the bidding period.

The BIDDER shall assemble all drawings, catalog data, and other supplementary information necessary to thoroughly describe Work, materials and equipment covered by the bid, and shall attach such supplemental information to the copies of the Specifications and documents submitted.

- b) Signatures. Each BIDDER shall sign the bid with his usual signature and shall give his full business title and address. The BIDDER's corporate name stated on the bid shall be the exact legal name of the firm. The names of all persons signing should also be typed or printed below the signature.

Bids by partnerships shall be signed with the partnership name followed by the signature and designation title/officer of one of the partners or other authorized representative. A complete list of the partners shall be included with the bid.

Bids by a corporation shall be signed in the official corporate name of the corporation, followed by the signature and designation of the "president," "secretary," or other legally appropriate person authorized to bind the corporation.

A bid by a person who affixes to his signature the word "president," "secretary," "agent," or other designation, without disclosing his principal corporation, will be rejected. Satisfactory evidence of the legal authority of the officer signing on behalf of the corporation shall be furnished. Bidding corporations shall designate the state in which they are incorporated and the address of their principal office.

- c) Submittal. The original signed bid (and its accompanying photocopy) shall be transmitted to arrive at the designated BPUB address not later than the date and time stipulated in the Legal Notice and Invitation to Bid.

Submit the original signed bid (and its accompanying photocopy) to:

Brownsville Public Utilities Board
1155 FM 511
Olmito, Texas 78575
Attention: Ms. Diane Solitaire
Purchasing Department

Each bid must be submitted in duplicate as stated above (original signature and photocopy), in a sealed envelope bearing on the outside the name of the BIDDER, the bidder's address, and the name of the Project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid itself must be enclosed in another mailing envelope addressed as specified in the bid form.

4. METHOD OF BIDDING: UNIT PRICE AND LUMP SUM.

Prices shall be firm, not subject to qualification, condition or adjustment. Prices shall be in United States dollars. Prices shall be lump sum, except where unit prices are requested by the bid forms. When unit price items are required by the bid, the unit prices for each of the several items in the bid of each BIDDER shall include its prorata share of overhead, so that the sum of the products obtained by multiplying the quantity shown for each item, by the unit price bid, represents the total bid. -Any bid not conforming to that requirement may be rejected as informal and nonresponsive. -The special attention of all BIDDERS is called to this provision, (See: General Conditions paragraph 11.9) for should conditions make it necessary to revise any unit price quantities, generally, a fifteen (15%) percent plus or minus tolerance quantity limit will be fixed for such increased or decreased quantities for which no extra compensation will be allowed, provided the net monetary value of all such additive and subtractive changes in quantities of such items of work pursuant to public competitive bidding statutes (i.e., difference in cost) shall not cumulatively increase or decrease the original Contract Price by more than twenty-five- (25%) percent. A proposed decrease only, that exceeds twenty-five (25%) percent of the original Contract Price must be agreed to in writing in advance by the Contractor.

5. DISCLOSURE BY BIDDER:

Each BIDDER shall submit with the bid documents, on the form furnished for that purpose, his Pre-Bid Disclosure Statement showing his experience record in performing the type of work embraced in the contract, his organization and equipment available for the work contemplated, and, when specifically requested by the OWNER, a detailed financial statement. The OWNER shall have the right to take such steps as it deems necessary, including telephonic contact to other owner references, to determine the ability and responsibility of the BIDDER to perform his obligations under the Contract and the BIDDER shall be responsive in furnishing the OWNER all such information and data for this purpose as it may request. OWNER reserves the right to reject any bid where an investigation of the available evidence or information does not satisfy the OWNER that the BIDDER is responsible to properly carry out the terms of the Contract. This shall also apply to any proposed subcontractor(s).

6. SUBCONTRACTS:

The BIDDER is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the OWNER, and that a Pre-Bid Disclosure Statement for each proposed subcontractor must also be submitted with the bid documents.

7. BID SECURITY:

Each bid must be accompanied by a certified or cashier's check, or a bid bond prepared on the form of the bid bond attached hereto, duly executed by the BIDDER as principal, and having as surety therein a surety company approved by the OWNER, and authorized to do business in the State of Texas, in the amount of not less than five (5%) percent of the total bid amount, but not less than \$2,500.00. Such checks, or bid bonds will be returned to all except the three lowest BIDDERS within fifteen (15) calendar days after the opening of bids, and the remaining checks, or bid bonds will be returned promptly after the OWNER and the accepted successful BIDDER have executed the Contract or if no award has been made, within Ninety (90) calendar days after the date of the opening of bids. The bid security will be returned upon demand of the BIDDER at any time thereafter, so long as he has not been notified of the acceptance of his bid.

8. ADDENDA AND INTERPRETATIONS:

No oral interpretations by OWNER and its representatives shall be binding upon OWNER as to the meaning of the Plans, Specifications, Contract Documents, or other pre-bid documents.

Every request for such interpretation should be made in writing, addressed to Diane Solitaire, BPUB Purchasing Department. Any interpretation, correction, or change to the Invitation to Bid will be made by ADDENDUM. Changes or corrections will be issued by the Brownsville PUB Purchasing Department only and will be on file at the BPUB Department mentioned above. Addenda will be emailed to all who have returned the Bid Acknowledgement form. Addenda will be issued as expeditiously as possible. It is the BIDDER's responsibility to inquire as to any Addenda issued and failure of any BIDDER to receive any such Addenda or interpretation shall not relieve such BIDDER from any obligation under his bid as submitted. All Addenda so issued shall become part of the Contract Documents. Addenda may also be posted on BPUB's webpage.

Exceptions or conditional qualifications by the BIDDER to the Plans, Technical Specifications, Contract Documents, or other pre-bid documents will not be permitted at the time of submitting the Bid Documents to the OWNER, and any exceptions or conditional qualifications taken by BIDDER, will automatically deem the bid conditional and non-responsive and subject to OWNER rejection.

9. FACSIMILE MODIFICATION:

Any BIDDER may modify (not originally submit) his bid by facsimile communication at any time prior to the scheduled bid closing time for receipt of bids, provided such communication is received

by the OWNER, in the BPUB Purchasing Department, prior to the bid closing time, and provided further, the OWNER is satisfied that a written confirmation of the facsimile modification, over the original signature of the BIDDER, was also mailed prior to the bid closing time. The facsimile communication should not reveal the total bid price, but only should provide the clarification, addition or subtraction, or other modification, so that the final bid prices or terms intended will not be known by the OWNER, until the original sealed bid is opened and the Bidder's intended modification computed by OWNER.

Revised bids submitted before the opening of bids, whether forwarded by mail or facsimile, if representing an increase in excess of two percent (2%) of the original bid submittal, must have the bid security (bid bond or check) adjusted accordingly; otherwise the bid will not be considered responsive.

If the written and originally signed confirmation of a bid revision is not received within three (3) calendar days after the bid closing time, no consideration will be given to any proposed adjustment contained in the facsimile modification.

10. TIME FOR RECEIVING BIDS:

Bids received prior to the advertised hour of opening will be securely kept sealed by BPUB. The officer whose duty it is to open them will decide when the specified time has arrived, and no bid received thereafter will be considered; except that when a bid arrives by mail after the time fixed for opening, but before the public reading of all other bids is completed, and it is shown to the satisfaction of the OWNER that the non-arrival on time was due solely to delay in the mails for which the BIDDER was not responsible, such bid will be received and considered.

BIDDERS are cautioned that, while facsimile modifications of bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misinterpretation, shall make the bid so modified or amended, subject to rejection for non-responsiveness.

11. OPENING OF BIDS:

At the time and place fixed for the public opening of bids, the OWNER will cause to be opened and publicly read aloud every bid received within the time set for receiving bids, irrespective of any irregularities therein. BIDDERS and other persons properly interested in a bid (subcontractors, suppliers, etc.) may be present, in person or by representative, but shall carry identification and present same to BPUB as requested.

12. WITHDRAWAL OF BIDS:

Bids may be withdrawn on written, facsimile or electronic transmission request dispatched by the BIDDER in time for delivery in the normal course of business prior to the time fixed for bid opening; provided, that written confirmation of any facsimile withdrawal over the signature of the BIDDER is placed in the mail and postmarked prior to the time set for bid opening. The bid security of any BIDDER withdrawing the bid in accordance with the foregoing conditions will be returned promptly.

13. AWARD OF CONTRACT: REJECTION OF BIDS:

The Contract will be awarded to the responsive and responsible BIDDER submitting the lowest bid complying with the conditions of the Legal Notice and Invitation for Bids. The BIDDER to whom the award is made will be notified at the earliest possible date. The OWNER, however, reserves the right to reject any and all bids and to waive any informality in bids received, whenever such rejection or waiver is in BPUB's interest.

The OWNER reserves the right to consider as not responsible, any BIDDER who does not habitually perform with his own forces the major portions of the Work involved in construction of the improvements embraced in this proposed Contract. This provision is meant to prevent wholesale assignment and "brokering" of awarded contracts.

14. EXECUTION OF AGREEMENT: PERFORMANCE AND PAYMENT BOND:

Subsequent to the Notice of Award and within ten (10) calendar days after the prescribed forms are presented for signature, the successful BIDDER shall execute and deliver to the OWNER an Agreement in the form included in the Contract Documents in such number of copies as the OWNER may require.

Having satisfied all conditions of award as set forth elsewhere in these Documents, the successful BIDDER shall, within the period specified in the preceding paragraph, furnish a Performance Bond and Payment Bond, in accordance with the following parameters:

- a.) For a Contract in excess of \$100,000.00, a Performance Bond shall be executed in the full amount of the Contract, conditioned upon the faithful and timely performance of the Work in accordance with the Plans, Specifications, and Contract Documents. Said Bond shall be solely for the protection of the OWNER.
- b.) For a Contract in excess of \$50,000.00, a Payment Bond shall be executed in the full amount of the Contract, solely for the protection of all proper claimants supplying labor and material in the prosecution of the Work provided for in the Contract, for the use of each such claimant perfecting a proper and timely claim. Payment Bonds are required under Texas law, since no mechanics' liens are allowed against BPUB's public property assets.

When bonds are required, they shall serve as security for the faithful performance of the Contract, and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted to for labor, materials, tools, equipment, or services of any nature, including utility and transportation services employed or used by him in performing the Work. Such bonds shall be in the same form as that included in the Contract Documents and shall bear the same date as, or a date subsequent to that of the Agreement. The current power of attorney for the person who signs for any surety company shall be attached to such bonds. These bonds shall be signed by a guaranty or surety company legally authorized to do business in the State of Texas and appearing on the most recently issued (as of the date of bid opening) federally qualified U. S. Treasury

Circular 570 List of Approved Sureties.

The failure of the successful BIDDER to execute such Agreement and to supply the required bonds and insurance certificates within ten (10) calendar days after the prescribed forms are presented for signature, or within such extended period as the OWNER may grant in writing, based upon reasons determined sufficient by the OWNER, shall constitute a default, and the OWNER may either award the Contract to the next lowest responsive and responsible BIDDER, or re-advertise for bids, and may charge against the defaulting BIDDER the difference between the amount of the defaulted bid and the amount for which a final Contract for the Work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid bond. If a more favorable bid is received by re-advertising, the defaulting BIDDER shall have no claim against the OWNER for a bid bond refund.

15. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

The successful BIDDER, upon his failure or refusal to execute and deliver the Contract, Bonds and insurance certificates required within ten (10) calendar days after he has received BPUB notice of the acceptance of his bid, shall forfeit to the OWNER, as mutually agreed to liquidated damages (and not as a penalty) for such failure or refusal, the security provided in the bid bond or otherwise deposited with his bid.

16. TIME OF COMPLETION AND LIQUIDATED DAMAGES:

BIDDER agrees by submission of his bid that PERFORMANCE TIME IS OF THE ESSENCE OF THIS CONTRACT and further agrees to commence Work on the date to be specified in a BPUB written "Notice to Proceed" issued by the OWNER and to Substantially Complete the Project as provided in Article 3 of the Construction Agreement.

BIDDER agrees by submission of his bid to pay as mutually agreed to liquidated damages, and not as a penalty, the sum as provided in said Construction Agreement, Article 3.

17. NOTICE OF SPECIAL CONDITIONS:

Attention is particularly called to those parts of the Contract Documents and Specifications which address the following:

- A. Access to Work - Inspection and testing of materials.
- B. Insurance requirements.
- C. Indemnification by Contractor
- D. Wage and Hour Provisions.
- E. State Sales and Use Tax Exemption Provisions.
- F. Subsurface Geologic Conditions.
- G. Certification Regarding Debarment, Suspension and other Responsibility Requirements (EPA 5700-49).

18. LAWS AND REGULATIONS:

The BIDDER's attention is directed to the fact that all applicable federal, State and local laws, statutes, ordinances, codes and the rules and regulations of all authorities having jurisdiction over construction of the Project, as may be periodically amended, shall apply to the Contract throughout, and they will be mutually deemed to be included in the Contract, the same as though herein written out in full.

19. EQUAL EMPLOYMENT OPPORTUNITY:

Attention of BIDDERS is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, religion, gender, age, sexual preference, physically challenging condition or national origin.

Equal Opportunity in Employment - All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin. Bidders will be required to comply with the President's Executive Order No. 11246, as amended by Executive Order 11375, and as supplemented in Department of Labor regulations 41 CFR, Part 60. The requirements for bidders and contractors under this order are explained in the General Conditions.

20. PRE-BID CONFERENCE:

A pre-bid virtual or in-person meeting between the OWNER, prospective bidders, suppliers, etc., will be held to answer any questions concerning the Work. No Addenda will be issued at this meeting. Subsequent thereto, if necessary to clear up any written questions, a written Addendum will be issued by the OWNER to all pre-bid conference attendees. The pre-bid meeting will be held at the place, time and date indicated in the Legal Notice. Attendance at the Pre-Bid Conference is NOT mandatory for prospective bidders.

21. SUBMITTAL OF TRENCH SAFETY DESIGN: (RESERVED)

For Work involving excavations generally deeper than five (5) feet within narrow trenches, the apparent low BIDDER shall provide the OWNER with a Trench Safety System Plan and a certificate signed and sealed by a Registered Professional Engineer licensed by the State of Texas, within twenty-one (21) calendar days after the date of the opening of Bids prior to award of the Contract. Failure to timely comply may disqualify BIDDER. This Section may be "Reserved" by BPUB if not applicable to the Work.

22. INFORMATION TO BE SUBMITTED WITH BID:

Each BIDDER shall submit with his bid, the following:

- a) Equipment and Materials. In addition to the information submitted on the bid and bid data forms, each BIDDER shall submit all specifications, preliminary drawings, and similar descriptive information necessary to describe completely the equipment and materials he proposes to furnish.

The bid shall be based on using new equipment and materials, which comply with the Specifications and Contract Documents in every respect, unless existing equipment is specifically noted by OWNER for reuse. If alternate or "equal" equipment and materials are indicated in the bid, it shall be understood that the OWNER will have the option of selecting any one of the alternates so indicated and such selection shall not be a cause for extra contractor compensation or extension of time. OWNER specifically reserves the legal right to specify "sole source" equipment or materials in the Specifications when unique circumstances warrant.

- b) Contractor's Field Organization and Safety Record.
- (i) An organization chart showing the names of field management, supervisory, technical personnel, and number of employees/workforce available and the details of the management, supervisory, and technical organization which he proposes to use for this Project. The successful BIDDER's organizational concept will be subject to the review and acceptance of the OWNER.
 - (ii) The experience record of the Contractor's field superintendent(s) shall be submitted with the bid.
 - (iii) The Contractor's job-safety record summary for the previous five (5) years
 - (iv) The two most recent year's independently audited Financial Statements
 - (v) List of three (3) projects completed by CONTRACTOR of both similar size and scope over the past five (5) years

23. PREFERENCE LAW:

Bid evaluations will take into consideration any Preference Laws of the State of Texas, and any reciprocity laws of other states as they may be addressed by current Texas law.

24. SUBSURFACE GEOLOGIC CONDITIONS: (RESERVED)

Each BIDDER shall be responsible for determining prior to bidding, the types of subsurface materials which will be found. If test borings have been made on the Project site by the BPUB or its consultants, the locations and logs of the test borings are bound as an appendix to these Specifications and Documents.

It is to be expressly understood and acknowledged by the BIDDER, that any information on subsurface geology made available by OWNER for BIDDER'S convenience shall **not be a part of the Contract Documents and there is no expressed or implied guarantee of the data given, nor of the interpretation thereof.**

All excavation for this Project will be unclassified and the BIDDER shall be responsible for investigating and satisfying himself of subsurface geologic conditions (including the presence or likelihood of encountering soils requiring dewatering, rock or rock-like materials) prior to submitting his bid, which shall include any and all costs BIDDER associates with avoiding, managing or removing said subsurface geologic conditions without claim for extra compensation against OWNER.

Should BIDDER desire to perform on-site investigations prior to submitting his bid, he is required to notify the OWNER of such intentions and obtain OWNER's written permission not less than 48 hours prior to performing the investigation. BIDDER is responsible for obtaining all related insurance and necessary permits from all sources.

25. DISPOSAL OF EXCESS MATERIALS:

After completion of this Project there may be in some instances an excess of spoil material or waste material left over. In such cases where there is an excess of material, BIDDER shall load and haul it away from the job site and dispose of it in a legal manner so as not to: trespass; adversely impact any protected wetlands; adversely impact the 100 year flood plain; adversely impact any endangered species; or otherwise create drainage diversions or impoundments. No extra remuneration for this Work will be allowed.

26. EROSION AND SEDIMENT CONTROL MEASURES:

The BIDDER is expected to conduct his Work in such a manner as to minimize any soil erosion or sediment runoff from the construction site. Earth cuts and fills shall have smooth, flat side slopes, as generally indicated on the PLANS, to preclude erosion of the soil. Such operations should be timed consistent with the actual need for doing the Work and only to leave raw, unprotected surfaces for a minimum of time.

Existing lawns are to remain intact as far as practical. Such areas as are disturbed shall be duly restored by the BIDDER to as good as or better than original condition using the same type of grass, shrubs, or cover as the original. The BIDDER shall be responsible for correcting any erosion that occurs at his sole cost without claim for extra compensation.

As construction progresses, and in accordance with State and federal laws regulating stormwater runoff and management from construction sites greater than five acres in size, if applicable, (See: Section 405 of the Water Quality Act of 1987, Section 402(P) as amended), and at locations where erosion with sediment runoff occurs or is likely to occur, the BIDDER shall construct temporary ditches, perimeter siltation screens, retainage levees, drains, inlets, or other works to manage, prevent, or correct the possible conditions. Upon completion of the Work, such facilities shall be removed by contractor.

During construction, the BIDDER shall take the necessary precautions to see that erosion is controlled and sediment runoff is prevented so as to protect the quality of any neighboring water bodies.

27. SAFETY PROVISIONS:

BIDDER shall provide barricades, flares, warning signs, and/or flagmen so that danger and inconvenience to the OWNER, public, and any job site working personnel, will be mitigated. In addition to any other requirements of the Contract Documents, the BIDDER shall be responsible for familiarity and compliance with all Federal (OSHA), State, railroad and local safety rules, laws and requirements.

28. PROTECTION OF PROPERTY AND EXISTING UTILITIES:

Within developed areas, all public and private property along and adjacent to the BIDDER'S operations, including roads, driveways, lawns, yards, shrubs, drainage gradients, and trees, shall be adequately protected, and when damages occur, they shall be repaired, replaced, or renewed or otherwise put in a condition equal to, or better than, that which existed before the BIDDER caused the damage or removal.

An attempt has been made by BPUB and the ENGINEER to locate and show all known existing utilities on the PLANS, but the possibility remains strong that some underground utilities may exist that have not been shown. The BIDDER, through mandatory contact with local utility owners, shall keep himself informed and take such precautions as necessary to avoid utility damage and unsafe working conditions for employees.

29. WAGES AND HOURS:

The most recent wage rate determination from the U.S. Department of Labor for Cameron County, Texas as amended within the previous three (3) years and as locally adopted by the BPUB, is a part of the Supplementary Conditions and controls minimum wage, hour and any fringe benefits, with the exception that no wage shall be paid below \$8.00 as established locally by the BPUB.

A copy of the appropriate (building and/or heavy/highway) wage rate schedule(s) must be posted at the job site in both English and Spanish and kept posted in a conspicuous place on the site of the Project at all times during construction. The BIDDER shall familiarize himself with the included General and Supplementary Conditions Section entitled "Wage and Labor Standard Provisions." Copies of the current pre-bid wage rate schedule(s) are included in the Contract Documents, but the responsibility for initial posting and keeping same posted, rests upon the BIDDER.

30. WARRANTY/GUARANTEE:

The BIDDER shall warranty and guarantee the Work, equipment and materials for a period of at least one (1) year after date of final acceptance in writing by the OWNER. During this period, the BIDDER shall make any repairs and/or replacements of defective equipment and materials and corrections of Work due to poor workmanship or manufacturing, all as may be required for full compliance with the General Conditions, Plans and Specifications. This combined workmanship quality guarantee, and minimal equipment and materials warranty, shall apply to all matters reported by the OWNER in writing within said one (1) year period and this post-construction guarantee/warranty period shall be included in the coverage period set forth in the Performance Bond.

31. STATE SALES AND USE TAX EXEMPTION:

Pursuant to 34 Texas Administrative Code 3.291, in order for the Brownsville PUB to continue to benefit from its status as a State Sales and Use Tax Exempt Organization. Construction contracts

must be awarded on a "separated contract" basis. A "separated contract" is one that distinguishes the value of the tangible personal property (materials such as pipe, bricks, lumber, concrete, paint, etc.) to be physically incorporated into the Project realty, from the total Contract Price. Under the "separated contract" format, the Contractor in effect becomes a "seller" to the Brownsville PUB of materials that are to be physically incorporated into the Project realty. As a "seller", the Contractor will issue a "Texas Certificate of Resale" to the supplier in lieu of paying the sales tax on materials at the time of purchase. The Contractor will also issue a "Certificate of Exemption" to the supplier demonstrating that the personal property is being purchased for resale and that the resale is to the Brownsville PUB, which is a sales tax exempt entity under UTCA Tax Code Section 151.309(5). Contractors should be careful to consult the most recent guidelines of the State Comptroller of Public Accounts regarding the sales tax status of supplies and equipment that are used and/or consumed during Project Work (gas, oil, rental equipment), but that are not physically incorporated into the Project realty. Such items are generally not tax exempt. Contractors that have questions about the implementation of this statute are asked to inquire directly with the State Comptroller of Public Accounts, Tax Administration Division, State of Texas, Austin, Texas 78774. Bidders will not include any federal taxes in bid prices since the City of Brownsville and Brownsville PUB are exempt from payment of such federal taxes. "Texas Certificates of Exemption", "Texas Certificates of Resale" and "Texas Sales Tax Permits" are forms available to the Contractor through the regional offices of the State Comptroller of Public Accounts.

32. ADDITIONAL FEDERAL AND STATE REQUIRED CONTRACT PROVISIONS:

2 CFR 200.327 Contract provisions. The non-Federal entity's contracts should contain applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards. The non-Federal entity's contracts must contain the provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards, as applicable. ***Language as of September 1, 2022.**

THRESHOLD	PROVISION	CITATION	PROVISION APPLIES TO
>\$250,000 (Simplified Acquisition Threshold)	Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908 , must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.	2 CFR 200 APPENDIX II (A)	Contractor RFP/IFB Contractor RFQ Subrecipients
>\$10,000	All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be affected and the basis for settlement.	2 CFR 200 APPENDIX II (B)	Contractor RFP/IFB Contractor RFQ Subrecipients
None	Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60 , all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b) , in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp. , p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60 , "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." 41 CFR 60-1.4 Equal opportunity clause. (b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The [recipient] hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving	2 CFR 200 APPENDIX II I and 41 CFR §60-1.4(b)	Contractor RFP/IFB Contractor RFQ Subrecipients

	<p>such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:</p> <p>During the performance of this contract, the contractor agrees as follows:</p> <p>(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:</p> <p>Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.</p> <p>(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.</p> <p>(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.</p> <p>(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.</p> <p>(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.</p> <p>(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.</p> <p>(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.</p> <p>(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:</p> <p>Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.</p> <p>The [recipient] further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the [recipient] so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.</p> <p>The [recipient] agrees that it will assist and cooperate actively with the</p>		
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	<p>administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the recipient agency in the discharge of the agency's primary responsibility for securing compliance.</p> <p>The recipient further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the [recipient] agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the [recipient] under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such [recipient]; and refer the case to the Department of Justice for appropriate legal proceedings.</p>		
<p>>\$10,000,000 for ARPA but State Provision Applies at any amount and/or [OB] >\$2,000 for CDBG/Braided Funds</p>	<p>Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$10,000,00 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.</p>	<p>2 CFR 200 APPENDIX II (D)</p>	<p>Contractor RFP/IFB Subrecipients</p>
<p>>\$100,000</p>	<p>Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.</p>	<p>2 CFR 200 APPENDIX II I</p>	<p>Contractor RFP/IFB Subrecipients</p>
<p>None</p>	<p>Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.</p>	<p>2 CFR 200 APPENDIX II (F)</p>	<p>Contractor RFP/IFB Contractor RFQ Subrecipients</p>
<p>>\$150,000</p>	<p>Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended – Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award</p>	<p>2 CFR 200 APPENDIX II (G)</p>	<p>Contractor RFP/IFB Contractor RFQ Subrecipients</p>

	to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671g) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).		
>\$25,000	Debarment and Suspension (Executive Orders 12549 and 12689) – A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.	2 CFR 200 APPENDIX II (H)	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors
>\$100,000	Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) – Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352 . Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.	2 CFR 200 APPENDIX II (I) and 24 CFR §570.303	Contractor RFP/IFB Contractor RFQ Subrecipients
	See 2 CFR §200.323 - Procurement of Recovered Materials.	2 CFR 200 APPENDIX II (J)	Contractor RFP/IFB Contractor RFQ Subrecipients
	See 2 CFR §200.216 - Prohibition on certain telecommunications and video surveillance services or equipment	2 CFR 200 APPENDIX II (K)	Contractor RFP/IFB Contractor RFQ Subrecipients
	See 2 CFR §200.322 - Domestic Preferences for Procurements.	2 CFR 200 APPENDIX II (L)	Contractor RFP/IFB Contractor RFQ Subrecipients
>\$10,000	An NFE (non-Federal Entity) that is a state agency or an agency of a political subdivision of a state, and the NFE’s contractors must comply with Section 6002 of the Solid Waste Disposal Act. Applicable NFEs must include a contract provision requiring compliance with this requirement. This includes contracts awarded by a state agency or political subdivision of a state and its contractors for certain items, as designated by the EPA, with a purchase price greater than \$10,000. Indian Tribal Governments and nonprofit organizations are not required to comply with this provision. Additional requirements are listed below.	2 CFR 200.323	Contractor RFP/IFB Contractor RFQ Subrecipients
None	The Federal awarding agency must establish conflict of interest policies for Federal awards. The non-Federal entity must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with applicable Federal awarding agency policy.	2 CFR 200.112	Contractor RFP/IFB Contractor RFQ Subrecipients
None	The Federal awarding agency and the non-Federal entity should, whenever practicable, collect, transmit, and store Federal award-related information in open and machine-readable formats rather than in closed formats or on paper in accordance with applicable legislative requirements. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a web browser or computer system. The Federal awarding agency or pass-through entity must always provide or accept paper versions of Federal award-related information to and from the non-Federal entity upon request. If paper copies are submitted, the Federal awarding agency or pass-through entity must not require more than an original and two copies. When original records are electronic and cannot be altered, there is no need to create and retain paper copies. When original records are paper, electronic versions may be substituted through the use of duplication or other forms of electronic media provided that they are subject to periodic quality control reviews, provide reasonable safeguards against alteration, and remain readable.	2 CFR 200.336	Contractor RFP/IFB Contractor RFQ Subrecipients
None	Contracting with HUB, small and minority businesses, women’s business enterprises, and labor surplus area firms.	2 CFR 200.321	Contractor RFP/IFB Contractor RFQ

	<p>(a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.</p> <p>(b) Affirmative steps must include:</p> <ol style="list-style-type: none"> (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists; (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources; (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises; (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and (6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (b)(1) through (5) of this section. 		Subrecipients
None	<p>Financial records, supporting documents, statistical records, and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. All records related to ARPA shall be maintained for 5 years per the ARPA terms, conditions, and regulations. The only exceptions are the following:</p> <ol style="list-style-type: none"> (a) If any litigation, claim, or audit is started before the expiration of the 3-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. All records related to ARPA shall be maintained for 5 years per the ARPA terms, conditions and regulations. (b) When the non-Federal entity is notified in writing by the Federal awarding agency, cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity to extend the retention period. (c) Records for real property and equipment acquired with Federal funds must be retained for three years after final disposition. All records related to ARPA shall be maintained for 5 years per the ARPA terms and conditions and regulations. (d) When records are transferred to or maintained by the Federal awarding agency or pass-through entity, the 3-year retention requirement is not applicable to the non-Federal entity. All records related to ARPA shall be maintained for 5 years per the ARPA terms and conditions and regulations. All records related to ARPA shall be maintained for 5 years per the ARPA terms, conditions, and regulations. (e) Records for program income transactions after the period of performance. In some cases, recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the non-Federal entity's fiscal year in which the program income is earned. (f) Indirect cost rate proposals and cost allocations plans. This paragraph applies to the following types of documents and their supporting records: Indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates). <ol style="list-style-type: none"> (1) <i>If submitted for negotiation.</i> If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission. All records related to ARPA shall be maintained for 5 years per the ARPA terms, conditions, and regulations. (2) <i>If not submitted for negotiation.</i> If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the 3-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation. All records related to ARPA 	2 CFR 200.334	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors

	shall be maintained for 5 years per the ARPA terms, conditions, and regulations.		
None	CONTRACTS WITH COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION PROHIBITED. A governmental entity may not enter into a governmental contract with a company that is identified on a list prepared and maintained under Section 806.051, 807.051, or 2252.153 . The term "foreign terrorist organization" in this paragraph has the meaning assigned to such a term in Section 2252.151(2) of the Texas Government Code.	Texas Government Code 2252.152	Contractor RFP/IFB Contractor RFQ Subrecipients
>\$100,000	PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that: (1) is between a governmental entity and a company with 10 or more full-time employees; and (2) has a value of \$100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. (b) A governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.	Texas Government Code 2271	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors
	Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.	42 U.S.C. 6201	Contractor RFP/IFB Subrecipients
	The Firm agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.	Section 504 of the Rehabilitation Act of 1973, as amended.	Subrecipients
ARPA Terms, Conditions, & Records	Use of Funds. a. Recipient understands and agrees that the funds disbursed under this award may only be used in compliance with section 603(c) of the Social Security Act (the Act), Treasury's regulations implementing that section, and guidance issued by Treasury regarding the foregoing. b. Recipient will determine prior to engaging in any project using this assistance that it has the institutional, managerial, and financial capability to ensure proper planning, management, and completion of such project.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Period of Performance. The period of performance for this award begins on the date hereof and ends on December 31, 2026. As set forth in Treasury's implementing regulations, Recipients may use award funds to cover eligible costs incurred during the period that begins on March 3, 2021 and ends on December 31, 2024.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Reporting. Recipient agrees to comply with any reporting obligations established by Treasury as they relate to this award.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Maintenance of and Access to Records a. Recipient shall maintain records and financial documents sufficient to evidence compliance with section 603(c) of the Act, Treasury's regulations implementing that section, and guidance issued by Treasury regarding the foregoing. b. The Treasury Office of Inspector General and the Government Accountability Office, or their authorized representatives, shall have the right of access to records (electronic and otherwise) of Recipient in order to conduct audits or other investigations. c. Records shall be maintained by Recipient for a period of five (5) years after all funds have been expended or returned to Treasury, whichever is later.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors
ARPA Terms, Conditions, & Records	Pre-award Costs. Pre-award costs, as defined in 2 C.F.R. § 200.458, may not be paid with funding from this award.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Subrecipients

ARPA Terms, Conditions, & Records	Administrative Costs. Recipient may use funds provided under this award to cover both direct and indirect costs.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Cost Sharing. Cost sharing or matching funds are not required to be provided by Recipient.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Conflicts of Interest. Recipient understands and agrees it must maintain a conflict of interest policy consistent with 2 C.F.R. § 200.318(c) and that such conflict of interest policy is applicable to each activity funded under this award. Recipient and subrecipients must disclose in writing to Treasury or the pass-through entity, as appropriate, any potential conflict of interest affecting the awarded funds in accordance with 2 C.F.R. § 200.112.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors
ARPA Terms, Conditions, & Records	<p>Compliance with Applicable Law and Regulations.</p> <p>a. Recipient agrees to comply with the requirements of section 603 of the Act, regulations adopted by Treasury pursuant to section 603(f) of the Act, and guidance issued by Treasury regarding the foregoing. Recipient also agrees to comply with all other applicable federal statutes, regulations, and executive orders, and Recipient shall provide for such compliance by other parties in any agreements it enters into with other parties relating to this award.</p> <p>b. Federal regulations applicable to this award include, without limitation, the following:</p> <p>i. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, other than such provisions as Treasury may determine are inapplicable to this Award and subject to such exceptions as may be otherwise provided by Treasury. Subpart F – Audit Requirements of the Uniform Guidance, implementing the Single Audit Act, shall apply to this award.</p> <p>ii. Universal Identifier and System for Award Management (SAM), 2 C.F.R. Part 25, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 25 is hereby incorporated by reference.</p> <p>iii. Reporting Subaward and Executive Compensation Information, 2 C.F.R. Part 170, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 170 is hereby incorporated by reference.</p> <p>iv. OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Non-procurement), 2 C.F.R. Part 180, including the requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 C.F.R. Part 180, subpart B) that the award is subject to 2 C.F.R. Part 180 and Treasury's implementing regulation at 31 C.F.R. Part 19.</p> <p>v. Recipient Integrity and Performance Matters, pursuant to which the award term set forth in 2 C.F.R. Part 200, Appendix XII to Part 200 is hereby incorporated by reference.</p> <p>vi. Governmentwide Requirements for Drug-Free Workplace, 31 C.F.R. Part 20. (Subrecipient Only)</p> <p>vii. New Restrictions on Lobbying, 31 C.F.R. Part 21.</p> <p>viii. Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (42 U.S.C. §§ 4601-4655) and implementing regulations.</p> <p>ix. Generally applicable federal environmental laws and regulations.</p> <p>c. Statutes and regulations prohibiting discrimination applicable to this award include, without limitation, the following:</p> <p>i. Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.) and Treasury's implementing regulations at 31 C.F.R. Part 22, which prohibit discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance;</p> <p>ii. The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability;</p> <p>iii. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;</p> <p>iv. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit</p>	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors

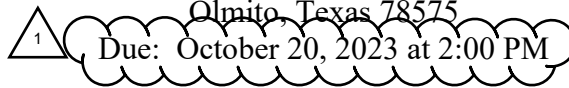
	discrimination on the basis of age in programs or activities receiving federal financial assistance; and v. Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.		
ARPA Terms, Conditions, & Records	Remedial Actions. In the event of Recipient's noncompliance with section 603 of the Act, other applicable laws, Treasury's implementing regulations, guidance, or any reporting or other program requirements, Treasury may impose additional conditions on the receipt of a subsequent tranche of future award funds, if any, or take other available remedies as set forth in 2 C.F.R. § 200.339. In the case of a violation of section 603(c) of the Act regarding the use of funds, previous payments shall be subject to recoupment as provided in section 603(e) of the Act.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Hatch Act. Recipient agrees to comply, as applicable, with requirements of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limit certain political activities of State or local government employees whose principal employment is in connection with an activity financed in whole or in part by this federal assistance.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	False Statements. Recipient understands that making false statements or claims in connection with this award is a violation of federal law and may result in criminal, civil, or administrative sanctions, including fines, imprisonment, civil damages and penalties, debarment from participating in federal awards or contracts, and/or any other remedy available by law.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors
ARPA Terms, Conditions, & Records	Publications. Any publications produced with funds from this award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of Recipient] by the U.S. Department of the Treasury."	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Debts Owed the Federal Government. a. Any funds paid to Recipient (1) in excess of the amount to which Recipient is finally determined to be authorized to retain under the terms of this award; (2) that are determined by the Treasury Office of Inspector General to have been misused; or (3) that are determined by Treasury to be subject to a repayment obligation pursuant to section 603(e) of the Act and have not been repaid by Recipient shall constitute a debt to the federal government. b. Any debts determined to be owed the federal government must be paid promptly by Recipient. A debt is delinquent if it has not been paid by the date specified in Treasury's initial written demand for payment, unless other satisfactory arrangements have been made or if the Recipient knowingly or improperly retains funds that are a debt as defined in paragraph 14(a). Treasury will take any actions available to it to collect such a debt.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Disclaimer. a. The United States expressly disclaims any and all responsibility or liability to Recipient or third persons for the actions of Recipient or third persons resulting in death, bodily injury, property damages, or any other losses resulting in any way from the performance of this award or any other losses resulting in any way from the performance of this award or any contract, or subcontract under this award. b. The acceptance of this award by Recipient does not in any way establish an agency relationship between the United States and Recipient.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Subrecipients
ARPA Terms, Conditions, & Records	Protections for Whistleblowers. a. In accordance with 41 U.S.C. § 4712, Recipient may not discharge, demote, or otherwise discriminate against an employee in reprisal for disclosing to any of the list of persons or entities provided below, information that the employee reasonably believes is evidence of gross mismanagement of a federal contract or grant, a gross waste of federal funds, an abuse of authority relating to a federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a federal contract (including the competition for or negotiation of a contract) or grant. b. The list of persons and entities referenced in the paragraph above includes the following: i. A member of Congress or a representative of a committee of Congress; ii. An Inspector General; iii. The Government Accountability Office;	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603(c) as applicable	Contractor RFP/IFB Contractor RFQ Subrecipients Vendors

	<ul style="list-style-type: none"> iv. A Treasury employee responsible for contract or grant oversight or management; v. An authorized official of the Department of Justice or other law enforcement agency; vi. A court or grand jury; or vii. A management official or other employee of Recipient, contractor, or subcontractor who has the responsibility to investigate, discover, or address misconduct. <p>c. Recipient shall inform its employees in writing of the rights and remedies provided under this section, in the predominant native language of the workforce.</p>		
ARPA Terms, Conditions, & Records	Increasing Seat Belt Use in the United States. Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Recipient should encourage its contractors to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented or personally owned vehicles.	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	<p>Contractor RFP/IFB</p> <p>Contractor RFQ</p> <p>Subrecipients</p> <p>Vendors</p>
ARPA Terms, Conditions, & Records	Reducing Text Messaging While Driving. Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Recipient should encourage its employees, subrecipients, and contractors to adopt and enforce policies that ban text messaging while driving, and Recipient should establish workplace safety policies to decrease accidents caused by distracted drivers	Section 9901 of the American Rescue Plan Act, Pub. L. No. 117-2; Section 602(b), 603(b) and/or 603 (c) as applicable	<p>Contractor RFP/IFB</p> <p>Contractor RFQ</p> <p>Subrecipients</p> <p>Vendors</p>

**BID
B001-24**

BPUB Purchasing Department
1155 FM 511

Olmito, Texas 78575



Bid of _____ hereinafter called BIDDER, a corporation organized and existing under the laws of the State of _____, or, a partnership, or an individual doing business as _____.

To the Brownsville Public Utilities Board of the City of Brownsville, Texas, hereinafter called OWNER.

Respected Board Members:

The undersigned BIDDER, in compliance with your Invitation to Bid for the **Downtown Wastewater Project 1**, having read and examined the Plans and Specifications with related Contract Documents and visited the site of the proposed Work, and being familiar with all of the federal, state and local conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, equipment and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth herein, and at the Total Base Bid Amount prior to OWNER options on additive/deductive alternates of: (in words and numeric figures)

_____. These price(s) are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this bid is a part. These price(s) are firm and shall not be subject to adjustment, provided this Bid is accepted by OWNER within ninety (90) calendar days after the time set for BPUB receipt of bids.

BIDDER hereby agrees to commence Work under this Contract on or before a date to be specified in a written "Notice to Proceed" to be issued by the OWNER, and to then fully complete the Project within the times established in Article 3 of the Construction Agreement. BIDDER further agrees to pay as liquidated damages, not as a penalty, for failure to do so, the sum(s) established in Article 3 of the Construction Agreement.

BIDDER agrees to perform all Work for which he contracts as described in the Technical Specifications and as shown on the Plans, for the prices indicated on the following Bid Form.

BID SCHEDULE
BASE BID – B001-24
BROWNSVILLE PUBLIC UTILITIES BOARD

The Bidder, in compliance with the Invitation for Bids for the **Downtown Wastewater Project 1** having examined the scope of work and written Specifications, hereby proposes to furnish construction services for the following Unit prices and lump sums.

1 **TOTAL AMOUNT OF BID (ITEMS 1 - 74):** \$ _____

(written in words)

NOTE: Quantities are estimated. The Brownsville PUB reserves the right to increase or decrease quantities as allowed by Texas law (plus or minus 25%) percent and as deemed necessary by OWNER, without impacting the quoted unit prices. Prospective bidders are encouraged to visit and assess the existing Project site and structures prior to submitting a bid.

BIDDER Acknowledges receipt of the following Addenda:

SUBCONTRACTORS. The undersigned BIDDER proposes that he will be responsible to perform major portions of the Work at the Project site with his own forces and that specific portions of the Work not performed by the undersigned will be subcontracted and performed by the following subcontractors.

Work Subcontracted	Name of Subcontractor
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Bid amounts are to be legibly shown in both words and figures. In case of discrepancy, the unit price amount written in words will govern.

The above lump sum and unit prices shall include all labor, materials, excavation, bailing, shallow groundwater dewatering, shoring, removal, backfill, overhead, profit, insurance, etc., to cover the finished Work of the several kinds called for.

BIDDER understands that the OWNER reserves the right to reject any or all bids and to waive any informalities in the bidding and to elect to opt for any additive or deductive alternates in arriving at a final Contract price.

BIDDER agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled bid opening.

The undersigned hereby declares that only the persons or firms interested in the bid as principal or principals are named herein, and that no other persons or firms than are herein mentioned have any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company, or entities likewise submitting a bid or bid; and that it is in all respects for and in good faith, without collusion or fraud.

Upon receipt of written notice of the acceptance of this bid, BIDDER will execute the formal Contract attached within ten (10) calendar days and deliver the Bonds and Insurance Certificates as required under the GENERAL CONDITIONS. The Bid security attached in the sum of _____ (\$_____) is to become the property of the OWNER in the event the Contract, Bonds, and insurance certificates are not executed or delivered within the time above set forth, as mutually agreed to liquidated damages and not as a penalty for the delay and additional administrative expense to the OWNER caused thereby; otherwise the Bid security will be returned upon the signing of the Contract and delivering the approved Bonds and Insurance Certificates.

Seal affixed here if BID is by a Corporation:
Respectfully submitted,

By: _____
Signature (Failure to sign disqualifies bid)

Title

Address

Attest: _____

Special Conditions

- SC-1 Pre-Bid Site Visit:** Prior to submitting a bid, the CONTRACTOR shall conduct a site visit to verify construction spacing limitations and proximity to buildings. The CONTRACTOR is responsible for acquiring the appropriate equipment to protect existing buildings, overhead utilities, and nearby structures not specifically called out to be replaced in the plans.
- SC-2 Existing Subsurface Conditions and Above-ground Utilities:** Existing subsurface conditions shall be confirmed by the CONTRACTOR. All existing underground utilities shown on the plans are approximate and based on available information. It shall be the CONTRACTOR'S responsibility to determine the exact location and elevation and, in some cases expose all existing utilities shown or not shown on plans prior to construction and notify ENGINEER and OWNER of any conflicts with proposed work.

The CONTRACTOR is responsible for maintaining, supporting, and protecting the integrity of underground utilities during construction. It shall be the CONTRACTOR'S responsibility to excavate over, under and around such utilities and, if necessary, provide temporary bridging during construction so as to maintain continuous service while constructing the proposed facilities. It will be the CONTRACTOR's responsibility to backfill around existing utilities and to complete construction in a manner such as to leave the existing utilities securely bedded in their original position. All this work will be at no additional cost to BPUB.

If damages occur to existing facilities due to the CONTRACTOR's actions, it will be the CONTRACTOR's full responsibility to repair, replace, or pay for the repair or replacement of any damaged items at no additional cost to BPUB.

- SC-3 Communication Protocol:** All communication from the OWNER's Construction Inspector to the CONTRACTOR shall be through the CONTRACTOR's Project Manager and/or Superintendent. Communication to/from the CONTRACTOR's subcontractors shall be routed to the OWNER's Construction Inspector through the CONTRACTOR. Contact information for the OWNER's Construction Inspector and the CONTRACTOR will be provided at the pre-construction conference.
- SC-4 Contaminated Soil and Groundwater:** The CONTRACTOR shall be aware of potential for hazardous materials in the area. If encountered, the CONTRACTOR shall notify the owner and engineer of record and have the contaminated soil and ground water sampled and lab tested. Contaminated water and/or soils shall be handled and disposed of in accordance to specification 01 35 13.43.
- SC-5 Antiquities Code:** The project is located in a historic area and potentially contains historic archaeological deposits. Construction monitoring by an archaeologist is required during excavation. An on-site monitor, acquired by the OWNER, shall be on site to review any potential archaeological deposits. The CONTRACTOR shall coordinate with the OWNER on times of planned excavation throughout the duration of the project.
- SC-6 Geotechnical Investigation:** A Geotechnical Data Report (GDR) is available in the Appendix for CONTRACTORS informational purposes only. The CONTRACTOR shall review the available information to determine the appropriate equipment needed for the varying project area soil conditions and groundwater.

SC-7 Shore Protection: CONTRACTOR is advised that existing soils in the area will likely warrant special shoring requirements including but not limited to hydraulic shoring, step shoring, etc. Please refer to Geotechnical Report for additional information. No additional pay will be allowed for shore protection other than bid items included in Contract.

SC-8 Groundwater Control: CONTRACTOR is advised that groundwater was observed during geotechnical borings. Line items have been included in the Bid Proposal.

SC-9 Potential Fiber Optic Conflicts: At the time of bid, broadband fiber is being installed in the project area. The proposed fiber was installed after the project survey and is not shown on the plans. **Appendix B** shows the proposed locations of the new fiber conduits. The CONTRACTOR shall coordinate the location of the fiber optic lines prior to construction and excavation.

1

SC-10 Allowance Items: This Project includes allowances for repairs and/or relocations to existing utility crossings and disposal of contaminated water/soil during construction that are not directly called out in the plans. The assumptions and corresponding budget shown on bid form made when determining allowance items are presented below. Anticipated crossings are based on GIS/Record information and should be verified by the CONTRACTOR prior to excavation.

- Contaminated Soil/Water Disposal: Allowance is based on estimated 44 CY and 1000 GAL quantities of disposal.
- Power Pole Bracing: Allowance is based on 82 power poles that require bracing during construction.
- Relocation and Repair of Existing Water Main: Allowance is based on 16 (various diameter & depth) water main crossings.
- Relocation and Repair of Existing Fiber Optic: Allowance is based on 24 (various diameter & depth) fiber optic and communications cable crossings.
- Relocation and Repair of Existing Gas: Allowance is based on 34 (various diameter & depth) gas line crossings (both mains and service laterals).

END OF SECTION

SECTION 01 01 50

SEQUENCE OF CONSTRUCTION

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The construction of this project will occur while the wastewater collection system remains operable to meet customer needs and requirements. The operations necessary to meet these requirements are of higher priority than construction activities. Schedules of by-pass pumping, connections, renovations and modifications shall be submitted to the OWNER for approval, and all such items shall be coordinated throughout the entire construction period.
- B. CONTRACTOR shall prepare and submit a project schedule, schedule of values and safety plan within 10 days of Notice to Proceed.
- C. CONTRACTOR shall notify the OWNER in writing at least 14 days in advance and again three (3) days prior to beginning work on a particular area, and coordinate with the OWNER the specific items to be isolated and duration for each. Obtain written approval from the OWNER prior to each shutdown. Drought conditions, scheduling of improvements and shut-downs at other sites or equipment outages may require the re-scheduling of an approved shutdown. Any cost associated with rescheduling will be considered as incidental to the CONTRACTOR's cost of the project.
- D. Prior to beginning work, CONTRACTOR shall have on-site all materials, equipment, and personnel necessary to complete the work in the time scheduled. CONTRACTOR shall also perform all preparatory tasks to the most complete state possible.
- E. Failure of the CONTRACTOR to properly plan and perform the work in the prescribed manner may result in inadequate pumping of wastewater. In this case, CONTRACTOR may be liable for payment of fines, fees or other charges imposed upon the OWNER by state or federal regulatory agencies, and all other costs associated with the discharge. The OWNER may recover monetary sums by retention.
- F. CONTRACTOR shall be required to maintain the existing roads utilized during construction in a reasonably clean condition.
- G. CONTRACTOR shall be required to perform yard maintenance services throughout the duration of the construction project, per Section 01 0 10 – Summary of Work and Section 01 50 00 – Temporary Facilities and Controls.

1.02 RELATED WORK

- A. Bid Proposal
- B. Section 01 33 00 – Submittal Procedures

1.03 SUBMITTALS

- A. Project submittal specifications are detailed in Section 01 33 00 – Submittal Procedures.

- B. The Drawings indicate the general location and arrangement of existing conditions. Prior to developing any construction drawings and/or Work Plans, it is mandatory that the Bidder visit the site to determine the complexity of the work and the existing conditions. Conditions which are obvious/visible, noted in the plans or which should be reasonably anticipated by the Bidder on inspection will not be considered as a “differing site conditions” clause of this Contract.
- C. CONTRACTOR shall submit a plan to be reviewed and accepted by the OWNER for the sequence of construction and placement of the wastewater utilities into operation in accordance with this section. The plan shall be submitted to the OWNER and accepted by the OWNER at least 30 days prior to initial startup of the utility. The plan shall include the specific items indicated in Part 3 of this section. CONTRACTOR may request modifications to the items in Part 3 which shall be subject to acceptance by the OWNER. The plan shall include the following:
1. Organization charts detailing the Construction/Home Office organizational structure.
 2. A detailed staffing plan/curve for both field craft and staff.
 3. A proposed schedule for performance of the Work in the project-scheduling tool, Microsoft Project© or Primavera P3, with submittals of the original file and Adobe PDF.
 4. Names, resumes, professional registrations and certifications, schedule for assignment and signature authorities of Key Personnel. Provide guarantees that personnel named will in fact be those utilized in execution of the Work.
 5. A description of CONTRACTOR’s proposed execution approach, addressing project management, interfacing with the sequence of work, equipment and materials salvage and staging, equipment required for bypass pumping, demolition, and construction activities.
 6. Demonstrate experience with small diameter wastewater construction and urban construction and coordination.
 7. A detailed description of how the CONTRACTOR will install and maintain the sanitary sewer bypass while constructing the improvements to the existing system. Where feasible, the CONTRACTOR shall keep the existing gravity and force main system in service during construction.
 8. Demonstrate a firm understanding of the execution requirements.
 9. CONTRACTOR’s plans for the removal and disposal of debris, trash, and waste. Plans shall include removal and disposal of potential contaminated soil and groundwater
 10. A detailed list of activities that will be performed by SUBCONTRACTORS (to be included in detailed schedule).

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. CONTRACTOR shall coordinate and schedule each task necessary to complete all work within the time allowed for the Project. These phases are general in nature and not intended to prescribe the CONTRACTOR's Work Plan. Work items from various phases may be done simultaneously or separately unless otherwise specified.

- B. Each phase may require the CONTRACTOR to perform work such as installing temporary bypass pumping, traffic control, SWPPP, and safety protection. The specifics related to flow diversion and temporary plugging means and methods are the responsibility of the CONTRACTOR; however, the CONTRACTOR's plans and schedules shall be submitted to the OWNER for review and approval.

3.02 SEQUENCE OF CONSTRUCTION

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- A. CONTRACTOR is to develop a detailed sequence for discussion with OWNER prior to beginning construction. CONTRACTOR can submit an alternate construction sequence for OWNER's review and acceptance. Some construction activities may be conducted concurrently. Completion dates of the various stages shall be in accordance with the accepted construction schedule submitted by the CONTRACTOR.

- B. Required CONTRACTOR Completion Dates:

- 1. The Work specified herein and any other Contract Work required by the OWNER which may interrupt the normal operations of the wastewater utility shall be accomplished at such times that will be convenient to the OWNER. The CONTRACTOR shall plan to Work overtime if needed to complete construction of the various Project improvements and shall make no claims for extra compensation for overtime Work required to conform to these requirements. The CONTRACTOR shall coordinate with the OWNER in accordance with Paragraph 1.01.C of this Section prior to performing Work.

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- a. Required contract completion date is December 31, 2024.
- 2. Construction Sequencing:
 - a. Contractor shall furnish and install all tools and material required to abandon/remove existing infrastructure and install the new wastewater pipeline in accordance with the plans and specifications.

END OF SECTION

SECTION 01 10 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 SCOPE SUMMARY

- A. Furnish all labor, materials, equipment, and incidentals required to rehabilitate or reconstruct approximately 5,500 LF of wastewater gravity mains and associated sitework as shown on the drawings, and as specified herein.

1.02 LOCATION OF WORK

- A. The Downtown Water and Wastewater Project 1 is located along various roadways inside the City of Brownsville.

1.03 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work includes but is not limited to the following:
 - 1. Segment A:
 - a. Rehabilitation or reconstruction of approximately 2,300 LF of 10-inch wastewater gravity mains with 12-inch wastewater gravity mains and seven (7) manholes. Segment A runs within an alleyway located between E. Elizabeth St. and E. Levee St. from E. 7th St. to International Blvd.
 - 2. Segment B:
 - a. Rehabilitation or reconstruction of approximately 1,050 LF of 8-inch wastewater gravity mains with 12-inch wastewater gravity mains and four (4) manholes. Segment B runs within an alleyway located between E. Levee St. and E. St. Charles St. from E. 7th St. to E. 10th St.
 - 3. Segment C:
 - a. Rehabilitation or reconstruction of approximately 1,350 LF of 8-inch wastewater gravity mains with 12-inch wastewater gravity mains and five (5) manholes. Segment C runs within an alleyway located between E. St. Francis St. and E. St. Charles St. from E. 8th St. to E. 11th St., as well as a section that runs down E. 8th St
 - 4. Segment D:
 - a. Rehabilitation or reconstruction of approximately 300 LF of 8-inch wastewater gravity mains with 12-inch wastewater gravity mains and two (2) manholes. Segment D runs along E. 11th St. near E. St. Charles St.
- B. Any damage to the existing equipment, structures or items to remain during construction shall be fully repaired at CONTRACTOR's expense to OWNER's satisfaction and at no additional cost to the OWNER.
- C. All work done under this contract shall conform to all local ordinances. The CONTRACTOR shall arrange and pay all cost of permits and inspection fees not already obtained by the OWNER and shall confine his operation to the limits set by law.
- D. It is the intent of the OWNER to award this project to one contractor.

1.04 WORK OF OTHER CONTRACTS

- A. During the Work of this Contract, it is not anticipated that construction by other contractors for separate but related work will be in progress within the project limits. Should any additional Work be done within the project limits, the CONTRACTOR should coordinate any additional work by others necessary at no additional cost to the OWNER.

1.05 EXISTING CONDITIONS

- A. Locate and protect all existing utilities impacted by this project. Those affected by this project may include, but are not necessarily limited to:
 1. Brownsville Public Utilities Board
 2. Texas Gas Service
 3. AEP Energy
 4. AT&T
 5. Charter, Spectrum, TWC
 6. MCI, Sprint
 7. 1-800-DIG-TESS (utility locate services)
 8. Texas One-Call (utility locate services)
 9. Lonestar One-Call (utility locate services)
 10. Valley Telephone Coop
 11. FiberLight
 12. Smartcom Telephone

1.06 WORK SEQUENCE

- A. The CONTRACTOR shall furnish, install, and place into operation the wastewater gravity main system within 52 weeks (365 calendar days) from Notice to Proceed on the project.
- B. Construct work in stages to provide proper coordination with work by Others. Coordinate the construction schedule and operations with the OWNER's representative. Refer to General Conditions and Section 01 01 50 – Sequence of Construction for milestone completion requirements.
- C. Traffic Control plan conforming to the requirements of the Texas Manual on Uniform Traffic Control Devices shall be provided by the CONTRACTOR to the governing R.O.W. agency and the OWNER when the proposed construction affects, or is located within the limits, or R.O.W. of a local, state or federal maintained R.O.W. The CONTRACTOR shall not begin construction of the Project or close any streets until the traffic control plan has been approved by the governing R.O.W. agency and the OWNER, and all traffic control devices are properly installed and maintained at the job site in accordance with the Texas Manual on Uniform Traffic Control Devices. The CONTRACTOR shall notify the governing R.O.W. agency and the OWNER forty-eight (48) hours in advance of closing any street to through traffic. CONTRACTOR shall provide for the access of residents and businesses within all phases of work. This may include, but shall not be limited to, providing steel plates as temporary trench crossings at entrances to businesses or residences. Flagmen to control traffic at these crossings shall be used as necessary.

- D. The CONTRACTOR shall prepare and submit a construction schedule that accomplishes the Work within the allotted time and adheres to the overall schedule and Project-specific constraints listed herein.

1.07 PROJECT REQUIREMENTS

- A. "Or-Equal" products will be allowed if approved by the OWNER and ENGINEER. Refer to General Conditions for requirements.
- B. Preparation For Shipment. All materials shall be suitably packaged to facilitate handling and protect against damage during transit and storage. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of the OWNER.
- C. Each item, package, or bundle of material shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packaging lists and bills of materials shall be included with each shipment.
- D. Notices To OWNERS And Authorities. CONTRACTOR shall, as provided in the General Conditions, notify owners of adjacent property and utilities when prosecution of the Work may affect them.
 - 1. When it is necessary to temporarily deny access to property, or when any utility service connection must be interrupted, CONTRACTOR shall give written notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and shall include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.
 - 2. Utilities and other concerned agencies shall be notified at least seventy-two (72) hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.
- E. Lines And Grades. All Work shall be done to the lines, grades, and elevations indicated on the Drawings.
 - 1. CONTRACTOR shall provide an experienced instrument person, competent assistants, and such instruments, tools, stakes, and other materials required to complete the survey, layout, and measurement work. In addition, CONTRACTOR shall furnish, without charge, competent persons and such tools, stakes, and other materials as OWNER may require in establishing or designating control points or in checking survey, layout, and measurement work performed by CONTRACTOR.
 - 2. CONTRACTOR shall keep OWNER informed, a reasonable time in advance, of the times and places at which the CONTRACTOR wished to do Work, so that horizontal and vertical control points may be established and any checking deemed necessary by OWNER so that it may be done with minimum inconvenience to OWNER and minimum delay to CONTRACTOR.
 - 3. CONTRACTOR shall remove and reconstruct work which is improperly located.
- F. Connections to Existing Utilities. Unless otherwise specified or indicated, CONTRACTOR shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, CONTRACTOR shall receive permission from OWNER or the owning utility prior to undertaking connections. CONTRACTOR shall protect facilities against

deleterious substances and damage. CONTRACTOR shall provide a minimum of seventy-two (72) hours notice prior to making interconnection.

- G. Unfavorable Construction Conditions. During unfavorable weather, wet ground, or other unsuitable construction conditions, CONTRACTOR shall confine its operations to work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by CONTRACTOR to perform the Work in a proper and satisfactory manner.
- H. Cleaning Up. CONTRACTOR shall keep the premises free at all times from accumulations of waste materials and rubbish. CONTRACTOR shall provide adequate trash receptacles about the site and shall promptly empty the containers when filled.
 - 1. Construction materials, such as concrete forms and scaffolding, shall be neatly stacked by CONTRACTOR when not in use. CONTRACTOR shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.
 - 2. Volatile wastes shall be properly stored in covered metal containers and removed daily.
 - 3. Wastes shall not be buried or burned on the site or disposed of into storm drains, sanitary sewers, streams, or waterways. All wastes shall be removed from the site and disposed of in a manner complying with local ordinances and antipollution laws.
 - 4. Adequate cleanup will be a condition for recommendation of progress payment applications.



I. Applicable Codes are designated within the technical specifications.

- J. Reference Standards. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest 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. However, no provision of any referenced standard, specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR, CONSULTANT, or ENGINEER, or any of their Consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any of ENGINEER's Consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the Work.
- K. Site Administration. CONTRACTOR shall be responsible for all areas of the site used by it and by all Subcontractors in the performance of the Work. CONTRACTOR will exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to OWNER or others. CONTRACTOR has the right to exclude from the site all persons who have no purpose related to the Work or its inspection and may require all persons on the site (except OWNER's employees) to observe the same regulations as CONTRACTOR requires of its employees.

1.08 SECURITY

- A. The CONTRACTOR shall initiate a security program to protect the Work, CONTRACTOR's construction equipment and OWNER's facilities from theft, vandalism, and unauthorized entry for the duration of the construction period. Program shall be initiated at mobilization and shall be maintained throughout the construction duration until final OWNER acceptance of the complete project. Refer to Section 01 50 00 –Temporary Facilities and Controls for security requirements.

END OF SECTION

SECTION 01 15 00

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This section defines the method that will be used to determine the quantities of Work performed or materials supplied and establish the basis upon which payment will be made.

1.02 AUTHORITY

- A. Measurement methods delineated in Specification Sections are intended to complement the criteria of this section. In the event of conflict, the requirements of the Specification Section shall govern.

1.03 BID PROPOSAL

- A. Required items of Work and incidentals necessary for the satisfactory completion of the Project shall be considered incidental to the specified Work required under this contract and shall be considered as included in the unit bids for the various bid items. The CONTRACTOR shall prepare his bid accordingly to allow for such items:

1. Not specifically listed in the bid proposal form.
2. Not specified in this section to be measured or to be included in one of the items listed in the bid proposal form.
3. To include CONTRACTOR overhead and profit.

- B. Work includes the furnishing of all labor, materials, equipment, tools, and related items for performing all operations required to complete the Project satisfactorily in place, as specified by the contract documents.

1.04 ADMINISTRATIVE SUBMITTALS

- A. Schedule of Values: Submit schedule on CONTRACTOR standard form.

- B. Schedule of Estimated Progress Payments:

1. Submit with initially acceptable schedule of values.
2. Submit adjustments thereto with Application for Payment.

- C. Application for Payment.

- D. Final Application for Payment.

1.05 SCHEDULE OF VALUES

- A. Prepare a separate schedule of values for each schedule of Work under the Agreement.

- B. Unit Price Work: Reflect unit price quantity and price breakdown from conformed Bid Form.
- C. An unbalanced or front-end loaded schedule will not be acceptable.
- D. Summation of the complete schedule of values representing all Work shall equal the Contract Price.

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~~1.06 SCHEDULE OF ESTIMATED PROGRESS PAYMENTS~~

- ~~A. Show estimated payment requests throughout Contract Times aggregating initial Contract Price.~~
- ~~B. Base estimated progress payments on initially acceptable progress schedule. Adjust to reflect subsequent adjustments in progress schedule and Contract Price as reflected by modifications to the Contract Documents.~~

1.07 MEASUREMENT – GENERAL

- A. Lump sum bids shall cover the costs of all the work shown and/or specified in the plans and specifications and be required to complete that particular portion of the work. Payment of the full lump sum price shall be paid for the work.
- B. Unit price bids shall cover all costs associated in providing a single unit (linear foot, each, cubic yard, square foot, etc.) as called for on the plans and/or specifications and as required to provide a complete unit. Payment shall only be made for the actual quantity of units provided as determined by the ENGINEER.
- C. Payment shall constitute full compensation to the Contractor for furnishing all labor, equipment, tools, and materials, and for performing all operations required to furnish.
- D. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and specifications as specified in National Institute of Standards and Technology, Handbook 44.
- E. Whenever pay quantities of material are determined by weight, the material shall be weighed on scales furnished by CONTRACTOR and certified accurate by the state agency responsible. A weight or load slip shall be obtained from the weigher and delivered to the OWNER's representative at the point of delivery of the material.
- F. If material is shipped by rail, the car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff, and provided further that car weights will not be acceptable for material to be passed through mixing plants.
- G. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by OWNER. Each vehicle shall bear a plainly legible identification mark.
- H. All materials which are specified for measurement by the cubic yard measured in the vehicle shall be hauled in vehicles of such type and size that the actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each

vehicle must bear a plainly legible identification mark indicating its water level capacity. All vehicles shall be loaded to at least their water level capacity. Loads hauled in vehicles not meeting the above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to rejection, and no compensation will be allowed for such material.

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- I. ~~Quantities will be based on ground profiles shown. Field surveys will not be made to confirm accuracy of elevations shown.~~
- J. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings.
- K. Units of measure shown on the Bid Form shall be as follows unless specified otherwise.

Item	Method of Measurement
AC	Acre—Field Measure by BPUB Inspector
CY	Cubic Yard—Field Measure by BPUB Inspector within the limits specified or shown
CY-VM	Cubic Yard—Measured in the Vehicle by Volume
EA	Each—Field Count by BPUB Inspector
GAL	Gallon—Field Measure by BPUB Inspector
HR	Hour
LB	Pound(s)—Weight Measure by Scale
LF	Linear Foot—Field Measure by BPUB Inspector
VF	Vertical Foot—Field Measure by BPUB Inspector
LS	Lump Sum—Unit is one; no measurement will be made
SF	Square Foot
SY	Square Yard
TON	Ton—Weight Measure by Scale (2,000 pounds)

1.08 RELATED WORK

- A. Section 01 33 00 – Submittal Procedures

1.09 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- A. Payment shall not be made for the following:
 1. Loading, hauling and disposing of rejected material.
 2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
 3. Rejected loads of material, including material rejected after it has been placed by reason of failure of CONTRACTOR to conform to provisions of Contract Documents.
 4. Material not unloaded from transporting vehicle.
 5. Defective Work not accepted by OWNER.

6. Material remaining on hand after completion of Work.

1.10 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

- A. Partial Payment: No partial payments shall be made for materials and equipment delivered or stored unless Shop Drawings or preliminary operation and maintenance manuals are acceptable to OWNER.
- B. Final Payment: Shall be made only for products incorporated in Work; remaining products, for which partial payments have been made, shall revert to MANUFACTURER unless otherwise agreed, and partial payments made for those items shall be deducted from final payment.

PART 2 BASE BID ITEMS



2.01 ITEM NO. 68 – CONTAMINATED SOIL/WATER DISPOSAL

- A. Description – The Contractor shall provide all labor, supervision, tools, equipment, materials, and disposal fees necessary to remove and properly dispose of any contaminated soils or groundwater encountered during construction. No contract days will be added due to delays.
- B. Payment – Payment for this item will be made by the CY for contaminated soils and GAL for contaminated water encountered during construction. Payment for these items will be made utilizing the allowances included in the bid.

2.02 ITEM NO. 69 - POWER POLE BRACING

- A. Description – The Contractor shall coordinate with utility company and provide all labor, supervision, tools, equipment, and materials necessary to brace and /or relocate power poles as required to complete work. No contract days will be added due to delays.
- B. Payment – Payment for this item will be made under the allowance included in the bid.

2.03 ITEM NO. 70 - RELOCATION AND REPAIR OF EXISTING WATER MAIN

- A. Description – Waterline crossings are expected throughout this project. The CONTRACTOR is responsible for protecting existing waterlines during construction. Should the existing waterline require relocation or repair for the construction of the proposed sanitary sewer line, the CONTRACTOR shall coordinate with BPUB and provide all labor, supervision, tools, equipment, and materials necessary to relocate water lines as required to complete work. This item includes all work associated with, including but not limited to, trenching, bedding and backfill, removal of existing utility, disposal of existing utility, relocation of existing utility, connections to existing infrastructure, testing, and all required surface restoration. No contract days will be added due to delays
- B. Payment – Payment for this item will be made under the allowance included in the bid.



2.04 ITEM NO. 71 - RELOCATION AND REPAIR OF EXISTING FIBER OPTIC

- A. Description – Telecommunication crossings are expected throughout this project. The CONTRACTOR is responsible for protecting existing utilities during construction. Should the existing line require relocation or repair for the construction of the proposed sanitary sewer line, the CONTRACTOR shall coordinate with the appropriate utility owner and provide all labor, supervision, tools, equipment, and materials necessary to relocate all diameters and all depths of the existing utility as required to complete work. This includes all work associated with, including but not limited to, trenching, bedding and backfill, removal of existing utility, disposal of existing utility, relocation of existing utility, connections to existing infrastructure, testing, and all required surface restoration. No contract days will be added due to delays
- B. Payment – Payment for this item will be made under the allowance included in the bid.

2.05 ITEM NO. 72 - RELOCATION AND REPAIR OF EXISTING GAS

- A. Description – Gas line crossings are expected throughout this project. The CONTRACTOR is responsible for protecting existing utilities during construction. Should the existing line require relocation or repair for the construction of the proposed sanitary sewer line, the CONTRACTOR shall coordinate with the appropriate utility owner and provide all labor, supervision, tools, equipment, and materials necessary to relocate all diameters and all depths of the existing utility as required to complete work. This includes all work associated with, including but not limited to, trenching, bedding and backfill, removal of existing utility, disposal of existing utility, relocation of existing utility, connections to existing infrastructure, testing, and all required surface restoration. No contract days will be added due to delays
- B. Payment – Payment for this item will be made under the allowance included in the bid.

PART 3 PRODUCTS (NOT USED)

PART 4 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SCOPE OF WORK

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

1.02 SUBMITTAL PROCEDURES

- A. All submittals shall use English units and shall be written in English.
- B. Transmit each submittal with Engineer-accepted form.
- C. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- D. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.

- E. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- F. Schedule submittals to expedite Project, and post electronic submittals as PDF electronic files to Project website per project communications procedures. Coordinate submission of related items.



G. For each submittal for review, allow 15 business days excluding delivery time to and from Contractor.

- H. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- I. Allow space on submittals for Contractor and Engineer review stamps.
- J. When revised for resubmission, identify changes made since previous submission.
- K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- L. Submittals not requested will not be recognized nor processed.
- M. Incomplete Submittals: Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.03 CONSTRUCTION PROGRESS SCHEDULES (NOT USED)

1.04 PROPOSED PRODUCT LIST

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

1.05 PRODUCT DATA

- A. Product Data: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Post electronic submittals as PDF electronic files to Project website.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.
- 1.06 ELECTRONIC CAD FILES OF PROJECT DRAWINGS (NOT USED)
- 1.07 SHOP DRAWINGS
- A. Shop Drawings: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
 - B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
 - C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 - 3. Make revisions and provide additional information when required by authorities having jurisdiction.
 - D. Post electronic submittals as PDF electronic files to Project website.
 - E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 – Execution and Closeout Requirements.
- 1.08 SAMPLES
- A. Samples: Submit to Owner for assessing conformance with information given and design concept expressed in Contract Documents.
 - B. Samples for Selection as Specified in Product Sections:
 - 1. Submit to Owner for aesthetic, color, and finish selection.
 - 2. Submit Samples of finishes, textures, and patterns for Owner selection.
 - C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.
 - D. Include identification on each Sample, with full Project information.
 - E. Submit number of Samples specified in individual Specification Sections; Owner will retain one Sample.
 - F. Reviewed Samples that may be used in the Work are indicated in individual Specification Sections.

- G. Samples will not be used for testing purposes unless specifically stated in Specification Section.
 - H. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 – Execution and Closeout Requirements.
- 1.09 OTHER SUBMITTALS
- A. Closeout Submittals: Comply with Section 01 70 00 – Execution and Closeout Requirements.
- 1.10 DESIGN DATA
- A. Submit data for Engineer's knowledge as Contract administrator or for Owner.
 - B. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.
- 1.11 TEST REPORTS
- A. Submit reports for Engineer's knowledge as Contract administrator or for Owner.
 - B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.
- 1.12 CERTIFICATES
- A. Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
 - B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 - C. Certificates may be recent or previous test results on material or product but must be acceptable to Engineer.
- 1.13 MANUFACTURER'S INSTRUCTIONS
- A. Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.
 - B. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Engineer in quantities specified for Product Data.
 - C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- 1.14 MANUFACTURER'S FIELD REPORTS
- A. Submit reports for Engineer's knowledge as Contract administrator or for Owner.

- B. Submit report within 5 days of observation to Engineer for information.
- C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1

1.15 ~~ERECTION DRAWINGS~~

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

1.16 CONSTRUCTION PHOTOGRAPHS

- A. Provide photographs of construction throughout progress of Work produced by an experienced photographer acceptable to Engineer.
- B. Each month submit photographs with Application for Payment.
- C. Photographs: Digital images shall be submitted with the information listed below.
- D. Take **two** Site photographs from different directions and **five** interior photographs of indicating relative progress of the Work.
- E. Take site photographs as evidence of existing project conditions, nearby buildings, and overhead utilities and structures.
- F. Identify each print with name of Project, Contract number, phase, station or location, orientation of view, date and time of view, name and address of photographer, and photographer's numbered identification of exposure.
- G. Digital Images: Deliver complete set of digital image electronic files to Owner with Project record documents. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as sensor, uncropped.
 - 1. Digital Images: Uncompressed TIFF format, produced by digital camera with minimum sensor size of 4.0 megapixels, and image resolution of not less than 1024 by 768 pixels.
 - 2. Date and Time: Include date and time in filename for each image.

1.17 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.
- B. CONTRACTOR: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.

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

1.18 ENGINEER REVIEW

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

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 35 13.43

SPECIAL PROCEDURES FOR CONTAMINATED SITES

PART 1 GENERAL

1.01 SCOPE

- A. This specification covers the excavation, handling, loading, temporary storage, transportation and disposal of contaminated soils and water encountered during the installation of the planned wastewater improvements. A Geotechnical Investigation Report indicated that solid waste or contaminated soils and groundwater may be present at depths less than the proposed depth of the excavation. Based on this assessment, if the CONTRACTOR encounters, during excavation and/or earth moving for the work, soil or groundwater that is contaminated, discolored, has a noticeable odor or is otherwise out of the ordinary, the CONTRACTOR shall immediately notify the OWNER and follow the procedures set forth in this Section.

1.02 REGULATORY REQUIREMENTS

- A. Work covered under this specification shall be performed in accordance with all applicable local, state, and federal regulations, statues, codes, rules, ordinances and policies. In the event of a conflict, the more stringent standards shall apply. Applicable regulations and laws include, but are not limited to:

1. Code of Federal Regulations, Title 29, Part 1910.120 Hazardous Waste Operations and Emergency Response (29 CFR § 1910.120). U.S. Government Printing Office, Washington, DC.

2. RG-022 – Texas Commission on Environmental Quality. Classifying and Coding of Industrial and Hazardous Waste. Austin, TX.

3. SW-846 - U.S. Environmental Protection Agency. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Vol. I. Washington, DC.

4. Texas Administrative Code, Title 30, Chapter 335 (30 TAC § 335). Office of the Secretary of State, Austin, TX.

5. Texas Administrative Code, Title 30, Chapter 350 (37 TAC § 350). Office of the Secretary of State, Austin, TX.

6. Texas Administrative Code, Title 37, Chapter 16 (37 TAC § 16). Office of the Secretary of State, Austin, TX.

1.03 HEALTH AND SAFETY

- A. The CONTRACTOR shall be responsible for developing, implementing, and maintaining a health and safety program for their personnel including

subcontractors. Prior to commencement of work, the CONTRACTOR shall submit a site-specific Health and Safety Plan (HASP) to the OWNER for review. The HASP shall be prepared and signed by a certified safety professional (CSP) or a certified industrial hygienist (CIH). The resume of the CSP or CIH shall be submitted as an attachment to the HASP and shall document their qualifications and applicable experience. In addition to the health and safety requirements as described in the sewer construction specifications, the HASP shall address exposure of workers to contaminated soil and groundwater, temporary storage, and transportation and disposal of contaminated materials. The HASP shall be prepared in accordance with the requirements of 29 CFR 1910.120 and shall contain, at minimum, the following sections:

1. Project Description
2. Site Description
3. Summary of Field Activities
4. Listing of Field Staff including Project Manager, On-site Manager, and Health and Safety Officer
5. Emergency Contact Information
6. Site Control Measures
7. Identification of Environmental Hazards
8. Protective Equipment
9. Exposure Limits for Chemicals of Concern
10. Monitoring Requirements and Action Levels
11. Decontamination Procedures
12. Disposal Procedures
13. Employee Training Records
14. Resume of CSP or CIH

1.04 RECORD KEEPING

A. When performing work within the scope of this specification, the CONTRACTOR shall be responsible for maintaining a Project record on-site that includes:

1. A copy of the CONTRACTOR's HASP;

2. A daily sign in sheet including the signatures of all personnel, regardless of affiliation, who enter the site acknowledging that they;
 - i. Have read and understood the CONTRACTOR'S Site Specific HASP;
 - ii. Meet the training requirements described in the CONTRACTOR HASP; and
 - iii. Have been made aware of potential site hazards including environmental hazards.
3. A copy of all waste manifests or load tickets generated during the transport of contaminated soils or water in accordance with Section 3.07 of this Specification.
4. A copy of all waste manifests or scale tickets generated during the disposal of contaminated soils or water in accordance with Section 3.08 of this Specification.

PART 2 PRODUCTS

2.01 PLASTIC SHEETING

- A. The CONTRACTOR shall use plastic sheeting at least 6 mil thick for lining of all trucks, transport vehicles, soil stockpiles, and roll-off boxes.
- B. Plastic sheeting shall be used and or applied in a manner to prevent migration of soils and contaminants from soils. Soil stockpiles must be placed on, and covered by, plastic sheeting. Under no circumstances will leakage of fluids from soil stockpiles, roll-off boxes or transport trucks be allowed.

PART 3 EXECUTION

3.01 EXCAVATION

- A. During excavation of soils as required by the work, the CONTRACTOR shall place all excavated soils into soil stockpiles or lined roll-off containers in the designated staging area. For areas beyond the originally identified location, the CONTRACTOR shall notify the OWNER if soil or groundwater is encountered that is contaminated, discolored, has a noticeable odor or is otherwise out of the ordinary. This notification shall be made immediately upon encountering contaminated soil and groundwater beyond the limits initially identified.
- B. If the excavation fills with water such that the CONTRACTOR cannot perform construction activities in accordance with the construction specifications, the OWNER shall determine if the water is potentially contaminated in accordance with Section 3.03 of this specification. The CONTRACTOR shall collect water that is found to be potentially contaminated in a clean temporary storage tank.

3.02 MONITORING

- A. During excavation activities, the CONTRACTOR shall be responsible for monitoring the excavation for potentially hazardous vapor concentrations and preventing exposure of workers to contaminated media in accordance with their health and safety plan.
- B. If contaminated soils or groundwater, (soil or groundwater that is discolored, has a noticeable odor or is otherwise out of the ordinary) are encountered in areas beyond the originally identified location, CONTRACTOR shall immediately notify the OWNER or OWNER'S REPRESENTATIVE, who will screen excavated soils. The CONTRACTOR shall abide by the directions of the OWNER'S REPRESENTATIVE and shall provide the OWNER'S REPRESENTATIVE the opportunity to screen soils in accordance with the following procedure:
 - 1. The OWNER'S REPRESENTATIVE will screen excavated soil with a photoionization detector (PID). If OWNER or OWNER'S REPRESENTATIVE determines that readings are above pre-determined action levels, the CONTRACTOR shall stage soils in soil stockpiles or roll-offs separate from other fill materials.
 - 2. If the OWNER'S REPRESENTATIVE determines that soils are contaminated by visual inspection or odor, the CONTRACTOR shall stage soils in soil stockpiles or roll-offs separate from the other fill materials.

3.03 COLLECTION OF SAMPLES

- A. The OWNER or OWNER'S REPRESENTATIVE will collect soil samples from stockpiled soil that is suspected to be contaminated, confirmation samples from clean soil stockpiles, and samples of potentially contaminated groundwater based on the procedures defined in Section 3.02 of this specification. The OWNER shall pay for any testing undertaken for soil that is suspected of contamination due to existing conditions. The OWNER or OWNER'S REPRESENTATIVE will perform waste characterization (testing) of the soil and water, and the CONTRACTOR shall abide by the waste characterization decisions of the OWNER. Depending on the type of contamination discovered, testing duration may be up to three (3) weeks. Testing may need to be conducted on an ongoing basis as additional contaminated soil is discovered. Soils that are thought to be contaminated must remain in the staging area and protected from rainfall and contact by the CONTRACTOR until the OWNER determines how the soil is to be disposed in accordance with Section 3.07 of this Specification.

3.04 TEMPORARY STORAGE

- A. Soils that are determined by the OWNER or OWNER'S REPRESENTATIVE to be potentially contaminated by shall be staged in soil stockpiles or roll-off containers separately from soils that are to be used as fill. Soil stockpiles shall be placed on, and covered by, plastic sheeting. Roll-off containers shall be covered to prevent

- accumulation of water in the container. The roll-off containers shall be located so that they do not block surface drainage pathways, or prevent access to storm sewer inlets or manholes. The CONTRACTOR must ensure that roll-off containers and soil stockpiles are completely sealed and covered. The CONTRACTOR will be responsible for replacing or repairing any roll-off box found to be leaking or in poor condition.
- B. Water that is determined by the OWNER or OWNER'S REPRESENTATIVE to be contaminated shall be collected as required to allow work. Such water shall be collected and temporarily stored in clean, sealed tank(s) by CONTRACTOR. The CONTRACTOR shall place tank(s) such that they do not block surface drainage pathways, storm sewer inlets or manholes. The CONTRACTOR shall be responsible for repairing or replacing any tanks that are found to be leaking or in poor condition.
 - C. During storage, contaminated soil and groundwater containers shall be placed within designated or approved areas. The limits of these areas shall be indicated via barricades, flagging, and/or fencing and access to storage areas shall be restricted.

3.05 CLASSIFICATION OF SOILS AND WATER

- A. The OWNER or OWNER'S REPRESENTATIVE will determine the waste classification of soils and groundwater for the purpose of proper disposal.
- B. Confirmation samples collected from clean soil must have Total Petroleum Hydrocarbon (TPH) concentrations, as measured by Method TX 1005, less than 60 mg/kg per Texas Risk Reduction Program Tier 1 Protective Concentration Levels. Soils with TPH concentrations greater than 60 mg/kg but less than 1500 mg/kg are classified as Class 2 industrial non-hazardous waste and must be disposed in accordance with Section 3.07 at a permitted Class 2 industrial waste landfill.
- C. Soils with TPH concentration greater than or equal to 1500 mg/kg are classified as Class I industrial non-hazardous wastes and must be disposed at a permitted Class I landfill.
- D. Groundwater with TPH concentrations less than 0.73 mg/L is unregulated and can be disposed of by the contractor in accordance with city stormwater disposal regulations. Groundwater with TPH concentrations greater than 0.73 mg/L but less than 1500 mg/l TPH concentration is classified as Class 2 industrial, non-hazardous waste. Groundwater with TPH concentration greater than or equal to 1500 mg/l must be classified as Class I industrial non-hazardous waste.

3.06 TRANSPORTATION

- A. The CONTRACTOR shall perform transport operations in a manner that precludes the spread of contamination. The CONTRACTOR shall remediate waste spillage in transport in accordance with applicable requirements of 30 TAC 335.93, 330.34, and other applicable Federal, State, and local regulations at no additional cost to the OWNER.

- B. Open waste transport vehicles shall be covered by the CONTRACTOR prior to leaving the project site. Covers shall be constructed from water-resistant material with sufficient strength to withstand wind loads during transit. Covers shall effectively prevent release of dust from the transport vehicle. Covers shall have tie-downs or other restraint mechanisms necessary to securely fasten them to the transport vehicle.
- C. Waste transport vehicles shall not leave the project site until the OWNER or OWNER'S REPRESENTATIVE signs the waste manifest as generator of the waste. The CONTRACTOR shall not sign any waste manifest or shipping papers as generator. Payment will not be made for any waste shipment that leaves the site without signatory approval of OWNER or OWNER's REPRESENTATIVE.
- D. The CONTRACTOR shall line all trucks transporting potentially contaminated or known contaminated soils with plastic liner as described in Section 2.01 of this specification. The liner shall be secured in such a manner as to prevent the leaking of liquid materials from the truck bed. The CONTRACTOR shall be responsible for ensuring that trucks leaving the site are NOT leaking liquid materials, and shall be responsible for sealing or re-lining any trucks that are leaking liquids. The CONTRACTOR shall also be responsible for clean-up of any releases.
- E. The CONTRACTOR shall retain a copy of all waste manifests and load tickets for each waste shipment prior to off-site transportation, for record purposes. The CONTRACTOR shall submit a copy of all waste manifests and load tickets to the OWNER within THREE (3) business days of transport. The CONTRACTOR shall notify the OWNER whenever a waste shipment does not arrive at the approved disposal site in a timely manner.
- F. The CONTRACTOR will inspect vehicles before they enter or exit the Project site to verify compliance with decontamination criteria provided in Part A of this Section. The CONTRACTOR shall be responsible to remedy deficiencies identified by OWNER or OWNER REPRESENTATIVES.
- G. All transport vehicles shall be properly licensed, labeled and placarded in a manner consistent with TCEQ and DOT regulations for material being transported.

3.07 DISPOSAL

- A. The CONTRACTOR shall submit contact information for off-site hazardous and non-hazardous waste transfer, storage, processing, and disposal facilities prior to the commencement of work to the OWNER for approval. The OWNER or appointed representative must review and approve of all off-site disposal facilities prior to commencement of work. In the event that the CONTRACTOR does not receive approval from the OWNER or the appointed representatives for the selected off-site disposal facility prior to starting work, the CONTRACTOR will be responsible for all costs incurred in identifying an alternative off-site disposal facility and the cost of staging any contaminated material until a facility acceptable to the OWNER is identified.

- B. The CONTRACTOR shall retain a copy of all waste manifests, certificates of disposal, and load or weight tickets from disposal facility on-site for the duration of the project and submit copies of the waste manifests, certificates of disposal, and load or weight tickets with the corresponding Application for Progress Payment.

3.08 DECONTAMINATION

- A. The CONTRACTOR shall be responsible for preventing the spread of contaminated material beyond the excavation and temporary storage areas. To accomplish this, the CONTRACTOR shall include, as part of the health and safety plan, written procedures for decontamination of personnel and equipment, including transport vehicles that come in contact with potentially contaminated material.
- B. The CONTRACTOR shall establish exclusion and contamination reduction zones around the excavation when potentially contaminated soils and/or water are encountered. The exclusion zone is the zone around the excavation and the temporary storage piles and/or tanks. All personnel and equipment entering or exiting the exclusion zone must do so through the contamination reduction zone. The contamination reduction zone includes all of the equipment and materials necessary to clean workers and equipment, and to collect all decontamination materials and water for proper disposal.
- C. The CONTRACTOR shall be responsible for all fines, penalties, or citations resulting from non-conformance with these specification

PART 4 MEASUREMENT AND PAYMENT

4.01 WORK INCLUDES

- A. Provide all labor, equipment, and materials to excavate, handle, load, place in temporary storage, transport, and dispose of contaminated soils and groundwater in accordance with this specification.

4.02 MEASUREMENT

- A. Soils- Measurement of soils will be based in cubic yard of waste received and disposed at the approved off-site facility as weighed on a certified scale at the disposal facility. Submittal of certificates of disposal and weight tickets will be required for all nonhazardous solid wastes prior to the OWNER's recommendation for payment. Submittal of final waste manifests will be required for Class I industrial nonhazardous solid wastes prior to the OWNER's recommendation of payment. Soils transported and disposed of off-site shall contain no free liquids.
- B. Water - Measurement of bulk liquid nonhazardous wastes will be based on gallons of wastewater received and disposed at the approved facility/location as measured at the disposal facility/location by a means accepted by the OWNER. Measurement of nonhazardous liquid wastes in drums, barrels or other containers will be based on the number of waste containers received and disposed at the off-site facility.

Submittal of certificates of disposal and load tickets will be required for all nonhazardous liquid wastes prior to the OWNER's recommendation of payment. Submittal of final waste manifests will be required for Class I industrial nonhazardous wastes prior to the OWNER's recommendation of payment.

4.03 PAYMENT

- A. Payment for soil and water disposal under shall be made under the allowance included in the bid. This item shall be all inclusive of all costs associated with disposal of this material, including but not limited to fees, temporary storage, loading and unloading storage containers, decontamination of equipment if required, and any and all other costs associated with disposal of this material.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Reference Standards
- B. Temporary facilities under Construction Management Agreement.
- C. Temporary Utilities:
 - 1. Temporary electricity.
 - 2. Temporary lighting for construction purposes.
 - 3. Temporary water service.
 - 4. Temporary sanitary facilities.
- D. Construction Facilities:
 - 1. Vehicular access.
 - 2. Parking.
 - 3. Progress cleaning and waste removal.
 - 4. Project identification.
 - 5. Fire-prevention facilities.
- E. Temporary Controls:
 - 1. Barriers.
 - 2. Enclosures and fencing.
 - 3. Security.
 - 4. Dust control.
 - 5. Erosion and sediment control.
 - 6. Pest and rodent control.
 - 7. Pollution control.
- F. Removal of utilities, facilities, and controls.

1.02 REFERENCE STANDARDS

- A. ASTM International:
 - 1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - 3. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

1.03 TEMPORARY FACILITIES UNDER CONSTRUCTION MANAGEMENT AGREEMENT

- A. Temporary Provisions Provided by Construction Manager:
 - 1. Temporary barriers, barricades, covered walkways, fencing, exterior closures, and interior closures.
 - 2. Cleaning during construction.
 - 3. Access roads and approaches.
 - 4. Temporary sanitary facilities.
 - 5. Temporary electrical service and distribution system for power and lighting.
- B. Each CONTRACTOR: Coordinate provisions with Construction Manager and provide the following items as necessary for execution of the Work including associated costs:
 - 1. Construction aids.
 - 2. Temporary fire protection, dust control, erosion and sediment control, water control, noise control, and other necessary temporary controls.
 - 3. Temporary barriers, barricades, and similar devices as necessary for safety and protection of construction personnel and public.
 - 4. On Construction Manager's approval, may provide temporary field office including electrical service and temporary telephone.
 - 5. Temporary tree and plant protection.
 - 6. Temporary heating before building enclosure.
 - 7. Electrical service required in addition to temporary service and distribution provided by Construction Manager.
 - 8. Temporary provisions for protection of installed Work.

1.04 TEMPORARY ELECTRICITY

- A. Provide and pay for power service required from utility source as needed for construction operation.

1.05 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain lighting for construction operations.
- B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide and maintain lighting to interior work areas after dark for security purposes.
- D. Maintain lighting and provide routine repairs.
- E. Permanent building lighting may be used during construction.

1.06 TEMPORARY WATER SERVICE

- A. Provide and pay for suitable quality water service as needed to maintain specified conditions for construction operations. Provide separate metering and reimburse Owner for cost of water used.

1.07 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facility use is not permitted. Provide facilities at time of Project mobilization.

1.08 VEHICULAR ACCESS

- A. Construct temporary all-weather access roads from public thoroughfares to serve construction area, of width and load-bearing capacity to accommodate unimpeded traffic for construction purposes.
- B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
- C. Extend and relocate vehicular access as Work progress requires and provide detours as necessary for unimpeded traffic flow.
- D. Locate as indicated on Drawings or approved by Engineer/Owner.
- E. Provide unimpeded access for emergency vehicles. Maintain minimum 20 foot-wide driveways with turning space between and around combustible materials.
- F. Provide and maintain access to fire hydrants and control valves free of obstructions.
- G. Provide means of removing mud from vehicle wheels before entering streets.
- H. Use existing on-Site roads for construction traffic.

1.09 PARKING

- A. Provide temporary gravel surface parking areas to accommodate construction personnel if use of existing paved parking is not feasible/allowed.
- B. If Site space is not adequate, provide additional off-Site parking.
- C. Use of existing on-Site streets and driveways used for construction traffic is permitted. Tracked vehicles are not allowed on paved areas.
- D. Do not allow heavy vehicles or construction equipment in parking areas.
- E. Permanent Pavements and Parking Facilities:
 - 1. Bases for permanent roads and parking areas may be used for construction traffic.
 - 2. Avoid traffic loading beyond paving design capacity. Tracked vehicles are not allowed.
 - 3. Use of permanent parking structures is not permitted.
- F. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, ice, and the like.

2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original condition.

1.10 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.

1.11 PROJECT IDENTIFICATION

- A. Project Identification Sign:
 1. One painted sign of construction, design, and content shown on Drawings, location designated.
- B. Installation:
 1. Install Project identification sign within 15 days after date established by Notice to Proceed.
 2. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
 3. Install sign surface plumb and level, with butt joints. Anchor securely.
 4. Paint exposed surfaces of sign, supports, and framing.
- C. Maintenance: Maintain clean signs and supports; repair deterioration and damage.
- D. Removal: Remove signs, framing, supports, and foundations at completion of Project and restore area.

1.12 FIRE-PREVENTION FACILITIES

- A. Prohibit smoking. Designate area on Site where smoking is permitted. Provide approved ashtrays in designated smoking areas.
- B. Establish fire watch for cutting, welding, and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.

1.13 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide barricades and covered walkways required by authorities having jurisdiction for public rights-of-way and for public access to existing building.
- C. Tree and Plant Protection: Preserve and protect existing trees and plants designated to remain.
 1. Protect areas within drip lines from traffic, parking, storage, dumping, chemically injurious materials and liquids, ponding, and continuous running water.

2. Provide 6-foot-high barriers around drip line, or as indicated on the drawings, with access for maintenance.
3. Replace trees and plants damaged by construction operations.

D. Protect non-owned vehicular traffic, stored materials, Site, and structures from damage.

1.14 ENCLOSURES AND FENCING

A. ~~Exterior Enclosures:~~

- ~~1. Provide temporary insulated weathertight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual Specification Sections, and to prevent entry of unauthorized persons.~~

1.15 SECURITY

A. Security Program:

1. Protect Work on existing premises from theft, vandalism, and unauthorized entry.
2. Initiate program at Project mobilization.
3. Maintain program throughout construction period until directed by Owner.

B. Entry Control:

1. Restrict entrance of persons and vehicles to Project Site.
2. Allow entrance only to authorized persons with proper identification.
3. Coordinate access of Owner's personnel to Site in coordination with Owner's security forces.

C. ~~Personnel Identification:~~

- ~~1. Provide identification badge for each person authorized to enter premises.~~
- ~~2. Badge to Include: Personal photograph, name, and employer.~~
- ~~3. Maintain list of accredited persons and submit copy to Owner on request.~~
- ~~4. Require return of badges at expiration of employment on the Work.~~

1.16 DUST CONTROL

- A. Execute Work by methods that minimize raising dust from construction operations.
- B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.17 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize surface area of bare soil exposed at one time.
- C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.

- D. Construct fill and waste areas by selective placement to avoid erosive surface silts and clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.
- F. Comply with sediment and erosion control plan indicated in the Contract Documents and Local and State Requirements.

1.18 PEST AND RODENT CONTROL

- A. Provide methods, means, and facilities to prevent pests and insects from damaging the Work.

1.19 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.20 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials before Final Application for Payment inspection.
- B. Clean and repair damage caused by installation or use of temporary Work.
- C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 04 41 10

DRY-PLACED BRICKS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Specification includes all materials, labor, and work associated with the placement of brick pavers as shown on plans.

1.02 RELATED WORK

- A. Section 31 23 33 – Trenching and Backfilling
- B. Section 32 11 26 – Asphaltic Base Courses

1.03 MEASUREMENT AND PAYMENT

- A. Measurement for installation of brick pavers will be by the unit square yards. Measurement will include all materials, labor, incidentals and work associated with the installation of brick pavers, including subgrade preparation and surface restoration.

- B. Payment of brick pavers will be based upon the square yards place as shown in plans.



- 1. Installation of Brick Pavers (Salvage, Reuse, and Replacement of Existing Pavers) – per square yard

PART 2 PRODUCTS

2.01 MATERIALS

- A. New brick pavers are to match colors, size, and type of existing brick pavers. Pavers that have been salvaged and not damaged during construction activities may be utilized for installation of new surface. Condition of pavers will be determined by OWNER's inspector onsite.
- B. CONTRACTOR to match existing materials utilized for subgrade preparation and brick placement.

PART 3 EXECUTION

3.01 CONSTRUCTION

- A. CONTRACTOR to place brick pavers in a manner that matches slopes, patterns, and finish of existing brick pavers. Refer to plans for areas where brick pavers are present. Coordinate with OWNER inspector for use of salvaged brick pavers.

END OF SECTION

SECTION 32 11 26

ASPHALTIC BASE COURSES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish labor, materials, equipment and incidentals necessary to perform operations in connection with the construction of flexible base access roads. Flexible base shall consist of a foundation for a road surface or for other courses. Construct the flexible base as specified herein in one or more courses in conformance with the typical sections, lines, and grades indicated.

1.02 RELATED WORK

- A. Section 32 12 16 – Asphalt Paving

1.03 SUBMITTALS

- A. Submittals shall be made in accordance with the requirements of Section 01 33 00 – Submittal Procedures.
- B. Quality Control Submittals:
 - 1. Certified Test Results on Source Materials: Submit copies from commercial testing laboratory 20 days prior to delivery of materials to project.
 - 2. Certified Results of In-Place Density Tests from independent testing agency.

1.04 REFERENCE STANDARDS

- A. TXDOT Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges, latest edition.

1.05 DEFINITIONS

- A. Completed Course: Compacted, unyielding, free from irregularities, with smooth, tight, even surface, true to grade, line, and cross-section.
- B. Completed Lift: Compacted with uniform surface reasonably true to cross-section.
- C. Standard Specifications: When referenced in this Section, unless otherwise specified, shall mean the Current Edition of Standard Specifications for Construction of Highways, Streets, and Bridges, Texas State Department of Highways and Public Transportation. Parts of these standard specifications that are specifically referenced shall become a part of this Section containing references to them as though stated in full. In case of a discrepancy between the requirements of the standard specifications and the requirements stated in these specifications, the requirements in these specifications shall prevail.



1.06 MEASUREMENT AND PAYMENT

A. MEASUREMENT:

Flexible base will be measured by the square yard method per thickness shown in the plans.

Geogrid will be measured by the square yard for pavement restoration in the alleyways.

The quantity to be paid for is the quantity shown in the proposal unless modified by the Engineer. Additional measurements or calculations will be made if adjustments of quantities are required.

Measurement is further defined for payment by the square yard of surface area in the completed and accepted final position. The surface area of the base course is based on the width of flexible base as shown on the plans.

B. PAYMENT: The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the types of work shown below. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans for square yard measurement.

Sprinkling and rolling will not be paid for directly but will be subsidiary to this Item unless otherwise shown on the plans.

Where subgrade is constructed under this Contract (Subgrade Treatment), correction of soft spots in the subgrade will be at the Contractor's expense. Where subgrade is not constructed under this project, correction of soft spots in the subgrade will be paid in accordance with pertinent Items.

Payment for flexible base will be made for the type and grade specified. For square yard measurement, a depth will be specified. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, spreading, blading, mixing, shaping, placing, compacting, reworking, finishing, correcting locations where thickness is deficient, curing, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals.

Payment for geogrid will be made for the type and grade specified. For the square yard measurement. This price is full compensation for furnishing materials, temporary stockpiling, loading, hauling, delivery of materials, placing, and labor for measuring, and equipment, labor, tools, and incidentals.

PART 2 PRODUCTS

2.01 FLEXIBLE BASE

- A. Flexible base shall be per TXDOT Item 247 Type A Grade 1 or 2.

2.02 GEOGRID

- A. TXDOT DMS-6240 Geogrid (Type 1)

2.03 SOURCE QUALITY CONTROL

- A. CONTRACTOR: Perform tests necessary to locate acceptable source of materials meeting specified requirements.
- B. Final approval of aggregate material shall be based on materials' test results on installed materials.
- C. Should separation of coarse from fine materials occur during processing or stockpiling, immediately change methods of handling materials to correct uniformity in grading.

PART 3 EXECUTION

3.01 CLEANING

- A. Remove excess material; clean stockpile areas of aggregate.

3.02 SUBGRADE PREPARATION

- A. Scarify subgrade and compact to a minimum of 95% of maximum dry density (TxDOT Test Method TEX-113-E) at a moisture content @1% to 6% of optimum.
- B. Where P.I. of subgrade material is 20 or greater, subgrade shall be lime stabilized. Apply hydrated lime at a minimum rate of 6% by weight.
- C. Apply emulsified asphalt SS-1 at 0.25 gallon per square yard, if the subgrade is treated with lime.
- D. Obtain Owner's acceptance of subgrade before placement of base course rock. The subgrade shall be shaped to conform as shown on the drawings.
- E. Do not place base materials in snow or on soft, muddy, or frozen subgrade.

3.03 EQUIPMENT

- A. Compaction Equipment: Adequate in design and number to provide compaction and obtain the specified density for each layer.
- B. The Contractor shall sprinkle water for dust control as directed by the Owner.

3.04 HAULING AND SPREADING

- A. Hauling Materials:
 - 1. Do not haul over surfacing in process of construction.
 - 2. Loads: Of uniform capacity.

3. Maintain consistent gradation of material delivered; loads of widely varying gradations will be cause for rejection.
- B. Spreading Materials:
1. Distribute material to provide required density, depth, grade and dimensions with allowance for subsequent lifts.
 2. Produce even distribution of material upon roadway without segregation.
 3. Should segregation of coarse from fine materials occur during placing, immediately change methods of handling materials to correct uniformity in grading.
- 3.05 CONSTRUCTION OF COURSES
- A. General: Complete each lift in advance of laying succeeding lift to provide required results and adequate inspection.
- B. Asphalt Treated Base:
1. Completed Asphalt Treated Base Total Thickness: as shown on drawings.
 2. Spread lift on preceding course to required cross-section.
 3. Lightly blade and roll surface until thoroughly compacted.
 4. Blade or broom surface to maintain true line, grade, and cross-section. This surface shall be smooth and in conformity with the grades as shown on the drawings.
- 3.06 ROLLING AND COMPACTION
- A. Commence compaction of each layer of base after spreading operations and continue until density of 95 percent of maximum dry density has been achieved as determined by TxDOT Test Method TEX 126-E.
- B. Roll each course of surfacing until material shall not creep under roller before succeeding course of surfacing material is applied.
- C. Commence rolling at outer edges of surfacing and continue toward center; do not roll center of road first.
- D. Place and compact each lift to required density before succeeding lift is placed.
- E. Bind up preceding course before placing surfacing. Remove floating or loose stone from surface.
- F. Blade or otherwise work surfacing as necessary to maintain grade and cross-section at all times, and to keep surface smooth and thoroughly compacted.
- G. Surface Defects: Remedy surface defects by loosening and rerolling. Reroll entire area, including surrounding surface, until thoroughly compacted.
1. Finished Surface: True to grade and crown before proceeding with surfacing.
- 3.07 SURFACE TOLERANCES
- A. Finished Surface of Asphalt Treated Base: Within plus or minus 0.04-foot of grade shown at any individual point.

- B. Compacted Surface of Asphalt Treated Base: Within 0.04-foot from lower edge of 10-foot straight edge placed on finished surface, parallel to centerline.
- C. Overall Average: Within plus or minus 0.01-foot from crown and grade specified.

3.08 FIELD QUALITY CONTROL

- A. In-Place Density Tests:
 - 1. Construct asphalt treated base so areas shall be ready for testing.
 - 2. Allow reasonable length of time for testing laboratory to perform tests and obtain results during normal working hours.
 - 3. Show proof that areas meet specified requirements before identifying density test locations.
 - 4. Perform a minimum of 2 tests on completed asphalt treated base in accordance with TxDOT Test Method TEX 126-E at locations acceptable to Owner.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish labor, materials, equipment and incidentals necessary to perform operations in connection with the construction of hot mix asphaltic concrete (HMAC) base course, leveling-up course and surface course or any other combination of these courses. Construct the pavement on the previously completed and approved subgrade, base, or existing pavement.

1.02 RELATED WORK

- A. Division 01 – General Requirements

1.03 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 00 – Submittal Procedures and shall include:
 1. Aggregate gradation test reports for coarse and fine aggregates
 2. A mix design
 3. Mixing Plant certification by Texas Department of Transportation (TXDOT)

1.04 REFERENCE STANDARDS

- A. Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges - Texas Department of Transportation (TXDOT Current Edition)
- B. Tex-204-F – Design of Bituminous Mixtures
- C. Tex-207-F – Determining Density of Compacted Bituminous Mixtures

1.05 QUALITY ASSURANCE

- A. The CONTRACTOR shall retain a qualified independent testing laboratory to prepare a mix design to comply with TXDOT Standard Specification Item 340 - Hot Mix Asphaltic Concrete Pavement.
- B. The CONTRACTOR will retain a qualified independent testing laboratory to perform the field inspections and tests. When such testing indicates that Contractor's work does not comply with the specified requirements, the CONTRACTOR will be responsible the cost of additional testing.

1.06 DELIVERY, HANDLING AND STORAGE

- A. Haul the asphaltic mixture to the job site in tight vehicles previously cleaned of foreign materials. Arrange the dispatching of vehicles so that all material delivered shall be placed and all rolling shall be completed during daylight hours. In cool weather, or for

long hauls, canvas covers may be required. The inside of the truck body shall be given a light coating of oil to prevent the asphaltic mixture from adhering to the body.

1.07 MEASUREMENT AND PAYMENT

- A. Hot Mix Asphaltic Concrete Pavement shall be measured by square yard, complete in place, for the thickness specified on the plans. Limits of payment will be from face of curb to face of curb. Pavement area shall not exceed the limits shown on the plans without written authorization.
- B. The work performed and materials furnished, as described by this item and measured as provided herein, shall be paid for at the contract unit bid price per square yard specified on the plans of "HOT MIX ASPHALTIC CONCRETE PAVEMENT," which price shall be full compensation for furnishing and placing all materials, and for all labor, tools, equipment, and incidentals necessary to complete the work. The prime coat and tack coat, when required, shall be paid under the provisions of Sections 32 12 16.01 and 32 12 16.02, respectively.



1. Hot Mix Asphaltic Pavement Type ___ - per square yard ___" thickness

PART 2 PRODUCTS

2.01 MATERIALS

- A. Aggregate: Conform to TXDOT Standard Specification Item 340.

Gradation for surface course shall comply with Type D listed as follows:

Type "D" (Fine-Graded Surface Course):

<i>Sieve Size</i>	<i>% passing by weight or volume</i>
1/2"	100
3/8"	85-100
No. 4	50-70
No. 10	32-42
No. 40	11-26
No. 80	4-14
No. 200	1-6
VMA % Minimum	14

The asphalt content shall be from four (4) to eight (8) percent of the mixture by weight.

- B. Asphaltic Materials: The grade of asphalt shall be AC-20. Other grades of asphalt shall be considered if weather conditions or mix design appear to warrant a change. Prime

coat shall be cut back asphalt MC-30 and tack coat shall be emulsified asphalt SS-1. Prime coat and tack coat shall comply with TXDOT Standard Specification Item 300-Asphalts, Oils and Emulsions.

2.02 MIXES

- A. The CONTRACTOR shall retain a testing laboratory to prepare design mixes. Mix shall be designed in accordance with Construction Bulletin C-14 and Test Method Tex-204-F to conform to the requirements herein.
- B. Density: The mixture shall be designed to produce a density of 94.5 to 97.5 percent, when tested in accordance with TXDOT Test Method Tex-207-F.
- C. Stability: The material used in the mix design shall produce a mixture with a stability value of at least 35, unless otherwise indicated on Drawings, when tested in accordance with TXDOT Test Method Tex-208-F.

PART 3 EXECUTION

3.01 FIELD TESTING

- A. Surface Tests
 - 1. The finished surface of the pavement after compression shall be smooth and true to the established line, grade, and cross section. When tested with a 16' straightedge placed parallel to the centerline of the roadway, the finished surface shall have no deviation in excess of 1/16" per foot from the nearest point of contact. The maximum ordinate measured from the face of the straightedge shall not exceed 1/4" at any point. Any point in the pavement surface not meeting these requirements shall be immediately corrected.
- B. Pavement Thickness Test
 - 1. Upon completion of the work and before final acceptance shall be made, pavement thickness test shall be made by the OWNER's Representative or authorized representative unless otherwise specified in the special provisions or in the Drawings. The number and location of tests shall be at the discretion of the OWNER's Representative. The cost for the initial pavement thickness test shall be at the expense of the OWNER. In the event a deficiency in the thickness of the pavement is revealed during normal testing operations, subsequent tests necessary to isolate the deficiency shall be at the CONTRACTOR's expense. The cost for the additional coring test shall be at the same rate charged by commercial laboratories.
- C. Stability Tests
 - 1. The paving mixture shall have a retained stability of not less than 70 percent when tested in accordance with ASTM Standard Procedure D1075.

3.02 EQUIPMENT

- A. The equipment necessary for the construction of the hot mix asphaltic concrete pavement shall be on the project site and shall be approved by the OWNER's Representative as to condition before the CONTRACTOR shall be permitted to begin

construction operations on which the equipment is to be used. Equipment shall be maintained in good repair and operating condition.

B. Spreading and Finishing Machines

1. The spreading and finishing machine shall be of a type approved by the OWNER's Representative and capable of producing a surface that shall meet the requirements of the typical cross section and surface test.

C. Rollers

1. Pneumatic Tire Roller

- a. The roller shall consist of not less than seven (7) pneumatic tire wheels, running on axles in such a manner that the rear group of tires shall cover the entire gap between adjacent tires of forward group; mounted in a rigid frame; and provided with a loading platform or body suitable for ballast loading. The front axle shall be attached to the frame in such a manner that the roller may be turned within a minimum circle. The tire shall afford surface contact pressures up to 90 pounds per square inch or more. The roller shall be so constructed as to operate in both forward and a reverse direction with suitable provisions for moistening the surface of the tires while operating; and shall be approved by the OWNER.

2. Two Axle Tandem Roller

- a. The roller shall be an acceptable power-driven, steel-wheel tandem roller weighing not less than eight (8) tons. The roller must operate in forward and reverse directions; contain provisions for moistening the surface of the wheels while in motion; and shall be approved by the OWNER.

3. Three Wheel Roller

- a. The roller shall be an acceptable power-driven, all steel three (3) wheel roller weighing not less than ten (10) tons. The roller must operate in forward and reverse directions; contain provisions for moistening the surface of the wheels while in motion; and shall be approved by the OWNER.

4. Vibratory Steel Wheel Roller

- a. If approved for use by the OWNER's Representative, this roller shall have a minimum weight of six (6) tons. The CONTRACTOR shall be equipped with amplitude and frequency controls and shall be specifically designed to compact the material on which it is used. The roller shall be operated in accordance with the Supplier's recommendations.

D. Straightedges

1. The CONTRACTOR shall provide acceptable straightedges for the surface testing. Satisfactory templates shall be provided as required by the Owner's Representative.

3.03 SUBGRADE PREPARATION

A. The subgrade shall be excavated and shaped to the lines and grades as shown on the Drawings.

B. Irregularities of more than 1/2 inch, as shown by straightedge or template, shall be corrected.

- C. The subgrade shall be uniformly compacted to at least 95 percent of the maximum dry density as determined by ASTM D698. Moisture content shall be at 1 to 6 percent of optimum moisture content.
- D. The prepared subgrade shall be wetted down sufficiently.
- E. Where plasticity index of subgrade materials is 20 or greater, subgrade shall be modified.
- F. Lime treatment of subgrade is specified in Section 32 11 13.13 - Lime Treated Sub-Grade.
- G. Apply emulsified asphalt SS-1 at 0.25 gallon per square yard; if the subgrade is treated with lime.
- H. The prepared subgrade shall be wetted down sufficiently in advance of placing the pavement to ensure its being in a firm and moist condition.
- I. Sufficient subgrade shall be prepared in advance to ensure satisfactory prosecution of the work.
- J. After the specified moisture and density are achieved, the CONTRACTOR shall maintain the subgrade moisture and density in accordance with this Section.
- K. In the event that rain or other conditions may have adversely affected the condition of the subgrade or base, additional tests may be required by the Independent Testing Laboratory.
- L. The CONTRACTOR shall notify the Owner's Representative at least 24 hours in advance of paving operation.

3.04 PREPARATION

- A. Temperature
 - 1. Do not apply prime coat when the air temperature is below 50⁰ F and falling, but may be applied when the air temperature is above 40⁰ F and rising, the air temperature being taken in the shade and away from artificial heat. Do not place asphaltic material when general weather conditions, in the opinion of the Owner are not suitable.
 - 2. The asphaltic mixture shall be at a temperature between 225⁰ and 350⁰ F when dumped from the mixer. The testing laboratory shall take the temperature of the mixture at the mixer. The temperature of the mixture when dumped from the mixer shall not vary more than 30⁰ F from the selected temperature.
- B. Prime Coat
 - 1. Apply a uniform coat of prime coat asphaltic material to the surface of the prepared subgrade, sub-base, or base, applied at a rate of not less than 0.20 gallon per square yard of surface. Apply a thin uniform coat of the prime coat material to contact surfaces of gutters, manholes, and other structures.

- C. Tack Coat
 - 1. Thoroughly clean the surface of the asphalt base course and apply a uniform coat of tack material meeting the requirements for cutback asphalt MC-30. Apply a tack coat when the surface to be paved is portland cement concrete, brick, or asphaltic pavement. Apply the tack coat using sprayer at a rate not exceeding 0.05 gallon per square yard surface. Paint contact surfaces of curbs, gutters, vertical faces, and other structures in actual contact with asphaltic mixes with asphaltic material to provide a closely bonded, watertight joint.

- D. Compacted Thickness of Asphaltic Concrete Surface Courses and Base Courses
 - 1. Surface Course
 - a. The compacted thickness or depth of the asphaltic concrete surface shall be as indicated on the Drawings. Where the Drawings indicate a depth or thickness of the surface course greater than two (2) inch compacted depth, same shall be placed in multiple courses of equal depth, each which shall not exceed two (2) inch compacted depth. A tack coat shall be applied at the specified rate on each multiple courses.

3.05 PLACEMENT

- A. Place the asphaltic mixture on an approved subgrade or base course with the previously specified spreading and finishing machine in such a manner that, when properly compacted, the finished course shall comply with the maximum thickness requirements, shall be smooth, of uniform density and meet the requirements of the typical cross sections and the surface test. During the placing and spreading of the asphaltic material, take care to prevent the spilling of the material onto adjacent pavement, gutters, or structures.

- B. In small areas, which are inaccessible to the spreading and finishing machine, hand spreading may be authorized by the Owner, provided an acceptable surface can be obtained.

- C. Lifts shall be no more than 2.5-inches thick (compacted thickness). Design HMAC thickness greater than 2.5-inches shall be placed in two lifts with appropriate tack coat between lifts.

3.06 COMPACTION

- A. Rolling with the 3-wheel and tandem rollers shall start longitudinally at the sides and proceed toward the center of the surface course, overlapping on successive trips by at least half the width of the rear wheels. Alternate trips of the roller shall be slightly different in length. Rolling with the pneumatic tire roller shall be done as directed by the OWNER's Representative. Rolling shall continue until no further compression can be obtained and all roller marks are eliminated. The motion of the rollers shall be slow enough at all times to avoid displacement of the asphaltic surface material. If displacement should occur, correct the situation at once by the use of rakes and fresh asphaltic mixtures. The roller shall not be allowed to stand on the surface course when it has not been fully compacted and allowed to cool. To prevent adhesion of the surface to the roller, the wheels shall be kept thoroughly moistened with water, but an excess

of water shall not be permitted. Rollers shall be in good mechanical condition. Take the necessary precautions to prevent the dripping of gasoline, oil, grease, or other foreign matter on the surface course while the rollers are in motion or when standing. In areas where surface course cannot be compacted with the roller, hand tamps, lightly oiled, and shall be used to secure the required compaction.

- B. With approval by the OWNER, the vibratory steel wheel roller may be substituted for the 3-wheel roller and tandem roller. Each course, after final compaction, shall contain from five (5) to nine (9) percent air voids determined by TXDOT Test Method Tex 207-F.

END OF SECTION

SECTION 32 16 33

DRIVEWAYS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Construct and pave driveways. Reconstruct existing driveways.

1.02 SUBMITTALS

- A. Conform to requirements of Section 01 33 00 - Submittal Procedures.
- B. Submit a description of source, material classification and product description, production method, and application of materials.

1.03 REFERENCE STANDARDS

- A. ASTM C 33 - Specification for Concrete Aggregate.
- B. ASTM C 40 - Test Method for Organic Impurities in Fine Aggregates for Concrete.

1.04 MEASUREMENT AND PAYMENT

- A. No separate measurement of excavation, base material, prime coat, tack coat, Portland cement concrete, or asphalt surfacing will be made. Accepted work as prescribed by this item will be measured by the square yard of Portland cement concrete driveway, asphaltic concrete driveway or gravel driveway.
- B. The work performed as prescribed by this item will be paid for at the contract unit price bid per square yard for "Portland Cement Concrete Driveway," "Portland Cement Concrete Driveway - Commercial," "Asphaltic Concrete Driveway," or "Gravel Driveway," which price shall be full compensation for removal of existing driveway (if required), preparing the subgrade, for furnishing and placing all materials, manipulations, labor, tools, equipment and incidentals necessary to complete the work.



1. Concrete Driveway - per square yard
2. Concrete Driveway - Commercial - per square yard
3. Exposed Aggregate Driveway - per square yard
4. Asphaltic Concrete Driveway - per square yard
5. Gravel Driveway - per square yard

PART 2 PRODUCTS

2.01 MATERIALS

- A. Furnish materials in accordance with the requirements herein unless otherwise shown on the plans. Provide materials of the type and grade as shown on the plans or directed by the Engineer and in accordance with the pertinent Items listed below:
 1. Lime Treated Subgrade – 32 11 13.13
 2. Flexible Base – 32 11 26
 3. Prime Coat – 32 12 16.01

4. Tack Coat – 32 12 16.02
5. Hot Mix Asphaltic Concrete Pavement – 32 12 16
6. Asphalt Treated Base – 32 11 26
7. Concrete Pavement – 32 14 14
8. Concrete – Division 3

PART 3 EXECUTION

3.01 EQUIPMENT

- A. Furnish equipment as required and/or in accordance with the pertinent Items. Use of a motor grader will be permitted for asphalt concrete pavement unless otherwise shown on the plans.

3.02 CONSTRUCTION

- A. Removal of Existing Driveway or Curbs. If an existing driveway is to be reconstructed, remove existing driveway pavement to the depths and limits shown on the plans or identified by the Engineer using the methods described herein. All concrete and asphaltic concrete driveway pavements shall be cut with a concrete saw or other equipment approved by the Engineer from existing pavement lanes and/or parking areas. Existing gravel driveways shall be removed with appropriate excavation equipment as shown on the plans or approved by the Engineer. If necessary, remove adjacent soil and vegetation to prevent contamination of the driveway area, and place it in a windrow or stockpile. Do not damage adjacent pavement structure during removal and reconstruction operations.
 1. Existing Asphaltic Concrete Driveway. Unless otherwise shown on the plans or directed by the Engineer, saw-cut the existing driveway from existing pavement lanes and/or parking areas. The depth of the cut shall be such that upon removal of asphaltic concrete, the sides of the cut will be straight and square. Where existing base materials are to remain, driveway pavements shall be removed to their full depth up to the top of the base material. Care shall be taken not to damage the existing base. Remove or repair loose or damaged base material if present, and replace or repair it with approved base material to the original top of base grade. If subgrade work is required, remove flexible pavement structure layers to the top of subgrade and remove material from work area.
 2. Existing Portland Cement Concrete Driveway. If required, saw-cut full depth through the concrete around the perimeter of the existing driveway before removal. Do not spall or fracture concrete adjacent to the repair area. Remove or repair loose or damaged base material if present, and replace or repair it with approved base material to the original top of base grade. Allow treated materials used as base material to attain sufficient strength to prevent displacement when placing concrete pavement. If subgrade work is required, remove the entire pavement structure to the top of subgrade and remove material from work area.
 3. Curb Cuts. If required, saw-cut full depth through the concrete curb before removal. Do not spall or fracture concrete adjacent to the repair area. Remove or repair loose or damaged base material if present, and replace or repair it with approved base material to the original top of base grade. Allow treated materials used as base

material to attain sufficient strength to prevent displacement when placing concrete pavement.

B. Surfacing. Apply surfacing with materials as shown on the plans to the completed base section.

1. Gravel Driveway. A gravel driveway is defined as a driveway consisting entirely of flexible base material without an asphaltic concrete, Portland cement concrete, or surface treatment layer. The surface of the compacted base shall be smooth and in conformity with typical sections and to the established lines and grades. Prime coat the surface if shown on the plans or directed.
2. Prime Coat. Protect the compacted, finished, and cured flexible or cement-treated base mixtures with a prime coat. Unless otherwise shown on the plans, apply prime coat with an approved sprayer at a rate not to exceed 0.20 gallons per square yard of surface. The type and grade shall be shown on the plans or directed by the Engineer.
3. Asphalt Concrete Pavement. Unless otherwise shown on the plans, apply tack coat at a rate not to exceed 0.10 gallons per square yard. The type and grade shall be shown on the plans or directed by the Engineer. Place asphaltic concrete in accordance with Item 32 12 16, "Hot Mixed Asphaltic Concrete Pavement," to achieve required section. Testing requirements may be altered or waived by the Engineer.
4. Portland Cement Concrete Pavement. If shown on the plans, tie the concrete driveway to concrete pavement or concrete parking lot pavement. Use only drilling operations that do not damage the surrounding operations when drilling holes for replacement steel. Unless otherwise shown on the plans, reinforcement shall consist of either one layer of 6" x 6" - W5 x W5 welded wire flat sheet or No. 3 ($\frac{3}{8}$ ") reinforcing steel placed not more than 12 inches on centers both directions. All reinforcement shall be placed equidistant from the top and bottom of the concrete. Care shall be exercised to keep all steel in its proper position during the depositing of concrete. Splices in the No. 3 bars shall have a minimum lap of 12 inches. For existing driveways with existing steel, place new deformed reinforcing steel bars of the same size and spacing as the bars removed or as shown on the plans. Epoxy-grout all tiebars for at least a 12 inch embedment into existing concrete. Completely fill the tiebar hole with Type III, Class A or Class C epoxy before inserting the tiebar into the hole. Provide grout retention disks for all tiebar holes. Provide and place approved supports to firmly hold the new reinforcing steel, tiebars, and dowel bars in place.

Place a polyethylene sheet at least 4 mils thick as a bond breaker at the interface of the base or subgrade and new driveway pavement. Provide Class P concrete conforming to Item 32 13 13, "Concrete Pavement."

If the time frame designated for opening to traffic is less than 72 hours after concrete placement, provide Class HES concrete designed to attain a minimum average flexural strength of 255 psi or a minimum average compressive strength of 1,800 psi within the designated time frame. Type III cement is permitted for Class HES concrete. For driveways that are to be opened to traffic before 72 hours, use curing mats to maintain a minimum concrete surface temperature of 70°F when air temperature is less than 70°F.

Match the grade and alignment of existing concrete pavement. Broom-finish the concrete surface unless otherwise shown on the plans. Saw and seal contraction joints, if shown on the plans or directed by the Engineer, in accordance with Item 32 13 13, "Concrete Pavement."

- a. Commercial Driveways. Reinforcing for commercial driveways shall consist of either one (1) layer of 6" x 6" - W10 x W10 welded wire flat sheets or No. 4 (1/2") reinforcing steel placed not more than 12 inches on center both directions. The concrete slab shall be a minimum of 6 inches thick or as shown on the plans.
- b. Exposed Aggregate Surface. For exposed Aggregate finished driveways, wash concrete surface after initial set with staff bristle brush and water to remove matrix and clean each piece of exposed coarse aggregate. Unless otherwise acceptable to the Engineer, perform washing and brushing 3 - 4 hours after casting. Care shall be taken to uniformly expose about a third of each piece of coarse aggregate, removing no more of the matrix than necessary across the panel surface and as required to achieve appearance similar to adjacent existing work. After seven days, follow with a final cleaning with a mild acid solution and final rinsing with clear water

END OF SECTION

SECTION 33 31 50

REMOVAL AND ABANDONMENT OF SANITARY SEWER MAINS AND MANHOLES/STRUCTURES

PART 1 GENERAL

1.01 SCOPE OF WORK

- 1
- A. This item shall govern the removal and abandonment of sanitary sewer mains and manholes specified in the contract documents.

1.02 SUBMITTALS

- A. Contractor shall submit manufacturer's product data, instructions, grouting plan to include grouting pressure, grout tubes and vent tube locations and number per section, and recommendations prior to start of grouting.
- B. Conform to requirements of Section 01 33 00 - Submittal Procedures.

1.03 REFERENCE STANDARDS

- A. Texas Commission of Environmental Quality (TCEQ)
 1. Chapter 217 Design Criteria for Domestic Wastewater Systems
 2. Chapter 213 Edwards Aquifer
- B. American Society for Testing and Materials (ASTM)
 1. ASTM C 150 - Standard Specification for Portland Cement.
 2. ASTM C 494 - Standard Specification for Chemical Admixture for Concrete.
 3. ASTM C 618 - Standard Specification for Fly Ash and Raw or Calcinated Natural Pozzolan for use as Mineral Admixture in Portland Cement Concrete.
 4. ASTM C 937 - Standard Specification for Grout Fluidifier for Pre-placed Aggregate Concrete.
 5. ASTM C 940 - Standard Test Method for Expansion and Bleeding of Freshly Mixed Grout for Replaced Aggregate Concrete in the Laboratory.
 6. ASTM C 1017 - Standard Specification for Chemical Admixture for Use in Producing Flowing Concrete.
 7. ASTM C 1107 - Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)

1.04 MEASUREMENT AND PAYMENT

- 1
- A. Grouting of abandoned sewer lines shall be measured by linear foot. Grouting of abandoned manholes shall be measured on the basis of each one complete in place.
 - B. Removal of sanitary sewer manholes and structures shall be measured by the per each. Removed sanitary sewer manholes and structures shall be backfilled with flowable fill in accordance with section 31 23 23.33 Flowable Fill.

- C. Payment for abandoning sewer lines shall be made on the contract unit price per linear foot complete in place and per each abandoned manhole complete in place. Said price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work. Debris and build-up accumulated within existing sanitary sewer siphons and other segments of pipeline shall be removed as necessary to complete abandonment of sanitary sewer line and any cost associated with the removal of debris and build-up shall be subsidiary to the work performed.

1

- D. Payment for removal of sanitary sewer manholes and structures shall be made on the contract unit price per each. Said price shall be full compensation for furnishing all materials, labor equipment. Tools and incidentals necessary to complete the work.
1. Flowable fill for this item will be paid for under section 31 23 23.33 Flowable Fill.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials for abandonment of sanitary sewer pipe and manholes.
1. Sanitary Sewer Pipe: A cement-based grout shall be used to fill the void of the existing sanitary sewer main.
 2. The grouting material must have strength of at least 100 psi and shall have flow characteristics appropriate for filling a sanitary sewer main. The grout mix designed, and method of installation shall be approved by the Engineer prior to beginning operation.
 3. Material for Abandoning Manholes: The sanitary sewer manhole shall be filled to the top of the remaining concrete structure with the same material used to abandon the sanitary sewer main and comply with the manhole abandonment detail.

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- B. Materials for removal of sanitary sewer manholes and structures.
1. Material for Removing Manholes: Removed manholes and structures shall be backfilled with low strength flowable fill. Flowable fill shall be in accordance with Section 31 23 23.33 Flowable Fill.

PART 3 EXECUTION

3.01 CONSTRUCTION

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- A. Abandoned sanitary sewer mains and all abandoned sanitary sewer manholes and structures are to be filled with a cementious low strength material.
1. The sanitary sewer facility shall be abandoned in accordance with the specifications outlined herein and in conformity with the limits shown in the contract documents.
 2. Abandoning of sanitary sewer lines and manholes/structures shall not occur until all existing sanitary sewer services have been transferred to another line and directed by the Owner.
 3. Lines shall be cleaned and televised before grouting and checked for laterals.
 4. Point repairs should be completed prior to abandonment.
 5. All debris and build up in existing pipe and structure shall be removed prior to grouting.

6. Abandonment of sanitary sewer lines shall be accomplished by installing the grout material with sufficient pressure and in numerous locations.
7. The method of installation shall be able to meet the requirement of completely filling the existing sanitary sewer main and any voids adjacent to it.
8. The sanitary sewer manhole shall be filled to the top of the remaining concrete structure with the same material used to abandon the sanitary sewer main.
9. The method shall adequately provide for the removal and legal disposal of existing sewer materials in the system.
10. The method shall provide for the release of air.
11. When intermediate points are required to be constructed for the abandonment of the system, they shall be a part of the abandonment project process.
12. Mains to be abandoned shall be grouted only if required by the contract documents and payment as per these specifications is provided.
13. The concrete structure of the manhole shall be removed to a depth of 2 feet under proposed subgrade or finished ground elevation.
14. Manhole rings and covers shall be removed and delivered to a facility within the limits of City of Brownsville as designated by the Owner.

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- B. Removed sanitary sewer manholes and structures are to be filled with low strength flowable fill material.
1. Removing manholes and structures shall not occur until all existing sanitary sewer services have been transferred to another line and directed by the Owner.
 2. The excavated sanitary sewer manhole shall be filled to 1' below existing grade with a low strength flowable fill material in accordance with Section 31 23 23.33 Flowable Fill.
 3. The method shall adequately provide for the removal and legal disposal of existing sewer materials in the system.
 4. The concrete structure of the manhole shall be removed to the full depth of existing manhole/structure.
 5. Manhole rings and covers shall be removed and delivered to a facility within the limits of City of Brownsville as designated by the Owner.

END OF SECTION

SECTION 33 40 00
STORMWATER UTILITIES

PART 1 GENERAL

1.01 SCOPE OF WORK

- 1
- A. Furnish all labor materials, equipment and incidentals required to remove, install, test, complete and ready for operation all storm drainage systems as shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Section 31 23 33 – Trenching and Backfilling
- B. Section 31 41 33 – Trench and Excavation Safety Protection

1.03 SUBMITTALS

- A. The following shall be submitted in accordance with Section 01 33 00 – Submittal Procedures:
1. Certified copies of test reports demonstrating conformance to applicable pipe specifications.
 2. Pipe for Culverts and Storm Drains

1.04 REFERENCE STANDARDS

- A. The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.
1. American Association of State Highway and Transportation Officials (AASHTO)
 2. American Society for Testing and Materials (ASTM)
 - a. ASTM C 14 – Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe.
 - b. ASTM C 76 – Standard Specification for Reinforced Concrete Culvert Storm Drain and Sewer Pipe.
 - c. ASTM C 231 – Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - d. ASTM C 270 – Standard Specification for Mortar for Unit Masonry.
 - e. ASTM C 443 – Standard Specification for Joints for Circular Concrete Sewer and Culvert Pip, Using Rubber Gaskets.
 - f. ASTM C 478 – Standard Specification for Precast Reinforced Concrete Manhole Sections.
 - g. ASTM D 1056 – Standard Specification for Flexible Cellular Materials – Sponge or Expanded Rubber.
 - h. ASTM D 1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-Existing and Resilient Bituminous Types).

- i. ASTM D 1752 – Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
- j. ASTM D 1784 – Standard Specification for Rigid Poly (Vinyl Chloride)(PVC) Compounds and Chlorinated Poly (Vinyl Chloride)(CPVC) Compounds.
- k. ASTM D 2922 – Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: Materials delivered to Site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Gasket materials and plastic materials shall be protected from exposure to the direct sunlight over extended periods.
- B. Handling: Materials shall be handled in such a manner as to ensure delivery to the trench in sound, undamaged condition. Pipe shall be carried to the trench, not dragged.

1.06 MEASUREMENT AND PAYMENT

- A. All storm drainage system, including manholes, junction boxes, and inlet structures satisfactorily completed in accordance with the plans and specifications will be measured and paid for based on the unit price each.



- B. Storm sewer piping will be measured by the linear foot. Measurement of spurs, branches, or new connecting pipe will be made from the intersection of the flow line with the outside surface of the pipe into which it connects. Where inlets, headwalls, catch basins, manholes, junction chambers, or other structures are included in lines of pipe, the length of pipe tying into the structure wall will be included for measurement, but no other portion of the structure length or width will be included. For multiple pipes, the measured length will be the sum of the lengths of the barrels
- C. Removal of storm sewer piping will be measured and paid for by the linear foot. These prices are full compensation for all work and materials associated with removal of existing storm sewer pipe for the sizes specified, including hauling and disposing.
- D. These prices are full compensation for concrete, reinforcing steel, brick, mortar, aluminum and cast iron castings, frames, grates, rings and covers, excavation, and backfill and for all other materials, tools, equipment, labor, and incidentals The work performed and materials furnished in accordance with this specification will be paid for as follows:
 - 1. Complete Inlets. Payment for inlets will be made at the unit price bid for "Inlet (Complete)," of the type specified.
 - a. Inlet (Complete) 4' x 6' - per each
 - b. Inlet (Complete) 1' x 2' - per each

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2. Reinforced Concrete Pipe. The work performed and materials furnished in accordance with this item and provided will be paid for at the unit price bid for "Reinforced Concrete Pipe," "Reinforced Concrete Pipe (Arch)," or "Reinforced Concrete Pipe (Elliptical)" of the size and D-load specified or of the size and class specified. This price is full compensation for constructing, furnishing, transporting, placing, and joining pipes; shaping the bed; cutting pipes on skew or slope; connecting to new or existing structures; breaking back, replacing portions of the existing structure; cutting pipe ends on skew or slope; and equipment, labor, tools, and incidentals.
 - a. Reinforced Concrete Pipe - per linear foot (Class IV) (varying dia.)

PART 2 PRODUCTS

2.01 PIPE FOR CULVERTS AND STORM DRAINS

- A. Pipe for culverts and storm drains shall be of the sizes indicated and shall conform to the requirements specified.
 1. Concrete Pipe - ASTM C 76, Class IV unless otherwise noted on drawings.

2.02 MISCELLANEOUS MATERIALS

- A. Concrete: Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements for Class A concrete
- B. Mortar: Mortar for pipe joints, connections to other drainage structures, and brick or block construction shall conform to ASTM C270, Type M, except the maximum placement time shall be 1 hour. The quantity of water in the mixture shall be sufficient to produce a stiff workable mortar. Water shall be clean and free of harmful acids, alkalies, and organic impurities. The mortar shall be used within 30 minutes after the ingredients are mixed with water. The inside of the joint shall be wiped clean and finished smooth. The mortar head on the outside shall be protected from air and sun with a proper covering until satisfactorily cured.
- C. Frame, Cover and Grate: Frame, cover and grate shall be cast gray iron, ASTM A48, Class 35B; cast ductile iron, or ASTM A536, Grade 80-55-06. Service type, shape, size, and waterway openings for grates and curb inlets shall be as indicated on the Drawings. The manhole cover shall have the word "STORM DRAIN" cast on to it. The letter size shall be as shown on drawings.
- D. Joints:
 1. Flexible Watertight Joints
 - a. Materials: Flexible watertight joints shall be made with plastic or rubber-type gaskets for concrete pipe. The design of joints and the physical requirements for plastic gaskets shall conform to AASHTO M198, and rubber-type gaskets shall conform to ASTM C443. Gaskets shall have not more than one factory-fabricated splice, except that two factory-fabricated splices of the rubber-type gasket are permitted if the nominal diameter of the pipe being gasketed exceeds 54 inches.

- b. Test Requirements: Watertight joints shall be tested and shall meet test requirements of paragraph, Hydrostatic Test on Watertight Joints. Rubber gaskets shall comply with the oil resistant gasket requirements of ASTM C443. Certified copies of test results shall be delivered to the Owner before gaskets or jointing materials are installed. Alternate types of watertight joint may be furnished if specifically approved.

PART 3 EXECUTION

3.01 EXCAVATION FOR PIPE CULVERTS, STORM DRAINS, AND DRAINAGE STRUCTURES

- A. Excavation of trenches and for appurtenances and backfilling for culverts and storm drains shall be in accordance with the applicable sections of Division 31 - Earthwork, and the requirements specified below.
 1. Trenching: The width of trenches at any point below the top of the pipe shall be not greater than the outside diameter of the pipe plus 12 inches to permit satisfactory jointing and thorough tamping of the bedding material under and around the pipe. Sheeting and bracing where required shall be placed within the trench width as specified. Care shall be taken not to overexcavate. Where trench widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures shall be necessary. Cost of this redesign and increased cost of pipe or installation shall be borne by the Contractor without additional cost to the Owner.
 2. Removal of Rock: Rock in either ledge or boulder formation shall be replaced with suitable materials to provide a compacted earth cushion having a thickness between unremoved rock and the pipe of at least 8 inches or 2-inch for each foot of fill over the top of the pipe, whichever is greater, but not more than three-fourths the nominal diameter of the pipe. Where bell-and-spigot pipe is used, the cushion shall be maintained under the bell as well as under the straight portion of the pipe.
 3. Removal of Unstable Material: Where wet or otherwise unstable soil incapable of properly supporting the pipe, as determined by the Owner, is unexpectedly encountered in the bottom of a trench, such material shall be removed to the depth required and replaced to the proper grade with select granular material, compacted as provided in paragraph, Backfilling. When removal of unstable material is due to the fault or neglect of the Contractor in his performance of shoring and sheeting, water removal, or other specified requirements, such removal and replacement shall be performed at no additional cost to the Owner.

3.02 BEDDING

- A. The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe.
 1. Concrete Pipe: When no bedding class is specified or detailed on the drawings, concrete pipe shall be bedded carefully in a soil foundation accurately shaped and rounded to conform to the lowest one-fourth of the outside portion of circular pipe or to the lower curved portion of pipe arch for the entire length of the pipe or pipe arch. When necessary, the bedding shall be tamped. Bell holes and

depressions for joints shall be only of such length, depth, and width as required for properly making the particular type of joint.

3.03 PLACING PIPE

- A. Each pipe shall be carefully examined before being laid and defective or damaged pipe shall not be used. Plastic pipe shall be protected from exposure to the direct sunlight prior to laying as needed to maintain adequate pipe stiffness and meet installation deflection requirements. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Lifting lugs in vertically elongated metal pipe shall be placed in the same vertical plane as the major axis of the pipe. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. Deflection of installed plastic pipe shall not exceed 3.0 percent of the nominal inside diameter. After backfilling has been completed, the Owner may perform a deflection test on the entire length of installed plastic pipeline using a mandrel or other suitable device. Any plastic pipe showing deflections in excess of 3.0 percent shall be removed and replaced at the Contractor's expense. All pipe in place shall be inspected before backfilling, and those pipes damaged during placement shall be removed and replaced.
1. Concrete, Clay, PVC, Ribbed PVC, and Ductile Iron Pipe: Laying shall proceed upgrade with spigot ends of bell-and-spigot pipe and tongue ends of tongue-and-groove pipe pointing in the direction of the flow.

3.04 JOINTS

- A. Concrete Pipe
1. Cement-Mortar Tongue-and-Groove Joint: The first pipe shall be bedded carefully to the established grade line with the groove upstream. A shallow excavation shall be made underneath the pipe at the joint and filled with mortar to provide a bed for the pipe.
 2. Flexible Watertight Joints: Gaskets and jointing materials shall be as recommended by the particular manufacturer in regard to use of lubricants, cements, adhesives, and other special installation requirements. Surfaces to receive lubricants, cements, or adhesives shall be clean and dry. Gaskets and jointing materials shall be affixed to the pipe not more than 24 hours prior to the installation of the pipe, and shall be protected from the sun, blowing dust, and other deleterious agents at all times. Gaskets and jointing materials shall be inspected before installing the pipe; any loose or improperly affixed gaskets and jointing materials shall be removed and replaced. The pipe shall be aligned with the previously installed pipe, and the joint pushed home. If, while the joint is being made the gasket becomes visibly dislocated the pipe shall be removed and the joint remade.

3.05 DRAINAGE STRUCTURES

- A. Manholes and Inlets: Construction shall be of cast-in-place reinforced concrete complete with frames and covers or gratings.

1. Walls and Headwalls: Construction shall be as indicated on Drawings and specified below.
2. Refer to Department of Public Works, Standard Construction Details City of Brownsville.

3.06 BACKFILLING

- A. Backfilling Pipe in Trenches: After the pipe has been properly bedded, select material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of pipe in layers not exceeding 6 inches in compacted depth. The backfill shall be brought up evenly on both sides of pipe for the full length of pipe. Care shall be taken to ensure thorough compaction of the fill under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compacting shall continue until the fill has reached an elevation of at least 12 inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical rammers or tampers in layers not exceeding 12 inches. All sheeting and bracing shall be removed as excavation is backfilled that will prevent injury, caving of the excavation or damage to the structure. Untreated sheeting shall not be left in place beneath structures or pavements.
- B. Backfilling Pipe in Fill Sections: For pipe placed in fill sections, backfill material and the placement and compaction procedures shall be as specified elsewhere in this paragraph. The fill material shall be uniformly spread in layers longitudinally on both sides of the pipe, not exceeding 6 inches in compacted depth, and shall be compacted by rolling parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12 inches above the top of the pipe shall extend a distance of not less than twice the outside pipe diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12 inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 8 inches.
- C. Movement of Construction Machinery: In compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert or storm drain at any stage of construction shall be at the Contractor's risk. Any damaged pipe shall be repaired or replaced at the expense of the Contractor.
- D. Compaction: Compact backfill materials in accordance with Division 31 - Earthwork.
- E. Determination of Density: Tests shall be performed in sufficient number to ensure that specified density is being obtained. Laboratory tests for moisture-density relations shall be made in accordance with ASTM D1557 except that mechanical tampers may be used provided the results are correlated with those obtained with the specified hand tamper. Field density tests shall be determined in accordance with ASTM 2167 or ASTM D2922.

3.07 PIPELINE TESTING

- A. Lines shall be tested for leakage by exfiltration tests. Prior to testing for leakage the trench shall be backfilled up to at least the lower half of the pipe. If required, sufficient additional backfill shall be placed to prevent pipe movement during testing, leaving the joints uncovered to permit inspection. Visible leaks encountered shall be corrected regardless of leakage test results. When the water table is two feet or more above the top of the pipe at the upper end of the pipeline section to be tested, infiltration shall be measured using a suitable weir or other device acceptable to the Owner. An exfiltration test shall be made by filling the line to be tested with water so that a head of at least 2 feet is provided above both the water table and the top of the pipe at the upper end of the pipeline to be tested. The filled line shall be allowed to stand until the pipe has reached its maximum absorption, but not less than 4 hours. After absorption, the head shall be reestablished. The amount of water required to maintain this water level during a 2-hour test period shall be measured. Leakage as measured by the exfiltration test shall not exceed 250 gallons per inch in diameter per mile of pipeline per day 0.2 gallons per inch in diameter per 100 feet of pipeline per hour. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished. Testing, correcting, and retesting shall be made at no additional cost to the Owner.
- B. Frequency of Testing:
1. Compaction test (optimum moisture curve) and gradation and Atterberg limits for soil classification. (Tests required: One each, for each type of soil or combination of materials.)
 2. In-Place Moisture-Density Tests:
 - a. Under paved areas. Tests required: Two tests shall be taken at random on every other compacted lift for every 200 linear foot of trench.
 - b. Under grassed or non-traffic areas. Tests required: One per 200 linear feet of trench on every third compacted lift.

END OF SECTION