

MA) Z 2020

WILLIAMSON COUNTY, TEXAS CHANGE ORDER NUMBER: 2

HNTB Corporation
Round Rock
Great Oaks WL

1. CONTRACTOR: QA Construction Services Inc.		Project: Relocation
2. Change Order Work Limits: Sta. 502+25 to	Sta. 512+27	Roadway:
3. Type of Change(on federal-aid non-exempt projects):	Minor (Major/Minor)	CSJ Number: 3185
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 water line design that did not make it into the original plans.	. This Change Order adds revi	sions to the Brushy Creek MUD
	e attached	
7. New or revised plan sheet(s) are attached and numbere	d: BCMUD 1-14 revs	s., Fern Bluff MUD 1-10 revs.
8. New Special Provisions/Specifications to the contract ar	e attached:	☑ No
9. New Special Provisions to Item N/A No. N/A, Speci	al Specification Item N/A	are attached.
Each signatory hereby warrants that each has the authority	to execute this Change Orde	r (CO).
The contractor must sign the Change Order and, by doing so, agrees to waive	The following informa	ition must be provided
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.	Time Ext. #: N/A	Days added on this CO:0
THE CONTRACTOR Date 5/27/2020	Amount added by this chan	ge order: \$140,830.73
Ву		
Typed/Printed Name Jose A. Ruiz		
Typed/Printed Title Estimator / Project Manager		
RECOMMENDED FOR EXECUTION:		
	County Commission	oner Precinct 1 Date
S/27/2020_	☐ APPROVED	☐ REQUEST APPROVAL
Date		
	County Commission	oner Presingt 2
N/A	☐ APPROVED	Date REQUEST APPROVAL
Design Fingineer Date	Z ATTROVED	E REGUEST APPROVAE
111		
11.1 11/4	County Commission	oner Precinct 3 Date
05/27/2020	□ APPROVED	□ REQUEST APPROVAL
Prograi/. Manager Date		
Design Engineer's :		5
/	County Commission	
	APPROVED	REQUEST APPROVAL
	BU IL	6/2/20
	County June APPROVED	udge Date
	/ \	

WILLIAMSON COUNTY, TEXAS

CHANGE ORDER NUMBER:	2	Project # Great Oaks WL Relocation-3185	

TABLE A: Force Account Work and Materials Placed into Stock

LABOR	HOURLY RATE		HOURLY RATE	

TABLE B: Contract Items:

				ORIGINAL + PRE\	/IOUSLY REVISED	ADD or (DEDUCT)		NEW	
ITEM-LINE	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	ITEM COST	QUANTITY	QUANTITY	ITEM COST	OVERRUN/ UNDERRUN
509-13	TRENCH SAFETY SYSTEMS (ALL DEPTHS)	LF	\$2.00	2,786.00	\$5,572.00	375.00	3,161.00	\$6,322.00	\$750.00
510-W-15	PIPE, 4" DIA., DI CL-350 (ALL DEPTHS), INCLUDING RESTRAINED JOINTS, EXCAVATION, BACKFILL, AND TEMPORARY AND PERMANENT PAVEMENT AND CONCRETE REPAIRS	LF	\$55.00	247.00	\$13,585.00	(247.00)	0.00	\$0.00	(\$13,585.00)
510-W-16	PIPE, 6" DIA., DI CL-350 (ALL DEPTHS), INCLUDING RESTRAINED JOINTS, EXCAVATION, BACKFILL, AND TEMPORARY AND PERMANENT PAVEMENT AND CONCRETE REPAIRS	LF	\$75.00	228.00	\$17,100.00	375.00	603.00	\$45,225.00	\$28,125.00
510-W-17	PIPE, 12"DIA., DI CL-350 (ALL DEPTHS), INCLUDING RESTRAINED JOINTS, EXCAVATION, BACKFILL, AND TEMPORARY AND PERMANENT PAVEMENT AND CONCRETE REPAIRS	LF	\$115.00	721.00	\$82,915.00	118.00	839.00	\$96,485.00	\$13,570.00
510-W-18	PIPE, 12" DIA., PVC C-900 (ALL DEPTHS), INCLUDING RESTRAINED JOINTS, EXCAVATION, BACKFILL, AND TEMPORARY AND PERMANENT PAVEMENT AND CONCRETE REPAIRS	LF	\$90.00	875.00	\$78,750.00	3.00	878.00	\$79,020.00	\$270.00
510-W-19	PIPE, 24"DIA., DI CL-250 (ALL DEPTHS), INCLUDING RESTRIANED DJOINTS, EXCAVATION, BACKFILL, AND TEMPORARY AND PERMANENT PAVEMENT AND CONCRETE REPAIRS	LF	\$210.00	727.00	\$152,670.00	124.00	851.00	\$178,710.00	\$26,040.00
510-W-20	DUCTILE IRON FITTINGS	TON	\$8,500.00	12.70	\$107,950.00	1.95	14.65	\$124,525.00	\$16,575.00
510-W-21	WET CONNECTIONS, 4" DIA. X 4" DIA.	EA	\$5,000.00	1.00	\$5,000.00	(1.00)	0.00	\$0.00	(\$5,000.00)
510-W-CO1	WET CONNECTIONS, 3" DIA. X 3" DIA.	EA	\$4,500.00	0.00	\$0.00	1.00	1.00	\$4,500.00	\$4,500.00
510-W-25	RESTRAIN EXISTING PIPE, 4" DIA.; INCLUDES BELL JOINT RESTRAINTS, MATERIALS, BAOR AND OTHER INCRIDENTALS NECESSARY TO COMPLETE, PIPE SHALL BE RESTRAINED UP TO THE NEXT JOINT	EA	\$3,500.00	1.00	\$3,500.00	(1.00)	0.00	\$0.00	(\$3,500.00)
SP-510-W-CO1	RESTRAIN EXISTING PIPE, 3" DIA.; INCLUDES BELL JOINT RESTRAINTS, MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO COMPLETE, PIPE SHALL BE RESTRAINED UP TO THE NEXT JOINT	EA	\$3,500.00	0.00	\$0.00	1.00	1.00	\$3,500.00	\$3,500.00
511-CO1	6" PRESSURE RELEASE VALVE ASSEMBLY (PRV)	EA	\$56,685.73	0.00	\$0.00	1.00	1.00	\$56,685.73	\$56,685.73
511-29	VALVE, GATE VALVE 4"	EA	\$3,500.00	2.00	\$7,000.00	(2.00)	0.00	\$0.00	(\$7,000.00)
511-30	VALVE, GATE VALVE 6"	EA	\$4,300.00	4.00	\$17,200.00	3.00	7.00	\$30,100.00	\$12,900.00
511-32	VALVE, GATE VALVE 12"	EA	\$7,000.00	5.00	\$35,000.00	1.00	6.00	\$42,000.00	\$7,000.00
	TOTALS	<u> </u>			\$526,242.00			\$667,072.73	\$140,830.73

CHANGE ORDER REASON(S) CODE CHART

Design Error or Omission	1A. Incorrect PS&E 1B. Other
2. Differing Site Conditions	2A. Dispute resolution (expense caused by conditions and/or resulting delay)
(unforeseeable)	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)
	2l. 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
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
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

Great Oaks Waterline Relocation Williamson County Project No. 3185

Change Order No. 2

Reason for Change

This Change Order adds revisions to the Brushy Creek MUD water line design that did not make it into the original plans. These revisions include changes requested by the Brushy Creek MUD (BCMUD) to the water line alignment for the 12" and 24" pipe north of Oakridge Drive. The BCMUD also requested to change the size of Water Line C from 4" to a 6" water line, add pipe restraint on the existing 3" water line and the addition of a 6" Pressure Release Valve Assembly (PRV). These changes are necessary, because the specification for minimum size water line is 6 inches.

The following summarizes the new Contract item required for this Change Order.

ITEM-LINE	DESCRIPTION	QTY	UNIT
510-W-CO1	WET CONNECTIONS, 3" DIA. X 3" DIA.	1.00	EACH
SP-510-W- CO1	RESTRAIN EXISTING PIPE, 3" DIA.; INCLUDES BELL JOINT RESTRAINTS, MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO COMPLETE. PIPE SHALL BE ESTRAINED UP TO THE NEXT JOINT	1.00	EACH
511-CO1	6" PRESSURE RELEASE VALVE ASSEMBLY (PRV)	1.00	EACH

This Change Order results in a net increase of \$140,830.73 to the Contract amount, for an adjusted Contract total of \$1,495,929.84. The original Contract amount was \$1,325,000.00. As a result of this and all Change Orders to-date, \$170,929.84 has been added to the Contract, resulting in a 12.9% net increase in the Contract cost. No time will be added to the Contract for this Change Order.

HNTB Corporation

James Klotz, P.E.

G'PRV PRICING			510-	W- 44
material - PRV	EA	1	45000.00	45000.00
-Bedding	TN	4	19.00	76.00
Equipment - trucking	1+R	ı	125.00	125.00
- Excavator	DAY	1	650.00	650.00
- Loader	DAY	1	675.00	675.00
Labor - Foreman	HR	10	55.38	553.80
-Operator	HR	10	28.00	280.00
- Pipe Layer	HR	10	22.00	220.00
- General labor	HR	10	22.00	220.00
- General labor	HR	10	22.00	220.00
Material \$ 45038.50 x 1.15			<u> </u>	51794.28
Equipment 1450.00 x 1.15			;	1667.50
Labor 1493.80 x 1.55	: 2319	5.39 x 1.15	- 26	662.70
		TOTAL	= \$5	6124.48
\$56124.48 × 1.01 BOND :	\$ 56	685.73		



FERGUSON ENTERPRISES, LLC **FERGUSON WATERWORKS #1254** 200 PARK CENTRAL BLVD **GEORGETOWN, TX 78626**

Phone: 512-930-2262 Fax: 512-930-2388

Deliver T	o:	
From:	Colten Boothe	
Commen	ts:	

22:07:34 MAR 01 2020

Page 1 of 2

FERGUSON WATERWORKS #1106

Price Quotation Phone: 512-930-2262 Fax: 512-930-2388

Bid No:

B442180

Bid Date:

03/01/20 Quoted By: CJB

Customer:

QA CONSTRUCTION SERVICES IN

GREAT OAKS WATERLINE RELO

5811 BLUE BLUFF ROAD

AUSTIN, TX 78724

Cust Phone:

Terms:

NET 10TH PROX

Ship To:

QA CONSTRUCTION SERVICES IN

GREAT OAKS WATERLINE RELO

5811 BLUE BLUFF ROAD

AUSTIN, TX 78724

Cust PO#:

6" PRV ASSEMBLY

Job Name:

GREAT OAKS WATERLINE RELO

Item	Description	Quantity	Net Price	UM	Total	
	********			111-2-22-11-22-1		
	NOTE: 6" PRV ASSEMBLY W/ 3" BYPASS COMPLETELY ASSEMBLED WITH ALL PIPE, VALVES, AND FITTINGS IN A PRECAST CONCRETE VAULT					
	AND CONCRETE TOP WITH ALUMINUM HATCHWAY CAST IN PER CORR WT-17 DRAWING. VAULT IS STUBBED OUT WITH DUCTILE IRON PIPE FOR EASY HOOKUP.			6"	PRV	

	NOTE: IF A STARTUP IS REQUIRED, \$1200 PER DAY. ONE DAY IS DEFINED AS 8 HOURS AND INCLUDES TRAVEL TIME.					
SP-PRVVAULT6	6 PRV W/VAULT FULLY ASSEMBLED SUBTOTAL	1	45038.500	EA	45038.50 45038.50	

Net Total: \$45038.50 Tax: \$0.00 Freight: \$0.00

Total:

\$45038.50



HOW ARE WE DOING? WE WANT YOUR FEEDBACK!





FERGUSON WATERWORKS #1106 Price Quotation

Fax: 512-930-2388

22:07:34 MAR 01 2020 **Reference No:** B442180

Quoted prices are based upon receipt of the total quantity for immediate shipment (48 hours). SHIPMENTS BEYOND 48 HOURS SHALL BE AT THE PRICE IN EFFECT AT TIME OF SHIPMENT UNLESS NOTED OTHERWISE. QUOTES FOR PRODUCTS SHIPPED FOR RESALE ARE NOT FIRM UNLESS NOTED OTHERWISE.

CONTACT YOUR SALES REPRESENTATIVE IMMEDIATELY FOR ASSISTANCE WITH DBE/MBE/WBE/SMALL BUSINESS REQUIREMENTS.

Seller not responsible for delays, lack of product or increase of pricing due to causes beyond our control, and/or based upon Local, State and Federal laws governing type of products that can be sold or put into commerce. This Quote is offered contingent upon the Buyer's acceptance of Seller's terms and conditions, which are incorporated by reference and found either following this document, or on the web at https://www.ferguson.com/content/website-info/terms-of-sale Govt Buyers: All items are open market unless noted otherwise.

LEAD LAW WARNING: It is illegal to install products that are not "lead free" in accordance with US Federal or other applicable law in potable water systems anticipated for human consumption. Products with *NP in the description are NOT lead free and can only be installed in non-potable applications. Buyer is solely responsible for product selection.



HOW ARE WE DOING? WE WANT YOUR FEEDBACK!

BIOLITEM # DESCRIPTION UNIT Cty UNIT PRICE TOTAL PRICE	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE	TOTA	AL PRICE
TOTAL PRICE 25 RESTRAIN EXISTING PIPE, 3" DIAMETER: 26 RESTRAIN EXISTING PIPE, 3" DIAMETER: 27 DIAMETER: 28 RESTRAIN EXISTING PIPE, 3" DIAMETER: 28 RESTRAIN EXISTING PIPE, 3" DIAMETER: 29 RESTRAIN EXISTING PIPE, 3" DIAMETER: 20 RESTRAIN EXISTING PIPE, 4" DIAMETER: 20 DITEM # 21 DESCRIPTION 22 DIAMETER: 23 DIAMETER: 24 CA 1: \$ 3,500.00 \$ 3,500.00 TOTAL PRICE 25 DISTRAIN EXISTING PIPE, 4" DIAMETER: 26 RESTRAIN EXISTING PIPE, 4" DIAMETER: 27 DIAMETER: 28 CA 1: \$ 3,500.00 \$ (3,500.00) TOTAL PRICE 29 DITEM # 20 DITEM # 20 DISTRAIN EXISTING PIPE, 4" DIAMETER: 20 DITEM # 21 DITEM # 22 DISTRAIN EXISTING PIPE, 4" DIAMETER: 24 CA 1: \$ 3,500.00 \$ (3,500.00) TOTAL PRICE 25 DISTRAIN EXISTING PIPE, 4" DIAMETER: 26 CA 1: \$ 3,500.00 \$ (7,000.00) TOTAL PRICE 27 DIAMETER: 28 DITEM # 29 DITEM # 20 VAIVE, GATE VALVE, 4" 20 DISTRAIN EXISTING PIPE, 4" DIAMETER: 20 DISTRAIN EXISTING PIPE, 4" DIAMETER: 20 DISTRAIN EXISTING PIPE, 4" DIAMETER: 21 DISTRAIN PLANTING PIPE, 4" DIAMETER: 22 DISTRAIN EXISTING PIPE, 4" DIAMETER: 23 DISTRAIN EXISTING PIPE, 4" DIAMETER: 24 DIAMETER: 25 DISTRAIN EXISTING PIPE, 4" DIAMETER: 26 DISTRAIN PLANTING PIPE, 4" DIAMETER: 27 DIAMETER: 28 DISTRAIN EXISTING PIPE, 4" DIAMETER: 29 DISTRAIN PLANTING PIPE, 4" DIAMETER: 20 DISTRAIN PLANTING PIPE, 4" DIAMETER: 21 DISTRAIN PLANTING PIPE, 4" DIAMETER: 22 DIAMETER: 23 DIAMETER: 24 DIAMETER: 25 DIAMETER: 26 DISTRAIN PLANTING PIPE, 4" DIAMETER: 27 DIAMETER: 28 DISTRAIN PLANTING PIPE, 4" DIAMETER: 28 DISTRAIN PLANTING PIPE, 4" DIAMETER: 29 DISTRAIN PLANTING PIPE, 4" DIAMETER: 20 DISTRAIN PLANTING PIPE, 4" DIAMETER: 20 DISTRAIN PLANTING PIPE, 4" DIAMETER: 26 DISTRAIN PLANTING PIPE, 4" DIAMETER: 27 DIAMETER: 28 DISTRAIN PLANTING PIPE, 4" DIAMETER: 29 DISTRAIN PLANTING P	21	WET CONNECTIONS 4" DIA Y 4" DIA	50	1	£ 5,000,00	A	/F 000 00
STRAIN EXISTING PIPE, 3" DIAMETER: DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE	21	WET CONNECTIONS, 4 DIA. X 4 DIA.	EA	-1	\$ 5,000.00	\$	(5,000.00
## DESCRIPTION UNIT City UNIT PRICE TOTAL PRICE			Total Credit for WET	CONNECTIONS	5, 3" DIA. X 3" DIA	\$	(5,000.00
## DESCRIPTION UNIT City UNIT PRICE TOTAL PRICE	ESTRAIN EXIST	ING PIPE 3" DIAMETER:					_
RESTRAIN EXISTING PIPE, 3" DIAMETER:	BID ITEM #		UNIT	Qty	UNIT PRICE	TOTA	L PRICE
Total Cost for Additional RESTRAIN EXISTING PIPE, 3" DIA \$ 3,500.00	25	DESTRUMENTAL RUST OF STREET					
STRAIN ENISTING PIPE, 4" DIAMETER: DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE	25	RESTRAIN EXISTING PIPE, 3" DIAMETER;	EA	1	\$ 3,500.00	\$	3,500.00
BID TEM # DESCRIPTION			Total Cost for Additional	RESTRAIN EXIS	TING PIPE, 3" DIA	\$	3,500.00
BID TEM # DESCRIPTION	CTDAIN EVICE	TAIG DIDE 4" DIAMETED.					
RESTRAIN EXISTING PIPE, 4" DIAMETER:			UNIT	Qtv	UNIT PRICE	TOTA	L PRICE
Total Credit for RESTRAIN EXISTING PIPE, 4" DIA \$ (3,500.00) VE, GATE VALVE, 4"							
VALVE, GATE VALVE, 4" EA	26	RESTRAIN EXISTING PIPE, 4" DIAMETER;	EA	-1	\$ 3,500.00	\$	(3,500.00)
VALVE_GATE VALVE_4" DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE			Total Credit for I	RESTRAIN EXIS	TING PIPE, 4" DIA	\$	(3,500.00)
BID TIEM # DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE		All all					
Solution	BID ITEM #		UNIT	Otv	UNIT PRICE	TOTA	I PRICE
Total Credit for VALVE, GATE VALVE, 4" \$ (7,000.00)						TOTA	ET NICE
Note Content Note	30	VALVE, GATE VALVE, 4"	EA	-2	\$ 3,500.00	\$	(7,000.00)
Note Content Note			Total Cr	edit for VALVE	, GATE VALVE, 4"	\$	(7,000.00)
Malve, Gate Valve, 12" EA 2 \$ 4,300.00 \$ 8,600.00							
VALVE, GATE VALVE, 6" EA 2 \$ 4,300.00 \$ 8,600.00			LINIT	Otv	LIMIT DDICE	TOTAL	DDICE
Total Cost for Additional VALVE, GATE VALVE, 6" \$ 8,600.00				Qiy	DIVIT PRICE	TOTAL	LPRICE
VE_GATE VALVE_12"	31	VALVE, GATE VALVE, 6"	EA	2	\$ 4,300.00	\$	8,600.00
VELOCATE VALVE, 12" EA			Total Cost for Ad	ditional VALVE	GATE VALVE 6"	\$	8 600 00
DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE					,,, .	¥	0,000.00
Subtotal State S				04.	LIMIT PRICE		
Total Credit for VALVE, GATE VALVE, 12" \$ (7,000.00) VE, GATE VALVE, 24" SID ITEM # DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE	DID ITEIVI#	DESCRIPTION	UNII	Qty	UNIT PRICE	TOTAL	L PRICE
VALVE, GATE VALVE, 24" DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE	33	VALVE, GATE VALVE, 12"	EA	-1	\$ 7,000.00	\$	(7,000.00)
VALVE, GATE VALVE, 24" BID ITEM # DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE			Total Cre	dit for VALVE	GATE VALVE 12"	ė	/7 000 00\
DESCRIPTION		TAKE THE RESERVE TO T	Total Cic	dictor VALVE,	GAIL VALVE, 12	7	(7,000.00)
VALVE, GATE VALVE, 24" EA	VIE C						
Total Credit for VALVE, GATE VALVE, 24" \$ (25,000.00)				1			
New York State S			UNIT	Qty	UNIT PRICE	TOTAL	L PRICE
New York State S	BID ITEM #	DESCRIPTION					
BID ITEM # DESCRIPTION UNIT Qty UNIT PRICE TOTAL PRICE	BID ITEM #	DESCRIPTION	EA	-1	\$ 25,000.00	\$	(25,000.00)
Subtotal	34	VALVE, GATE VALVE, 24"	EA	-1	\$ 25,000.00	\$	(25,000.00)
Bedding - Material	34 PRESSURE RE	VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY	EA Total Cre	-1	\$ 25,000.00 GATE VALVE, 24"	\$	(25,000.00) (25,000.00)
Trucking Delivery - Equipment	34 PRESSURE REBID ITEM #	VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION	Total Cre	-1 dit for VALVE,	\$ 25,000.00 GATE VALVE, 24"	\$ \$ TOTAL	(25,000.00) (25,000.00)
Excavator - Equipment DAY 1	34 PRESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material	Total Cre	-1 dit for VALVE,	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00	\$ \$ TOTAL \$	(25,000.00) (25,000.00) L PRICE 45,000.00
Labor - Foreman	34 PRESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment	Total Cre UNIT EA TN	-1 dit for VALVE, Qty 1 4	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00	\$ * TOTAL \$ * \$	(25,000.00) (25,000.00) L PRICE 45,000.00 76.00
Labor - Operator	34 PRESSURE RE BID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment	Total Cre UNIT EA TN HR	-1 dit for VALVE, Qty 1 4 1	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00	\$ TOTAL \$ \$ \$ \$ \$	(25,000.00) (25,000.00) L PRICE 45,000.00 76.00 125.00
Labor - Operator	34 PRESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment	Total Cre UNIT EA TN HR DAY	-1 dit for VALVE, Qty 1 4 1 1	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 45,000.00 76.00 125.00 650.00
Labor - Pipe Layer	34 PRESSURE RE BID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment Labor - Foreman	Total Cre UNIT EA TN HR DAY DAY	-1 dit for VALVE, Qty 1 4 1 1 1	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 45,000.00 76.00 125.00 650.00 675.00
Labor - General Labor #1	34 PRESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment Labor - Foreman	EA Total Cre UNIT EA TN HR DAY DAY HR	-1 dit for VALVE, Qty 1 4 1 1 1 1 10	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38	\$ *** *** *** *** *** *** *** *** *** **	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80
Labor - General Labor #2	34 PRESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment Labor - Foreman Labor - Operator	EA Total Cre UNIT EA TN HR DAY DAY HR HR	-1 dit for VALVE, Qty 1 4 1 1 1 10 10	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00	\$ *** *** *****************************	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80 280.00
Total Cost (Material & Labor) \$ 48,019.80 Total Cost (Material & Labor) \$ 48,019.80 Total Material Cost Cost Overhead	34 RESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer	EA Total Cre UNIT EA TN HR DAY DAY HR HR HR	-1 dit for VALVE, Qty 1 4 1 1 1 1 10 10 10	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 650.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80 280.00 220.00
Total Material Cost \$ 45,076.00 0% \$ -	34 ESSURE RED ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1	EA Total Cre UNIT EA TN HR DAY DAY HR HR HR	-1 dit for VALVE, Qty 1 4 1 1 1 1 10 10 10	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80 280.00 220.00
Total Material Cost \$ 45,076.00 0% \$ -	34 PRESSURE REBID ITEM #	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY DESCRIPTION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1	EA Total Cre UNIT EA TN HR DAY DAY HR HR HR	-1 dit for VALVE, Qty 1 4 1 1 1 1 10 10 10 10	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80 280.00 220.00 220.00
Equipment \$ 1,450.00 55% \$ 797.50	34 PRESSURE RE BID ITEM # 37	DUCING VALVE, 24" DUCING VALVE ASSEMBLY BERTHION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2	EA Total Cre UNIT EA TN HR DAY DAY HR HR HR	-1 dit for VALVE, Qty 1 4 1 1 1 1 10 10 10 10 Total Cost (N	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 \$ 22.00	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80 280.00 220.00 220.00
Labor Subtotal Subt	34 PRESSURE RE BID ITEM # 37	DUCING VALVE, 24" DUCING VALVE ASSEMBLY BERTHION 6" PRESSURE REDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Loader - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2	EA Total Cre UNIT EA TN HR DAY DAY HR HR HR HR	-1 dit for VALVE, Qty 1 4 1 1 10 10 10 10 Total Cost (N	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 675.00 \$ 675.00 \$ 22.00 \$ 22.00 Atterial & Labor) Overhead	\$ *** *** *** *** *** *** *** *** *** **	(25,000.00) (25,000.00) (25,000.00) 76.00 125.00 650.00 675.00 553.80 280.00 220.00 220.00
Subtotal \$ 1,619.09 Mark-up 15% \$ 7,445.83 Insurance & Bond Adjustments 3% \$ 1,712.54	PRESSURE REBIDITEM# 37	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2 Weeks	Total Cre UNIT EA TN HR DAY DAY HR HR HR HR HR Total Material Cost \$	-1 dit for VALVE, Qty 1 4 1 1 1 1 1 10 10 10 Total Cost (N	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 \$ 22.00 Adatrial & Labor) Overhead 0%	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) 45,000.00 76.00 650.00 675.00 553.80 280.00 220.00 220.00 48,019.80
Mark-up 15% \$ 7,445.83 Insurance & Bond Adjustments 3% \$ 1,712.54	34 PRESSURE RE BID ITEM # 37 ad Time: 5 - 6	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2 Weeks	Total Cre UNIT EA TN HR DAY DAY HR HR HR HR HR HR STOTAL Material Cost Equipment \$	-1 dit for VALVE, Qty 1 4 1 1 1 10 10 10 Total Cost (N Cost 45,076.00 1,450.00	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 \$ 22.00 Atterial & Labor) Overhead 0% 55%	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) (25,000.00 76.00 125.00 650.00 675.00 220.00 220.00 220.00 48,019.80
Mark-up 15% \$ 7,445.83 Insurance & Bond Adjustments 3% \$ 1,712.54	34 PRESSURE RE BID ITEM # 37 ad Time: 5 - 6	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2 Weeks	Total Cre UNIT EA TN HR DAY DAY HR HR HR HR HR HR STOTAL Material Cost Equipment \$	-1 dit for VALVE, Qty 1 4 1 1 1 10 10 10 Total Cost (N Cost 45,076.00 1,450.00	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 \$ 22.00 Vaterial & Labor) Overhead 0% 55% 55%	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) (25,000.00 76.00 125.00 650.00 675.00 220.00 220.00 220.00 48,019.80
Insurance & Bond Adjustments 3% \$ 1,712.54	34 PRESSURE REBID ITEM # 37	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2 Weeks	Total Cre UNIT EA TN HR DAY DAY HR HR HR HR HR LABOT S S S S S	-1 dit for VALVE, Qty 1 4 1 1 1 10 10 10 10 Total Cost (N Cost 45,076.00 1,450.00 1,493.80	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 \$ 22.00 Vaterial & Labor) Overhead 0% 55% 55%	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) (25,000.00 76.00 76.00 650.00 675.00 220.00 220.00 220.00 48,019.80
	34 34 PRESSURE RE BID ITEM # 37	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2 Weeks	Total Cre UNIT EA TN HR DAY DAY HR HR HR HR CONTRIBUTION STATE OF STATE O	-1 dit for VALVE, Qty 1 4 1 1 1 1 10 10 10 10 Total Cost (N Cost 45,076.00 1,450.00 1,493.80	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 Auterial & Labor) Overhead 0% 55% 55% 0verhead Cost	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) (25,000.00 45,000.00 675.00 675.00 220.00 220.00 220.00 48,019.80 797.50 821.59 1,619.09
	34 34 38 38 38 37 37 37	DESCRIPTION VALVE, GATE VALVE, 24" DUCING VALVE ASSEMBLY BEDUCING VALVE ASSEMBLY - Material Bedding - Material Trucking Delivery - Equipment Excavator - Equipment Labor - Foreman Labor - Operator Labor - Pipe Layer Labor - General Labor #1 Labor - General Labor #2 Weeks	Total Cre UNIT EA TN HR DAY DAY HR HR HR HR Labor Subtot: Mark-u	-1 dit for VALVE, Qty 1 4 1 1 1 10 10 10 10 Total Cost (N Cost 45,076.00 1,450.00 1,493.80	\$ 25,000.00 GATE VALVE, 24" UNIT PRICE \$ 45,000.00 \$ 19.00 \$ 125.00 \$ 650.00 \$ 675.00 \$ 55.38 \$ 28.00 \$ 22.00 \$ 22.00 \$ 22.00 Auterial & Labor) Overhead O% 55% Overhead Cost	\$ TOTAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(25,000.00) (25,000.00) (25,000.00) (25,000.00 76.00 125.00 650.00 675.00 220.00 220.00 220.00 220.00 48,019.80

TREE REMOVAL (4" - 12" DIA)

7	BID ITEM #	DESCRIPTION	UNIT	Qty	U	NIT PRICE	TOTAL PRICE
	31	TREE REMOVAL (4" - 12" DIA)	EA	4	\$	2,000.00	\$ 8,000.00
L			Total Cost for Additional	TREE REMO	OVAL (4	1" - 12" DIA)	\$ 8,000.00



QA Construction Services Inc. 5811 Blue Bluff Road

Change Order #1

3/14/2020

Austin, TX 78724 Phone: 512-637-6120

Project: Great Oaks Drive Waterline Relocations

Owner: Williamson County

ROCK BERM

1 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE		TOTAL PRICE
	N/A	Rock Berm - Material	TN	16	\$ 25.00	\$	400.00
		Wire Mesh - Material	Roll	1	\$ 25.00	\$	25.00
		Trucking Delivery - Equipment	HR	1	\$ 150.00	\$	150.00
		Skitsteer - Equipment	HR	4	\$ 85.00	\$	340.00
		Labor - Foreman	HR	4	\$ 55.38	\$	221.52
		Labor - Operator	HR	4	\$ 23.00	\$	92.00
		Labor - Pipe Layer	HR	4	\$ 22.00	\$	88.00
		Labor - General Labor	HR	4	\$ 22.00	\$	88.00
				Total Cost (M	laterial & Labor)	\$	1,404.52
				Cost	Overhead		
		Total Material Cost	\$	425.00	0%	\$	-
		Equipment	\$	490.00	55%	\$	269.50
		Labor	\$	489.52	55%	\$	269.24
					Overhead Cost	\$	538.74
			Subtota			\$	1,943.26 291.49
	Mark-up 15% \$						
		Insuranc	e & Bond	d Adjustments	3%	\$	67.04
				Total Cos	t for Rock Berm	\$	2,301.79

JACKING OR BORING

2 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE	TOTAL PRICE
	9	JACKING OR BORING, 24" STEEL PIPE	LF	42	\$ 375.00	\$ 15,750.00
		270 LF- 228 LF = 42 LF (42 LF x \$375.00/LF = \$15,750.00)				
		Total C	Cost for A	dditional JACK	ING OR BORING	\$ 15,750.00

PIPE, 4" DIA., DI CL-350

3 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE	TOTAL PRICE
	15	PIPE, 4" DIA., DI CL-350	LF	-247	\$ 55.00	\$ (13,585.00)
		270 LF- 228 LF = 42 LF (42 LF x \$375.00/LF = \$15,750.00)				
	,		Total Cr	edit for PIPE, 4	" DIA., DI CL-350	\$ (13,585.00)

PIPE, 6" DIA., DI CL-350

	1112)0 01111)010	32 000				
4 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE	TOTAL PRICE
	16	PIPE, 6" DIA., DI CL-350	LF	162	\$ 75.00	\$ 12,150.0
		390 - 228 LF = 162 LF (162 LF x \$75.00/LF = \$12,150)				
		Tota	Cost for Ad	ditional Pipe. 6	" DIA., DI CL-350	\$ 12.150.0

PIPE, 12" DIA., DI CL-350

5 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE	TOTAL PRICE
	17	PIPE, 12" DIA., DI CL-350	LF	33	\$ 115.00	\$ 3,795.00
		754 LF - 721 LF = 39 LF (33 LF x \$115.00/LF = \$3,795)				
		Total Cost	for Addi	tional Pipe, 12	" DIA., DI CL-350	\$ 3,795.00

PIPE, 12" DIA., PVC

6 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UNIT PRICE	TOTAL PRICE
	18	PIPE, 12" DIA., PVC	LF	30	\$ 90.00	\$ 2,700.00
		905 LF - 875 LF = 30 LF (30 LF x \$90.00/LF = \$2,700)				
		Tot	al Cost fo	r Additional Pi	pe, 12 DIA., PVC	\$ 2,700.00

PIPE, 24" DIA., DI CL-350

7 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UN	IIT PRICE	TOTAL PRICE	
	19	PIPE, 24" DIA., DI CL-350	LF	39	\$	210.00	\$ 8,19	90.00
		766 LF - 727 LF = 39 LF (39 LF x \$210.00/LF = \$8,190)						
		Total Cost	for Addi	tional Pipe, 24	" DIA.	., DI CL-350	\$ 8,19	90.00

WET CONNECTIONS, 3" DIA. X 3" DIA.

8 -	BID ITEM #	DESCRIPTION	UNIT	Qty	UN	IT PRICE	TOTAL PRICE
	20	WET CONNECTIONS, 3" DIA. X 3" DIA.	EA	1	\$	4,500.00	\$ 4,500.00
		Total Cost for Addition	nal WET C	ONNECTIONS,	3" DIA	A. X 3" DIA	\$ 4,500.00

WILLIAMSON COUNTY

GREAT OAKS DRIVE WATERLINE RELOCATIONS

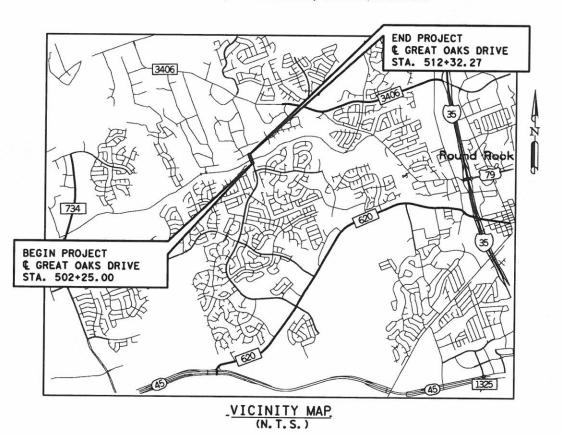
PRECINCT NUMBER 1

WILLIAMSON COUNTY PROJECT NO. IFB 3185

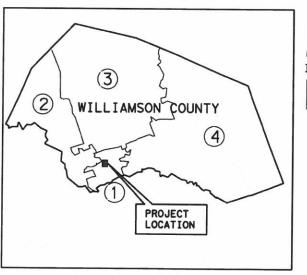
FINAL PLANS FOR CONSTRUCTION

PROJECT LIMITS: ALONG GREAT OAKS DRIVE FROM BRIGHTWATER BLVD TO OAK RIDGE DRIVE

CONSTRUCTION INCLUDES: RELOCATION OF EXISTING FERN BLUFF MUD AND BRUSHY CREEK MUD WATER LINES INCLUDING VALVES, FIRE HYDRANTS, AND APPURTENANCES.



REQUIRED SIGNS SHALL BE PLACED IN ACCORDANCE WITH STANDARD SHEETS BC(1)-14 THRU BC(12)-14 AND THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."



<u>KEY MAP</u> (N. T. S.)

TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES ADOPTED ON NOVEMBER 1, 2014 AND ALL APPLICABLE SPECIAL PROVISIONS AND SPECIAL SPECIFICATIONS AS INDICATED IN THE BID DOCUMENTS SHALL GOVERN ON THIS PROJECT.



PREPARED BY:

Steel Pieu

1/23/2020

DATE

(DESIGN CONSULTANT)

CLASSIFICATION & DESIGN SPEED:
GREAT OAKS DR MAJOR COLLECTOR 45 MPH
BRUSHY CREEK RD MAJOR COLLECTOR 35 MPH
HAIRY MAN RD MAJOR COLLECTOR 35 MPH

AVERAGE DAILY TRAFFIC (ADT):

GREAT OAKS DR 12,120 (2018) 19,960 (2040)

BRUSHY CREEK RD 8,900 (2018) 14,660 (2040)

HAIRY MAN RD 5,060 (2014) 8,340 (2040)

 DESIGN HOURLY VOLUME (DHV):

 GREAT OAKS DR
 1,212 (2018)
 1,996 (2040)

 BRUSHY CREEK RD
 890 (2018)
 1,466 (2040)

 HAIRY MAN RD
 506 (2018)
 834 (2040)

DIRECTIONAL DISTRIBUTION (D):
GREAT OAKS DR 0.58
BRUSHY CREEK RD 0.56
HAIRY MAN RD 0.51

PERCENT TRUCKS (T):
GREAT OAKS DR 0.2%
BRUSHY CREEK RD 0.7%
HAIRY MAN RD 0.8%



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APPROVED BY: WILLIAMSON COUNTY

BILL GRAVELL, JR. WILLIAMSON COUNTY JUDGE 1/28/2029 DATE

APPROVED BY: WILLIAMSON COUNTY

COMMISSIONER TERRY COOK WILLIAMSON COUNTY COMMISSIONER PRECINCT 1 DATE

APPROVED BY: HNTB CORPORATION

RICHARD L RIDINGS, P.E.

RICHARD L RIDINGS, P.E. ROAD BOND MANAGEMENT TEAM

DATE

SHEET INDEX

C-501

SHEET NUMBER SHEET TITLE

C-001 COVER

C-002 - C-003 GENERAL NOTES

C-101 KEY MAP - WATER

C-201 - C-205 PROP. BCMUD 12", 24", & 6" WL RELOCATIONS

(C)ORRECT, (A)DD, (V)OID SHEET NUMBERS

(C) C-201, C-202, C-203, C-204, C-20

APPR'D BY: DATE

SF 2/07/2020

EROSION CONTROL STANDARD DETAILS

C-206 BCMUD 12" WL ABANDONMENT PLAN

C-502 - C-504 CORR WATER STANDARD DETAILS

TCP (1-3)-18 TRAFFIC CONTROL PLAN DETAILS TCP (1-4)-18 TRAFFIC CONTROL PLAN DETAILS

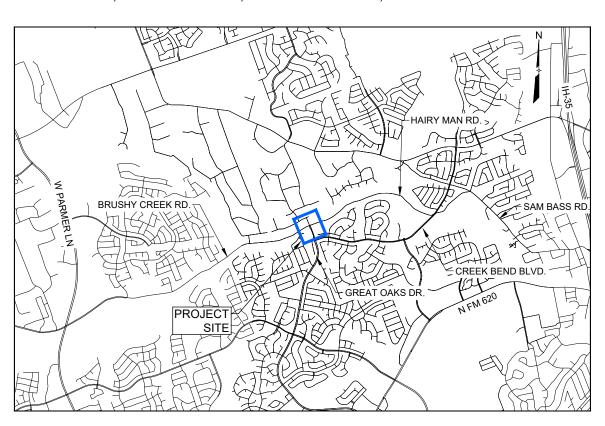


WILLIAMSON COUNTY GREAT OAKS BRUSHY CREEK MUD WATER RELOCATIONS

TOTAL LENGTH OF 12" WATER LINE: 750 LF TOTAL LENGTH OF 24" WATER LINE: 768 LF TOTAL LENGTH OF 6" WATER LINE: 380 LF

PROJECT LIMITS: HAIRY MAN RD. STA 13+50 TO 17+00; GREAT OAKS DR. STA 502+00 TO 512+30

RELOCATION OF EXISTING BRUSHY CREEK MUD 12", 24", AND 6" WATER LINES, INCLUDING VALVES, FIRE HYDRANTS, APPURTENANCES, AND RECONNECTIONS



VICINITY MAP (NOT TO SCALE)



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

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

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

<u>DESIGNER:</u>
COBB FENDLEY
505 E. HUNTLAND DR. SUITE 100
AUSTIN, TEXAS 78752

CONTACT: STANLEY R. FEES, P.E. 512-834-9798

100% SUBMITTAL



STANLEY R. FEES, P.E.

FEBRUARY 7, 2020

FENDLEY, INC.

APPROVAL:

BRUSHY CREEK MUD

DATE

DATE

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

WWW.COBBFENDLEY.COM

REVISION DESCRIPTION

ADJUSTED SHEETS
ADDED DETAILS

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.
- 3. 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.
- 4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION
- THE CONTRACTOR SHALL GIVE BRUSHY CREEK MUD 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 512-255-7871 EXT: 230.
- 6. 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 SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT REFORE CONSTRUCTION
- 7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN BRUSHY CREEK MUD, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
- 8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE BRUSHY CREEK MUD 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 BRUSHY CREEK MUD BOARD SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
- 10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE 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.
- 11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.

TRENCH SAFETY

- 1. 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 EET 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.
- 3. 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 BRUSHY CREEK MUD AND THE CITY OF ROUND ROCK.

STREET AND DRAINAGE

- 1. 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.
- 3. 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.
- 4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).
- 5. 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.
- 6. THE CONTRACTOR SHALL CONTACT THE BRUSHY CREEK MUD AT 512-255-7871 EXT: 230 TO COORDINATE UTILITY TIE-INS AND NOTIFY BCMUD AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.
- 7. 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.

- 8. 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 CITY OF ROUND ROCK 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.
- 10. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF ROUND ROCK AND BRUSHY CREEK MUD.
- 11. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
- 12. 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 SPECIFED BY THE ENGINEER AND ACCEPTED BY THE CITY OF ROUND ROCK AND BRUSHY CREEK MUD.

- 13. CONTACT CITY OF ROUND ROCK ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT 218-5555 AND BRUSHY CREEK MUD (PAUL HANSON, 512-255-7871 EXT: 230) FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.
- 14. 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.
- 15. 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	WEIGH
1/2"		0		
3/8"		0-2	2	
#4		40-8	35	
#10		95-1	00	

- 16. 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.
- 17. 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

- 1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE <u>TEXAS</u>
 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.
- 2. 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.
- 3. 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.
- 4. 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.

SURVEY NOTES

 BEARING VALUES BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM, NAD-83, CENTRAL (4203). COORDINATES ARE SURFACE VALUES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00012. ELEVATIONS BASED UPON GEOID 2012A, PER WESTERN DATA GPS REFERENCE NETWORK.

TREE LIST

POINT #	DRIP DIA.	SIZE	DESCRIPTION	STATUS
3331	60'	30"	PECAN	PROTECT





ENERAL NOTES
TOAKS BRUSHY CREEK MUD
WATER RELOCATIONS
WATER RELOCATIONS
WATEN COUNTY TEXAS







SHEET C-002 2 of 14

Williamson County Project: Great Oaks Drive Waterline Reloc

GENERAL NOTES: August 26, 2019 Version

	Basis of Estimate	е		
Item	Description	**Rate	Basis	Quantity
	Seed for Erosion Control			
164	(Item 164) (Temp) (Cool) (TY 4)	5000 SY/AC	SY	SY

** For Informational Purposes Only

GENERAL

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

The roadbed shall be free of organic material prior to placing any section of the pavement structure.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Provide a smooth, clean saw-cut along the existing asphalt pavement structure, as directed. Consider subsidiary to the pertinent Items.

Supply litter barrels in enough numbers at locations as directed to control litter within the project. Consider subsidiary to pertinent Items.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Construction Observer. This work is subsidiary.

Protect all areas of the right of way, which are not included in the actual limits of the proposed construction areas, from disturbance. Restore any area disturbed because of the Contractor's operations to a condition as good as, or better than, before the beginning of work at no cost to the

Damage to existing pipes and SETs due to Contractor operations shall be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not

General Notes

Sheet A

Williamson County

Project Creet Oaks Drive Waterline Pelecations

obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

The Project Superintendent will be capable of speaking English and will be available to contact at all times when work is being performed, including subcontractor work. The Superintendent will be available and on-call 24 hours a day.

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) — Construction Division's (CST) materials producers list. Refer to TxDOT's website for list of pre-qualified manufacturers. No substitutions will be allowed for materials found on the list. Submit list of approved suppliers/materials from TxDOT website to show items are TxDOT approved. Submit this list with request for material approval.

When any abandoned well is encountered, cease construction operations in this area and notify the Construction Observer who will coordinate the proper plugging procedures. A water well driller licensed in the State of Texas must be used to plue a well.

Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Track all exposed soil, stockpiles, and slopes. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work is subsidiary.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

Maintain positive drainage for permanent and temporary work for the duration of the project. Be responsible for any items associated with the temporary or interim drainage and all related maintenance. This work is subsidiary.

Suspend all activities near any significant recharge features, such as sinkholes, caves, or any other subterranean openings that are discovered during construction or core sampling. Do not proceed until the designated Geologist or TCEQ representative is present to evaluate and approve remedial action.

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

Unless otherwise approved, one (1) lane in each direction shall remain open at all times.

No work will be allowed between 8:00 PM to 5:00 AM without approval from Construction Observer. Nighttime lane closures will only be allowed with approval from Construction Observer and only from 8:00 PM to 5:00 AM, unless otherwise shown on the plans.

No Daytime Lane Closures will be allowed, unless otherwise shown on the plans or as directed by the GFC

General Notes Sheet B

Williamson County

The GEC is the authority to approve additional lane closures, prior to any work.

Maintain a written record of documentation of "The Additional Approved Lane Closures."

Submit and secure concurrence, prior to the publication of any notices or placement of any traffic control devices for implementation of the traffic control plan, hereinafter called a <u>Lane Closure Notice</u> (LCN).

Present to GEC, an LCN for traffic control, which is proposed for implementation, a minimum of four (4) full working days preceding any proposed implementation date. Indicate the estimated date, time, duration, and location for the proposed work. As a part of the LCN submit a written description of the lane closure(s) depicting the proposed traffic control devices used, based on the appropriate plan sheet, TXDOT or Texas Manual on Uniform Traffic Control Devices (TMUTCD) standards, and an operational description of the work to be performed.

Present to GEC, LCN's proposed to detour traffic, a minimum of *seven (7)* full calendar days preceding any proposed implementation date.

Present to GEC, LCN's proposed for night work, a minimum of seven (7) full calendar days preceding any proposed implementation date.

Receive concurrence prior to LCN implementation

Meet with the Construction Observer prior to roadway and lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Discuss contingency plans at that time. Consider inclement weather prior to implementing the lane closures.

Submit a cancellation of any lane closures, no later than noon on the day preceding the proposed work.

Coordinate Main Lane closures with adjacent projects.

Take immediate action to modify Closures / Traffic Control, if at any time backup (roadway queuing) becomes unreasonable (greater than 20 minutes). Have in place, a contingency plan of how this will occur.

Utilize Shadow Vehicle with Truck Mounted Attenuator for setup and removal of each lane

Do not set up any Lane Closure / TCP when the pavement is wet prior to the "setup," unless otherwise directed. Revise Traffic Control, when inclement weather is imminent, as directed.

Incorporate and maintain a 3H: 1V safety wedge into the proposed construction for any roadway edge of 2 inches or greater adjacent to a roadway under traffic.

General Notes Sheet C

REV. REVISION DESCRIPTION APPROVED DATE.



GENERAL NOTES
EAT OAKS BRUSHY CREEK MUT
WATER REI OCATIONS

LIAMSON CLIAMSON

NO.: 1703-011-10 7 N: K, VAN HOOSIEI C: L, PRINC S, FEE: FEBRUARY 7, 202

STANLEY RAY FEES

63294

63294

SE DESIGN DOCUMENTS ARE NOT TO USED FOR CONSTRUCTION PRIOR TO EQUILATORY SIGNATURE AND PERMIT

2/7/202

C-003

Project: Great Oaks Drive Waterline Relocations

Williamson County

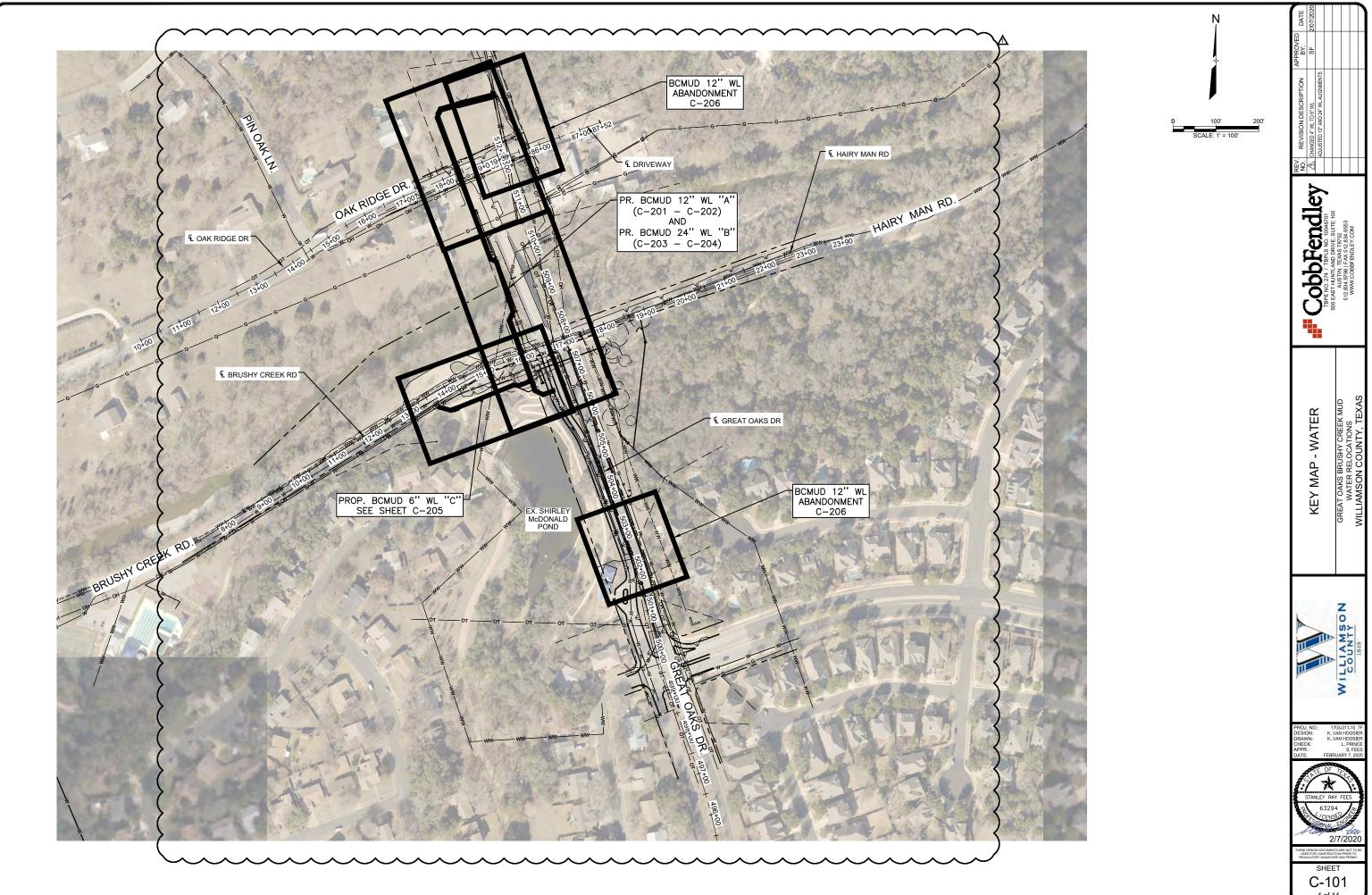
Within the limits of the project, provide standard barricades, warning signs, delineators, lights, 28-inch cones, and flaggers in enough numbers and combinations, as directed.

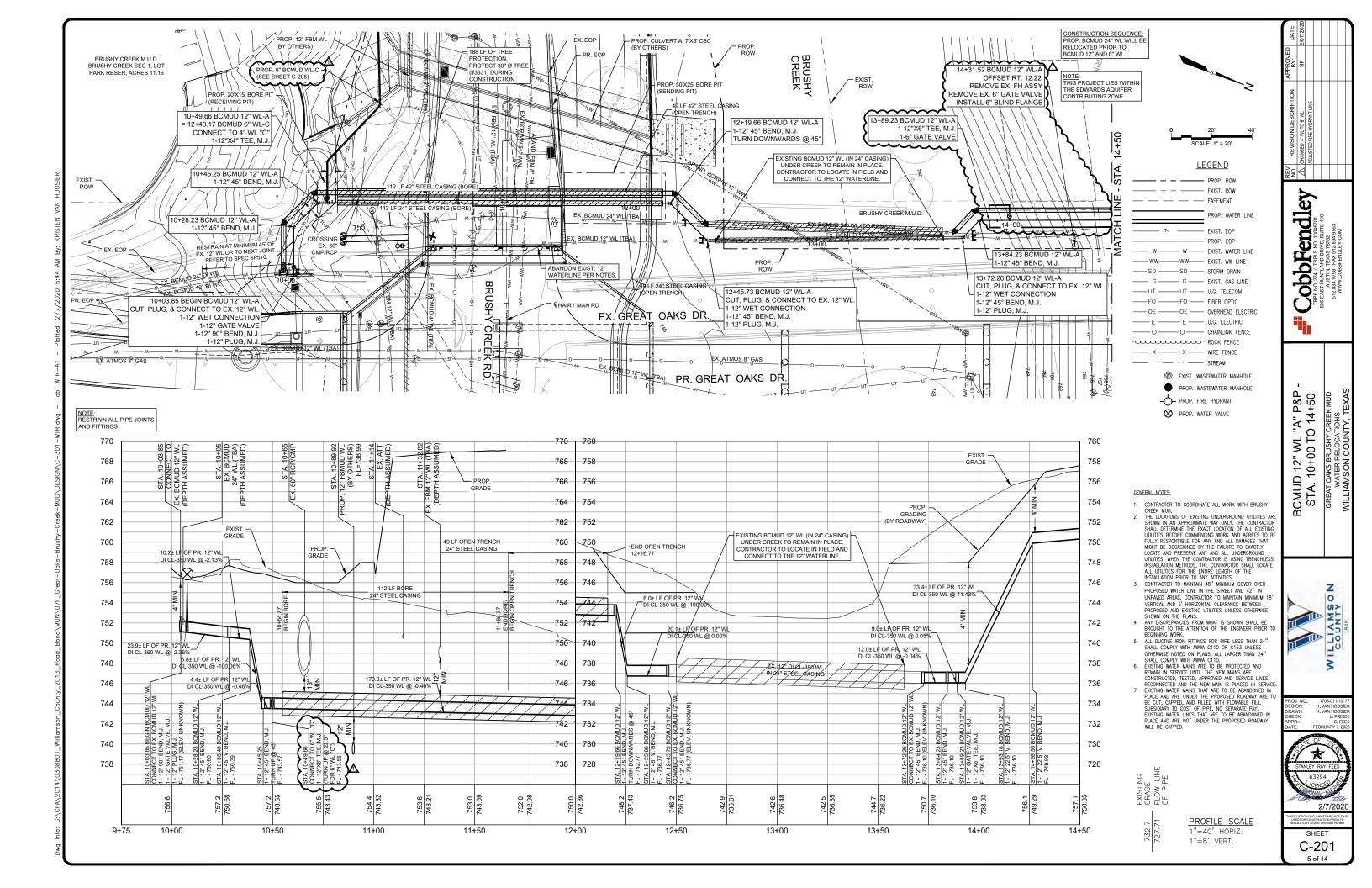
For Mainlanes use night-work and same-night remove-and-replace operations.

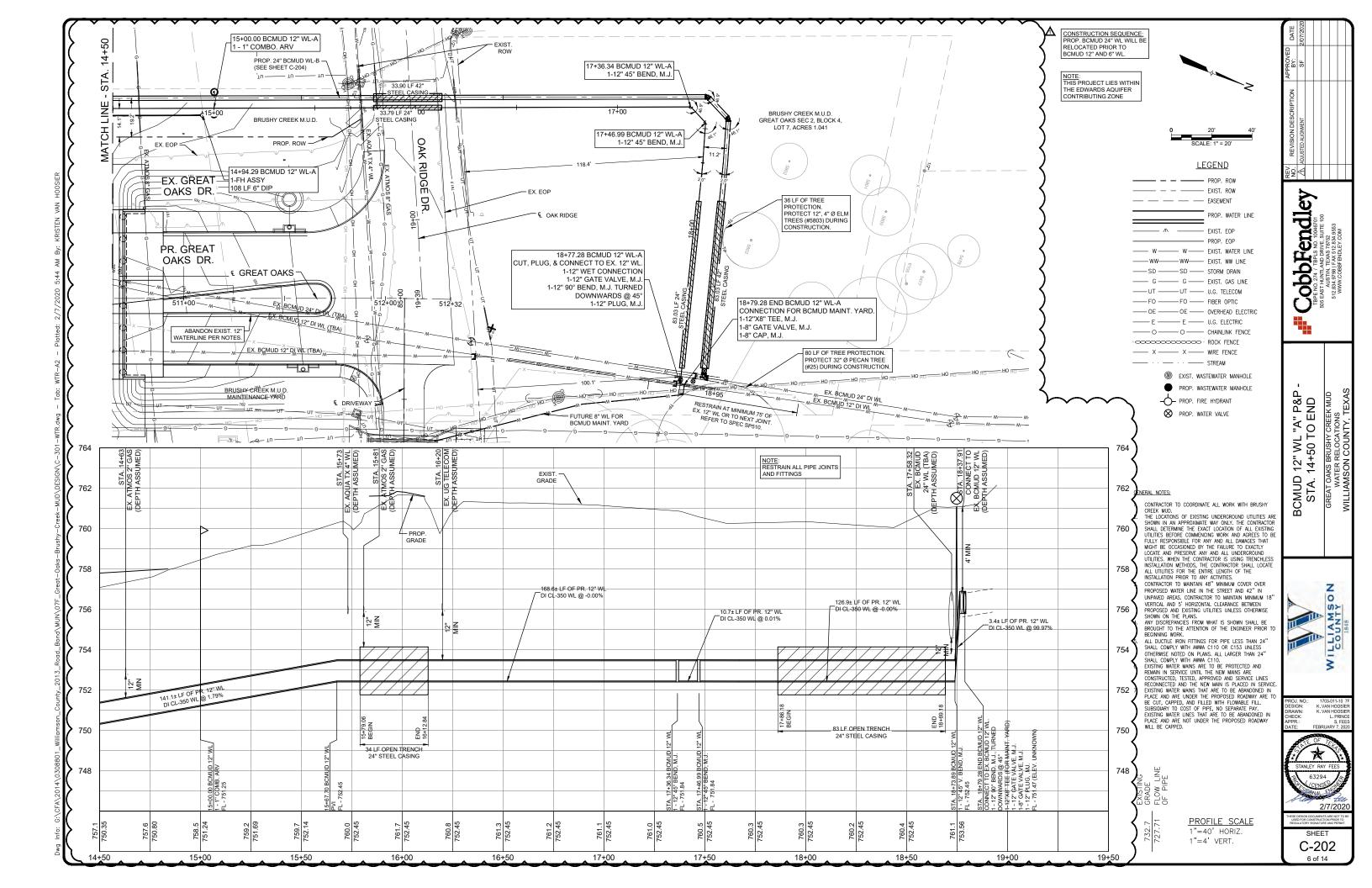
No closures will be allowed on the weekends, which include the following holidays: January 1st, the last Monday in May, July 4th, the first Monday in September, the fourth Thursday in November, December 25th, Easter weekend, and the working day prior to or immediately after any of the aforementioned holidays. Unless otherwise approved, no closures will be allowed on the weekends of special events that could be impacted by the construction. Ensure all equipment, vehicles, workers, etc., associated with these closures are off the roadways and all lanes re-opened, at least, by noon of the Friday before these holidays and special events.

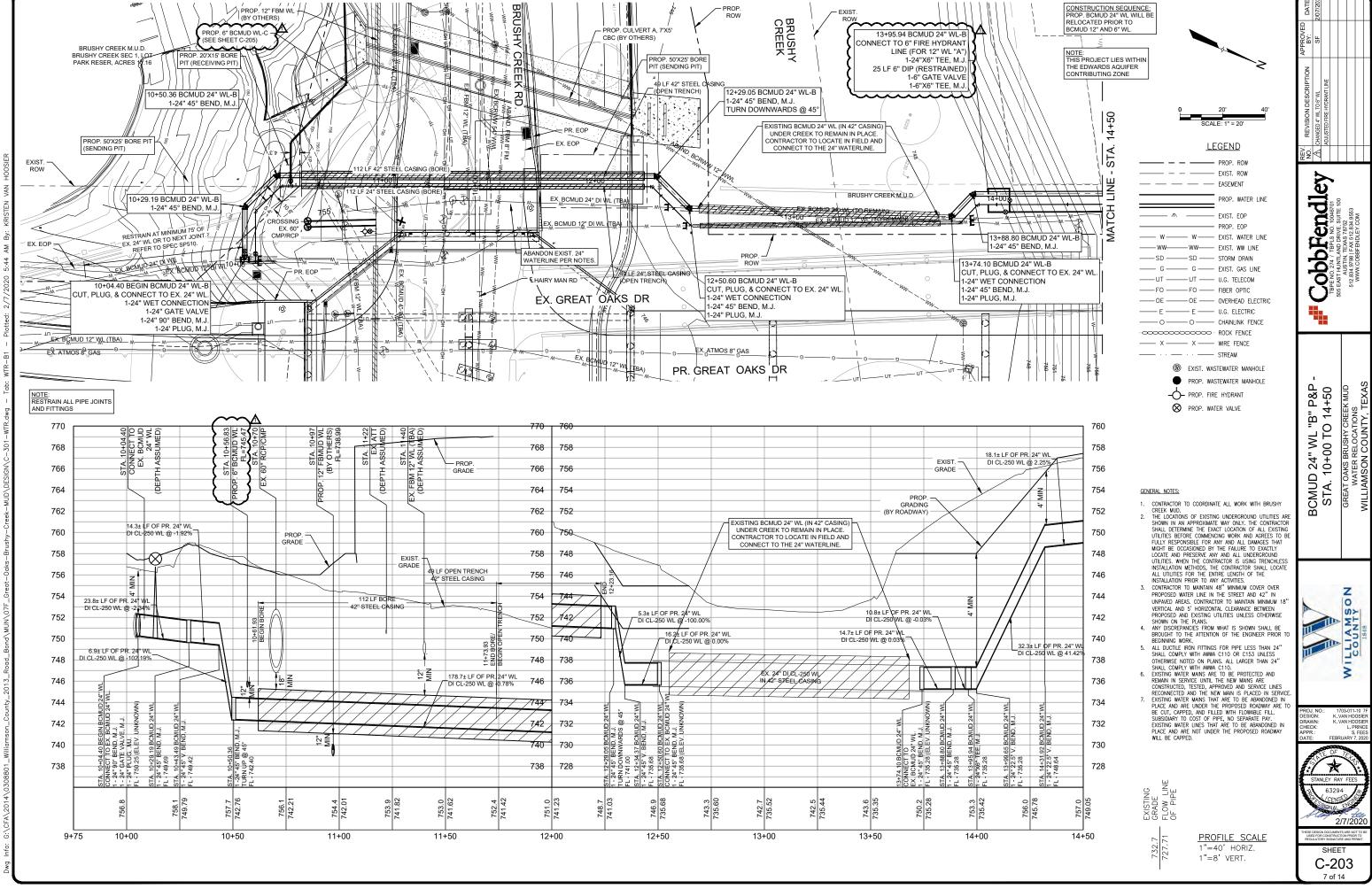
General Notes

Sheet D





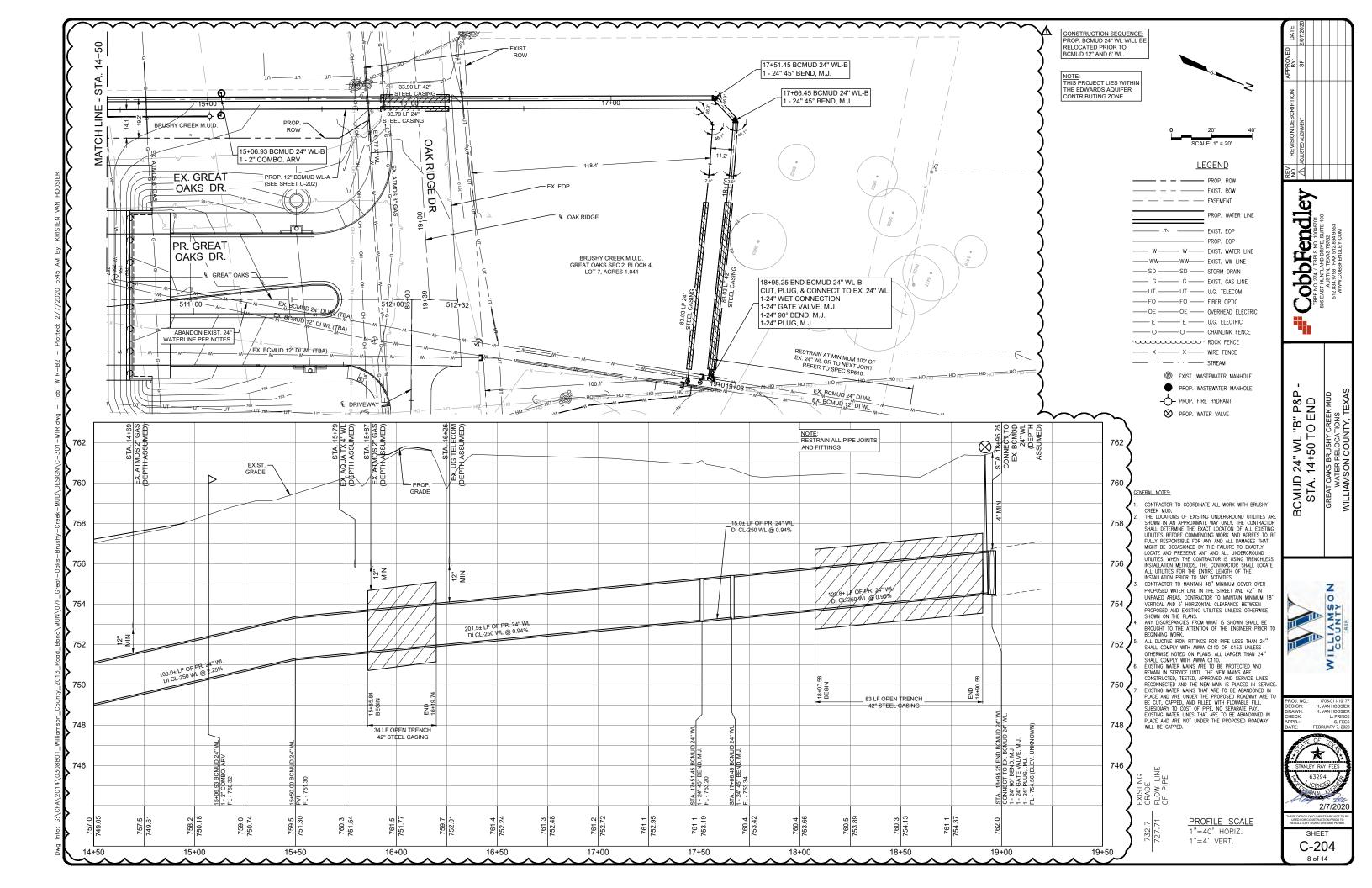


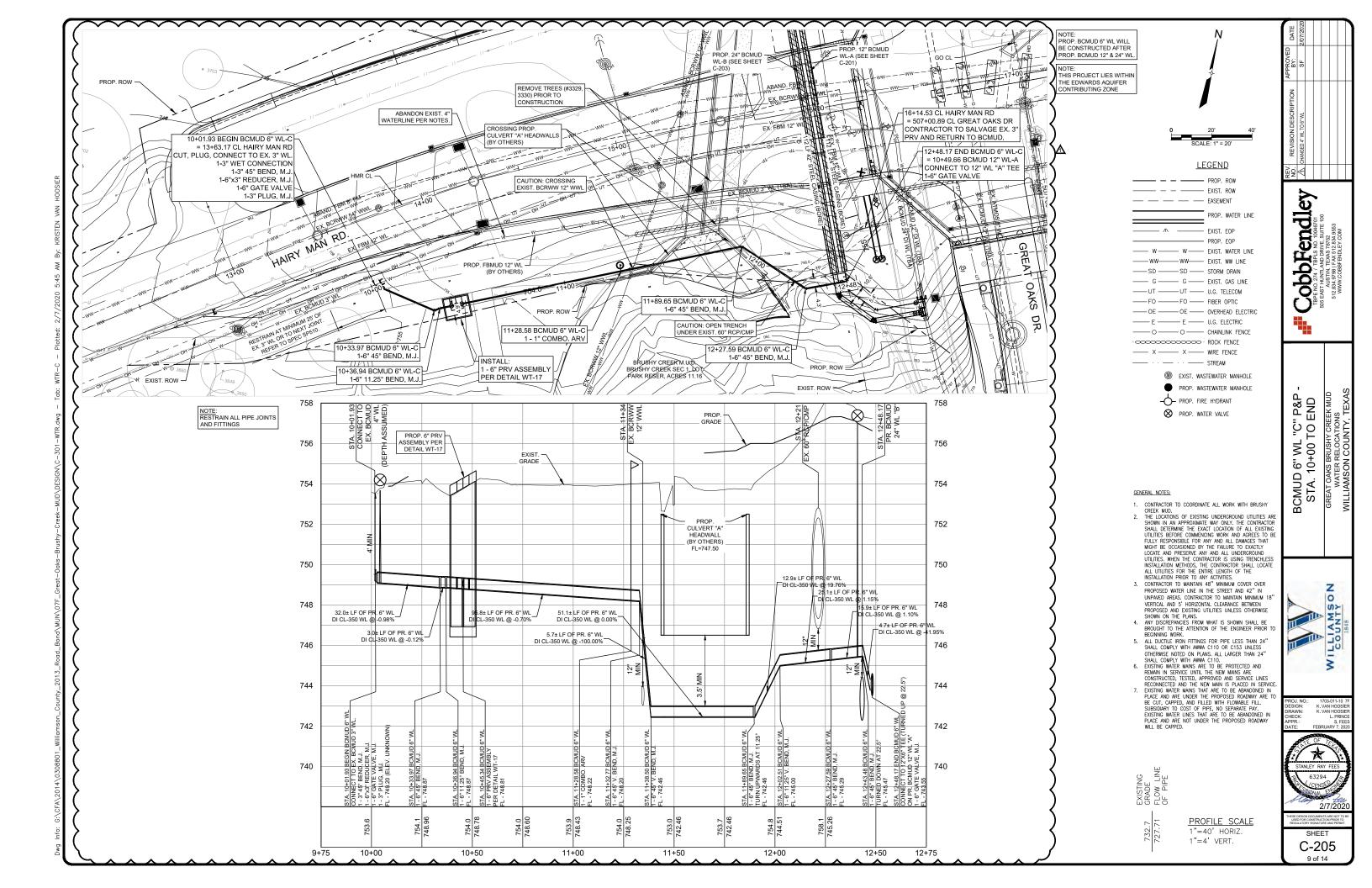


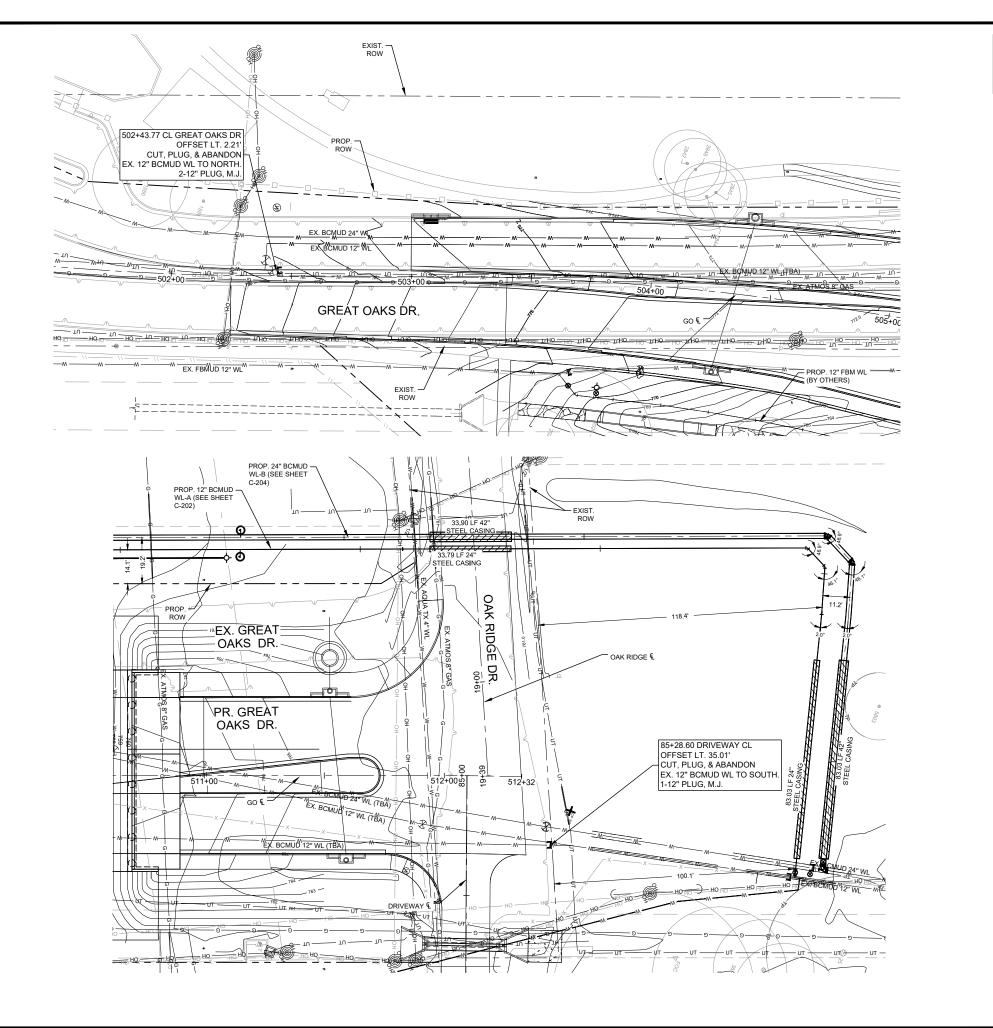
- PROP. CULVERT A. 7'X5'

/ PROP. 12" FBM WL

CONSTRUCTION SEQUENCE: PROP. BCMUD 24" WL WILL BE RELOCATED PRIOR TO BCMUD 12" AND 6" WL.







CONSTRUCTION SEQUENCE: PROP. BCMUD 24" WL WILL BE RELOCATED PRIOR TO BCMUD 12" AND 4" WL. THIS BCMUD 12" WL ABANDONMENT WORK WILL BE DONE AFTER THE RELOCATIONS ARE COMPLETE.

NOTE: THIS PROJECT LIES WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE





LEGEND

	THOI THOM
	EXIST. ROW
	EASEMENT
	PROP. WATER LINE
	EXIST. EOP
	PROP. EOP
w	EXIST. WATER LINE
	EXIST. WW LINE
—— SD ——— SD ——	STORM DRAIN
G G	EXIST. GAS LINE
UTUT	U.G. TELECOM
——F0 ——F0 ——	FIBER OPTIC
—— ОЕ —— ОЕ ——	OVERHEAD ELECTRIC
— Е — Е —	U.G. ELECTRIC
<u> </u>	CHAINLINK FENCE
	ROCK FENCE
x x	WIRE FENCE
	CTREAM

EXIST. WASTEWATER MANHOLE

PROP. WASTEWATER MANHOLE -O- PROP. FIRE HYDRANT

PROP. WATER VALVE

GENERAL NOTES:

- 1. CONTRACTOR TO COORDINATE ALL WORK WITH BRUSHY
- 1. CONTRACTOR TO COORDINATE ALL WORK WITH BRUSHY CREEK MUD.
 2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL ENISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAWAGES 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 ALL UTILITIES FOR THE ENTIRE LENGTH OF THE PARTICLE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE PARTICLE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE PARTICLE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE ALL UTILITIES FOR THE ENTIRE LENGTH OF THE PARTICLE AND ANY ACTIVITIES.

 3. CONTRACTOR TO MAINTAIN 48" MINIMUM COVER OVER PROPOSED WATER LINE IN THE STREET AND 42" IN UPPRAYED AREAS, CONTRACTOR TO MAINTAIN MINIMUM 18"

- 3. CONTRACTOR IO MAINIAIN & MINIMUM COVER OVER PROPOSED WATER LINE IN THE STREET AND 42" IN UNPAYED AREAS, CONTRACTOR TO MAINTAIN MINIMUM 18" VERTICAL AND 5" HORTOXIAL CLEARANCE BETWEEN PROPOSED AND EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE PLANS.

 4. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE ENSINEER PRIOR TO BEGINNING WORK.

 5. ALL DUCTILE IRON FITTINGS FOR PIPE LESS THAN 24" SHALL COMPLY WITH AWWA CITLO OR C153 UNLESS OTHERWISE NOTED ON PLANS, ALL LARGER THAN 24" SHALL COMPLY WITH AWWA CITLO OR C153 UNLESS OTHERWISE NOTED ON PLANS, ALL LARGER THAN 24" SHALL COMPLY WITH AWWA CITLO BE PROTECTED AND REMAIN IN SERVICE UNTIL THE NEW MAINS ARE CONSTRUCTED, TESTED, APPROVED AND SERVICE LINES RECONNECTED AND THE NEW MAIN IS PLACED IN SERVICE. EXISTING WHATER MINIS THAT ARE TO BE ABANDONED IN PLACE AND ARE UNDER THE PROPOSED ROADWAY ARE TO BE CUT, CAPPED, AND FILLED WITH FLOWMBLE FILL SUBSIDIARY TO COST OF PIPE, NO SEPARATE PAY, EXISTING WATER MINIS THAT ARE TO BE ABANDONED IN PLACE AND ARE NOT UNDER THE PROPOSED ROADWAY WILL BE CAPPED.







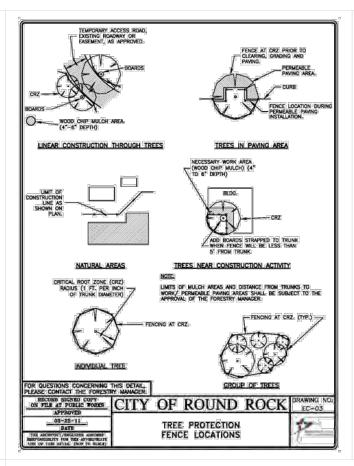
BCMUD 12" WL ABANDONMENT PLAN

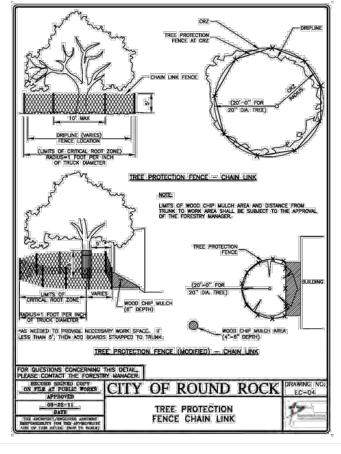


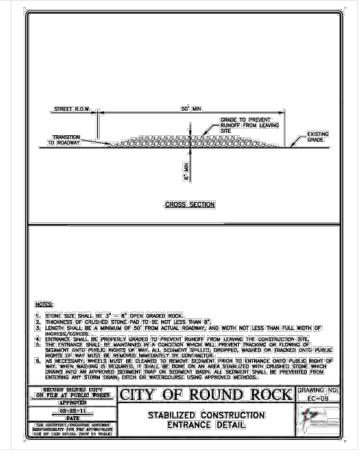


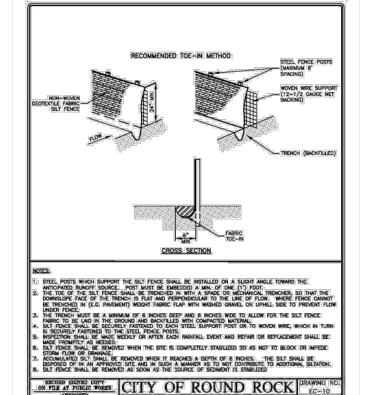
SHEET

C-206









SILT FENCE DETAIL





SHEET C-501

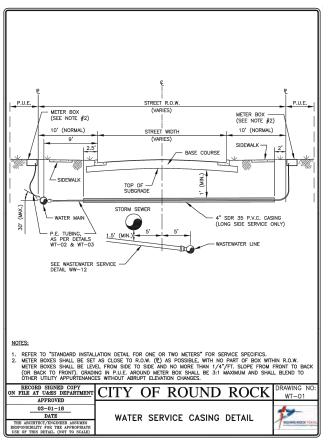
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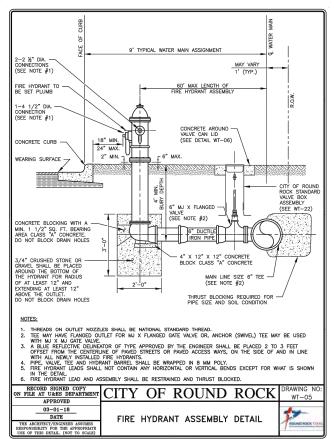
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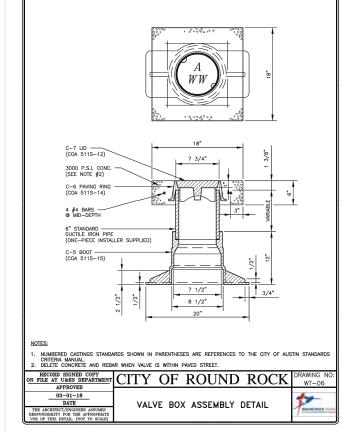
STANDARD CONTROL 8
DETAILS

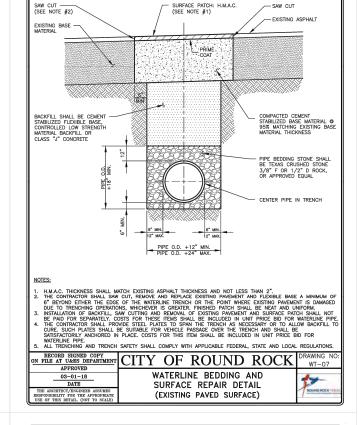
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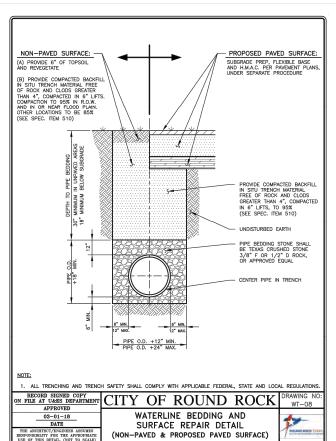
- SAW CUT

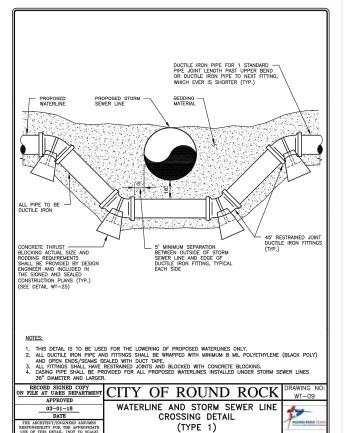


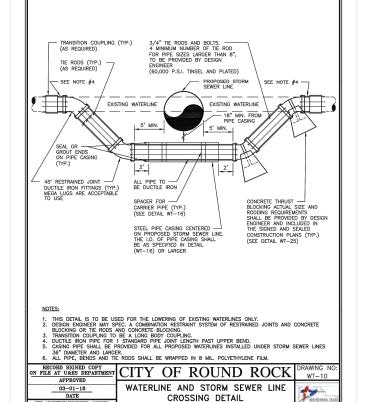




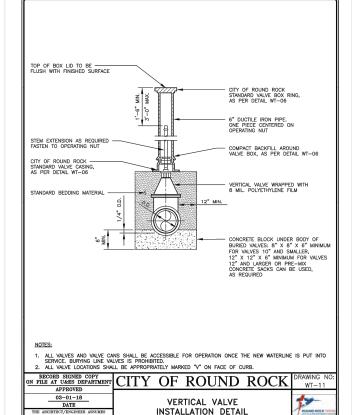


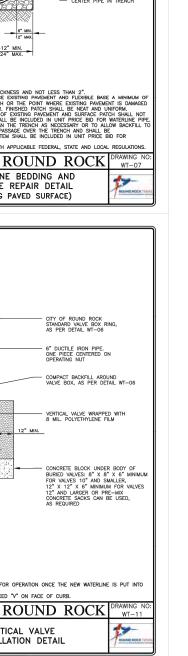






(TYPE 2)





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S

DET

STANDARD

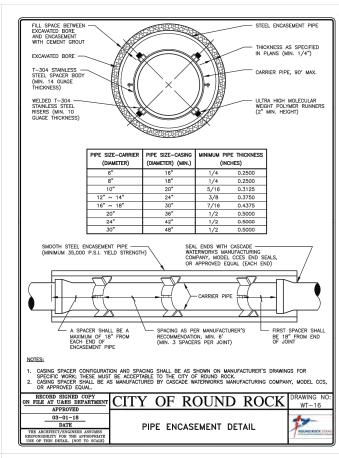
UTILITY

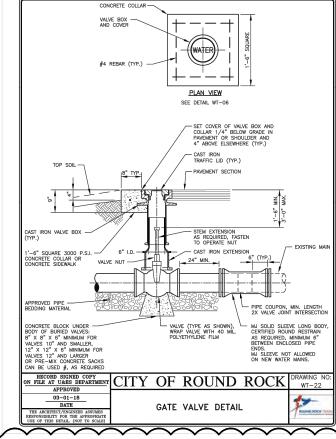
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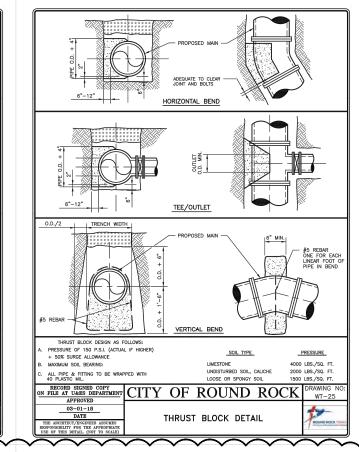
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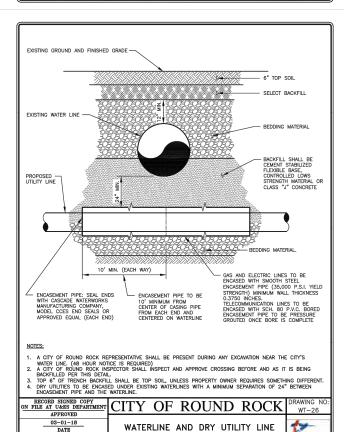
2/7/202 SHEET

C-502

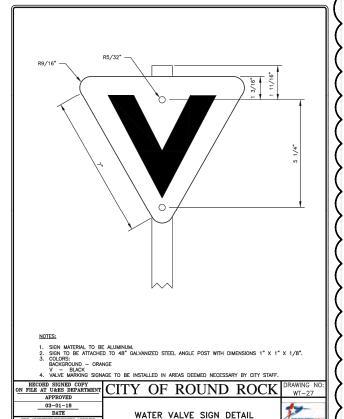


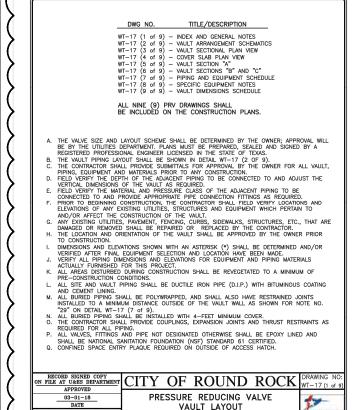




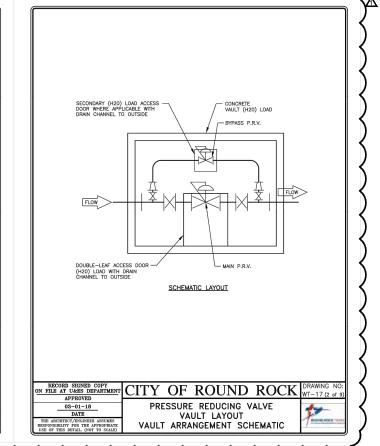


CROSSING DETAIL





INDEX AND GENERAL NOTES





FOR DETAILS SHOWING "CITY OF ROUND ROCK" TO BE LABELED ON INSTALLED ITEMS, "BRUSHY CREEK MIJD" SHALL BE LABELED INSTEAD



UTILITY

WATER

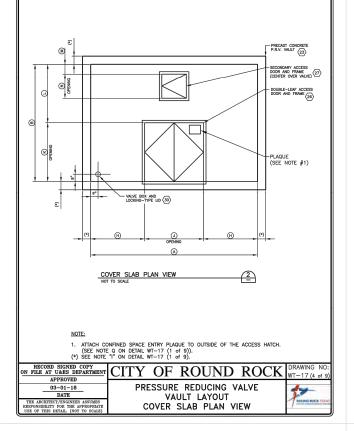
PROJ NO: 1703.011-10 1 DESIGN: K, VAN HOOSIE DRAWN: K, VAN HOOSIE K, VAN HOOSIE APPR: S, FEE DATE: FEBRUARY 7, 202

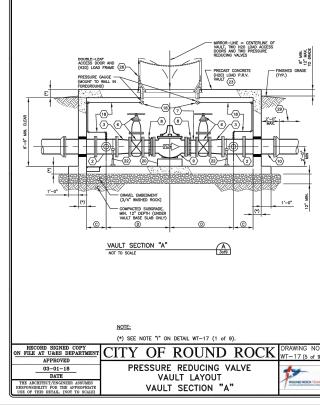


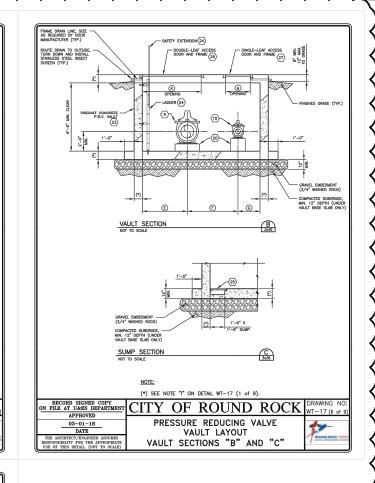
SE DESIGN DOCUMENTS ARE NOT TO BE ISSED FOR CONSTRUCTION PRIOR TO GOULATORY SIGNATURE AND PERMIT.

SHEET

C-503







TAG				NOMINAL SIZE				SPECIFIC NOTES
NO.	DESCRIPTION	VAULT NO. 1	VAULT NO. 2	VAULT NO. 3	VAULT NO. 4	VAULT NO. 5	FITTING TYPE	(SEE DRAWING DWG, WT-24)
1.	SPOOL PIPE	8"	10"	12*	16"	24"	M.J. x FL.	1, 2, 3
e.	TEE W/1-1/2" THREADED TESTING PORT	8" × 4"	10" x 4"	12" × 4"	16" x 6"	24" x 12"	FL x FL	2, 3
3.	CONCENTRIC REDUCER	NA.	N.A.	NA.	N.A.	24" x 16"	FL x FL	2, 3
4.	SPOOL PIPE	8*	10"	12*	16"	16"	FL. x FL	2, 3
5.	90° ELBOW	8*	10"	12*	16"	16"	FL x FL	2, 3
6.	RESILIENT WEDGE GATE VALVE	8"	10"	12*	16"	16"	FL x FL	3, 4
7.	SPOOL PIPE	8"	10"	12*	16"	16"	FL. x P.E.	2, 3
8.	DRESSER DISMANTLING JOINT	8"	10"	12*	16"	16"		5, 6
9.	PRESSURE REDUCING VALVE	8"	10"	12"	16"	16"	FL x FL	3, 7
10.	SPOOL PIPE	8"	10"	12*	16"	24"	FL. x P.E.	2, 3
11.	RESILIENT WEDGE GATE VALVE	4"	4*	4"	6"	12"	FL x FL	3, 4
12.	CONCENTRIC REDUCER	4" x 3"	4" x 3"	N.A.	N.A.	N.A.	FL. x FL	2, 3
13.	SPOOL PIPE	3*	3*	4"	6"	12"	FL. x P.E.	2, 3
14.	DRESSER DISMANTLING JOINT	3"	3"	4"	6"	12"		5, 6
15.	PRESSURE REDUCING VALVE	3"	3*	4"	6"	12"	FL x FL	3, 7
16.	90° ELBOW	3*	3*	4"	6*	12"	FL x FL	2, 3
17.	SPOOL PIPE	3"	3*	4"	6"	12"	FL x FL	2, 3
18.	PRESSURE GAUGE ASSEMBLY							8, 9
19.	CONCRETE PEDESTAL PIPE SUPPORT							10
20.	CONCRETE PEDESTAL VALVE SUPPORT							11
21.	PIPE STANCHION SADDLE SUPPORT							12
	PIPE STANCHION SADDLE SUPPORT							
	WITH YOKE							13
	PRE-CAST CONCRETE VALVE VAULT							14
24.	ALUMINUM LADDER W/SAFETY EXTENSION							15
25.	GRATING AND FRAME							16
26.	DOUBLE-LEAF ACCESS DOOR (H20)	60" x 60"	60" x 60"	60" x 60"	60" x 60"	60" x 60"		17
27.	SECONDARY ACCESS DOOR (H20)	N.A.	N.A.	N.A.	36" x 36"	42" x 42"		18
28.	WALL PENETRATION SEAL	8"	10"	12*	16"	24"		19
	BURIED PIPING WITH	8" DIA. x	10" DIA. x	12" DIA. x	16" DIA. x	24" DIA. x		
	RESTRAINED JOINT FITTINGS	114 L.F., MIN.	141 L.F., MIN.	167 L.F., MIN.	220 L.F., MIN.	318 L.F., MIN.		20
30.	VALVE BOX AND LOCKING LID	5 1/4" DIA.	5 1/4" DIA.	5 1/4" DIA.	5 1/4" DIA.	5 1/4" DIA.		20
		VAUL	T DESCRIP	TION NOTE	<u>.</u>			
	VAULT VAULT VAULT	NO. 1 = VAU NO. 2 = VAU NO. 3 = VAU NO. 4 = VAU	ESSURE REDU LT WITH 8" LT WITH 10" LT WITH 12" LT WITH 16" LT WITH 16"	P.R.V. AND P.R.V. AND P.R.V. AND P.R.V. AND	3" P.R.V. BYF 3" P.R.V. BYF 4" P.R.V. BYF 6" P.R.V. BYF	ASS ASS ASS ASS	.ows:	
	ALL VAULTS AND ACCESS DO	OORS SHALL	BE DESIGNEI	TO WITHST	AND (H20) L	OADING.		

PRESSURE REDUCING VALVE

VAULT LAYOUT PIPING AND EQUIPMENT SCHEDULE

FULLY RESTRAINED JOINT FITTING.
DUCTILE IRON PIPE.
200 P.S.I. WORKING PRESSURE MINIMUM.
NON-RISING STEM WITH HANDWHEEL OPERATOR, A.W.W.A. C509 (CLOW, MUELLER, OR APPROVED

RECORD SIGNED COPY N FILE AT U&ES DEPARTMENT APPROVED	CITY OF ROUND ROCK	DRAWING NO: WT-17 (8 of 9)
03-01-18 DATE	PRESSURE REDUCING VALVE VAULT LAYOUT	1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	SPECIFIC EQUIPMENT NOTES	ROUND ROCK TEAMS

			NOMINAL SIZE		
TAG	VAULT NO. 1	VAULT NO. 2	VAULT NO. 3	VAULT NO. 4	VAULT NO. 5
Α	12'-0"	14'-0"	14'-6"	16'-0"	20'-0"
В	10'-0"	10'-0"	10'-0"	12'-0"	13'-6"
С	1'-6"	2'-0"	2'-0"	2'-0"	2'-0"
D	4'-6"	5'-0"	5'-3"	6'-0"	8'-0"
Е	4'-6"	4'-6"	4'-6"	4'-9"	4'-9"
F	3'-6"	3'-6"	3'-6"	5'-0"	6'-3"
G	2'-0"	2'-0"	2'-0"	2'-3"	2'-6"
Н	3'-0"	4'-0"	4'-3"	5'-0"	7'-0"
1	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
J	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
K	6'-0"	6'-0"	6'-0"	6'-0"	7'-6"
L	N.A.	N.A.	N.A.	1'-0"	9"
М	N.A.	N.A.	N.A.	2'-6"	3'-6"
N	N.A.	N.A	N.A	2'-6"	3'-6"
0	N.A.	N.A.	N.A.	6'-9"	8'-3"

VAULT DIMENSIONS NOTE:

T DIMENSIONS SHOWN ARE MINIMUM AND MUST BE VERIFIED EQUIPMENT AND PIPING MATERIALS ACTUALLY FURNISHED FOR PRESSURE REDUCING VALVE VAULT TO BE CONSTRUCTED.

THE DESCRIPTION FOR THE PRESSURE REDUCING VALVE (P.R.V.) VAULTS IS AS FOLLOWS:
VAULT NO. 1 = VAULT WITH 8" P.R.V. AND 3" P.R.V. BYPASS
VAULT NO. 2 = VAULT WITH 10" P.R.V. AND 3" P.R.V. BYPASS
VAULT NO. 3 = VAULT WITH 12" P.R.V. AND 4" P.R.V. BYPASS
VAULT NO. 4 = VAULT WITH 16" R.V. AND 6" P.R.V. BYPASS
VAULT NO. 5 = VAULT WITH 16" P.R.V. AND 12" P.R.V. BYPASS

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT APPROVED	CITY OF ROUND ROCK	DRAWING NO: WT-17 (9 of 9)
APPROVED		
03-01-18	PRESSURE REDUCING VALVE	diam's
DATE	VAULT LAYOUT	Jan State St
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)	VAULT DIMENSIONS SCHEDULE	ROUND ROCK TOAL

FOR DETAILS SHOWING "CITY OF ROUND ROCK" TO BE LABELED ON INSTALLED ITEMS, "BRUSHY CREEK MUD" SHALL BE LABELED INSTEAD.





SHEET C-504

STANDARD UTILITY WATER

e C

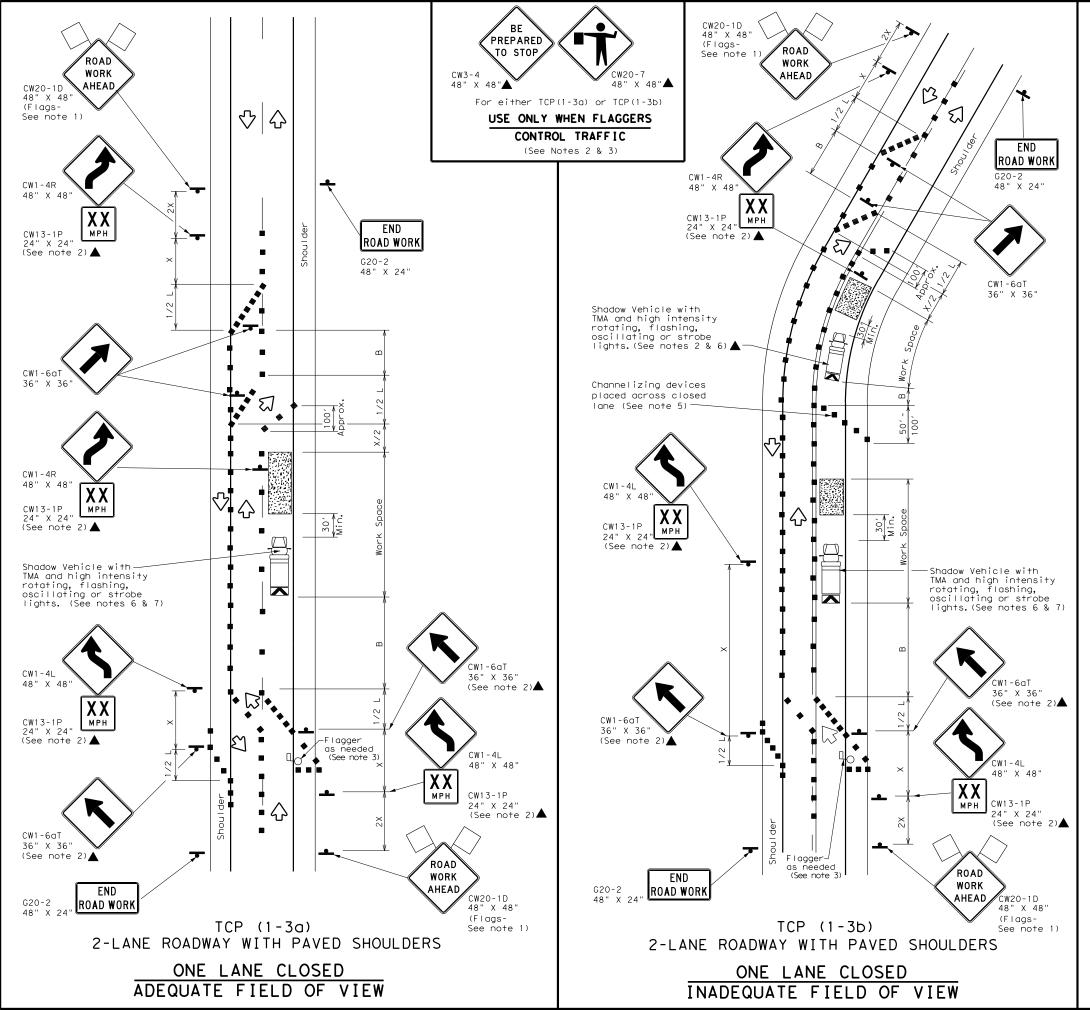
CobbFendl

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DET.

VAULT DESCRIPTION NOTE:

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by 1x00T for any purpose whatseever. Tx0OT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages the suse incorrect.



	LEGE	ND	
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
4	Sign	♡	Traffic Flow
\Diamond	Flag	LO	Flagger

Posted Speed	Formula	Minimum Desirable Taper Lengths XX			Spacir Channe		Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"
30	, ws²	150′	165′	180′	30′	60′	120′	90′
35	L = WS	205′	225′	245′	35′	70′	160′	120′
40	80	265′	2951	320′	40′	80′	240′	155′
45		450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55	L=WS	550′	605′	660′	55′	110′	500′	295′
60	L 113	600′	660′	720′	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

* Conventional Roads Only

** Taper lengths have been rounded off.

L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE					
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY	
	1	1			

GENERAL NOTES

- 1. Flags attached to signs where shown are REQUIRED.
- 2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- 3. Flagger control should NOT be used unless roadway conditions or heavy traffic volume require additional emphasis to safely control traffic. Additional flaggers may be positioned in advance of traffic queues to alert traffic to reduce speed.
- 4. DO NOT PASS, PASS WITH CARE and construction regulatory speed zone signs may be installed downstream of the ROAD WORK AHEAD signs.
- 5. When the work zone is made up of several work spaces, channelizing devices should be placed laterally across the closed lane to re-emphasize closure. Laterally placed channelizing devices should be repeated every 500 to 1000 feet in urban areas and every 1/4 to 1/2 mile in rural areas.
- 6. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- 7. Additional Shadow Vehicles with TMAs may be positioned off the paved
- surface, next to those shown in order to protect wider work spaces.

 8. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20', or 15' if posted speed are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the area of conflicting markings not the entire work zone.



1/20/2020



Traffic Operations Division Standard

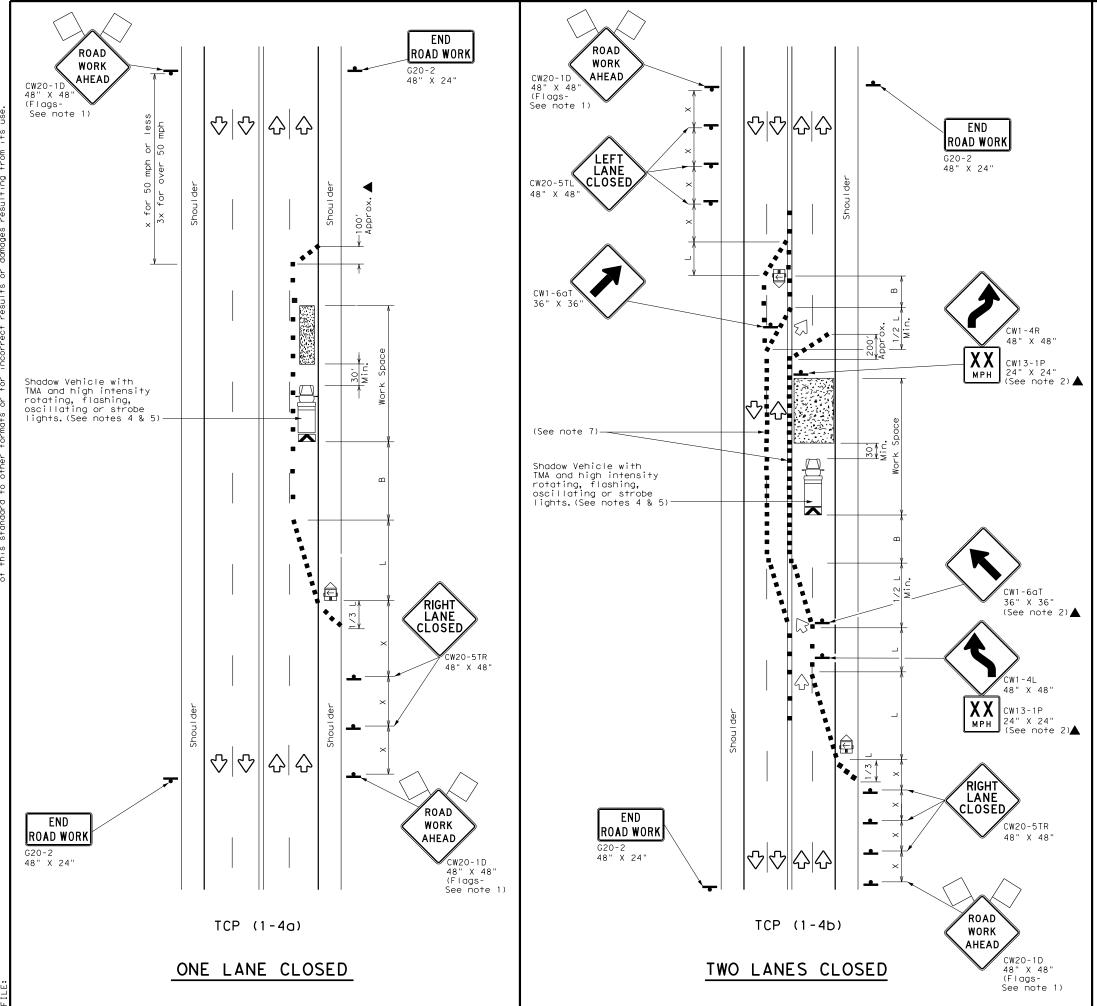
TRAFFIC CONTROL PLAN
TRAFFIC SHIFTS ON
TWO LANE ROADS

TCP(1-3)-18

FILE: tcp1-3-18.dgn	DN:		CK:	DW:		CK:
© TxDOT December 1985	CONT S	ECT	JOB		н	IGHWAY
REVISIONS 2-94 4-98						
8-95 2-12	DIST		COUNTY			SHEET NO.
1-97 2-18						

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DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOI for any purpose whatsoever. TxDOI assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damades resulting from its use.



	LEGEND						
V///2	Type 3 Barricade		Channelizing Devices				
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)				
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)				
•	Sign	♡	Traffic Flow				
\Diamond	Flag	Lo	Flagger				

Posted Speed	Speed		Minimum Desirable per Lengths **		Spacir Channe		Minimum Sign Spacing "X"	Suggested Longitudinal Buffer Space	
*		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	Distance	"B"	
30	, WS ²	150′	165′	180′	30′	60′	120′	90′	
35	L = WS	2051	225′	245′	35′	70′	160′	120′	
40	80	265′	295′	320′	40′	80′	240′	155′	
45		450′	495′	540′	45′	90′	320′	195′	
50		500′	550′	600′	50′	100′	400′	240′	
55	L=WS	550′	605′	660′	55′	110′	500′	295′	
60		600′	660′	720′	60′	120′	600′	350′	
65		650′	715′	780′	65′	130′	700′	410′	
70		700′	770′	840′	70′	140′	800′	475′	
75		750′	825′	900′	75′	150′	900′	540′	

- * Conventional Roads Only
- * Taper lengths have been rounded off.

L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE					
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY	
	1	1			

GENERAL NOTES

- 1. Flags attached to signs where shown are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
 The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the
- visibility of the work zone is less than 1500 feet.
- 4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- 5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

CP (1-4a)

6. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.



1/20/2020



TRAFFIC CONTROL PLAN
LANE CLOSURES ON MULTILANE
CONVENTIONAL ROADS

Traffic Operations Division Standard

TCP(1-4)-18

<u> </u>				-		
FILE: tcp1-4-18.dgn	DN:		CK:	DW:		CK:
© TxDOT December 1985	CONT	SECT	JOB		ніс	SHWAY
REVISIONS 2-94 4-98						
8-95 2-12	DIST		COUNTY			SHEET NO.
1-97 2-18					П	

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SHEET INDEX

SHEET NUMBER

SHEET TITLE

C-001

COVER

C-002 - C-003

GENERAL NOTES

C-100

KEY MAP - WATER

C-201 - C-202 C-501 - C-502 PROP FBMUD 12" WL PLAN & PROFILE

EROSION CONTROL STANDARD DETAILS

C-503 - C-504

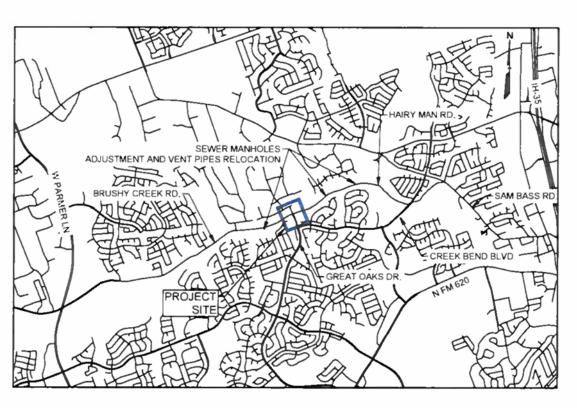
WATER UTILITY STANDARD DETAILS



WILLIAMSON COUNTY GREAT OAKS FERN BLUFF MUD WATER RELOCATION

TOTAL LENGTH OF 12" WATER LINE: 875 LF PROJECT LIMITS: HAIRY MAN RD. STA 12+77 TO 18+70

RELOCATION OF EXISTING FERN BLUFF MUD 12" WATER LINE, INCLUDING FIRE HYDRANTS, APPURTENANCES, AND RECONNECTIONS



VICINITY MAP (NOT TO SCALE)

OWNER INFORMATION

OWNER: FERN BLUFF MUD 7320 WYOMING SPRINGS DR. ROUND ROCK, TEXAS 78681

CONTACT: HECTOR ALANIS OPERATIONS MANAGER 512-788-2081

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

CONTACT: STANLEY R. FEES, P.E. 512-834-9798

100% SUBMITTAL



STANLEY R. FEES, P.E. COBB FENDLEY, INC.

JANUARY 13, 2020

APPROVALS:

FERNBLUFF NUB DATE



505 EAST HUNTLAND DRIVE, SUITE 100 AUSTIN, TEXAS 78752 512 834 9798 | FAX 512 834 7277 WWW.COBBFENDLEY.COM

REVISION DESCRIPTION

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.
- 3. 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.
- 4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION
- THE CONTRACTOR SHALL GIVE FERN BLUFF MUD 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 512-788-2081 (HECTOR ALANIS, OPERATIONS MANAGER).
- 6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVECETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT REFORE CONSTRUCTION.
- 7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN FERN BLUFF MUD, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
- 8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE FERN BLUFF MUD 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 FERN BLUFF MUD COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
- 10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE 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.
- 11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.

TRENCH SAFETY

- 1. 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.
- 3. 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

- 1. 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).
- 2. 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.
- 3. 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.
- 4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).
- 5. 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.
- 6. THE CONTRACTOR SHALL CONTACT THE FERN BLUFF MUD OPERATIONS MANAGER AT 512-788-2081 TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.
- 7. 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.

- 8. 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 FERN BLUFF MUD (HECTOR ALANIS, OPERATIONS MANAGER, 512-788-2081 OR JANEY MILLER, GENERAL MANAGER, 512-788-0336) AND THE CITY OF ROUND ROCK WATER & WASTEWATER SUPERINTENDENT. TELEPHONE 218-5555.
- 10. 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 ATTAINED 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.
- 11. 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 ENCINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT 218-5555.
- 12. 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 CITY OF ROUND ROCK PERSONNEL.
- 13. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
- 14. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF ROUND ROCK AND FERN BLUFF MUD.
- 15. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
- 16. 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 AND FERN BLUFF MUD.

- 17. CONTACT CITY OF ROUND ROCK ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT 218-5555 AND FERN BLUFF MUD (HECTOR ALANIS, OPERATIONS MANAGER, 512-788-2081) FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.
- 18. 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.
- 19. 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

- 20. 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.
- 21. 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

- 1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE <u>IEXAS</u> <u>MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS</u>, 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 FDITIONS

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.
- 2. 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.
- 3. 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 REFECTIVENESS. 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. 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.

SURVEY NOTES

 BEARING VALUES BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM, NAD-83, CENTRAL (4203). COORDINATES ARE SURFACE VALUES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00012. ELEVATIONS BASED UPON GEOID 2012A, PER WESTERN DATA GPS REFERENCE NETWORK

TREE LIST

POINT #	DRIP DIA.	SIZE	DESCRIPTION	STATUS
3329	36'	18"	PECAN	REMOVE
3330	28'	14"	CEDAR ELM	REMOVE
3331	60'	30"	PECAN	PROTECT
2483	44'	16" 12"	CEDAR ELM	REMOVE
2480	38'	19"	PECAN	REMOVE
2482	40'	20"	PECAN	REMOVE
2479	56'	15" 14" 12"	PECAN	PROTECT
2511	58'	23" 12"	PECAN	REMOVE
2515	50'	25"	CEDAR ELM	REMOVE
2471	18'	9"	PECAN	REMOVE
3463	18'	9"	CEDAR ELM	REMOVE
2402	48'	24"	BOIS D' ARC	REMOVE
2053	40'	20"	CEDAR ELM	REMOVE
2401	46'	23"	LIVE OAK	PROTECT





ENERAL NOTES

SAT OAKS FERN BLUFF MUD

WATER RELOCATION

AMSON COUNTY, TEX



PROJ. NO. 1703-011-10 i DESIGN: K. VANHOOSIEI DRAWN: R. RODRIGUEZ CHECK: L. PRINCE APPR: S. FEES DATE: JANUARY 22, 20



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

SHEET C-002

Williamson County

GENERAL NOTES: August 26, 2019 Version

Basis of Estimate					
Item	Description	**Rate	Basis	Quantity	
	Seed for Erosion Control				
164	(Item 164) (Temp) (Cool) (TY 4)	5000 SY/AC	SY	SY	

** For Informational Purposes Only

Williamson County

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

The roadbed shall be free of organic material prior to placing any section of the pavement structure.

Equip all construction equipment used in roadway work with highly visible omnidirectional

Provide a smooth, clean saw-cut along the existing asphalt pavement structure, as directed. ider subsidiary to the pertinent I

Supply litter barrels in enough numbers at locations as directed to control litter within the project.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. Osc a ser-contained vacuum voice in Sweep in todaway aim seep in teo viscament as uncertain.

The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Construction Observer. This work is subsidiary.

Protect all areas of the right of way, which are not included in the actual limits of the proposed construction areas, from disturbance. Restore any area disturbed because of the Contractor's operations to a condition as good as, or better than, before the beginning of work at no cost to the

Damage to existing pipes and SETs due to Contractor operations shall be repaired at Contractor's

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not

Within the limits of the project, provide standard barricades, warning signs, delineators, lights, 28-

No closures will be allowed on the weekends, which include the following holidays: January 1st, the last Monday in May, July 4th, the first Monday in September, the fourth Thursday in November, December 25th, Easter weekend, and the working day prior to or immediately after any of the aforementioned holidays. Unless otherwise approved, no closures will be allowed on the weekends of special events that could be impacted by the construction. Ensure all equipment, vehicles, workers, etc., associated with these closures are off the roadways and all lanes re-opened,

inch cones, and flaggers in enough numbers and combinations, as directed For Mainlanes use night-work and same-night remove-and-replace operations.

at least, by noon of the Friday before these holidays and special eve

General Notes

Sheet A

Williamson County

obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

The Project Superintendent will be capable of speaking English and will be available to contact at all times when work is being performed, including subcontractor work. The Superintendent will be available and on-call 24 hours a day.

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) – Construction Division's (CST) materials producers list. Refer to TxDOT's website for list of pre-qualified manufacturers. No substitutions will be allowed for materials found on the list. Submit list of approved suppliers/materials from TxDOT website to show items are TxDOT approved. Submit this list with request for material approval.

When any abandoned well is encountered, cease construction operations in this area and notify the Construction Observer who will coordinate the proper plugging procedures. A water well driller licensed in the State of Texas must be used to plug a well

Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Track all exposed soil, stockpiles, and slopes. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work is subsidiary.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

Maintain positive drainage for permanent and temporary work for the duration of the project. Be responsible for any items associated with the temporary or interim drainage and all related maintenance. This work is subsidiary.

Suspend all activities near any significant recharge features, such as sinkholes, caves, or any other subterranean openings that are discovered during construction or core sampling. Do not proceed until the designated Geologist or TCEQ representative is present to evaluate and approve remedial

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

Unless otherwise approved, one (1) lane in each direction shall remain open at all times.

No work will be allowed between 8:00 PM to 5:00 AM without approval from Construction Observer. Nighttime lane closures will only be allowed with approval from Construction Observer and only from 8:00 PM to 5:00 AM, unless otherwise shown on the plans.

No Daytime Lane Closures will be allowed, unless otherwise shown on the plans or as directed by

General Notes

Sheet B

Williamson County

The GEC is the authority to approve additional lane closures, prior to any work.

Maintain a written record of documentation of "The Additional Approved Lane Closures.

Submit and secure concurrence, prior to the publication of any notices or placement of any traffic control devices for implementation of the traffic control plan, hereinafter called a <u>Lane Closure</u> Notice (LCN).

Present to GEC, an LCN for traffic control, which is proposed for implementation, a minimum of four (4) full working days preceding any proposed implementation date. Indicate the estimated date, time, duration, and location for the proposed work. As a part of the LCN submit a written description of the lane closure(s) depicting the proposed traffic control devices used, based on the appropriate plan sheet, TxDOT or Texas Manual on Uniform Traffic Control Devices (TMUTCD) dards, and an operational description of the work to be performed

Present to GEC, LCN's proposed to detour traffic, a minimum of seven (7) full calendar days

Present to GEC, LCN's proposed for night work, a minimum of seven (7) full calendar days preceding any proposed implementation date

Receive concurrence prior to LCN implementation

Meet with the Construction Observer prior to roadway and lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Discuss contingency plans at that time. Consider inclement weather prior to implementing the lane closures.

Submit a cancellation of any lane closures, no later than noon on the day preceding the proposed

Coordinate Main Lane closures with adjacent projects.

Take immediate action to modify Closures / Traffic Control, if at any time backup (roadway queuing) becomes unreasonable (greater than 20 minutes). Have in place, a contingency plan of how this will occur.

Utilize Shadow Vehicle with Truck Mounted Attenuator for setup and removal of each lane

Do not set up any Lane Closure / TCP when the pavement is wet prior to the "setup," unless otherwise directed. Revise Traffic Control, when inclement weather is imminent, as directed.

Incorporate and maintain a 3H: 1V safety wedge into the proposed construction for any roadway edge of 2 inches or greater adjacent to a roadway under traffic

> General Notes Sheet C





NOTE

GENERAL

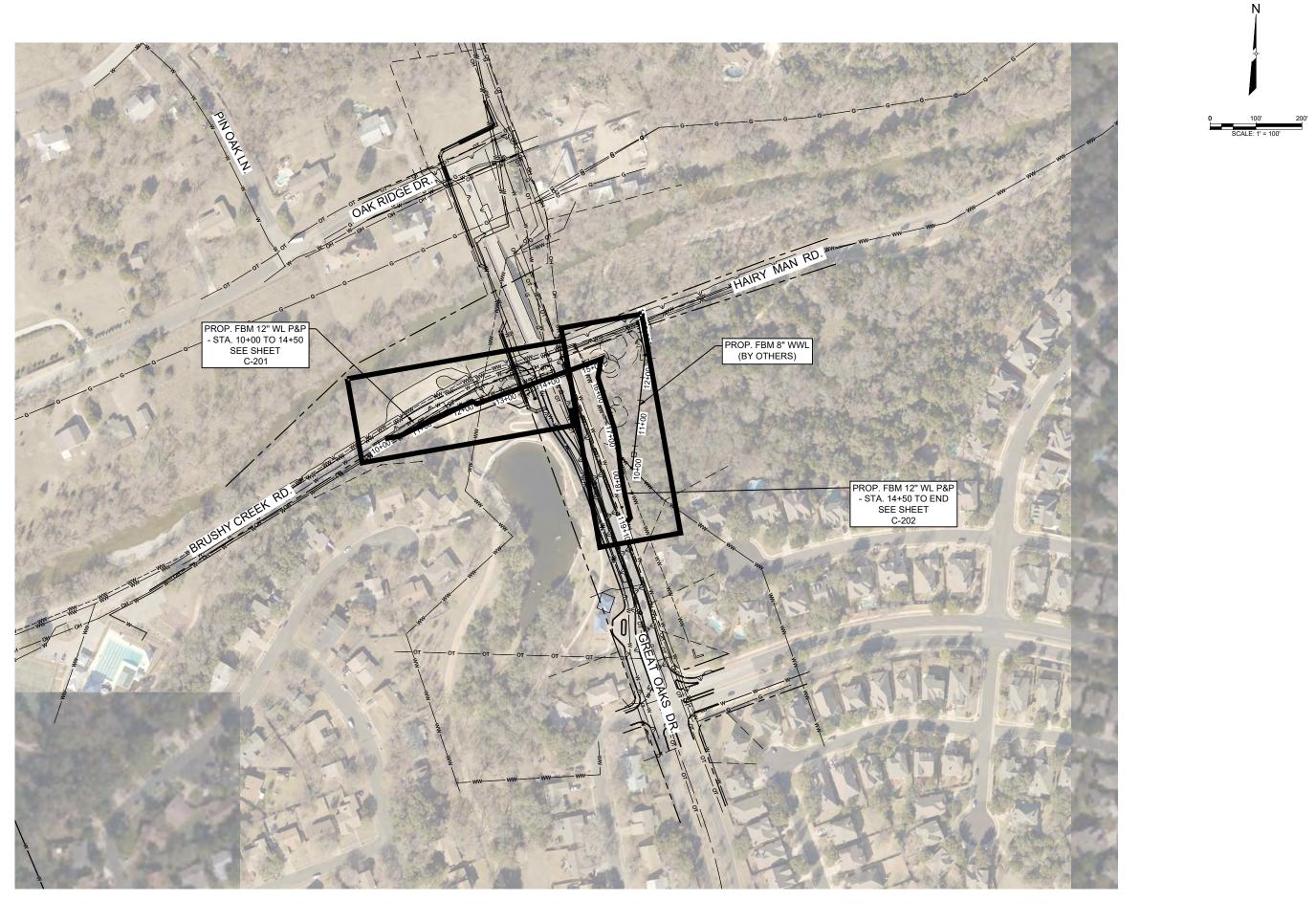
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SHEET C-003

Sheet D

General Notes



ON DESCRIPTION APPROVED DATE

CobbPFendley
TBPE NO, 274 / TBPLS NO, 10046701
S05 EAST HUNTLAND TRANS SUITE 100
\$12.804.9798 | FAX 512.804.9553
WWW.COBBFENDLEY.COM

KEY MAP - WATER

GREAT OA WAT WILLIAMS

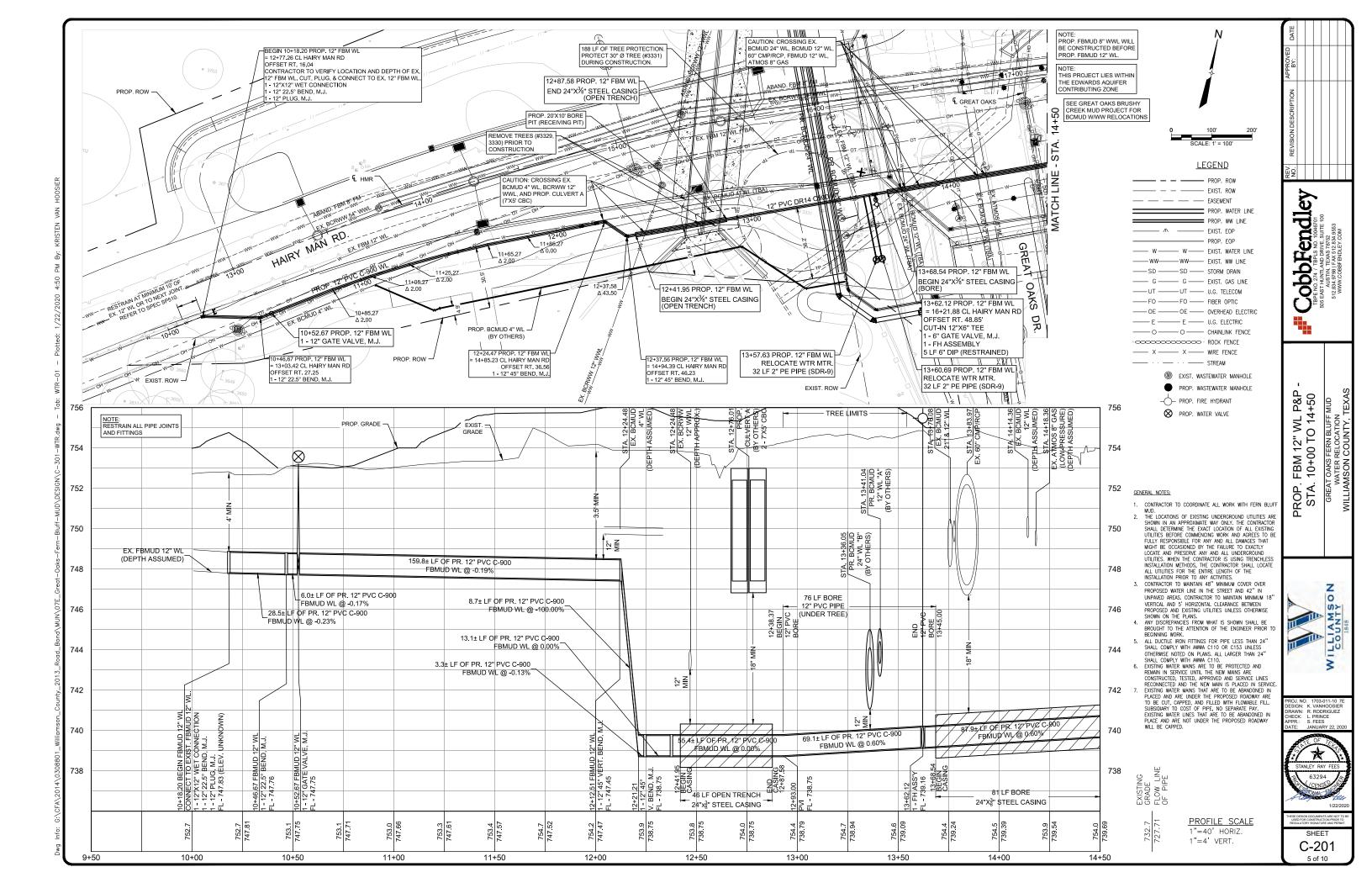


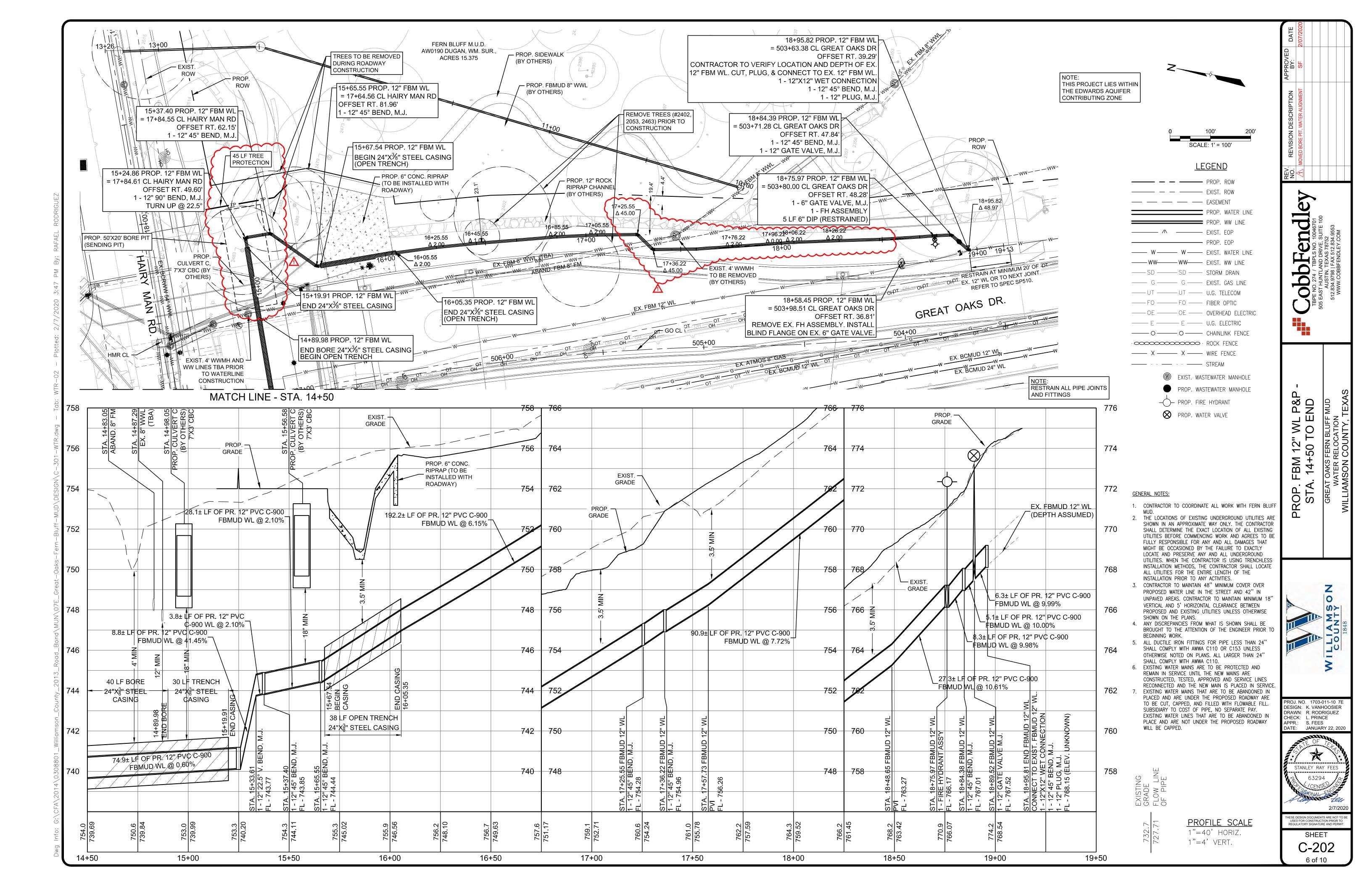
DJ. NO. 1703-011-10 7E SIGN: K. VANHOOSIER WWN: R. RODRIGUEZ ECK: L. PRINCE PR.: S. FEES TE: JANUARY 22, 202

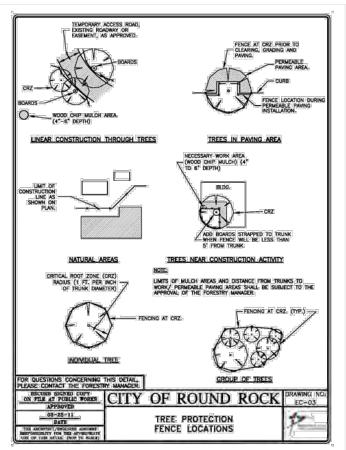


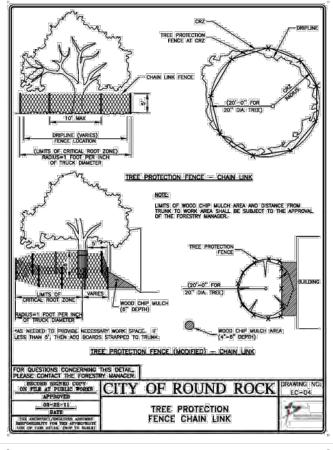
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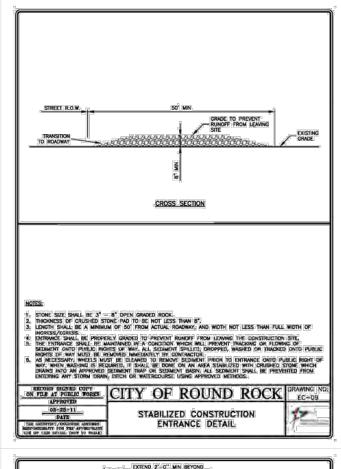
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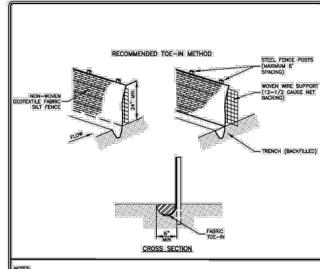












TREE PROTECTION NOTES

- STEEL, POSTS (WHICH SUPPORT THE SULT FENCE SHALL, BE INSTALLED ON A SUGHT ANGLE TOWARD, THE ANTICIPATED RUNOFT SOURCE). POST MUST BE EMBEDDED A MIN. OF ONE (17) FOOT. THE TOTO OF THE SULT FENCE SHALL BE TRENCHED IN WITH A SPACE OR RECHARCAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW, WHERE FROME CHANNEL BY THE TRENCHED ON LEGAL THE TOWN OF THE TO
- BALLERS THAN IN CO. PAYMENTY, MECHES DEEP AND 6. INCHES INDIC TO ALLOW FOR THE SILT FENCE!

 THE TREADS AND THE CANDINUM OF 6. INCHES DEEP AND 6. INCHES INDIC TO ALLOW FOR THE SILT FENCE!

 FABRIC TO BE LAD! IN THE GROUND AND BACKFILLD WITH COMPACTED IMPERAL!

 SECURIEVY PARTHERS TO THE STEEL FENCE POSTS.

 IS SECURELY PARTHERS TO THE STEEL FENCE POSTS.

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 MADE PROMPTLY AS INCEDED:

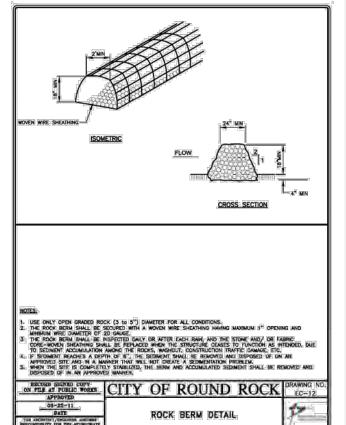
 SLIT FENCE SHALL BE REMOVED WHEN THE ISTEE IS COMPLETELY STABILIZED SO AS NOT-TO BLOCK-OR IMPEDE

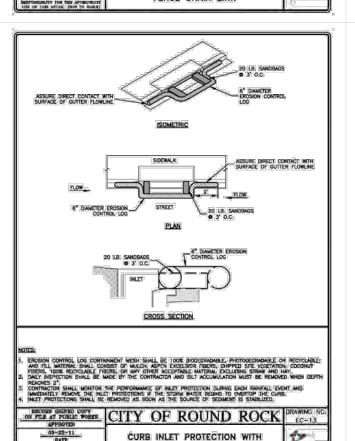
 STORM FLOW FOR DEAMNEL.

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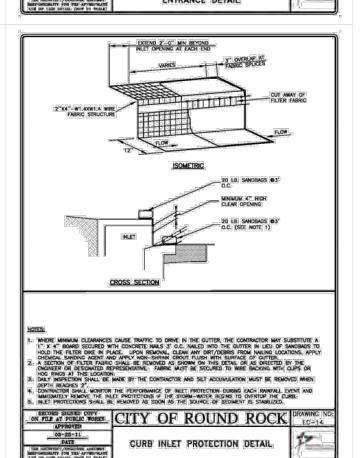
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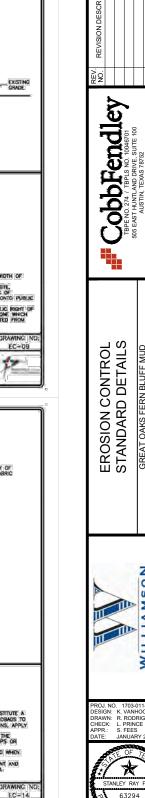
ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING N
09-25-11 DATE	SILT FENCE DETAIL	1
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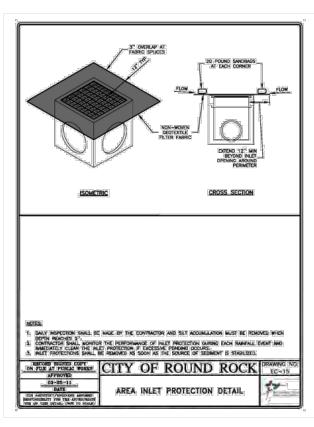
EROSION CONTROL LOG DETAIL

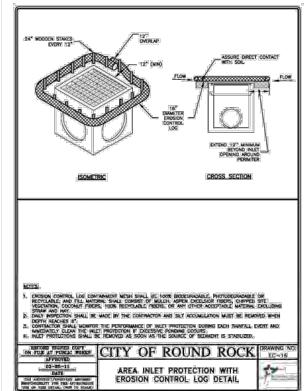


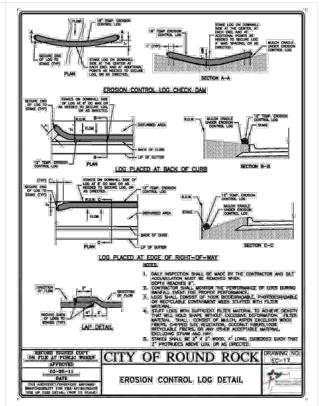


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SHEET C-501









EROSION CONTROL
STANDARD DETAILS
GREAT OAKS FERN BLUFF MUD

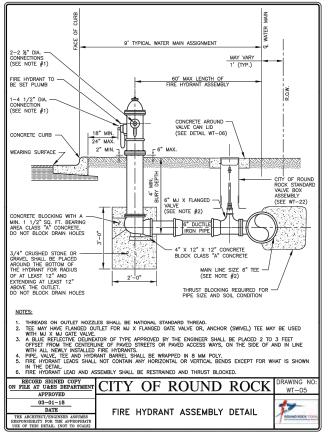
WILLIAMSON COUNTY

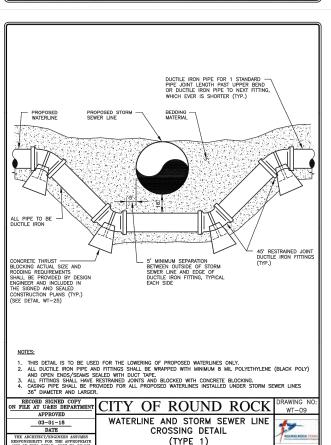
PROJ. NO. 1703-011-10 7E DESIGN: K. VANHOOSIER DRAWN: R. RODRIGUEZ CHECK: L. PRINCE APPR.: S. FEES DATE: JANUARY 22, 202

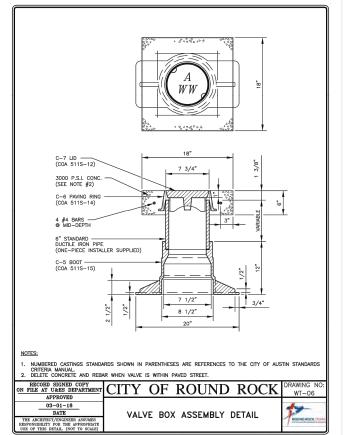


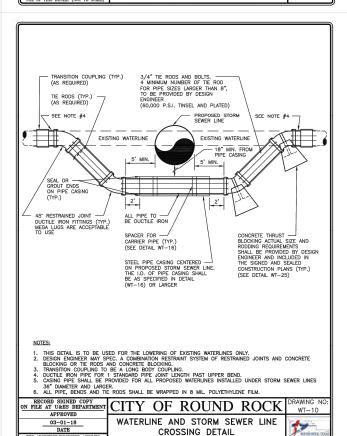
1/22/2021
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C-502

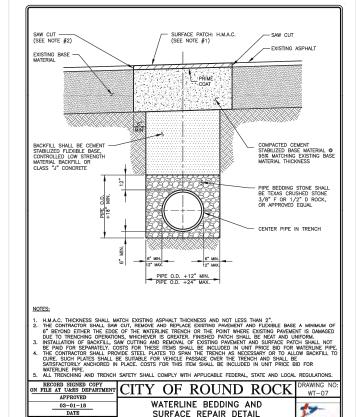






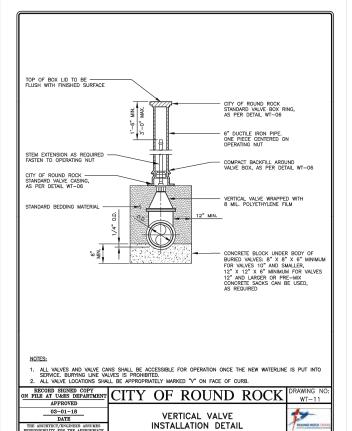


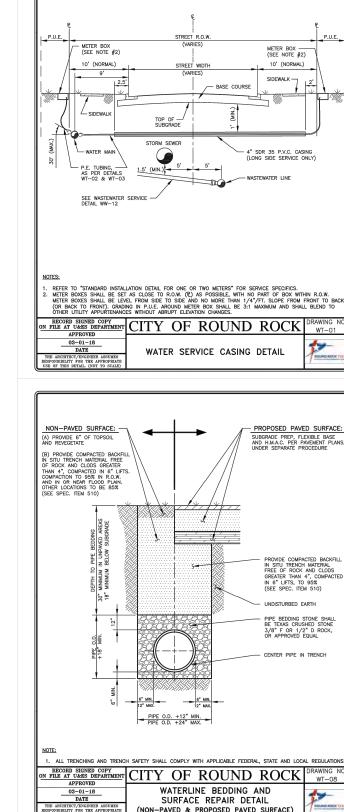
(TYPE 2)



SURFACE REPAIR DETAIL (EXISTING PAVED SURFACE)

FOR DETAILS SHOWING "CITY OF ROUND ROCK" TO BE LABELED ON INSTALLED ITEMS, GENERIC ITEMS SHALL BE INSTALLED INSTEAD. FOR EXAMPLE, FOR WATER ITEMS, JUST "WATER" SHALL BE LABELED.







UTILITY WATER Z 0

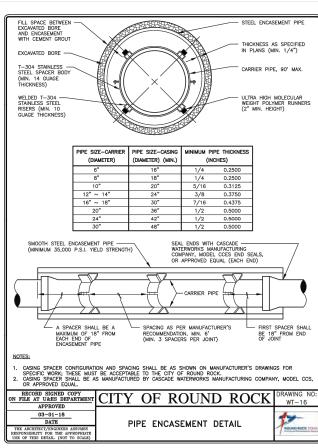
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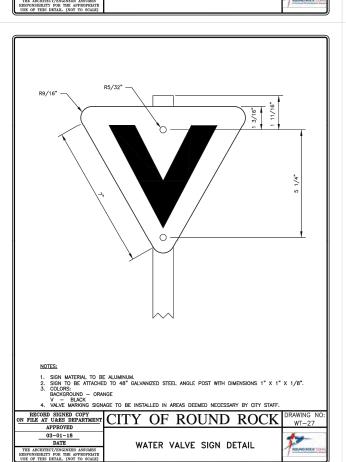
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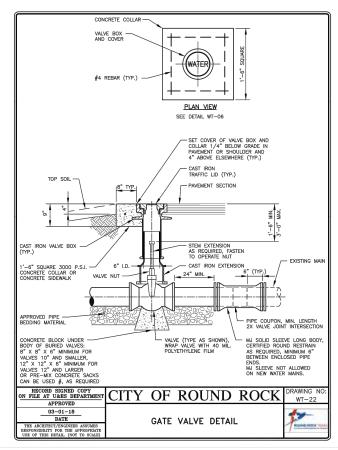


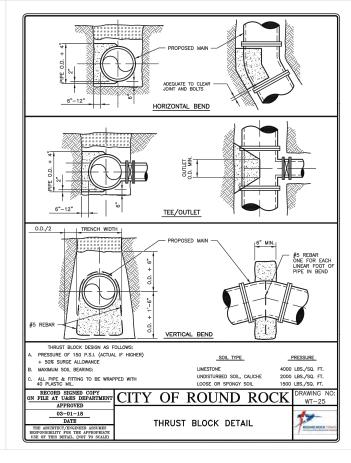
SHEET C-503

CROSSING DETAIL









NOTE: FOR DETAILS SHOWING "CITY OF ROUND ROCK" TO BE LABELED ON INSTALLED ITEMS GENERIC ITEMS SHALL BE INSTALLED
INSTEAD. FOR EXAMPLE, FOR WATER ITEMS JUST "WATER" SHALL BE LABELED.



N N N

CobbFendley

S

DET.



SIGN. .
RAWN: R. RODNIG.
JHECK: L. PRINCE
APPR.: S. FEES
'ANUARY 2'



SHEET C-504

