

DEC 05 2017

PSI

WILLIAMSON COUNTY, TEXAS

CHANGE ORDER NUMBER 1

HNTB Corporation

Round Rock

1. CONTRACTOR: Joe Bland Construction2. Change Order Work Limits: Sta. 115+00 to Sta. 140+003. Type of Change(on federal-aid non-exempt projects): Minor (Major/Minor)4. Reasons: 4B (3 Max. - In order of importance - Primary first)

5. Describe the work being revised:

4B: Third Party Accommodation. Third party requested work. This Change Order adds relocation of the existing Brushy Creek Municipal Utility District (BCMUD) water line along CR 176 and revises the City of Georgetown water line relocations on the project.

6. Work to be performed in accordance with Items: See Attached.7. New or revised plan sheet(s) are attached and numbered: see attached8. New Special Provisions/Specifications to the contract are attached: ☐ Yes ☒ No9. New Special Provisions to Item N/A No. N/A, Special Specification Item N/A are attached.

Each signatory hereby warrants that each has the authority to execute this Change Order (CO).

The contractor must sign the Change Order and, by doing so, agrees to waive any and all claims for additional compensation due to any and all other expenses; additional changes for time, overhead and profit; or loss of compensation as a result of this change.

THE CONTRACTOR

Date 12-4-19

By

Typed/Printed Name

Andrew Batten

Typed/Printed Title

Project Manager

The following information must be provided

Time Ext. #: N/A Days added on this CO: 0Amount added by this change order: \$208,869.67

RECOMMENDED FOR EXECUTION:

Project Manager

Date

N/A
Design Engineer

Date

Program Manager

Date

Design Engineer's Seal:

see attached plan sheets

County Commissioner Precinct 1

Date

☐ APPROVED☐ REQUEST APPROVAL

County Commissioner Precinct 2

Date

☐ APPROVED☐ REQUEST APPROVAL

County Commissioner Precinct 3

Date

☐ APPROVED☐ REQUEST APPROVAL

County Commissioner Precinct 4

Date

☐ APPROVED☐ REQUEST APPROVAL

County Judge

Date

☐ APPROVED

Received

DEC 04 2019

Project: 1901-285Roadway: CR 176 at RM 2243

CSJ

Number: _____

WILLIAMSON COUNTY, TEXAS

CHANGE ORDER NUMBER: 1

Project # 1901-285

TABLE A: Force Account Work and Materials Placed into Stock

	LABOR	HOURLY RATE			HOURLY RATE

TABLE B: Contract Items:

				ORIGINAL + PREVIOUSLY REVISED		ADD or (DEDUCT)	NEW		
ITEM	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	ITEM COST	QUANTITY	QUANTITY	ITEM COST	OVERRUN/ UNDERRUN
CITY OF GEORGETOWN:									
CIP11.06.B	TRENCH EXCAVATION SAFETY PROTECTION SYSTEM (ALL DEPTHS)	LF	\$1.42	80.00	\$113.60	(63.00)	17.00	\$24.14	(\$89.46)
W1.17.AR.4"	PIPE, 4" DIA. DI CL 350 (RESTRAINED), COMPLETE IN PLACE, INCLUDING EXCAVATION AND BACKFILL	LF	\$48.00	20.00	\$960.00	(20.00)	0.00	\$0.00	(\$960.00)
W1.17.AR.2"	PIPE, 2" COPPER TYPE K (RESTRAINED), COMPLETE IN PLACE, INCLUDING EXCAVATION AND BACKFILL	LF	\$58.00	0.00	\$0.00	17.00	17.00	\$986.00	\$986.00
SP W3.21.F	ADJUST WATER VALVE BOX TO GRADE	EA	\$450.00	6.00	\$2,700.00	(1.00)	5.00	\$2,250.00	(\$450.00)
SP W3.21.H	SALVAGE AND RELOCATE EXISTING 4" COMBINATION AIR RELEASE VALVE ASSEMBLY	EA	\$1,800.37	1.00	\$1,800.37	(1.00)	0.00	\$0.00	(\$1,800.37)
BRUSHY CREEK MUD WATERLINE RELOCATION:									
505-W	ENCASEMENT PIPE, 42" DIA., STEEL	LF	\$248.00	0.00	\$0.00	299.00	299.00	\$74,152.00	\$74,152.00
509	TRENCH SAFETY SYSTEMS (ALL DEPTHS)	LF	\$1.50	0.00	\$0.00	341.00	341.00	\$511.50	\$511.50
510-W-01	PIPE 4" DIA DI CL-350 (RESTRAINED)	LF	\$95.00	0.00	\$0.00	18.00	18.00	\$1,710.00	\$1,710.00
510-W-02	PIPE 24" DIA DI CL-250 (RESTRAINED)	LF	\$270.00	0.00	\$0.00	323.00	323.00	\$87,210.00	\$87,210.00
510-W-03	DUCTILE IRON FITTINGS 4" THROUGH 24"	TON	\$7,700.00	0.00	\$0.00	2.00	2.00	\$15,400.00	\$15,400.00
510-W-04	WET CONNECTIONS 24" X 24"	EA	\$9,000.00	0.00	\$0.00	2.00	2.00	\$18,000.00	\$18,000.00
SP510	RESTRAIN EXISTING DUCTILE IRON PIPE	EA	\$1,300.00	0.00	\$0.00	4.00	4.00	\$5,200.00	\$5,200.00
SP511	4" Combination Air Release Valve Assembly, including Salvage of Existing 4" CARV and Removal of Existing 4" Gate Valve	EA	\$9,000.00	0.00	\$0.00	1.00	1.00	\$9,000.00	\$9,000.00
TOTALS					\$5,573.97			\$214,443.64	\$208,869.67

CHANGE ORDER REASON(S) CODE CHART

1. Design Error or Omission	1A. Incorrect PS&E 1B. Other
2. Differing Site Conditions (unforeseeable)	2A. Dispute resolution (expense caused by conditions and/or resulting delay) 2B. Unavailable material 2C. New development (conditions changing after PS&E completed) 2D. Environmental remediation 2E. Miscellaneous difference in site conditions (unforeseeable)(Item 9) 2F. Site conditions altered by an act of nature 2G. Unadjusted utility (unforeseeable) 2H. Unacquired Right-of-Way (unforeseeable) 2I. Additional safety needs (unforeseeable) 2J. Other
3. County Convenience	3A. Dispute resolution (not resulting from error in plans or differing site conditions) 3B. Public relations improvement 3C. Implementation of a Value Engineering finding 3D. Achievement of an early project completion 3E. Reduction of future maintenance 3F. Additional work desired by the County 3G. Compliance requirements of new laws and/or policies 3H. Cost savings opportunity discovered during construction 3I. Implementation of improved technology or better process 3J. Price adjustment on finished work (price reduced in exchange for acceptance) 3K. Addition of stock account or material supplied by state provision 3L. Revising safety work/measures desired by the County 3M. Other
4. Third Party Accommodation	4A. Failure of a third party to meet commitment 4B. Third party requested work 4C. Compliance requirements of new laws and/or policies (impacting third party) 4D. Other
5. Contractor Convenience	5A. Contractor exercises option to change the traffic control plan 5B. Contractor requested change in the sequence and/or method of work 5C. Payment for Partnering workshop 5D. Additional safety work/measures desired by the contractor 5E. Other
6. Untimely ROW/Utilities	6A. Right-of-Way not clear (third party responsibility for ROW) 6B. Right-of-Way not clear (County responsibility for ROW) 6C. Utilities not clear 6D. Other

Williamson County Road Bond Program

CR 276 at RM 2243 Williamson County Project No. 1902-285 Change Order No. 1

Reason for Change

This Change Order adds relocation of the existing Brushy Creek Municipal Utility District (BCMUD) water line along CR 176 and revises the City of Georgetown water line relocations on the project.

The relocations for BCMUD include installing a new portion of water line in an encasement because the new roadway crosses the water line and adding a 4" Combination Air Release Valve Assembly (CARV), salvaging the old CARV and removing the existing 4" Gate Valve. The revisions to the City of Georgetown water line include adjustment of the existing 2" line and deletes items to adjust the existing 4" water line.

The following is a list of new items required for this Change Order.

ITEM	DESCRIPTION	QTY	UNIT
W1.17.AR.2"	PIPE, 2" COPPER TYPE K (RESTRAINED), COMPLETE IN PLACE, INCLUDING EXCAVATION AND BACKFILL(COGT)	17	LF
505-W	ENCASEMENT PIPE, 42" DIA., STEEL (BCMUD)	299	LF
509	TRENCH SAFETY SYSTEMS (ALL DEPTHS) (BCMUD)	341	LF
510-W-01	PIPE 4" DIA DI CL 350 (RESTRAINED)(BCMUD)	18	LF
510-W-02	PIPE 4" DIA DI CL 250 (RESTRAINED)(BCMUD)	323	LF
510-W-03	DUCTILE IRON FITTINGS 4" THROUGH 24" (BCMUD)	2	TONS
510-W-04	WET CONNECTIONS 24" X 24" (BCMUD)	2	EA
SP510	RESTRAIN EXISTING DUCTILE IRON PIPE (BCMUD)	4	EA
SP511	4" Combination Air Release Valve Assembly, including Salvage of Existing 4" CARV and Removal of Existing 4" Gate Valve (BCMUD)	1	EA

This Change Order results in an increase of \$208,869.67 to the Contract amount, for an adjusted Contract total of \$2,656,4329.67. The original Contract amount was \$2,447,560.00. As a result of this Change Order, \$208,869.67 has been added to the Contract, resulting in an 8.53% increase in the Contract cost. No additional days will be added to the Contract as a result of this Change Order.

HNTB Corporation

James Klotz, P.E.



JOE BLAND CONSTRUCTION, L.P.

13111 DESSAU ROAD

AUSTIN, TX 78754

Contact:

Phone:

Fax:

Quote To:

Eddie R. Church, PE

Job Name:

24" Waterline Relocation

Date of Plans:

Revision Date:

Phone:

Fax:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
10	PIPE, 2" COPPER TYPE K (ALL DEPTHS)	17.00	LF	58.00	986.00
20	ENCASEMENT PIPE, 42" DIA	299.00	LF	248.00	74,152.00
30	TRENCH SAFETY SYSTEMS(ALL DEPTHS)	341.00	LF	1.50	511.50
40	PIPE 4" DIA DI CL-350 (RESTRAINED)	18.00	LF	95.00	1,710.00
50	PIPE, 24" DIA DI CL-250 (RESTRAINED)	323.00	LF	270.00	87,210.00
60	DUCTILE IRON FITTINGS 4 INCH THROUGH 24 IN	2.00	TON	7,700.00	15,400.00
70	WET CONNECTIONS, 24" X 24"	2.00	EA	9,000.00	18,000.00
80	RESTRAIN EXISTING DUCTILE IRON PIPE	4.00	EA	1,300.00	5,200.00
90	4" COMBINATION AIR RELEASE VALVE	1.00	EA	9,000.00	9,000.00
GRAND TOTAL					\$212,169.50

Eddie R. Church

From: Eddie R. Church
Sent: Tuesday, November 5, 2019 1:17 PM
To: 'Andrew Batten'
Cc: 62811_1901-285_CR176@RM2243; Clayton Weber; Dawn Haggard; James Klotz
Subject: RE: CR 176 WL Relocation

Andrew,

We accept your pricing and will process the Change Order this week. Dawn will send a copy for you to sign, ASAP.

Thank you,

Eddie R. Church, PE
Project Manager
CELEBRATING 25th OFFICE ANNIVERSARY IN AUSTIN
AND MORE THAN 100 YEARS IN THE REGION
Tel (512) 527-6723 Email erchurch@hntb.com

From: Andrew Batten [<mailto:abatten@joeblandconstruction.com>]
Sent: Monday, November 4, 2019 11:26 AM
To: Eddie R. Church <erchurch@HNTB.com>
Cc: 62811_1901-285_CR176@RM2243 <CR176_P241@hntb.com>; Clayton Weber <cweber@HNTB.com>
Subject: RE: CR 176 WL Relocation

Eddie,

Please see revised proposal adding the item that I missed on the first proposal.

THANKS,

ANDREW BATTEN
PROJECT MANAGER
OFFICE: 512.821.2808
CELL: 512.579.9221



13111 DESSAU ROAD
AUSTIN, TEXAS 78754
512-821-2808

From: Eddie R. Church [<mailto:erchurch@HNTB.com>]
Sent: Monday, November 4, 2019 10:09 AM
To: Andrew Batten <abatten@joeblandconstruction.com>
Subject: RE: CR 176 WL Relocation

10-4

Thank you,

Eddie R. Church, PE
Project Manager

From: Andrew Batten [<mailto:abatten@joeblandconstruction.com>]
Sent: Monday, November 4, 2019 9:09 AM
To: Eddie R. Church <erchurch@HNTB.com>
Cc: 62811_1901-285_CR176@RM2243 <CR176_P241@hntb.com>; Clayton Weber <cweber@HNTB.com>
Subject: RE: CR 176 WL Relocation

My apologies for missing this. Let me revise my proposal and send over to you this morning.

THANKS,

ANDREW BATTEN
PROJECT MANAGER
OFFICE: 512.821.2808
CELL: 512.579.9221



13111 DESSAU ROAD
AUSTIN, TEXAS 78754
512-821-2808

From: Eddie R. Church [<mailto:erchurch@HNTB.com>]
Sent: Monday, November 4, 2019 8:49 AM
To: Andrew Batten <abatten@joeblandconstruction.com>
Cc: 62811_1901-285_CR176@RM2243 <CR176_P241@hntb.com>; Clayton Weber <cweber@HNTB.com>
Subject: RE: CR 176 WL Relocation

See below. Let me know if you have any questions.

New	ITEM	Description	Unit	Quantity	Quantity	Quantity	
				Original	New	Delta	
	BRUSHY CREEK MUD - ARV ADJUSTMENT & 24" WATERLINE RELOCATION						
	SP511	4" Combination Air Release Valve Assembly, including Salvage of Existing 4" CARV and Removal of Existing 4" Gate Valve	EA	0	1	1	

Thank you,

Eddie R. Church, PE
Project Manager
CELEBRATING 25th OFFICE ANNIVERSARY IN AUSTIN
AND MORE THAN 100 YEARS IN THE REGION
Tel (512) 527-6723 Email erchurch@hntb.com

-----Original Message-----

From: Andrew Batten [<mailto:abatten@joeblandconstruction.com>]
Sent: Monday, November 4, 2019 6:59 AM

To: Eddie R. Church <erchurch@HNTB.com>

Subject: CR 176 WL Relocation

Eddie,

My apologies for not getting back with you on Friday. I got tied up in the field and forgot to call you back. What item am I lacking on your message you left?

Andrew Batten

Project Manager

Joe Bland Construction, L.P

Sent from my iPhone

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

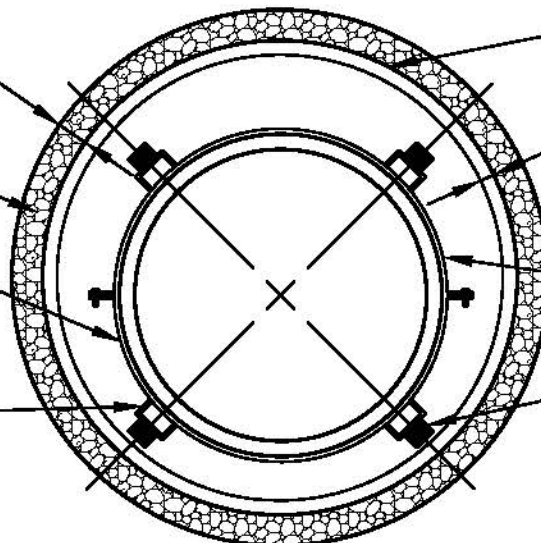
This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

FILL SPACE BETWEEN
EXCAVATED BORE
AND ENCASEMENT
WITH CEMENT GROUT

EXCAVATED BORE

T-304 STAINLESS
STEEL SPACER BODY
(MIN 14 GAUGE
THICKNESS)

WELDED T-304
STAINLESS STEEL
RISERS (MIN 10
GAUGE THICKNESS)



STEEL ENCASEMENT PIPE

THICKNESS AS SPECIFIED
IN PLANS (MIN 1/4")

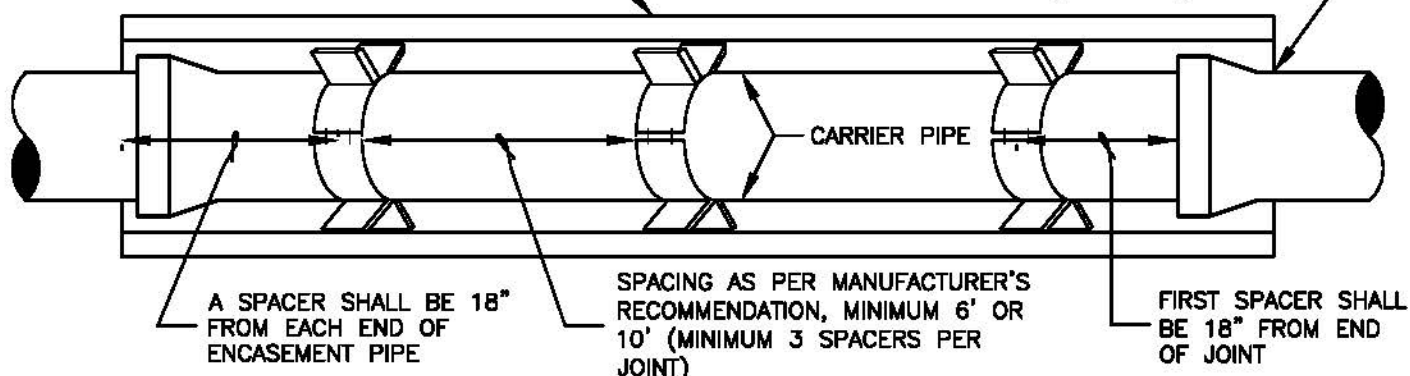
CARRIER PIPE, 90"
MAXIMUM

ULTRA HIGH MOLECULAR
WEIGHT POLYMER
RUNNERS (2" MINIMUM
HEIGHT)

PIPE SIZE-CARRIER (DIAMETER)	PIPE SIZE-CASING (DIAMETER) (MIN.)	MINIMUM PIPE THICKNESS (INCHES)	
6"	16"	1/4	0.2500
8"	18"	1/4	0.2500
10"	20"	5/16	0.3125
12" ~ 14"	24"	3/8	0.3750
16" ~ 18"	30"	7/16	0.4375
20"	36"	1/2	0.5000
24"	42"	1/2	0.5000
30"	48"	1/2	0.5000

SMOOTH STEEL ENCASEMENT PIPE
(MINIMUM 35,000 P.S.I. YIELD STRENGTH)

SEAL ENDS WITH CASCADE
WATERWORKS MANUFACTURING
COMPANY, MODEL CCES END SEALS,
OR APPROVED EQUAL (EACH END)



A SPACER SHALL BE 18"
FROM EACH END OF
ENCASEMENT PIPE

SPACING AS PER MANUFACTURER'S
RECOMMENDATION, MINIMUM 6' OR
10' (MINIMUM 3 SPACERS PER
JOINT)

FIRST SPACER SHALL
BE 18" FROM END
OF JOINT

NOTES:

1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK; THESE MUST BE ACCEPTABLE TO THE CITY OF ROUND ROCK.
2. CASING SPACER SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, MODEL CCS, OR APPROVED EQUAL.

RECORD SIGNED COPY
ON FILE AT PUBLIC WORKS
APPROVED

04-01-10

DATE

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR THE APPROPRIATE
USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

PIPE ENCASEMENT DETAIL

DRAWING NO:
WT-16



ITEM NO. 505

CONCRETE ENCASEMENT AND ENCASEMENT PIPE

505.1 Description

This item shall govern the furnishing of materials and the methods of constructing a Portland cement concrete encasement or encasement pipe.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text and accompanying tables, the inch-pound units are given preference followed by SI units shown within parentheses.

505.2 Submittals

The submittal requirements of this specification item include:

- A. Type of pipe, construction methods and sequence,
- B. Aggregate types, gradations and physical characteristics for the Portland cement concrete mix,
- C. Proposed proportioning of materials for the mortar mix.

505.3 Materials

- A. Portland Cement Concrete

The Portland cement concrete shall conform to Class B Concrete, Item No. 403, "Concrete for Structures".

- B. Pipe

Portland Cement concrete pipe shall conform to ASTM C-76, Class III or better.

Corrugated Metal Pipe (CMP) shall conform to Section 510. 2 (8)(o) of the City of Round Rock Standard Specification Item No. 510, "Pipe".

Steel Pipe shall conform to ASTM A134 with a minimum thickness of 3/8 inch (9.5 mm) for pipe with a diameter of 16 inches (400 mm) and greater.

- C. Grout

Grout shall consist of not less than 6 sacks Portland cement per cubic yard (335 kilograms Portland cement per cubic meter) and clean washed sand mixed with water. The grout shall have a consistency such that the grout will flow into and completely fill all voids. If allowed by the Engineer or designated representative, an air entraining admixture may be added to facilitate placement.

505.4 Construction Methods

When indicated on the Drawings or acceptable to Engineer or designated representative, concrete encasement or encasement pipe shall be placed to protect the pipe. Unless approved by the Engineer or designated representative

- (a) the top of the pipe would have less than 30 inches (60 mm) of cover,
- (b) ground water invades the trench, or
- (c) the trench bottom is of unstable material.

If any of these conditions is encountered, the Engineer or designated representative shall be notified and may direct the Contractor to:

- (a) encase the pipe with concrete,
- (b) change pipe material,
- (c) use a higher strength class of pipe, or
- (d) provide an encasement pipe.

Concrete encasement shall extend from 6 inches (150 mm) below to 6 inches (150 mm) above the outer projections of the pipe over the entire width of the trench.

The ends of encasement pipe shall be bulkheaded (Standard Specification Item No. 507) with manufactured boots or, concrete blocks, bricks or stones, dry-stacked without mortar, sufficient to prevent the intrusion of trench backfill material into the encasement, but fitted loosely enough to facilitate the escape of water from the encasement should carrier pipe leakage or failure occur.

505.5 Measurement and Payment

Concrete encasement will be measured by the lineal foot (meter: 1 meter equals 3.281 feet), for size of pipe being encased, complete in place. The measurement will be made between ends of the encasement, along the central axis as installed.

Encasement pipe will be measured by size of encasement installed, complete in place. The measurement will be made between the ends of the pipe, along the central axis as installed.

505.6 Payment

Work performed and materials furnished as prescribed by this item will be subsidiary to Item No. 510, "Pipe" unless included as a separate pay item in the contract. When included for payment, it shall be measured as provided under "Measurement" and will be paid at the unit bid price per lineal foot for "Concrete Encasement" or "Encasement Pipe" of the size indicated on the Drawings. The unit bid price shall include full compensation for furnishing all materials, pipe for all preparation, hauling, installation and for all labor, tools, equipment and incidentals necessary to complete the work, including bench excavation and disposal of surplus material.

Payment, when included as a contract Pay Item, will be made under one of the following:

Concrete Encasement for ____ Dia. Pipe -	Per Lineal Foot
Encasement Pipe ____ Dia., Type ____, -	Per Lineal Foot.

End

<i>SPECIFIC</i> Cross Reference Materials
--

Standard Specification Item No. 505, "Encasement and Encasement Pipe"

City of Round Rock Standard Specification Items

<u>Designation</u>	<u>Description</u>
Item 403	Concrete For Structures
Item 510	Pipe
Section 510.2(8)(o)	Corrugated Metal Pipe (CMP)

City of Round Rock Standard Details

<u>Designation</u>	<u>Description</u>
Detail 501-1	Encasement Detail w/ Casing Spacers

American Society for Testing and Materials (ASTM)

<u>Designation</u>	<u>Description</u>
A-134	Specification for Pipe, Steel, Electric-Fusion (Arc)-Welded (Sizes NPS 16 and Over)
C-76/C-76M	Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

<i>RELATED</i> Cross Reference Materials

Standard Specification Item No. 505, "Encasement and Encasement Pipe"

TxDOT Specifications

<u>Designation</u>	<u>Description</u>
Item 421	Portland Cement Concrete
Section 421.9	Quality of Concrete
Section 421.2(8)	Mortar and Grout
Item No. 501	Jacking or Boring Pipe
Item No. 502	Tunneling
Item No. 506	Manholes
Item No. 507	Bulkheads
Item No. 593	Concrete Retards

City of Round Rock Standard Specification Items

<u>Designation</u>	<u>Description</u>
Section 510.2(8)(c)	Concrete pipe
Section 510.2(8)(m)	Steel Pipe

Dwg Info: G:\CFA\2014\0308801_Williamson_County_2013_Road_Bond\MUN\31_CR-176-at-RM-2243-Intersection\DESIGN\C-001-COVR.dwg -- Tab: C001 COVER -- Plotted: 9/18/2019 6:01 PM By: KRISTEN VAN HOOSIER

INDEX OF SHEETS

- C-001

C-002

C-003
- TITLE SHEET

CITY OF GEORGETOWN GENERAL NOTES

CITY OF ROUND ROCK GENERAL NOTES

- C-100

C-101

C-102
- KEY MAP

VALVE AND FIRE HYDRANT ADJUSTMENTS TO GRADE

BCMUD 24" RAW WATERLINE RELOCATION

- C-501

C-502

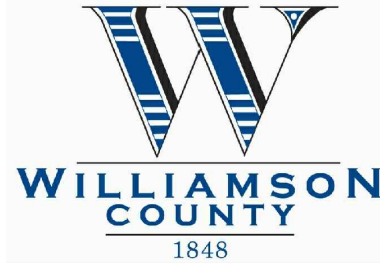
C-503

C-504
- CITY OF GEORGETOWN STANDARD DETAILS - SHEET 1

CITY OF GEORGETOWN STANDARD DETAILS - SHEET 2

CITY OF ROUND ROCK STANDARD DETAILS - SHEET 1

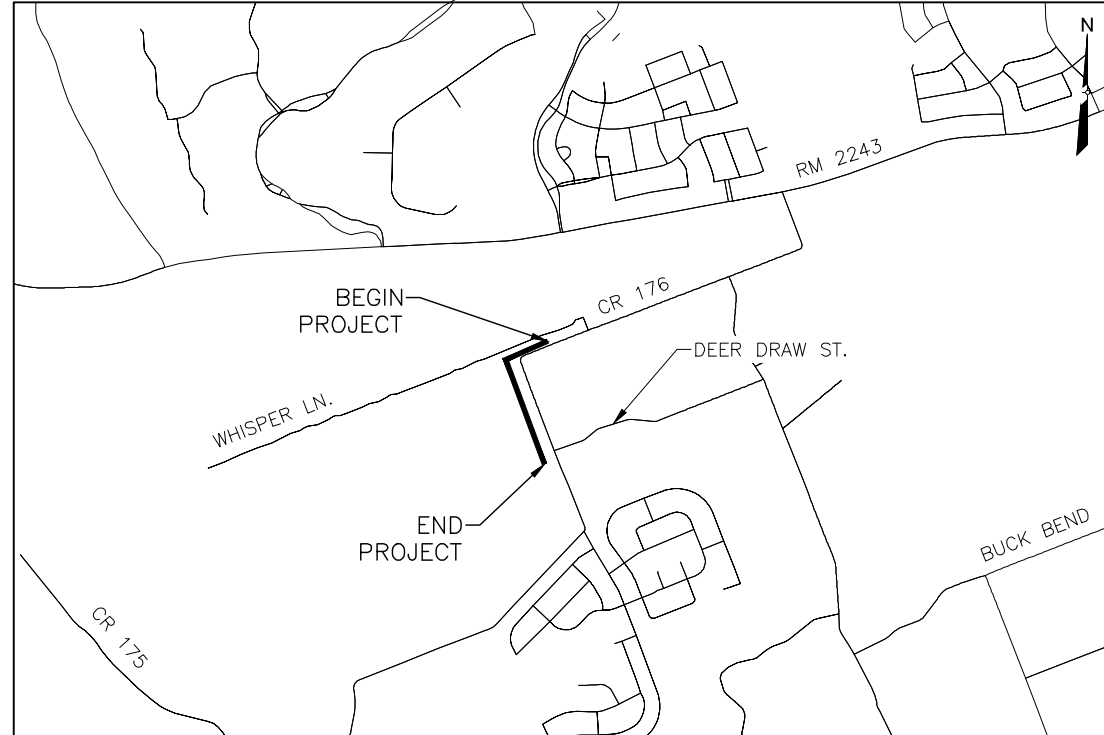
CITY OF ROUND ROCK STANDARD DETAILS - SHEET 2



WILLIAMSON COUNTY
CR 176 AT RM 2243 INTERSECTION
COG AND BCMUD WATER ADJUSTMENTS
AND BCMUD 24" RAW WATERLINE RELOCATION

PROJECT LIMITS: 580 FT SOUTH OF WHISPER LN. TO 300 FT SOUTH OF DEER DRAW ST.

ADJUSTMENT OF EXISTING WATER VALVES, HYDRANTS, AND AIR VALVES TO GRADE
RELOCATION OF EXISTING BCMUD 24" RAW WATERLINE



VICINITY MAP
(NOT TO SCALE)

REV. NO.	REVISION DESCRIPTION	(C)ORRECT, (A)DD, (V)OID SHEET NUMBERS	APPR'D BY:	DATE
1	ADDITIONAL BCMUD WL RELOCATION	(C) C-001, C-100-101 (A) C-003, C-102, C-503-504	LP	9/03/19

OWNER INFORMATION

COG OWNER:
CITY OF GEORGETOWN, TEXAS
300 INDUSTRIAL AVENUE
GEORGETOWN, TEXAS 78626

CONTACT:
MICHAEL HALLMARK
512-930-3569

BCMUD OWNER:
BRUSHY CREEK MUD, TEXAS
16318 GREAT OAKS DRIVE
ROUND ROCK, TEXAS 78681

ALTERNATE CONTACT:
PAUL HANSON
OFFICE: 512-255-7871 EXT: 230
MOBILE: 512-912-6205
PHANSON@BCMUD.ORG

ALTERNATE CONTACT:
BILL CARR
OFFICE: 512-255-7871 EXT: 401
MOBILE: 512-912-6205

DESIGNER:
COBB FENDLEY
505 E. HUNTLAND DR. SUITE 100
AUSTIN, TEXAS 78752

CONTACT:
LANCE PARISHER, P.E.
512-834-9798

SUBMITTED FOR APPROVAL:



LANCE PARISHER, P.E.
COBB FENDLEY, INC.

JANUARY 11, 2019

DATE

APPROVALS:

Michael Hallmark 1/11/19
CITY OF GEORGETOWN, TEXAS
DATE

BCMUD

DATE



TBPE NO. 274 / TBPLS NO. 10046701
505 EAST HUNTLAND DRIVE, SUITE 100
AUSTIN, TEXAS 78752
512.834.9798 | FAX 512.834.7277
WWW.COBBFENDLEY.COM

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF GEORGETOWN STANDARD SPECIFICATIONS.
2. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF GEORGETOWN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
3. DESIGN PROCEDURES SHALL BE IN COMPLIANCE WITH THE CITY OF GEORGETOWN ENGINEERING DESIGN GUIDELINES AND UNIFIED DEVELOPMENT CODE. ALL WAIVERS OR VARIANCES ARE LISTED BELOW:
4. AFTER THE CONSTRUCTION PERMIT HAS BEEN ISSUED AND PRIOR TO THE BEGINNING CONSTRUCTION, THE OWNER OR HIS REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF GEORGETOWN, DESIGN ENGINEER, CONTRACTOR(S), WILLIAMSON COUNTY (IF IN THE ETJ), OTHER UTILITY COMPANIES, AND ANY OTHER AFFECTED PARTIES. THE CITY OF GEORGETOWN SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE PROPOSED MEETING TIME (512-930-3569).
5. THE CONTRACTOR SHALL GIVE THE CITY OF GEORGETOWN CONSTRUCTION INSPECTOR AT LEAST 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
6. ANY CHANGES OR REVISIONS TO THESE APPROVED PLANS MUST BE SUBMITTED BY THE DESIGN ENGINEER AND APPROVED BY THE CITY OF GEORGETOWN PRIOR TO CONSTRUCTION OF THE REVISION.
7. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL OR OTHER PUBLIC INFRASTRUCTURE DAMAGED OR REMOVED WILL BE BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.
8. BENCHMARKS:
SEE "SURVEY CONTROL DATA" PLANS IN "RECONSTRUCTION OF COUNTY ROAD 258, ROADWAY AND DRAINAGE IMPROVEMENTS" PLAN SET FOR BENCHMARK INFORMATION, PREPARED BY:
CIVIL ENGINEERING CONSULTANTS
11550 IH-10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
(210) 641-9999
9. BLASTING OR BURNING SHALL NOT BE PERMITTED ON THIS PROJECT.
10. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER IMMEDIATELY. THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE AND SUBMITTING A REVISION TO THE CITY. USE ONE CALL UTILITY SYSTEM: DIAL 1-800-344-8377, 48 HOURS BEFORE YOU DIG.
11. EXCESS SOIL SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CITY OF GEORGETOWN IF THE DISPOSAL SITE IS INSIDE THE CITY'S JURISDICTIONAL BOUNDARIES.
12. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED AREAS OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING; AT THE CONTRACTOR'S OPTION.
13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT TEMPORARY EROSION CONTROLS ON A DAILY BASIS. ADJUST THE CONTROLS AND/OR REMOVE ANY SEDIMENT BUILDUP AS NECESSARY.
14. CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER, ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE.
15. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
16. ALL WET UTILITIES SHALL BE INSTALLED AND ALL DENSITIES MUST HAVE PASSED INSPECTIONS(S) PRIOR TO THE INSTALLATION OF DRY UTILITIES.
17. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND BE SEALED BY A REGISTERED TEXAS PROFESSIONAL ENGINEER.

EROSION AND SEDIMENTATION CONTROL NOTES

1. EROSION CONTROL MEASURES, SITE WORK, AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GEORGETOWN'S SUBDIVISION CODE AND CONSTRUCTION STANDARDS MANUAL, EXCEPT AS NOTED BELOW AND APPROVED BY CITY COUNCIL:
2. SLOPES SHALL BE SODDED OR SEEDED WITH THE APPROPRIATE GRASS, GRASS MIXTURES, OR GROUND COVER SUITABLE TO THE AREA AND SEASON TO WHICH THEY ARE APPLIED.
3. SILT FENCES, ROCK BERMS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF GEORGETOWN FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.

WATER NOTES

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900 OR AWWA C-905, DR-18, CLASS 150), OR DUCTILE IRON (AWWA C-151, CLASS 350 FOR 12" AND SMALLER AND CLASS 250 FOR 14"-20"). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (200 PSI, DR9).
2. UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 36" MIN. AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 36" BELOW SUBGRADE.
3. WHERE A WATER OR WASTEWATER LINE CROSSES BELOW A STORM SEWER STRUCTURE AND THE TOP OF THE PIPE IS WITHIN 18" OF THE BOTTOM OF THE UTILITY STRUCTURE, THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1' ON EITHER SIDE OF THE DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE ENCASEMENT WILL NOT BE REQUIRED FOR DUCTILE IRON PIPE WITH SIZES LARGER THAN 12". CONCRETE ENCASEMENT SHALL CONFORM TO THE CITY OF GEORGETOWN STANDARD DETAIL.
4. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO THE CITY OF GEORGETOWN STANDARD DETAIL.
5. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-151, MIN. CLASS 350).
6. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH A MINIMUM 8-MIL POLYETHYLENE FILM PRIOR TO PLACING CONCRETE.
7. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTION TO EXISTING LINES.
8. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE EQUIPMENT INCLUDING PUMPS, GAUGES, SUPPLIES, AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY OF GEORGETOWN PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF GEORGETOWN TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM.
9. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF GEORGETOWN AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
10. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF GEORGETOWN.
11. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
12. A DOUBLE CHECK BACKFLOW DEVICE IN A VAULT SHALL BE INSTALLED ADJACENT THE RIGHT OF WAY OR PUBLIC EASEMENT ON PRIVATE PROPERTY ON ALL PRIVATE FIRE LINES.
13. ALL WATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

WATER SERVICE "W" ON TOP OF CURB

VALVE "V" ON FACE OF CURB

14. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M.
15. ALL FIRE HYDRANTS SHALL BE NATIONAL STANDARD HOSE THREAD.
16. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE DEVELOPER IN ACCORDANCE WITH THE SPECIFICATIONS.
17. THRUST BLOCKING AS REQUIRED BY DETAIL W11 SHALL BE SUBSIDIARY TO COST OF PIPE.

SURVEY NOTES

1. ALL BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NAD-83(93). ALL DISTANCES AND COORDINATES ARE ADJUSTED TO THE SURFACE BY THE PROJECT SURFACE ADJUSTMENT FACTOR OF 0.99988.

[illegible]

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK STANDARD SPECIFICATIONS MANUAL.
- ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT HIS EXPENSE.
- THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS ARE APPROPRIATE.
- MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE THE BRUSHY CREEK MUD 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE: 512-255-7871 EXT: 230.
- ~~ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SOILING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.~~
- PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF ROUND ROCK, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
- THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF ROUND ROCK ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "ASBUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
- THE ROUND ROCK CITY COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
- WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINED HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.
- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.

TRENCH SAFETY

- IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED,SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR EACH PROJECT WILL BE PROVIDED TO CONTRACTOR.
- IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT,SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
- IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE,THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF ROUND ROCK.

STREET AND DRAINAGE

- ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE 218-5555 (INSPECTIONS).
- BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95%MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
- DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.

WATER AND WASTEWATER

- PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).
- PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26), DUCTILE IRON (AWWA C-100, MIN. CLASS 200).
- UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE.
- ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).
- ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT TAPE OR EQUAL ACCEPTED BY THE CITY ENGINEER.
- THE CONTRACTOR SHALL CONTACT BUSHY CREEK MUD TO COORDINATE UTILITY TIE-INS AND NOTIFY AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.
- ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS. TAPPING OF FIBERGLASS MANHOLES

SHALL NOT BE ALLOWED.

- ~~THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.~~
- ~~LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE WATER & WASTEWATER SUPERINTENDENT, TELEPHONE 218-5555.~~
- ~~THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY OF ROUND ROCK PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF ROUND ROCK TO VERIFY EACH TREATED LINE HAS ACHIEVED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL ACCEPTANCE BY THE CITY OF ROUND ROCK.~~
- ~~SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTOR'S REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF ROUND ROCK NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY OF ROUND ROCK, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY OF ROUND ROCK FEE AMOUNTS MAY BE OBTAINED BY CALLING THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT 218-5555.~~
- THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY BRUSHY CREEK MUD PERSONNEL.
- THE CONTRACTOR SHALL COORDINATE TESTING WITH THE BRUSHY CREEK MUD INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
- THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY BRUSHY CREEK MUD.
- ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
- ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

WATER SERVICE "W" ON TOP OF CURB
WASTEWATER SERVICE "S" ON TOP OF CURB
VALVE "V" ON FACE OF CURB

TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY OF ROUND ROCK.

- CONTACT CITY OF ROUND ROCK ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT 218-5555 FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.
- THE CITY OF ROUND ROCK FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING IN ORDER THAT THE FIRE DEPARTMENT MAY MONITOR SUCH TESTING.
- SAND, AS DESCRIBED IN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

SIEVE SIZE	PERCENT RETAINED BY WEIGHT
1/2"	0
3/8"	0-2
#4	40-85
#10	95-100
- THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M.
- ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. WHENEVER TCEQ AND CITY OF ROUND ROCK SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

TRAFFIC MARKING NOTES

- ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. LATEST EDITION.
- ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES

- EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK EROSION AND SEDIMENTATION CONTROL ORDINANCE.
- ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
- SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF ROUND ROCK FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.

- ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
- ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

WATER SHUT-OUT SCHEDULE

- CONTRACTOR SHALL COORDINATE WITH BCMUD PRIOR TO TIE-IN OF PROPOSED WATERLINE TO EXISTING WATERLINE. CONTRACTOR SHALL NOTIFY BCMUD AT LEAST 48 HOURS PRIOR TO CONNECTION. TIE-IN SHALL BE MADE M-F BETWEEN 9AM-4PM. WATERLINE CAN BE SHUT OFF FOR NO MORE THAN 8 HOURS. COORDINATE FOR BCMUD 4" CARV CONNECTION AND 24" RAW WATERLINE TIE-INS TO BE COMPLETED WITHIN ONE 8-HOUR SHUT-OUT PERIOD.

BCMUD 24" CONNECTION TO EXISTING RAW WATER LINE

- THE PROPOSED BCMUD 24" RAW WATER LINE RELOCATION WILL BE COMPLETELY INSTALLED AND TESTED TO THE EXTENT POSSIBLE PRIOR TO TAKING THE RAW WATER LINE OUT OF SERVICE TO MAKE THE CONNECTIONS TO THE EXISTING LINE.
- ALSO, PRIOR TO TAKING THE LINE OUT OF SERVICE, THE CONTRACTOR SHALL HAVE EXPOSED THE EXISTING LINE AT THE CONNECTION POINTS, MAKE NECESSARY MEASUREMENTS AND HAVE ONSITE AND ASSEMBLED TO THE EXTENT POSSIBLE THE PIPE, ADAPTORS, MEGA LUGS AND FITTINGS NECESSARY TO MAKE THE CONNECTIONS AT EACH END OF THE RAW WATER LINE. ALL EQUIPMENT REQUIRED TO FACILITATE THE CONNECTION, SUCH AS PUMPS FOR DEWATERING THE LINE, AND EQUIPMENT FOR LIFTING AND PLACING PIPE, SHALL BE ON SITE AT THE CONNECTION LOCATION PRIOR TO REMOVAL FROM SERVICE.
- THE CONTRACTOR SHALL SUBMIT A PLAN DETAILING THEIR PROCEDURES, PROPOSED METHODS, EQUIPMENT AND MATERIALS TO INCLUDE THESE ITEMS ABOVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH MAKING THIS CONNECTION.
- THE PORTION OF THE RAW WATER LINE WHERE THE CONNECTION WILL BE MADE WILL BE TAKEN OUT OF SERVICE BY CLOSING ISOLATION VALVES. ONE VALVE IS LOCATED TO THE SOUTH IN THE PARKSIDE AREA AND ANOTHER VALVE IS LOCATED IN THE PORTION OF THE RAW WATER LINE THAT RUNS PARALLEL TO FM 2243 (ABOUT MID-WAY IN THE RUN PARALLEL TO RM 2243).
- THE BCMUD 24" RAW WATER LINE CAN BE OUT OF SERVICE FOR NO MORE THAN 8-HRS, BETWEEN THE HOURS OF 9 AM AND 4 PM.
- AT THE LOCATION WHERE THE CONNECTIONS WILL BE MADE, THE EXISTING LINE WILL BE CUT TO ESTABLISH A PLAIN END OF PIPE, AND A 45 DEGREE BEND FITTING WILL BE PLACED ON THE PLAIN END TO CONNECT TO THE NEW PIPE. JOINT RESTRAINT WILL BE PROVIDED BY LOCKING GASKETS OR MEGA LUGS. FLANGE COUPLING ADAPTORS WILL ALSO BE ACCEPTABLE. ALL NUTS AND BOLTS WILL BE STAINLESS STEEL WITH ISOLATION AS APPROPRIATE TO RESIST CORROSION. WHERE EXISTING PIPE SEGMENTS MUST BE RESTRAINED TO ACHIEVE THE PROPER RESTRAINED LENGTH, A THRUST HARNESS MAY BE USED AGAIN WITH STAINLESS STEEL HARDWARE.
- THE NEW LINE SEGMENT SHALL BE FLUSHED TO REMOVE ANY SEDIMENT AND DEBRIS AND SUCCESSFULLY PRESSURE TESTED PRIOR TO PLACING IN SERVICE.

USE CITY OF ROUND ROCK GENERAL NOTES, STANDARD DETAILS, AND SPECIFICATIONS FOR WORK PERTAINING TO BRUSHY CREEK MUD, INCLUDING 4" COMB ARV ON C-101 AND RAW WATERLINE ON C-102

APPROVED BY: LP DATE: 9/20/19

REVISION DESCRIPTION

ADDED NEW SHEET

REV. NO. 1



CobbFendley
1700 W. 17th St. Suite 100
AUSTIN, TEXAS 78752
512.834.9798 | FAX 512.834.9553
WWW.COBBFENDLEY.COM

CITY OF ROUND ROCK
GENERAL NOTES

CR 176 AT RM 2243 INTERSECTION
GEORGETOWN, TEXAS



WILLIAMSON COUNTY
1848

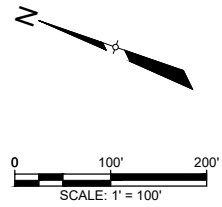
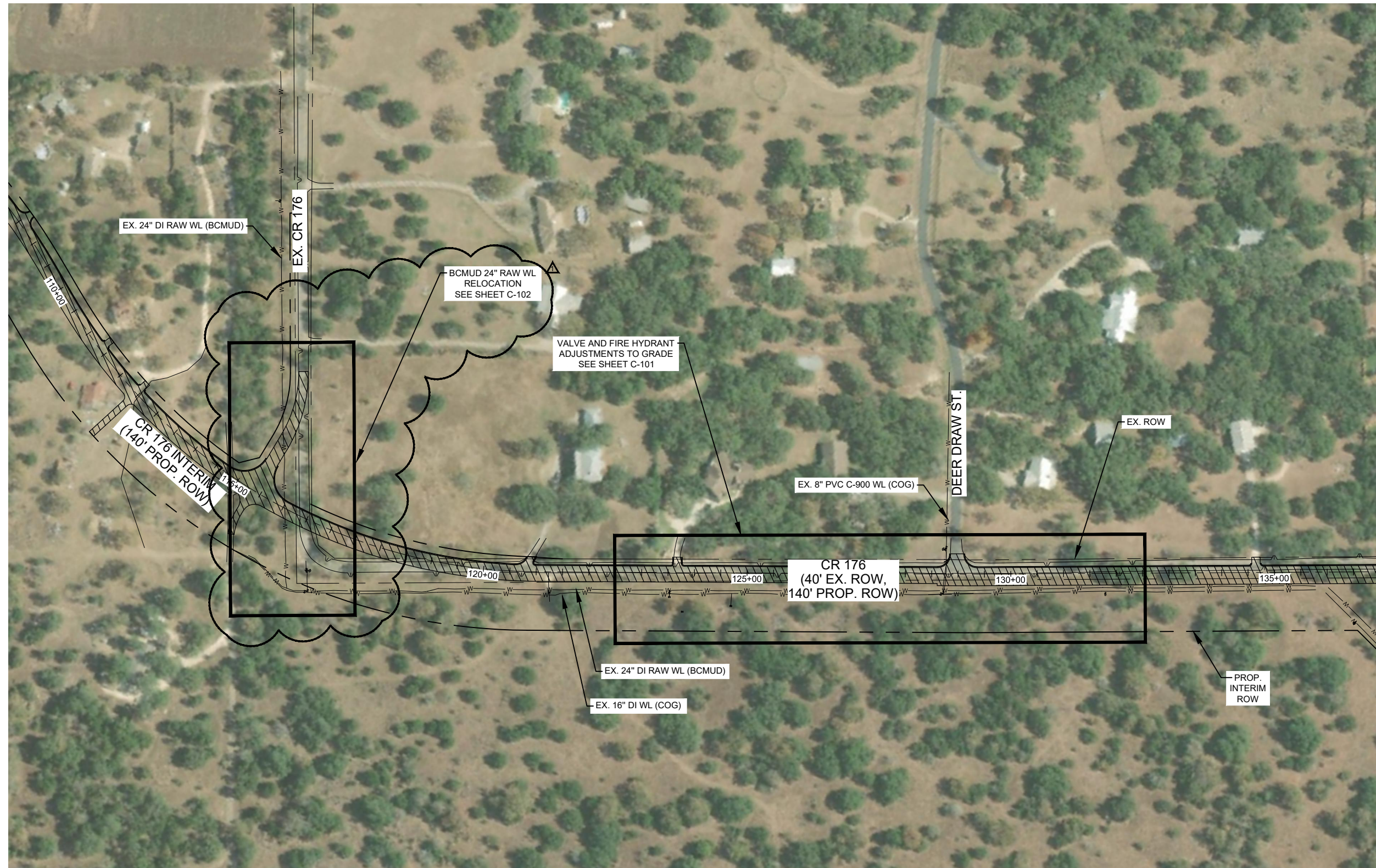
PROJ. NO. 1703-011-03
DESIGN: K. VAN HOOSIER
DRAWN: K. VAN HOOSIER
CHECK: L. PRINCE
APPR: L. PARISHER
DATE: JULY 24, 2019

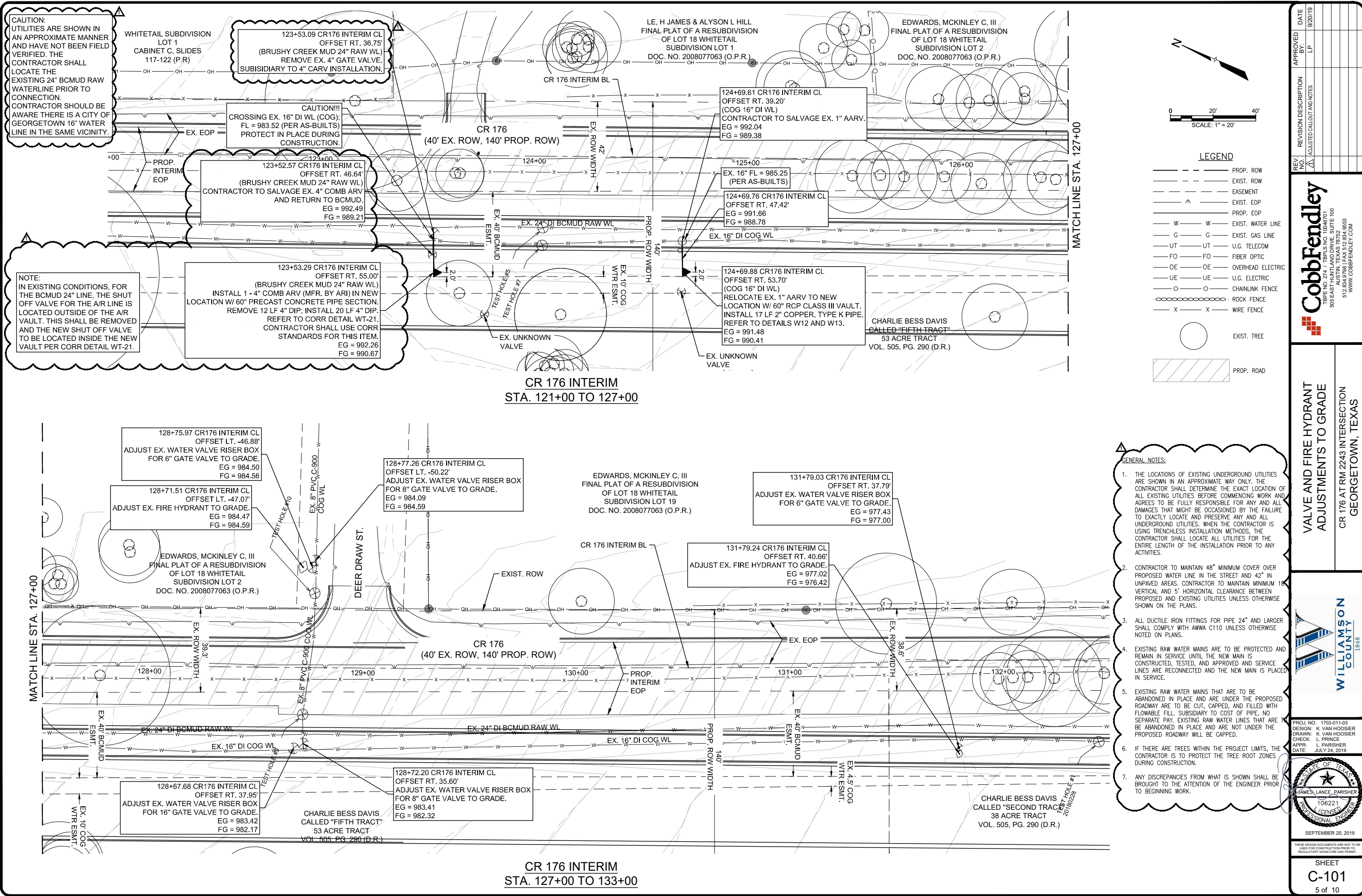


SEPTEMBER 20, 2019

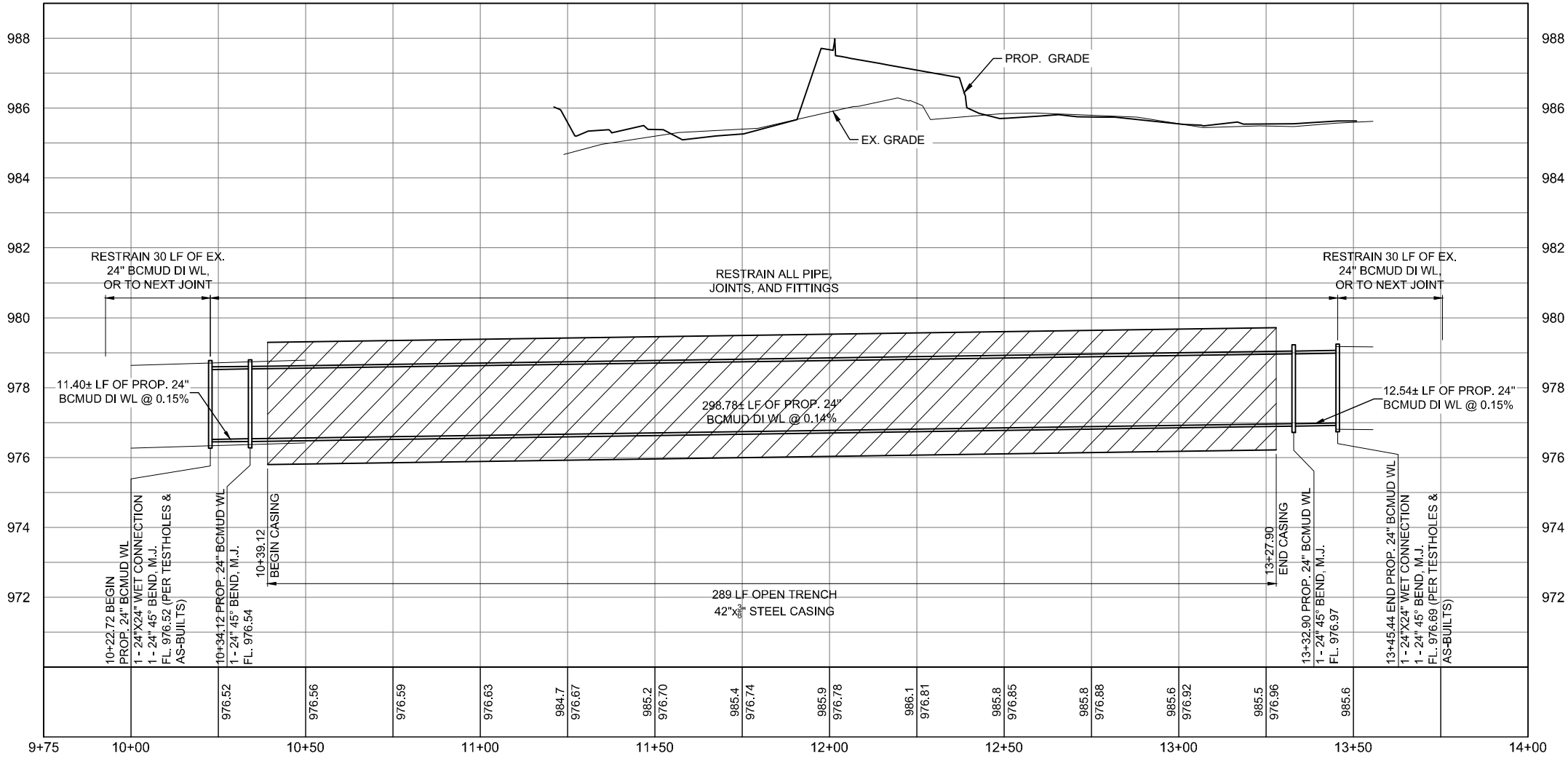
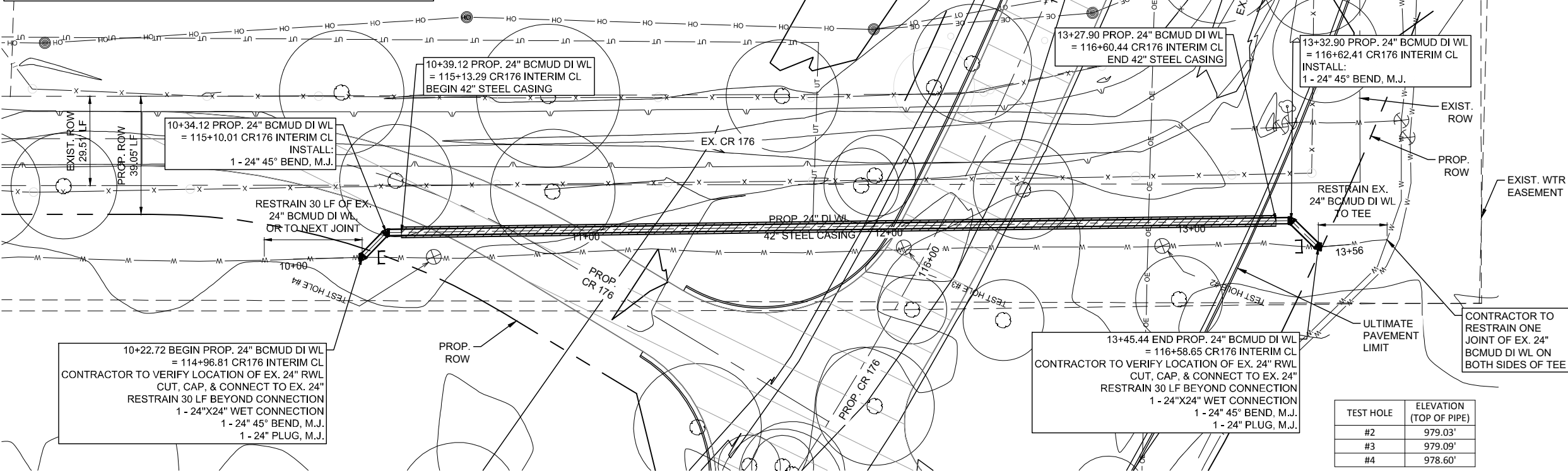
THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT

SHEET
C-003
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[illegible]



NOTE:
ALL NUTS AND BOLTS WILL BE STAINLESS STEEL WITH ISOLATION AS APPROPRIATE TO RESIST CORROSION. WHERE EXISTING PIPE SEGMENTS MUST BE RESTRAINED TO ACHIEVE THE PROPER RESTRAINED LENGTH, A THRUST HARNESS MAY BE USED WITH STAINLESS STEEL HARDWARE.



GENERAL NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHEN THE CONTRACTOR IS USING TRENCHLESS INSTALLATION METHODS, THE CONTRACTOR SHALL LOCATE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE INSTALLATION PRIOR TO ANY ACTIVITIES.
2. CONTRACTOR TO MAINTAIN 48" MINIMUM COVER OVER PROPOSED WATER LINE IN THE STREET AND 42" IN UNPAVED AREAS. CONTRACTOR TO MAINTAIN MINIMUM 18" VERTICAL AND 5' HORIZONTAL CLEARANCE BETWEEN PROPOSED AND EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE PLANS.
3. ALL DUCTILE IRON FITTINGS FOR PIPE 24" AND LARGER SHALL COMPLY WITH AWWA C110 UNLESS OTHERWISE NOTED ON PLANS.
4. EXISTING RAW WATER MAINS ARE TO BE PROTECTED AND REMAIN IN SERVICE UNTIL THE NEW MAIN IS CONSTRUCTED, TESTED, AND APPROVED AND SERVICE LINES ARE RECONNECTED AND THE NEW MAIN IS PLACED IN SERVICE.
5. EXISTING RAW WATER MAINS THAT ARE TO BE ABANDONED IN PLACE AND ARE UNDER THE PROPOSED ROADWAY ARE TO BE CUT, CAPPED, AND FILLED WITH FLOWABLE FILL. SUBSIDIARY TO COST OF PIPE, NO SEPARATE PAY. EXISTING RAW WATER LINES THAT ARE TO BE ABANDONED IN PLACE AND ARE NOT UNDER THE PROPOSED ROADWAY WILL BE CAPPED.
6. IF THERE ARE TREES WITHIN THE PROJECT LIMITS, THE CONTRACTOR IS TO PROTECT THE TREE ROOT ZONES DURING CONSTRUCTION.
7. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BEGINNING WORK.

EXISTING
GRADE
FLOW LINE
OF PIPE

PROFILE SCALE
1"=40' HORIZ.
1"=4' VERT.

APPROVED
DATE
7/22/19

REVISION DESCRIPTION
NO. 1
ADDED NEW SHEET

CobbFendley
THE ENGINEERS
505 EAST HUNTLAND DRIVE, SUITE 100
AUSTIN, TEXAS 78752
512.834.9798 / FAX 512.834.9553
WWW.COBBFENDLEY.COM

BCMUD 24" RAW WL RELOCATION

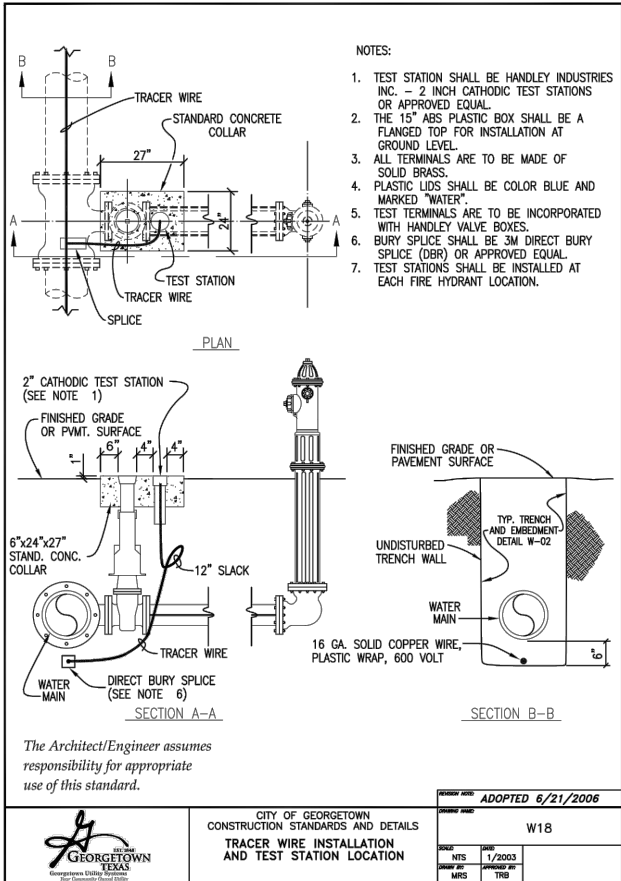
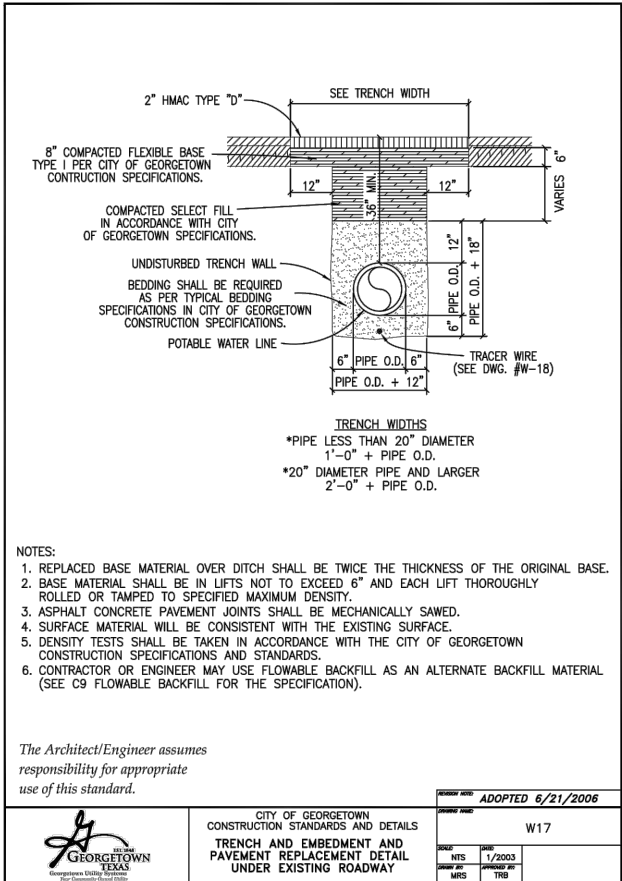
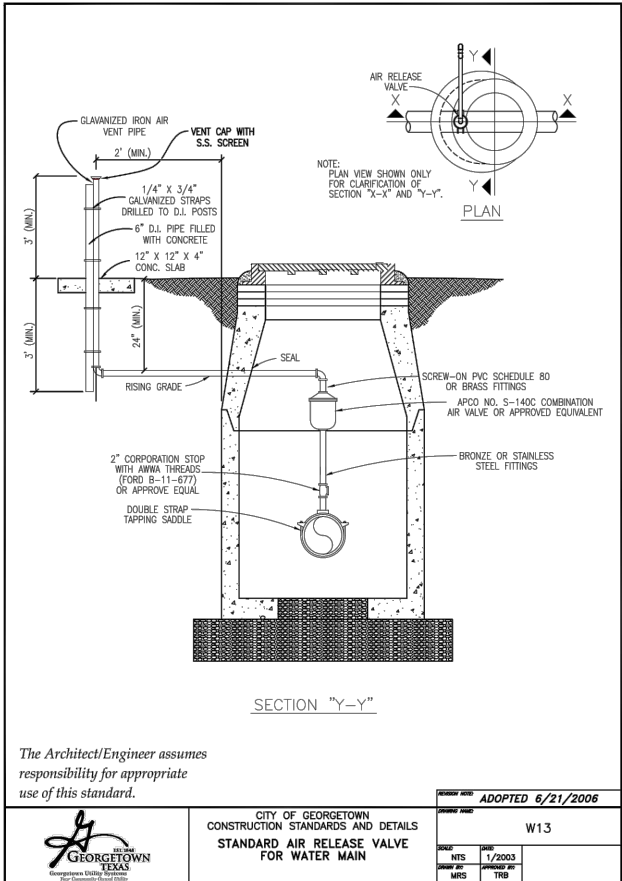
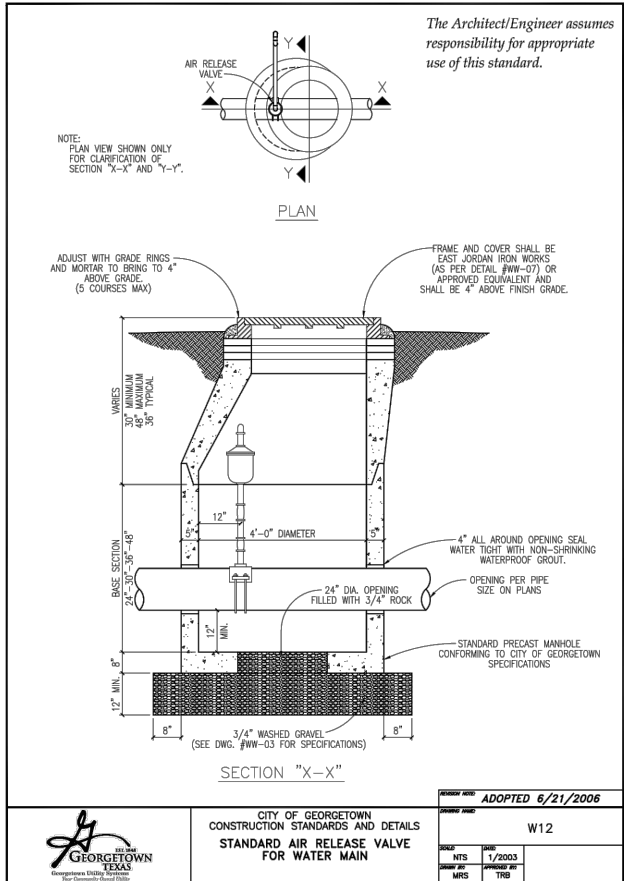
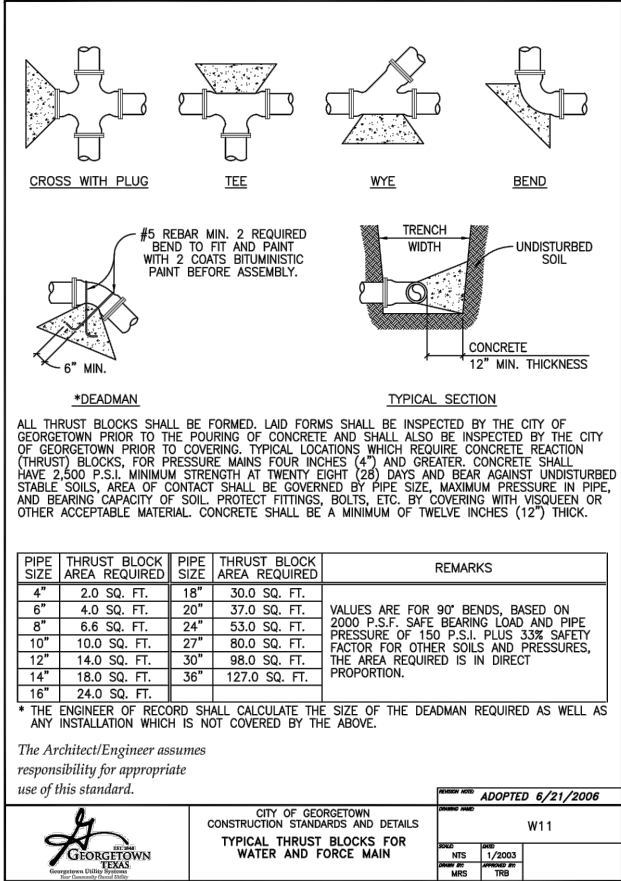
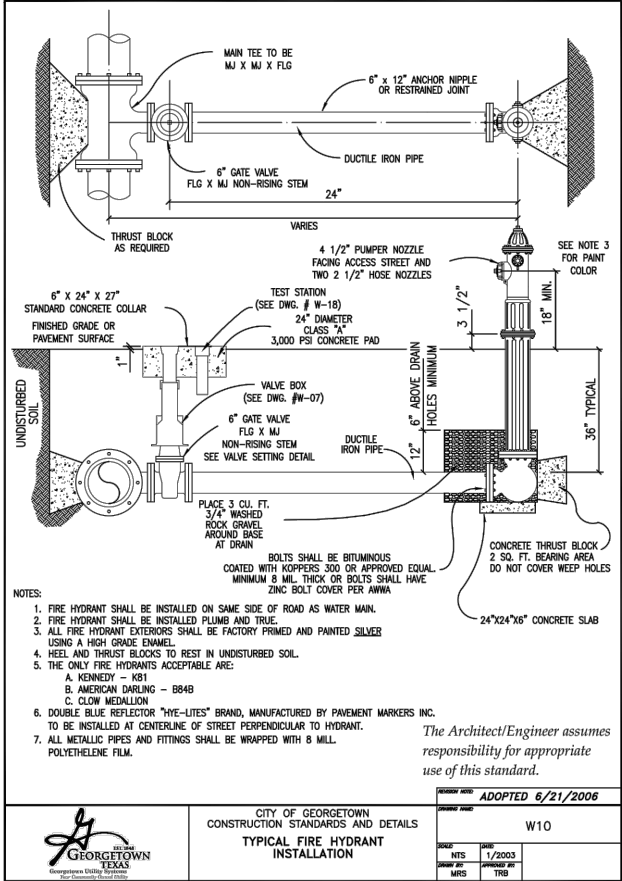
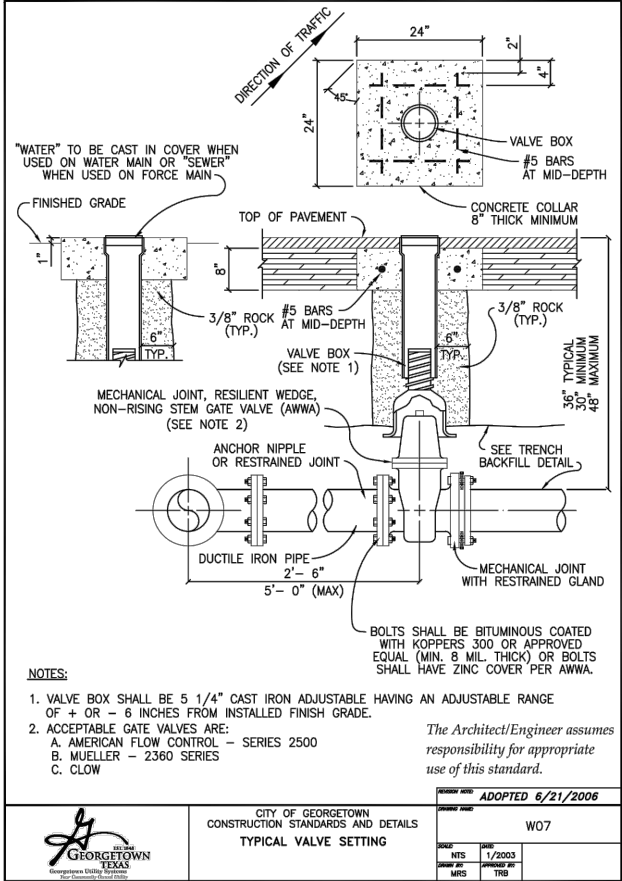
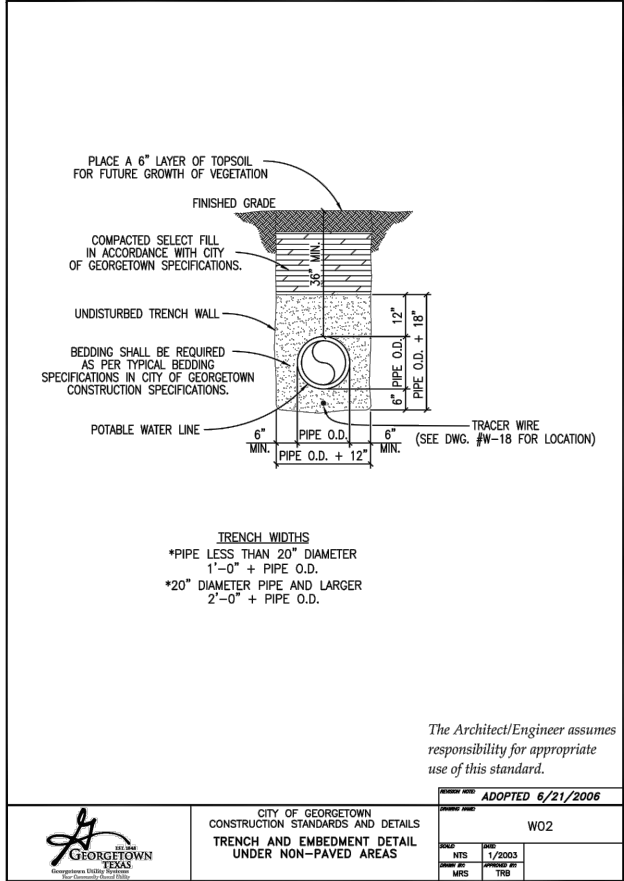
CR 176 AT RM 2243 INTERSECTION
GEORGETOWN, TEXAS

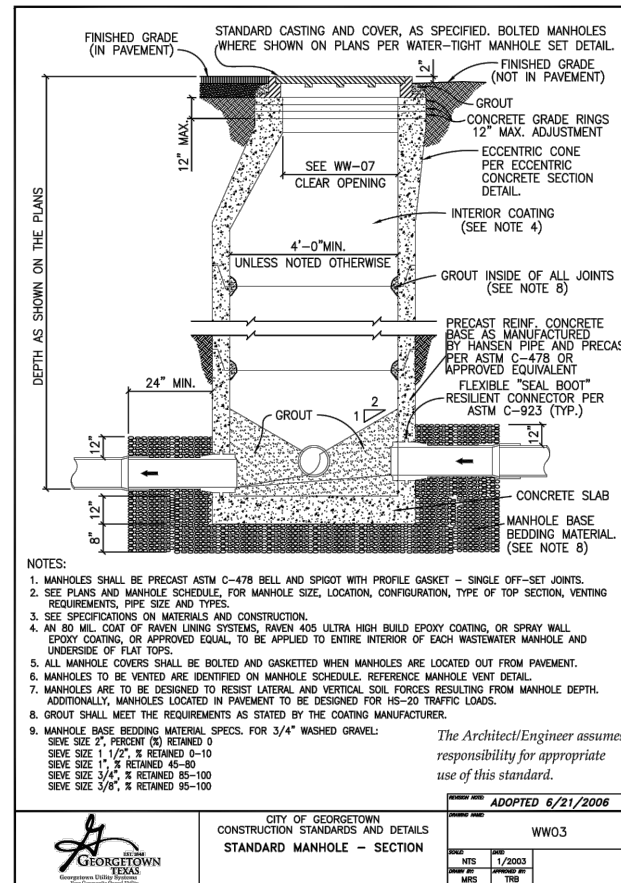
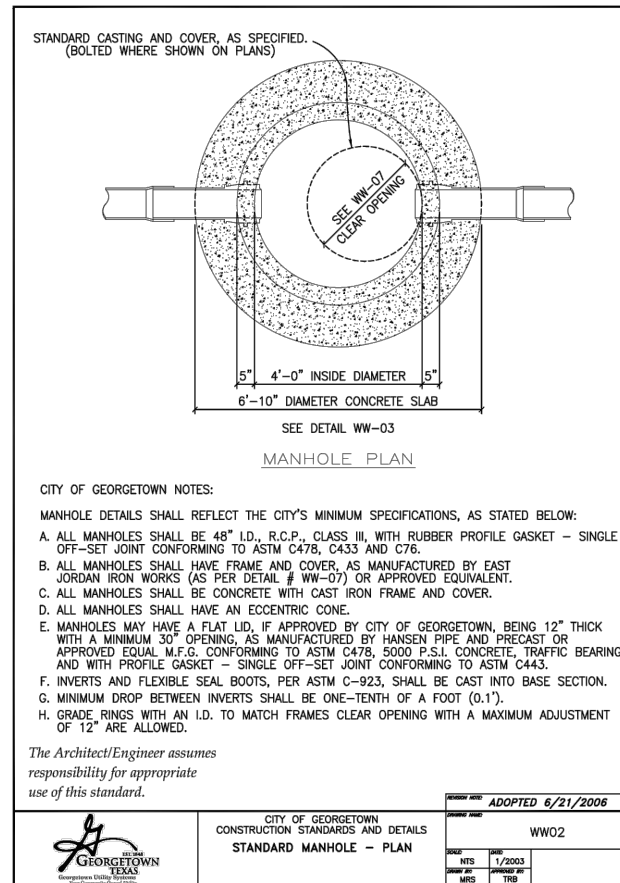
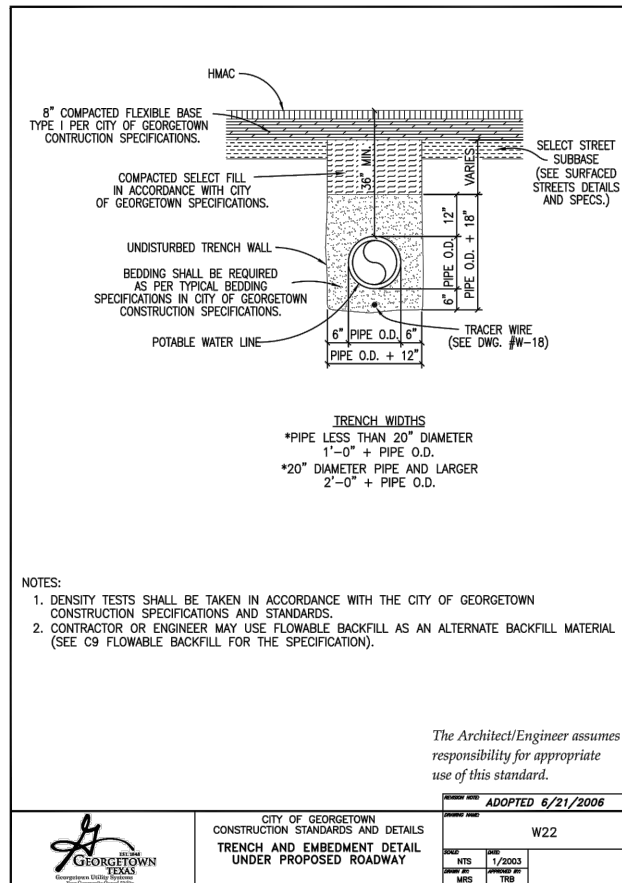
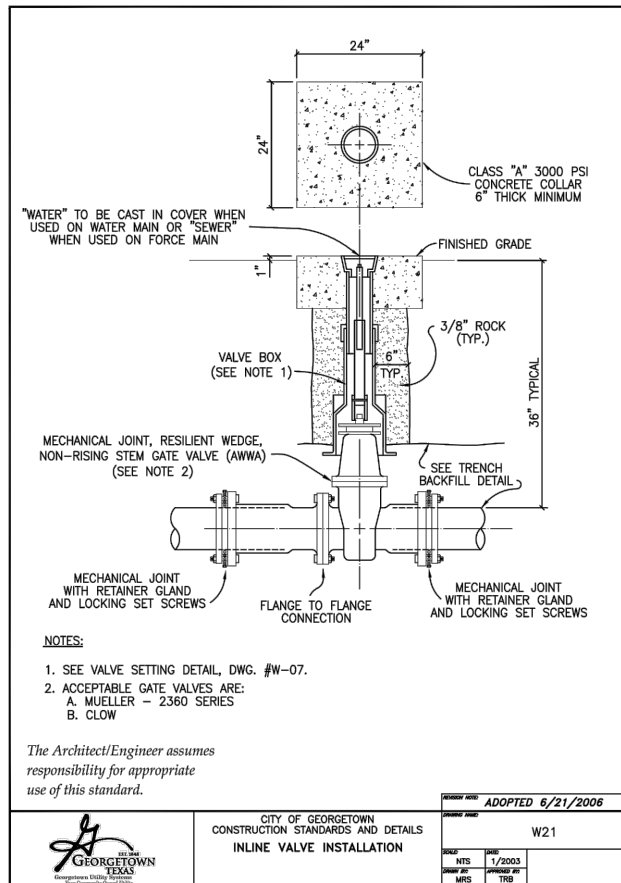
WILLIAMSON COUNTY
1848

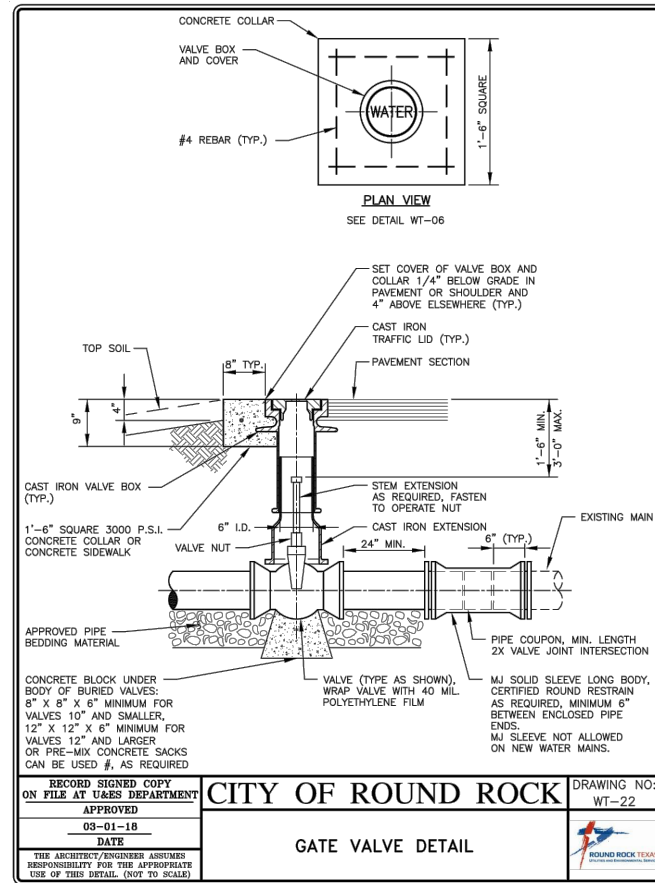
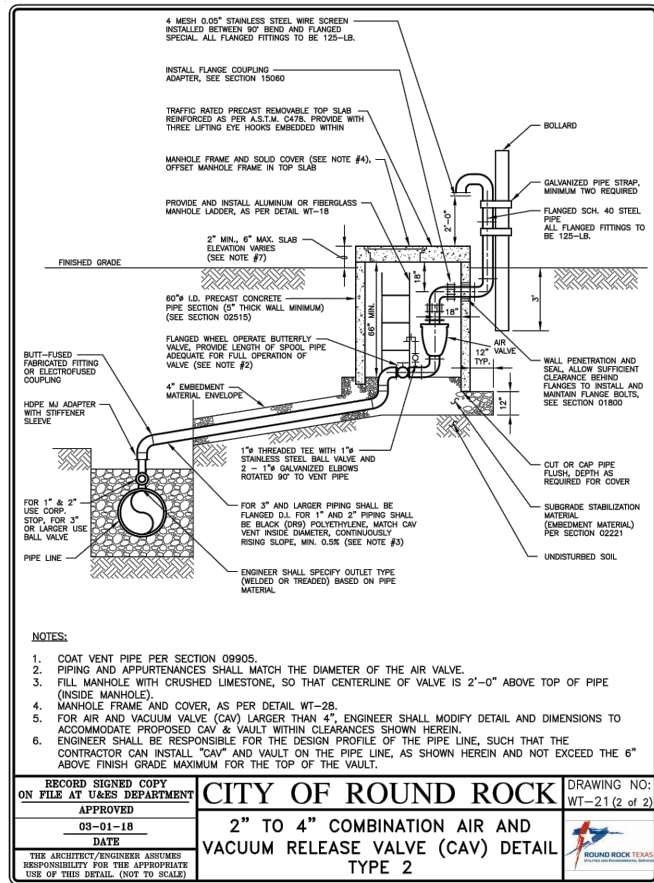
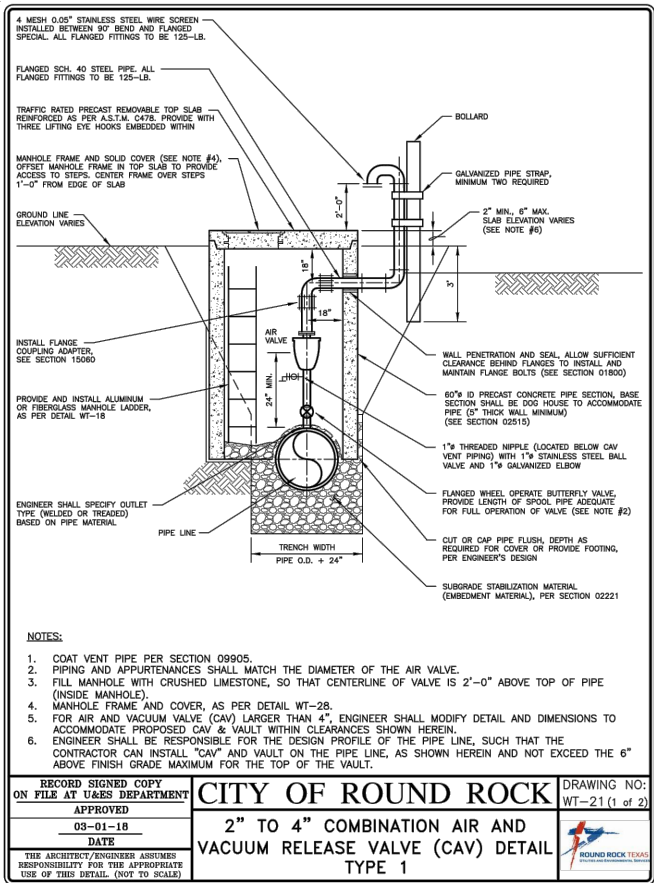
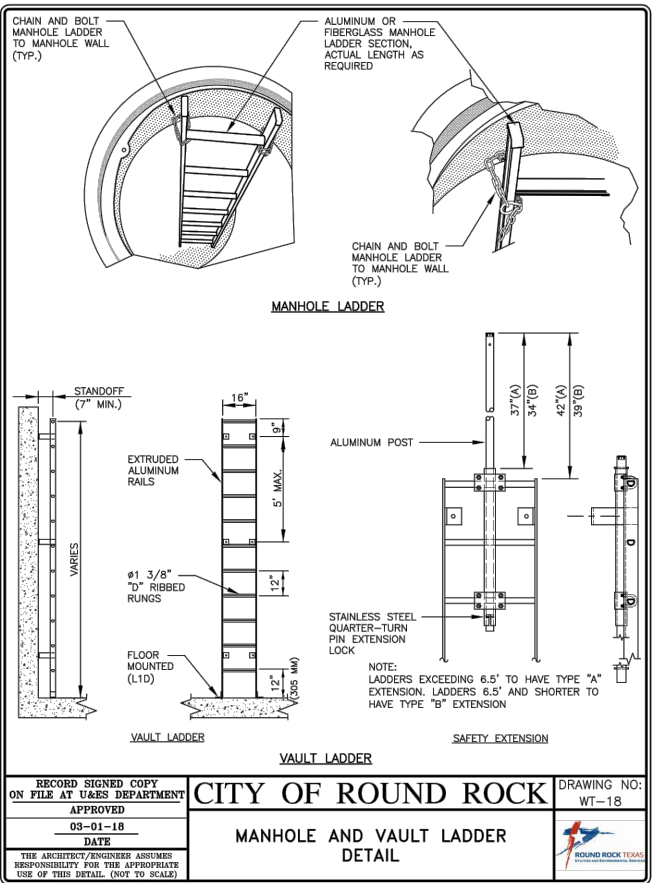
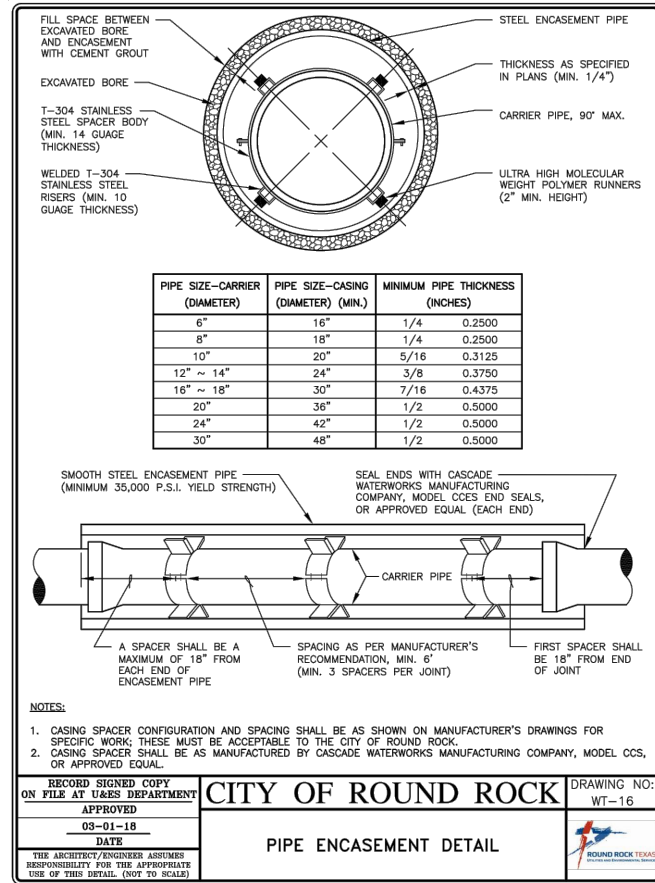
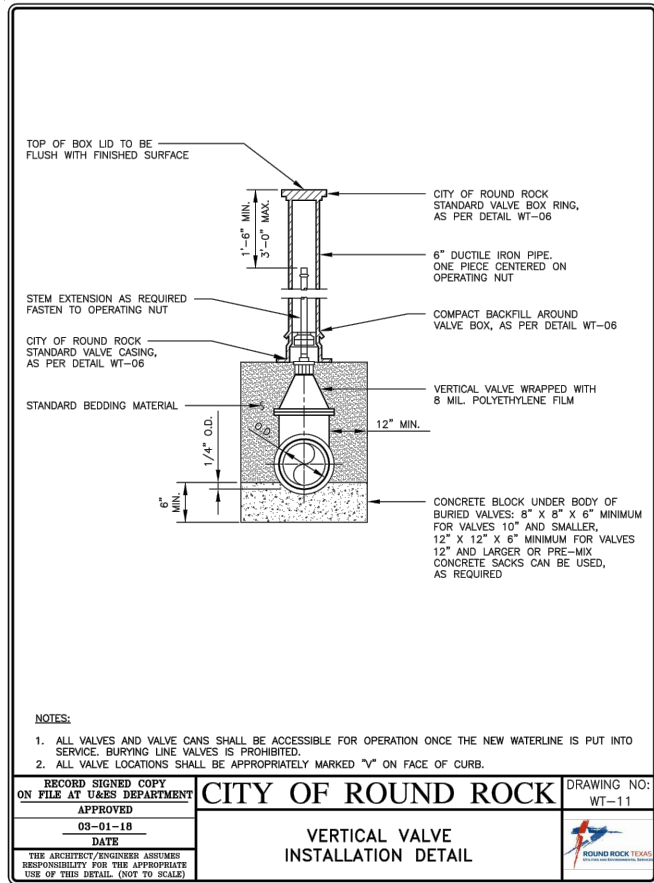
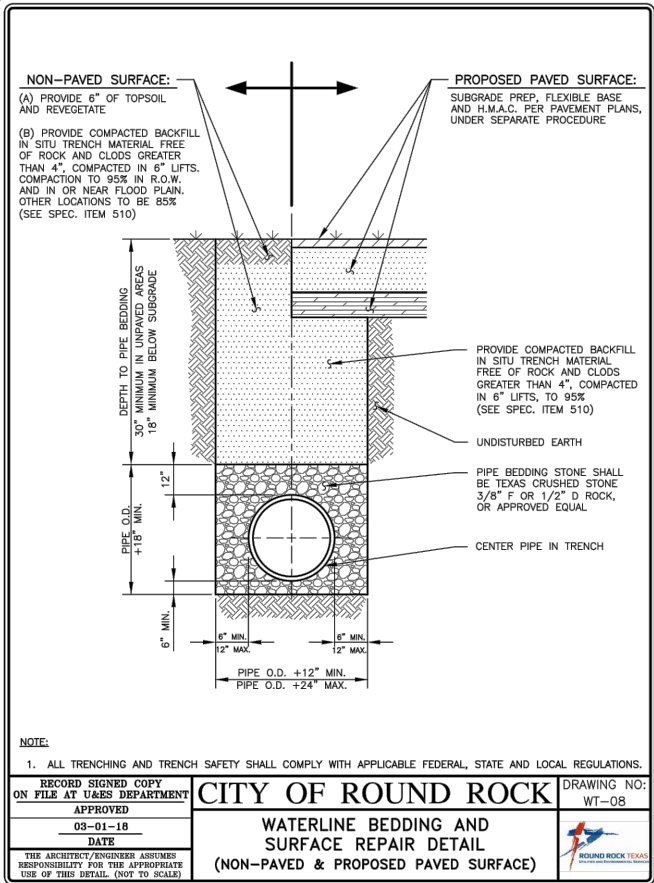
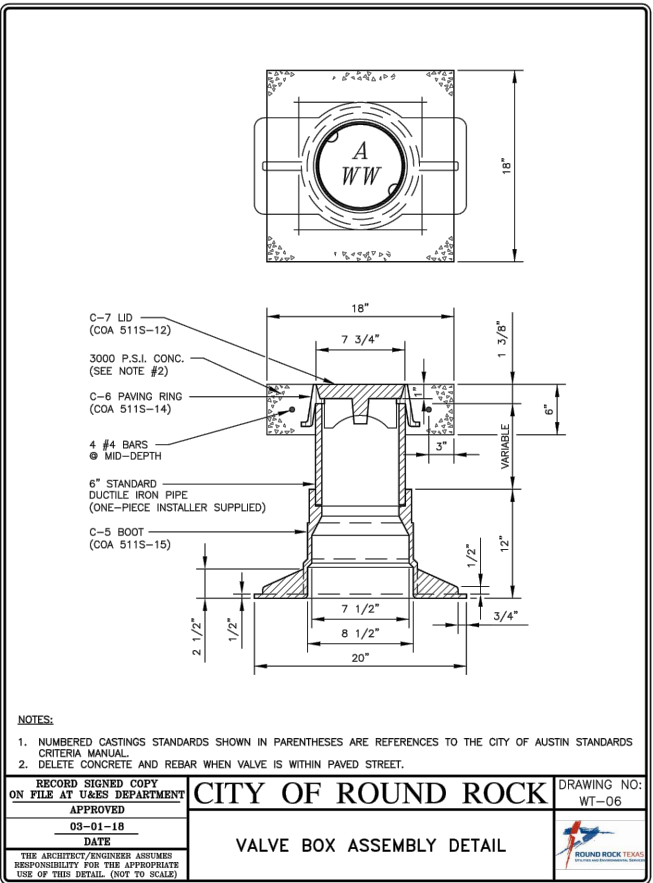
PROJ. NO. 1703-011-03
DESIGN: K. VAN HOOSIER
DRAWING: K. VAN HOOSIER
CHECK: L. PRINCE
APPR: L. PARISH
DATE: JULY 24, 2019

JAMES LANCE PARISHER
106221
LICENSED PROFESSIONAL ENGINEER
SEPTEMBER 20, 2019

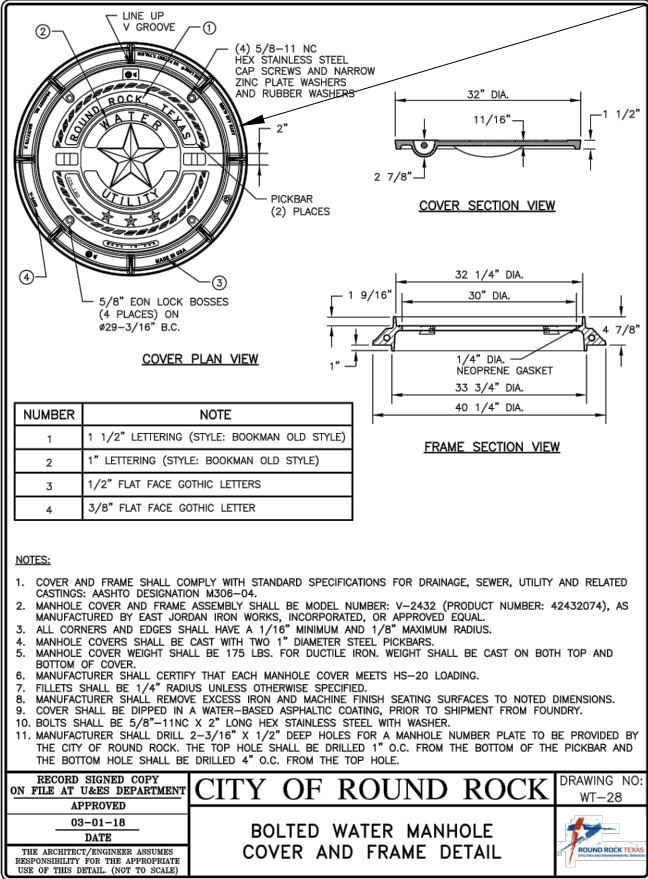
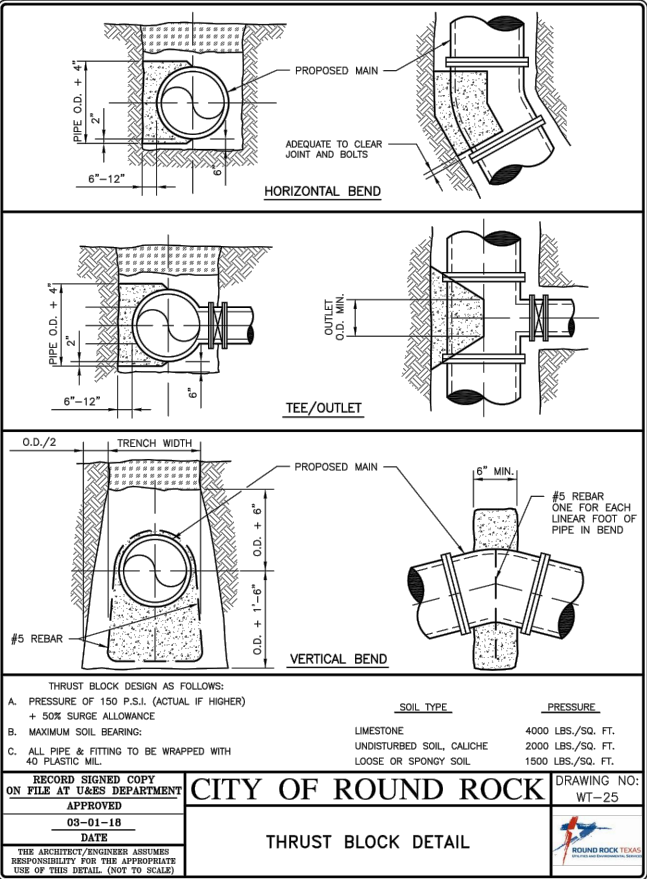
SHEET
C-102
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USE CITY OF ROUND ROCK GENERAL NOTES, STANDARD DETAILS, AND SPECIFICATIONS FOR WORK PERTAINING TO BRUSHY CREEK MUD, INCLUDING 4\"/>



FOR BRUSHY CREEK MUD ITEMS, MANHOLE LIDS SHALL BE STAMPED WITH "BRUSHY CREEK MUD" INSTEAD OF "ROUND ROCK, TEXAS".

USE CITY OF ROUND ROCK GENERAL NOTES, STANDARD DETAILS, AND SPECIFICATIONS FOR WORK PERTAINING TO BRUSHY CREEK MUD, INCLUDING 4" COMB ARV ON C-101 AND RAW WATERLINE ON C-102

APPROVED BY LP DATE 7/22/19

REVISION DESCRIPTION

ADDED NEW SHEET

REV. NO. 1

DATE 7/22/19

DESCRIPTION

CobbFendley
CITY OF ROUND ROCK, TEXAS
505 EAST HUNT AND DRIVE, SUITE 100
AUSTIN, TEXAS 78752
512.834.9798 | FAX 512.834.4553
WWW.COBBFENDLEY.COM

CITY OF ROUND ROCK
STANDARD DETAILS - SHEET 2

OR 176 AT RM 2243 INTERSECTION
GEORGETOWN, TEXAS

WILLIAMSON COUNTY
1848

PROJ. NO. 1703-011-03
DESIGN: K. VAN HOOSIER
DRAWN: K. VAN HOOSIER
CHECK: L. PRINCE
APPR: L. PARISHER
DATE: JULY 24, 2019

JAMES LANCE PARISHER
106221
LICENSED PROFESSIONAL ENGINEER
SEPTEMBER 6, 2019

THESE DESIGN DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO REGULATORY SIGNATURE AND PERMIT.

SHEET
C-503
10 OF 10