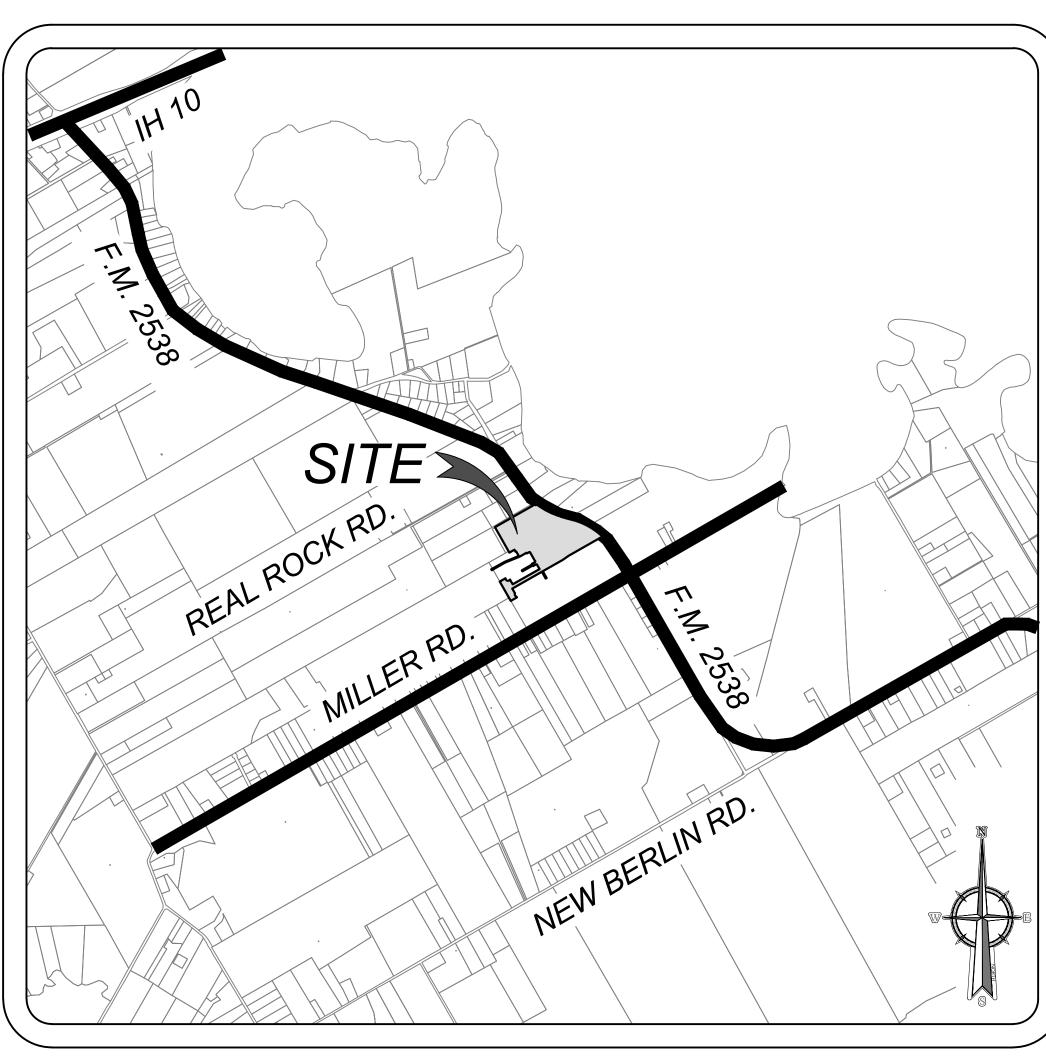
LILY TRAILS UNIT-1 BEXAR COUNTY, TEXAS STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS



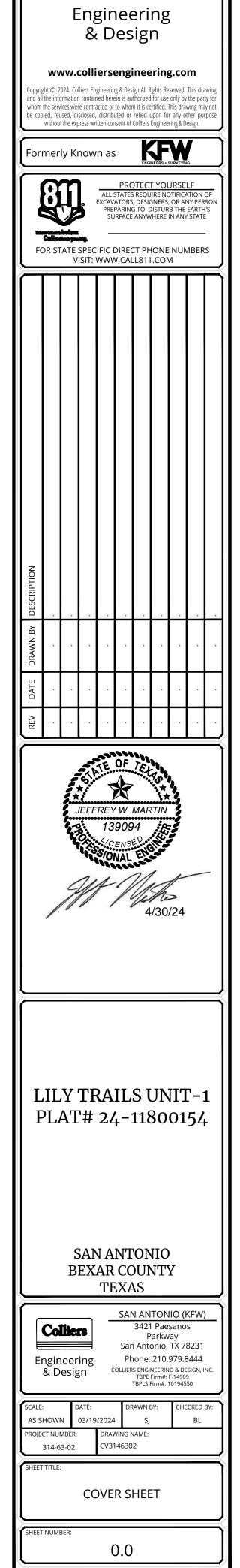
LOCATION MAP N.T.S.

OWNER/DEVELOPER LENNAR HOMES OF TEXAS LAND & CONSTRUCTION LTD. 100 NE LOOP 410, SUITE 1125 SAN ANTONIO, TEXAS 78216

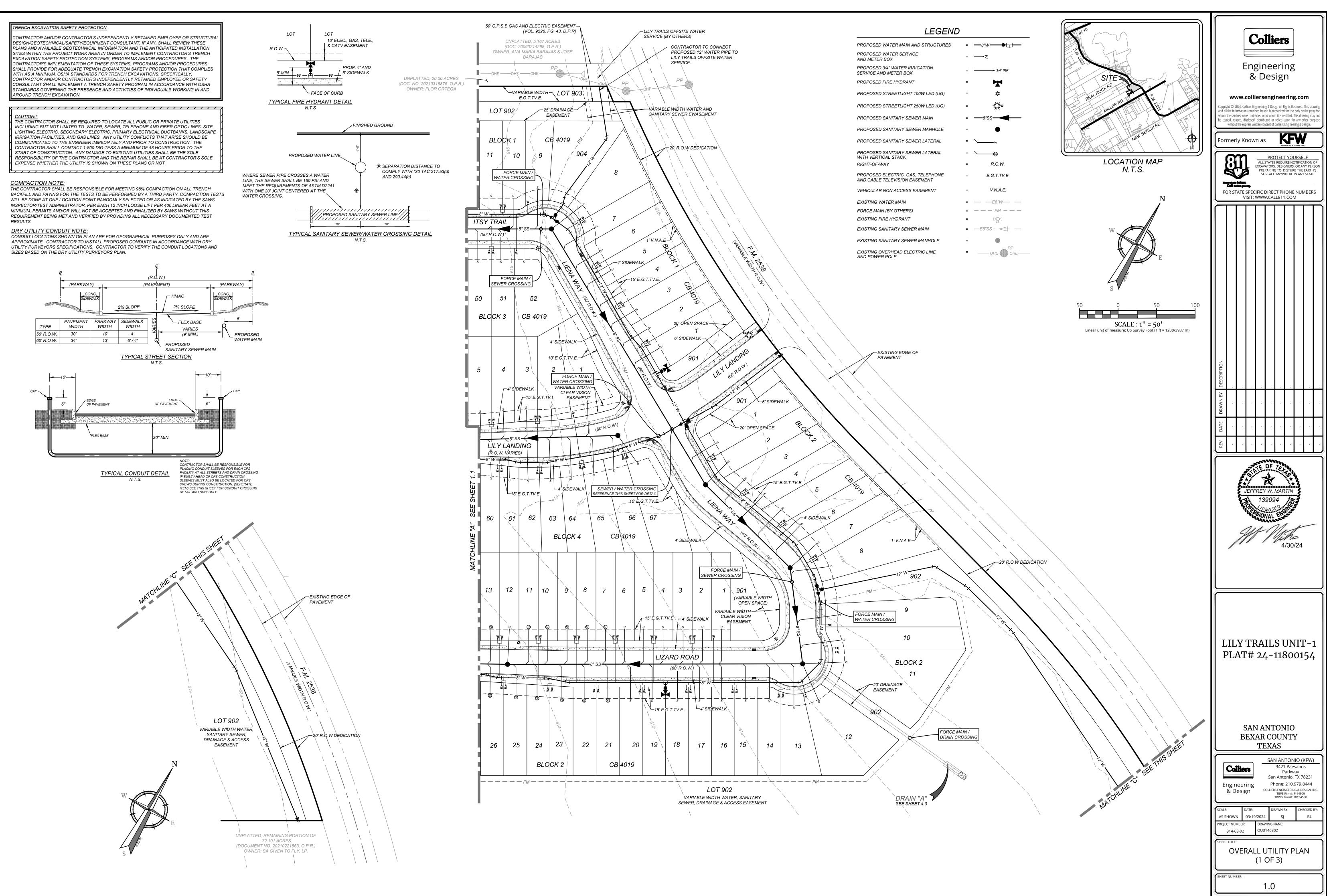
COVER SHEET OVERALL UTILITY PLA OVERALL UTILITY PLA OVERALL UTILITY PLA ULTIMATE CONDITION OVERALL GRADING PL OVERALL GRADING PL OVERALL GRADING PL DRAIN A PLAN & PROP DRAIN B PLAN & PROP DRAIN B PLAN & PROP DRAIN C & DRAIN D PL TYPE C INLET DETAILS JUNCTION BOX & 4 -W CONCRETE COLLAR & LILY LANDING PLAN A ITSY MOUNTAIN & ITS ITSY TRAIL, LIENA WA LIZARD ROAD & RAINE UNICORN VALLEY & R STREET DETAIL SHEE WHEELCHAIR RAMP A CONCRETE DRIVEWA TRAFFIC SIGNAGE & F TRAFFIC SIGNAGE & F TRAFFIC SIGNAGE DE TRAFFIC SIGNAGE DE TXDOT PAVEMENT MA SANITARY SEWER CO OVERALL SANITARY S OVERALL SANITARY S OVERALL SANITARY S LINE "A" PLAN AND PR LINE "A" PLAN AND PF LINE "B" PLAN AND PF LINE "C" PLAN AND PF LINE "D" PLAN AND PF LINE "E" PLAN AND PF LINE "G" PLAN AND PF SANITARY SEWER NO SANITARY SEWER NO SANITARY SEWER DE SANITARY SEWER DE WATER DISTRIBUTION WATER DISTRIBUTION WATER DISTRIBUTION WATER DISTRIBUTION WATER DETAIL SHEET WATER DETAIL SHEET STORMWATER POLLU STORMWATER POLLU STORMWATER POLLU STORMWATER POLLU

Sheet List Table

Sheet List Table	
Sheet Title	Sheet Number
	0.0
AN (1 OF 3)	$-\frac{0.0}{1.0}$
$AN(2 \overline{OF} 3) = $	$-\frac{1.0}{1.1}$
AN (3 OF 3)	<u> </u>
NS MASTER DRAINAGE PLAN	$-\frac{1.2}{2.0}$
PLAN (1 OF 3)	<u> </u>
PLAN (2 OF 3)	3.1
PLAN (3 OF 3)	3.2
` ´	4.0
FILE	4.1
FILE	4.2
PLAN & PROFILE	4.3
	<u> </u>
VAY INLET DETAIL	4.5
& PIPE DETAILS	4.6
AND PROFILE	<u> </u>
SY TRAIL PLAN AND PROFILE	<u> </u>
AY & LIZARD ROAD PLAN AND PROFILE	5.2
BOW RIVER PLAN AND PROFILE	<u> </u>
RAINBOW UNICORN PLAN AND PROFILE	5.4
ET	
AND STREETSCAPE DETAIL SHEET	5.6
Y DETAIL SHEET	<u> </u>
PEDESTRIAN ACCESSIBILITY PLAN (1 OF 2)	5.8
PEDESTRIAN ACCESSIBILITY PLAN (2 OF 2)	<u> </u>
ETAILS (1 OF 2)	5.10
TAILS (2 OF 2)	<u> </u>
ARKING DETAILS	<u> </u>
DVER SHEET	6.0
SEWER PLAN (1 OF 3)	6.1
SEWER PLAN (2 OF 3)	6.2
SEWER PLAN (3 OF 3)	6.3
ROFILE	6.4
ROFILE	6.5
ROFILE	6.6
ROFILE	6.7
ROFILE	6.8
ROFILE	6.9
ROFILE	6.10
DTES (1 OF 2)	6.11
DTES (2 OF 2)	6.12
TAILS (1 OF 2)	6.13
TAILS (2 OF 2)	6.14
N COVER SHEET	7.0
N PLAN (1 OF 3)	7.1
N PLAN (2 OF 3)	7.2
N PLAN (3 OF 3)	7.3
T (1 OF 2)	7.4
T (2 OF 2)	7.5
JTION PREVENTION PLAN (1 OF 3)	8.0
JTION PREVENTION PLAN (2 OF 3)	8.1
JTION PREVENTION PLAN (3 OF 3)	8.2
JTION PREVENTION DETAILS	8.3



Colliers



CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

(R.O.W.) (PAVEMENT) (PARKWAY) (PARKWAY) CONC. SIDEWALK CONC. SIDEWALK HMAC 2% SLOPE 2% SLOPE PAVEMENT PARKWAY SIDEWALK ∽ FLEX BASE TYPE WIDTH WIDTH WIDTH VARIES 50' R.O.W. 30' 10' 4' (9' MIN. PROPOSED 60' R.O.W. 34' 13' 6'/4' WATER MAIN PROPOSED SANITARY SEWER MAIN TYPICAL STREET SECTION **---**10′ ---OF PAVEMEN OF PAVEME NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONDUIT SLEEVES FOR EACH CPS FACILITY AT ALL STREETS AND DRAIN CROSSING TYPICAL CONDUIT DETAIL IF BUILT AHEAD OF CPS CONSTRUCTION. SLEEVES MUST ALSO BE LOCATED FOR CPS CREWS DURING CONSTRUCTION. (SEPERATE TEM) SEE THIS SHEET FOR CONDUIT CROSSING DETAIL AND SCHEDULE. LOT LOT 10' ELEC., GAS, TELE. & CATV EASEMENT R.O.W. ¬ _____ PROP. 4' AND 6' SIDEWALK └─ FACE OF CURB TYPICAL FIRE HYDRANT DETAIL N.T.S >FINISHED GROUND PROPOSED WATER LINE * SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) WHERE SEWER PIPE CROSSES A WATER AND 290.44(e) LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING. / PROPOSED SANITARY SEWER LINE 10'

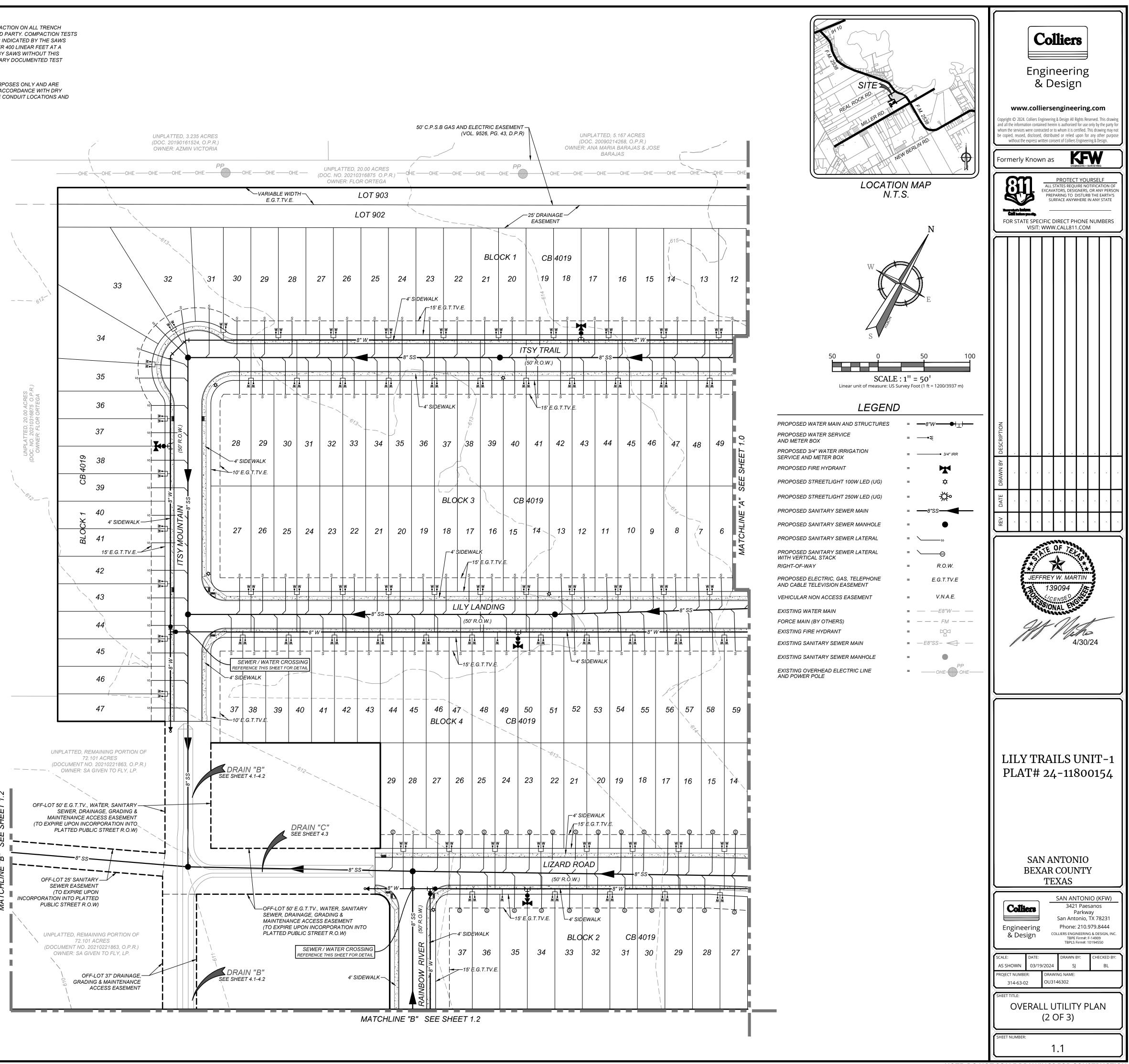
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL N.T.S.

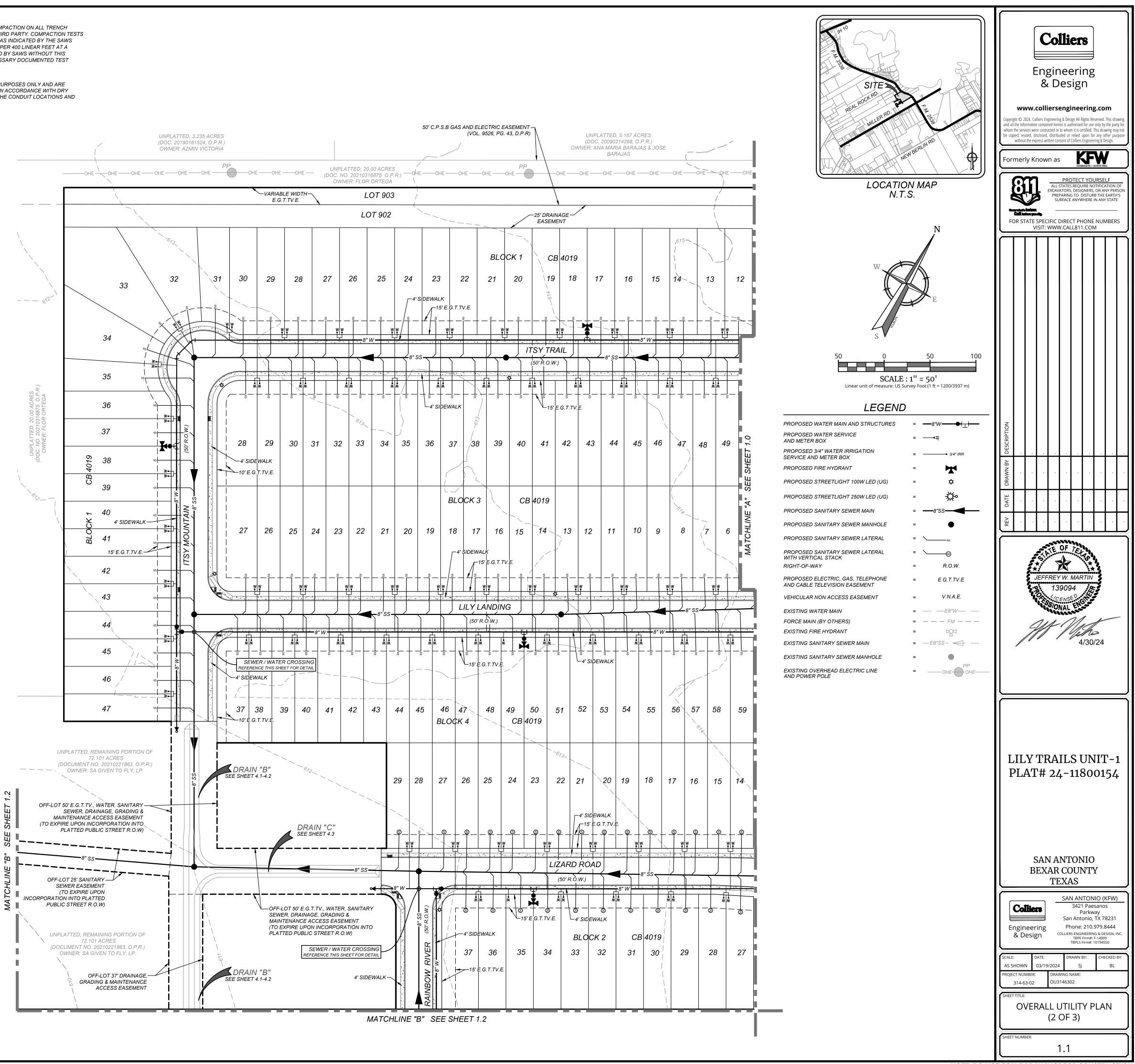
OMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

DRY UTILITY CONDUIT NOTE

CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.







AROUND TRENCH EXCAVATION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND

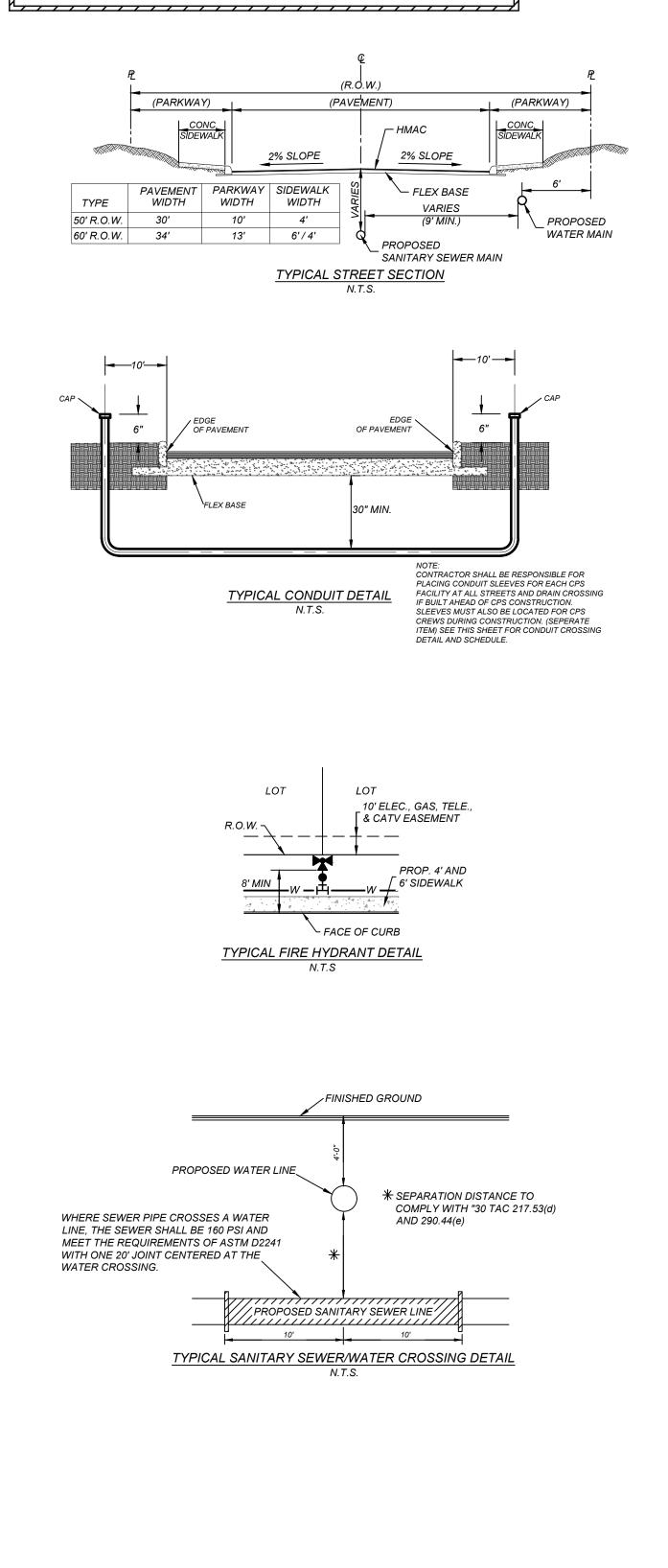
OMPACTION NOTE:

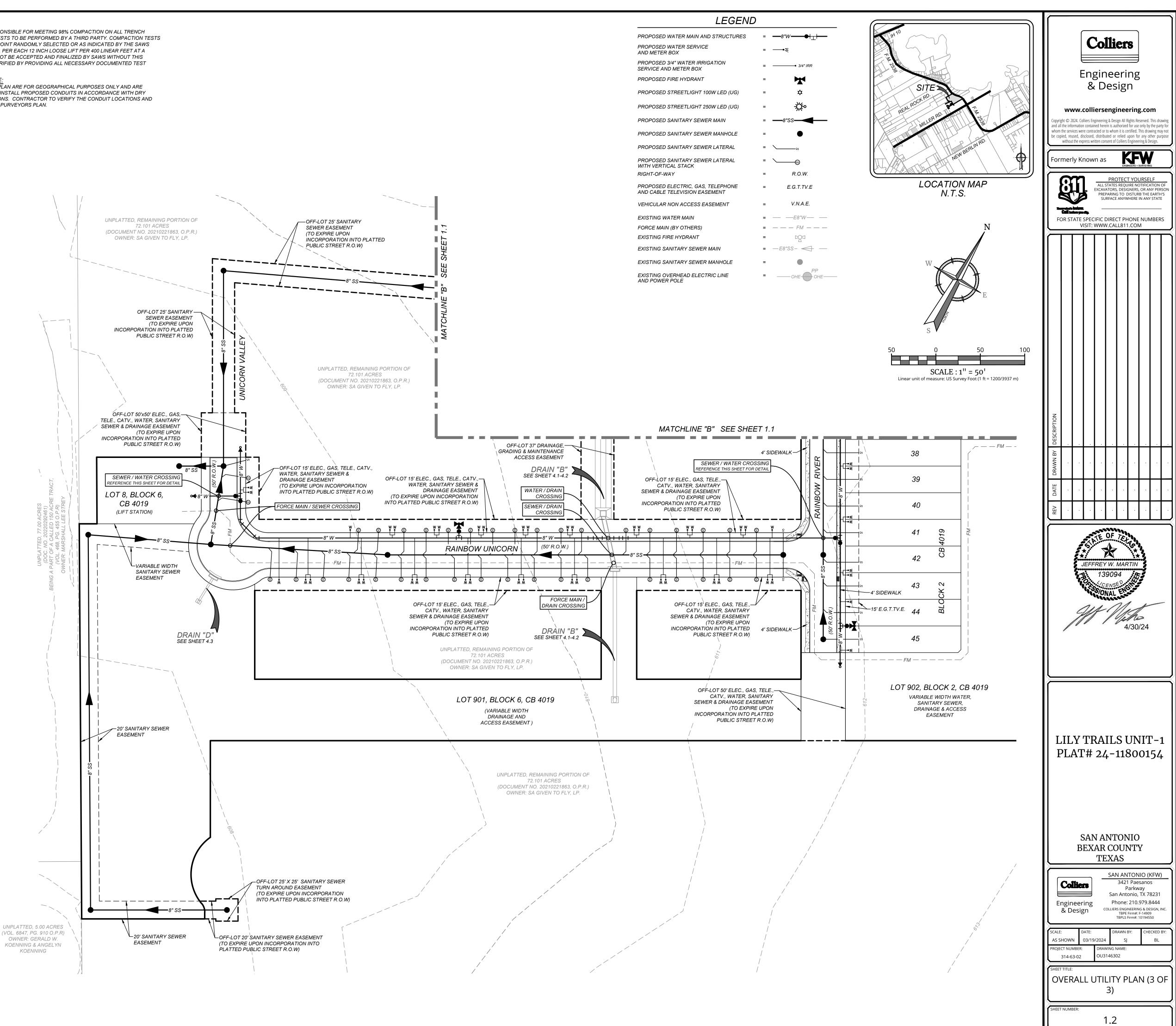
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR. PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

DRY UTILITY CONDUIT NOTE

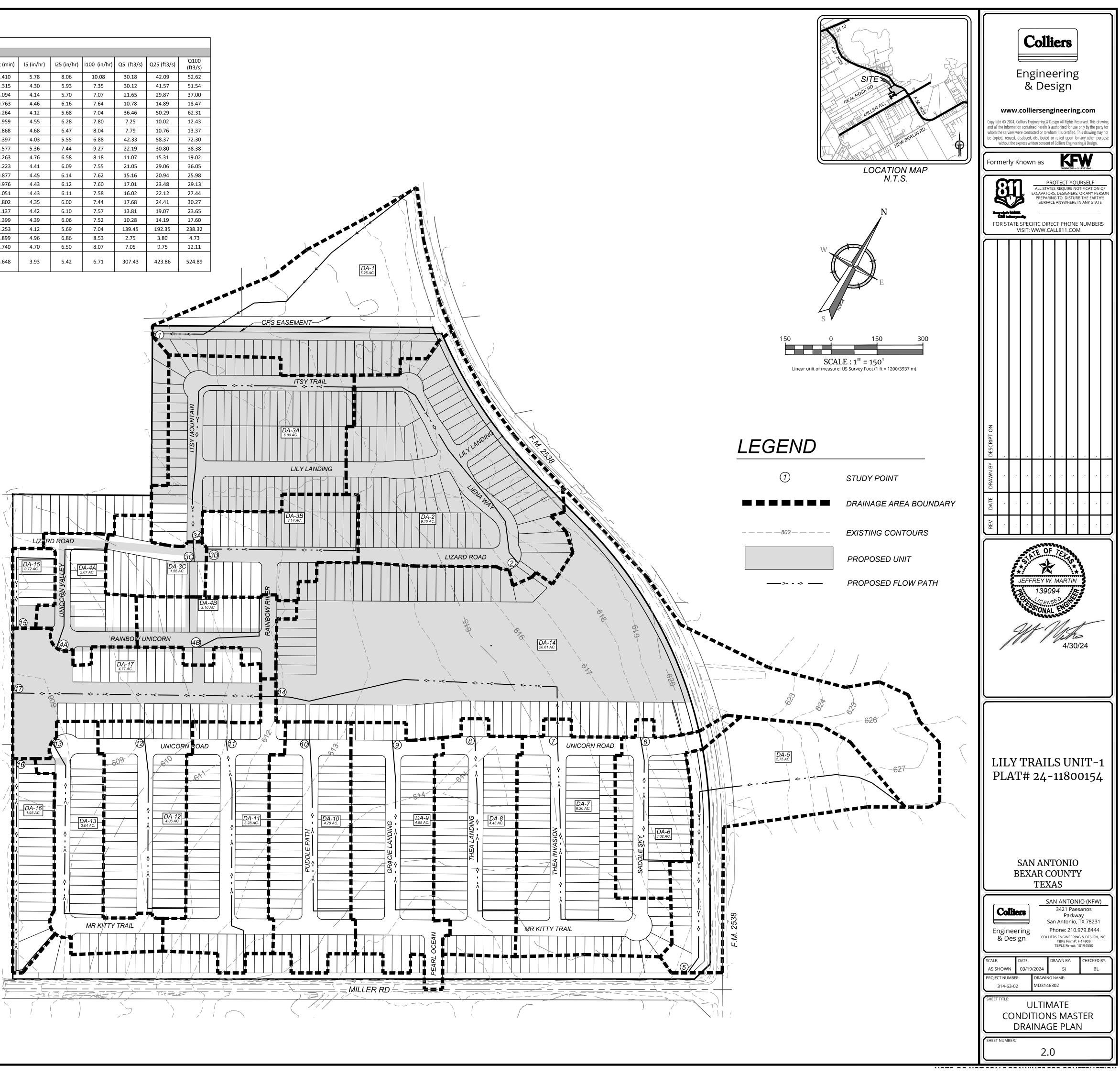
CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.

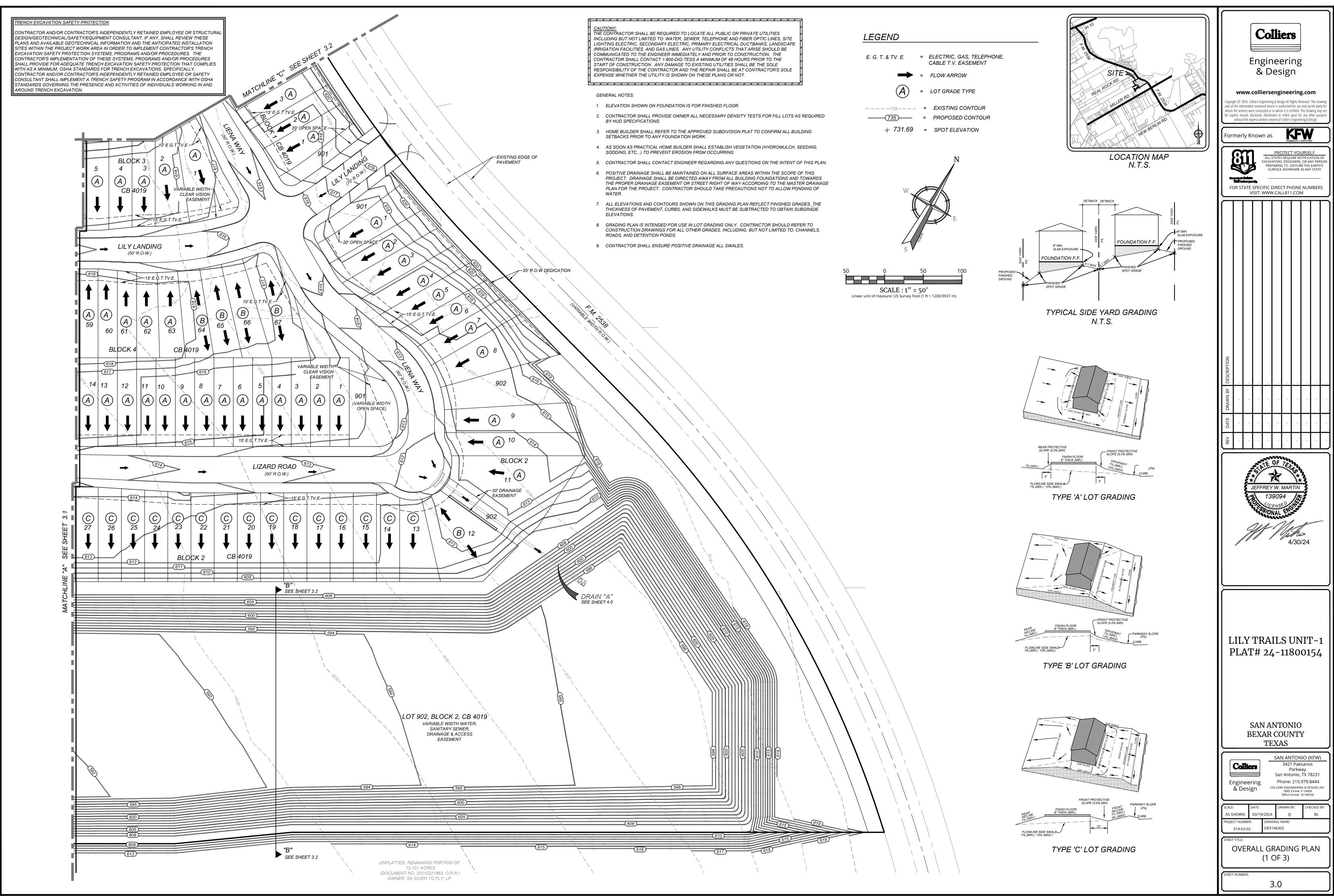
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.



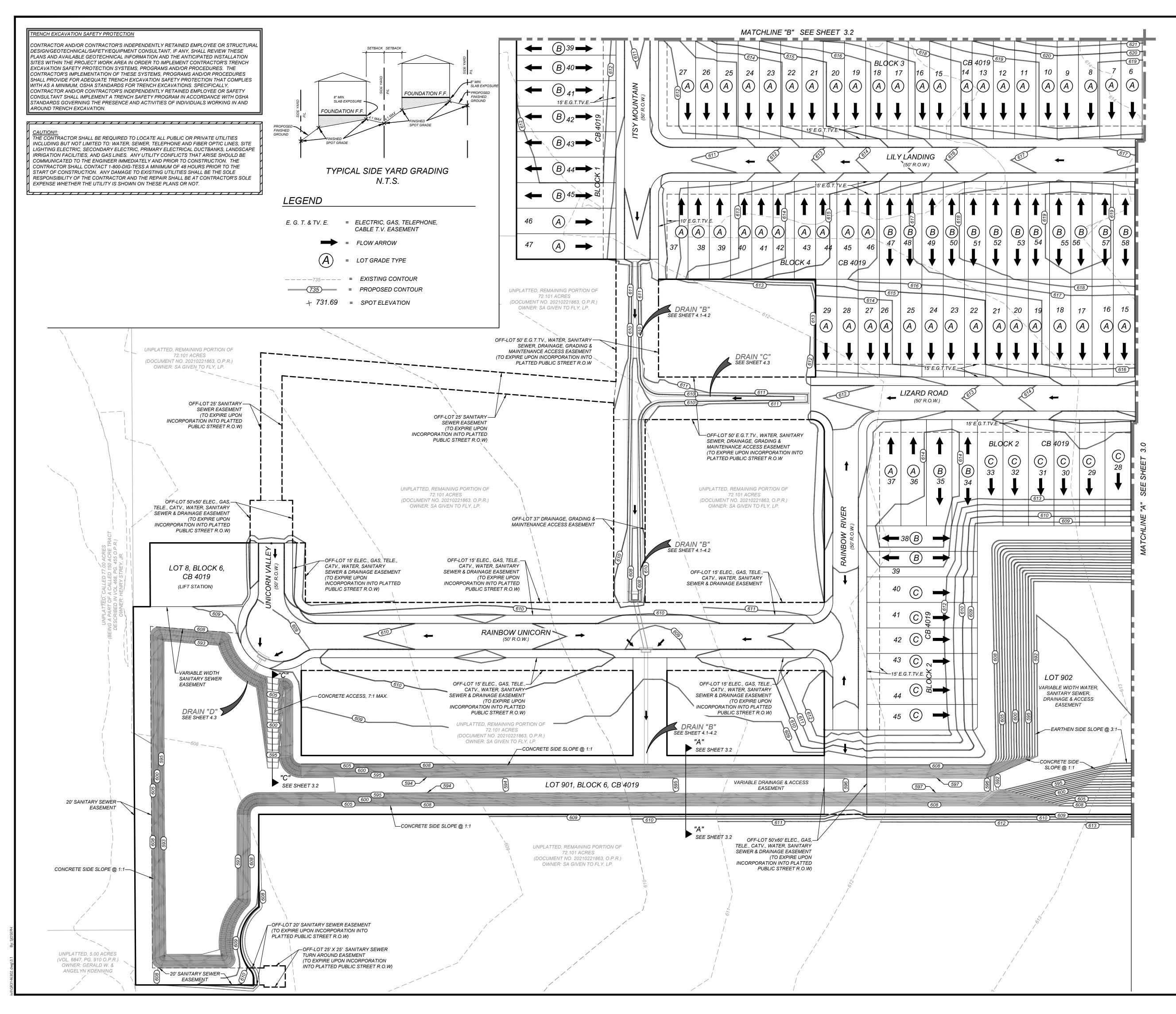


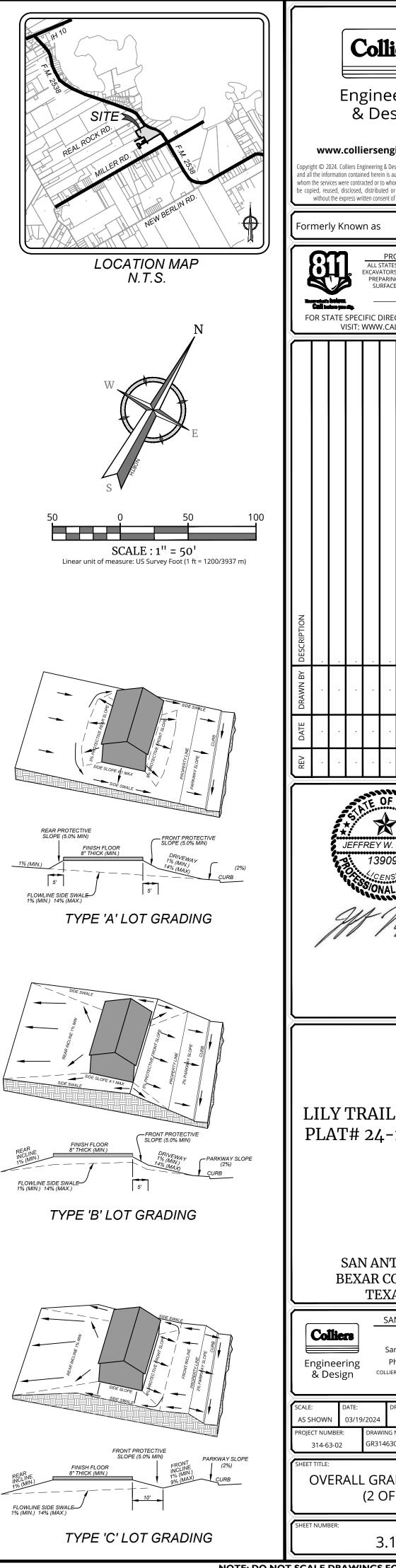
							METHOD				
				HIDROLO	UNIVIAR	RY - RATIONAL	METHOD				1
Study Point	Drainage Area	(Acres)	С	Tcarryover	(min)	Tovrl (min)	Tsc (min)	Tch (min)	Ttot (min)	15 (in/hr)	125
1	DA-1	7.25	0.72	SNYDER LAG	TIME USED, R	EFERENCE SPR	READSHEET IN	SWMP	12.410	5.78	8
2	DA-2	9.10	0.77			16.93	4.428	0.961	22.315	4.30	5
3A	DA-3A	6.80	0.77			16.93	6.473	0.694	24.094	4.14	Ľ.
3B	DA-3B	3.14	0.77			16.93	3.317	0.519	20.763	4.46	6
3C	DA-3A+DA-3B+DA-3C	11.49	0.77	FROM DA-3A	24.094			0.169	24.264	4.12	Ę
4A	DA-4A	2.07	0.77			16.93	3.032	0.000	19.959	4.55	f
4B	DA-4B	2.16	0.77			16.93	1.941	0.000	18.868	4.68	f
3D	DA-3A+DA-3B+DA-3C+DA-4B	13.65	0.77	FROM DA-3C	24.264			1.133	25.397	4.03	ŗ
5	DA-5	5.75	0.72	SNYDER LAG	TIME USED, R	EFERENCE SPR	READSHEET IN	SWMP	14.577	5.36	
6	DA-6	3.02	0.77			14.88	3.166	0.217	18.263	4.76	f
7	DA-7	6.20	0.77			16.93	3.607	0.689	21.223	4.41	f
8	DA-8	4.43	0.77			16.93	3.439	0.511	20.877	4.45	f
9	DA-9	4.98	0.77			16.93	3.661	0.389	20.976	4.43	6
10	DA-10	4.70	0.77			16.93	3.763	0.361	21.051	4.43	(
11	DA-11	5.28	0.77			16.93	4.422	0.453	21.802	4.35	6
12	DA-12	4.06	0.77			16.93	3.905	0.306	21.137	4.42	f
13	DA-13	3.04	0.77			16.93	4.231	0.242	21.399	4.39	f
14	DA-6+DA-7+DA-8+DA-9+DA-10+DA-14	43.94	0.77	FROM DA-7	21.223			3.031	24.253	4.12	Ĺ
15	DA-15	0.72	0.77			15.99	0.269	0.644	16.899	4.96	f
16	DA-16	1.95	0.77			15.99	0.826	1.928	18.740	4.70	6
17	DA-1+DA-2+DA-3A+DA-3B+DA-3C+DA-4A-DA+4B+DA-5 +DA-6+DA-7+DA-8+DA-9+DA-10+DA-11+DA-12+DA-13 +DA-14+DA-15+DA-16+DA-17	101.58	0.77	FROM DA-14	24.253			2.394	26.648	3.93	!

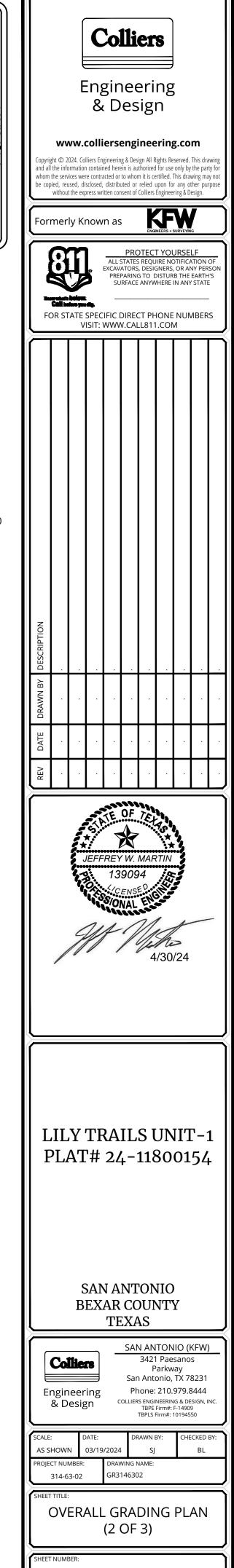


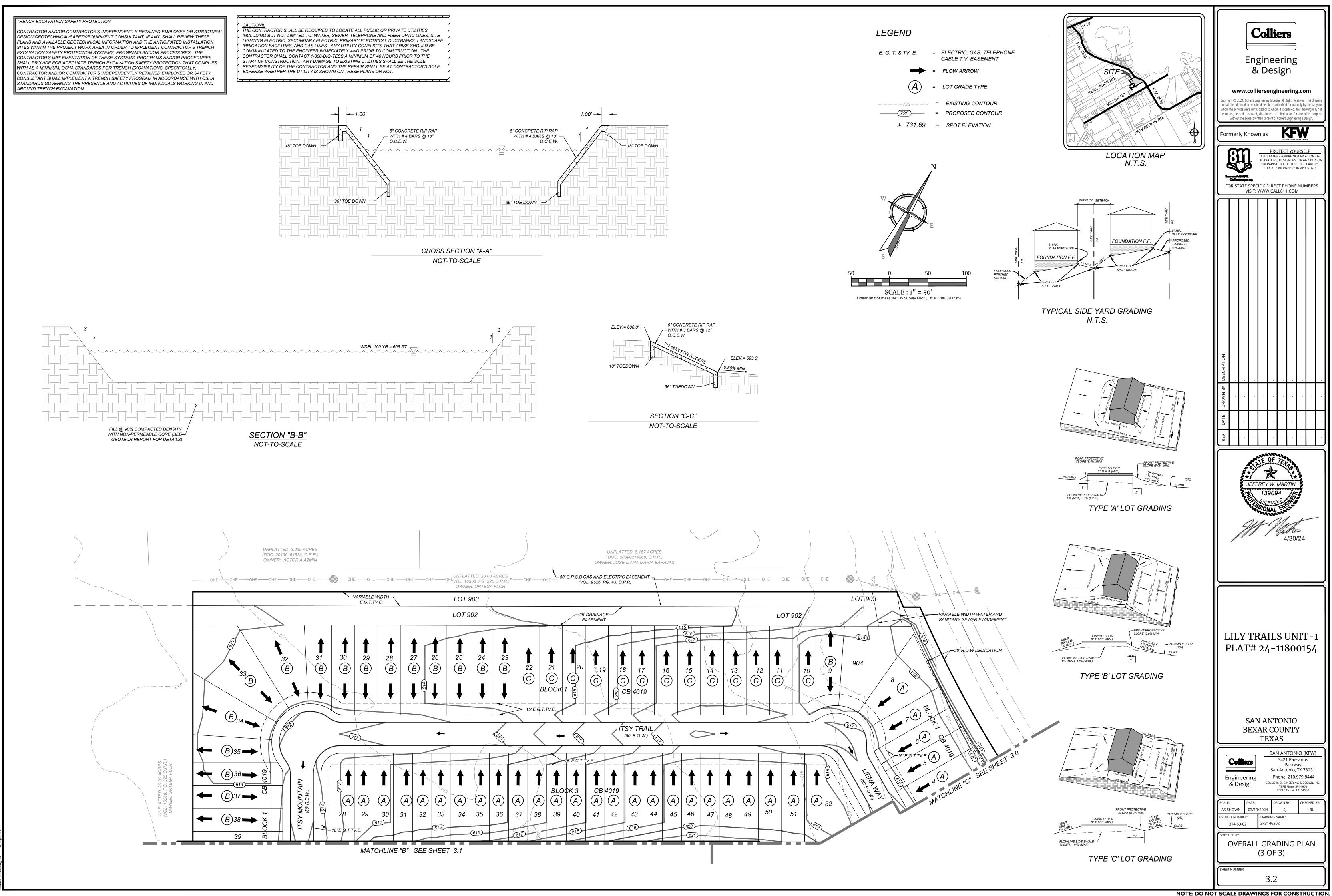


146302.dwg\3.0 By: SJOS









COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BE ING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

DRY UTILITY CONDUIT NOTE:

CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYOR'S PLAN.

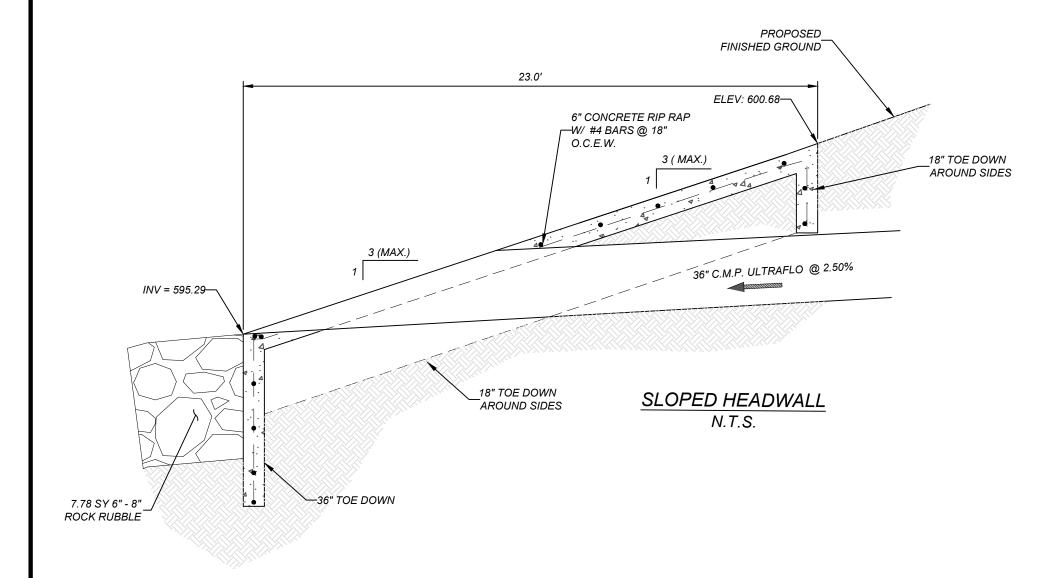
ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

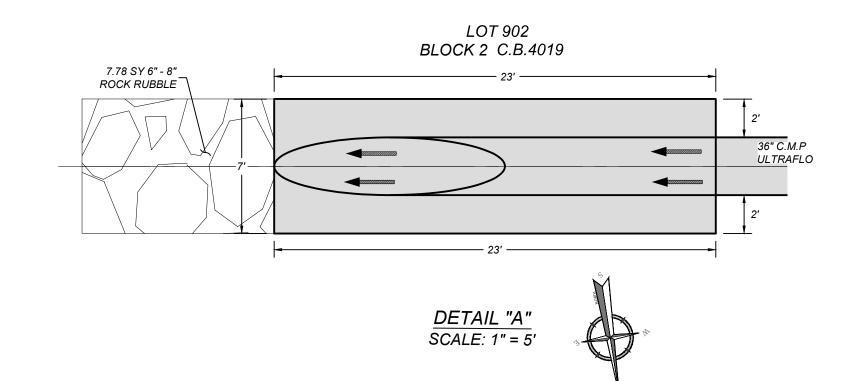
TRENCH EXCAVATION SAFETY PROTECTION

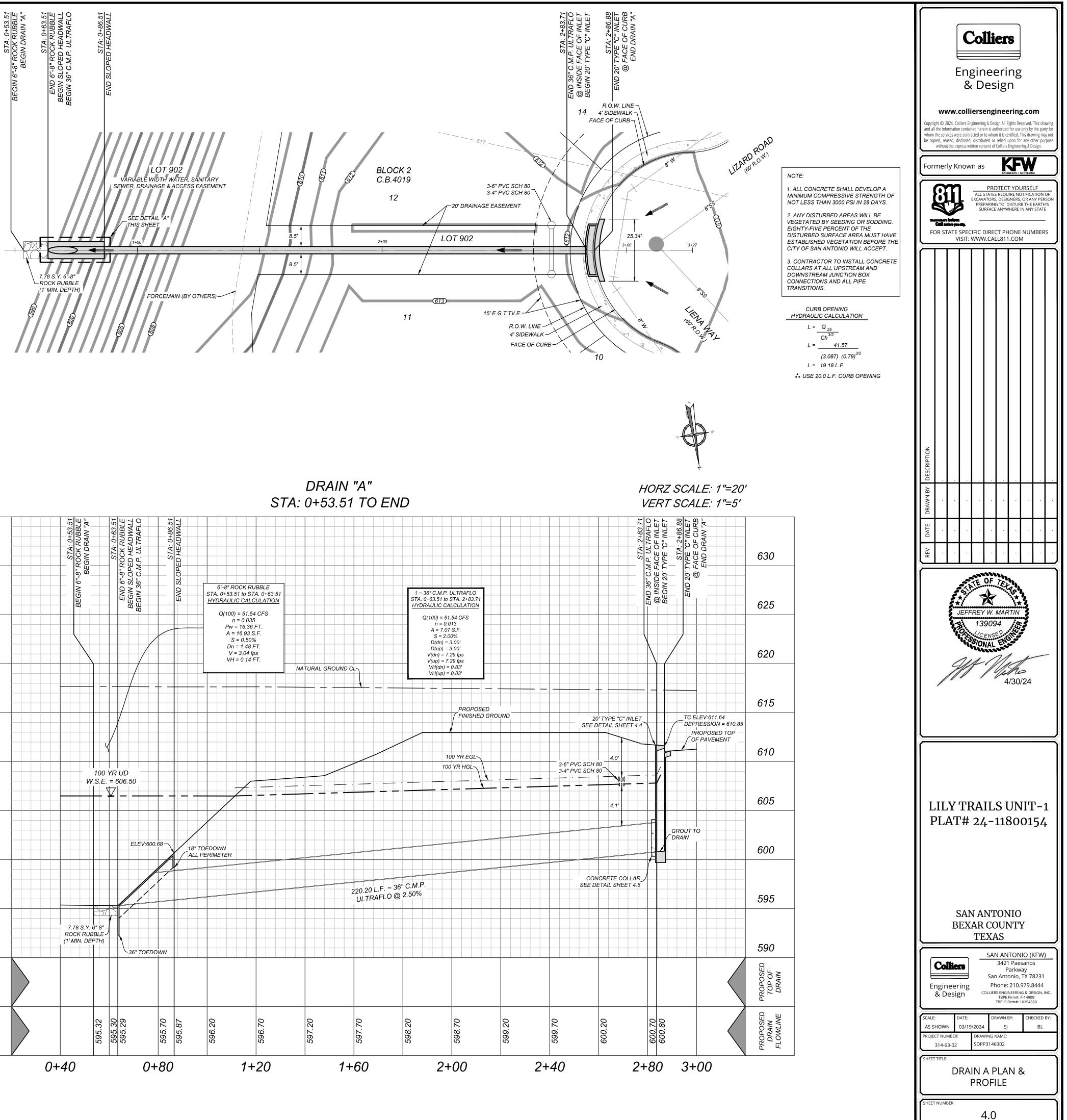
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND

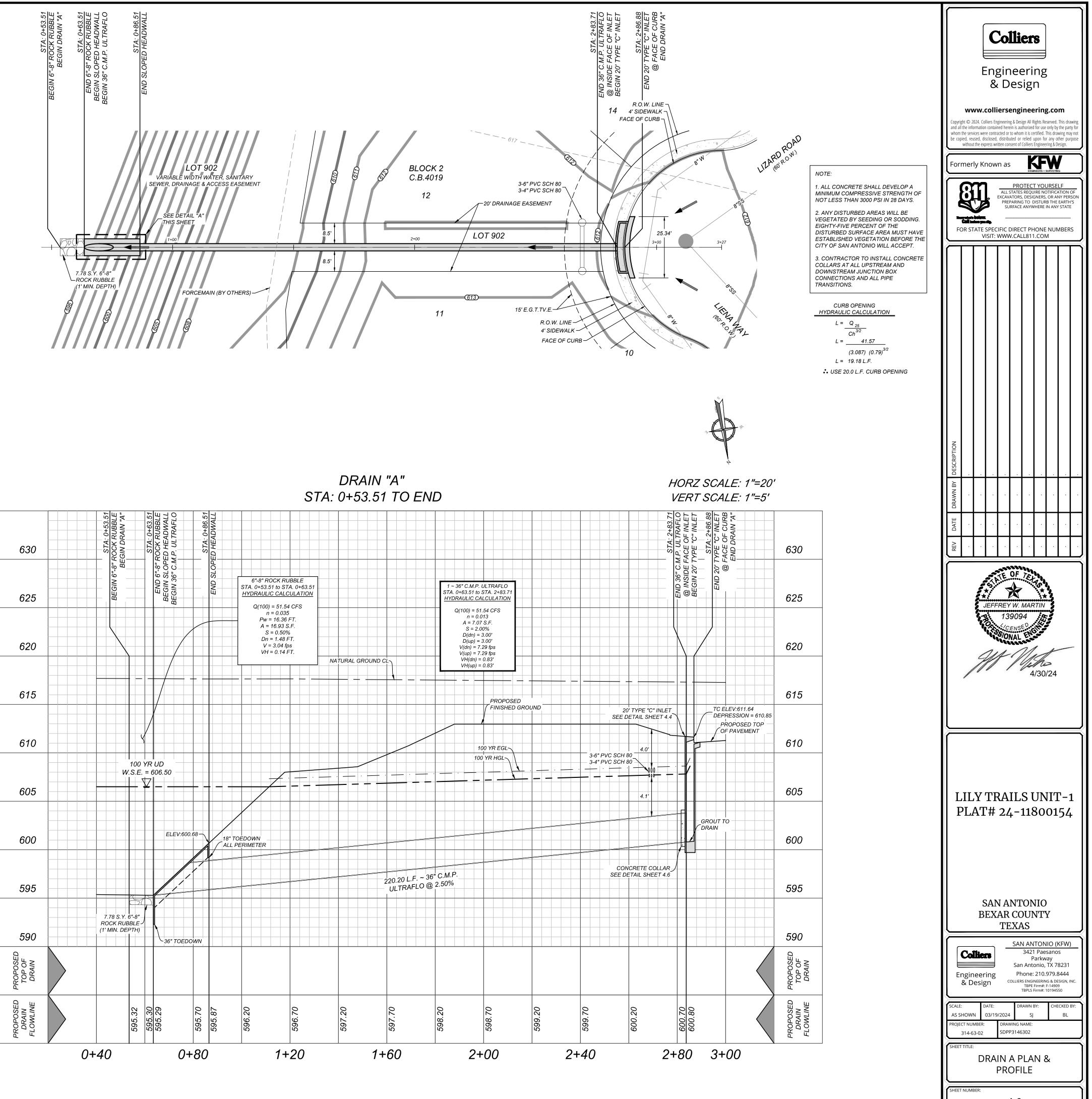
CAUTION!!:

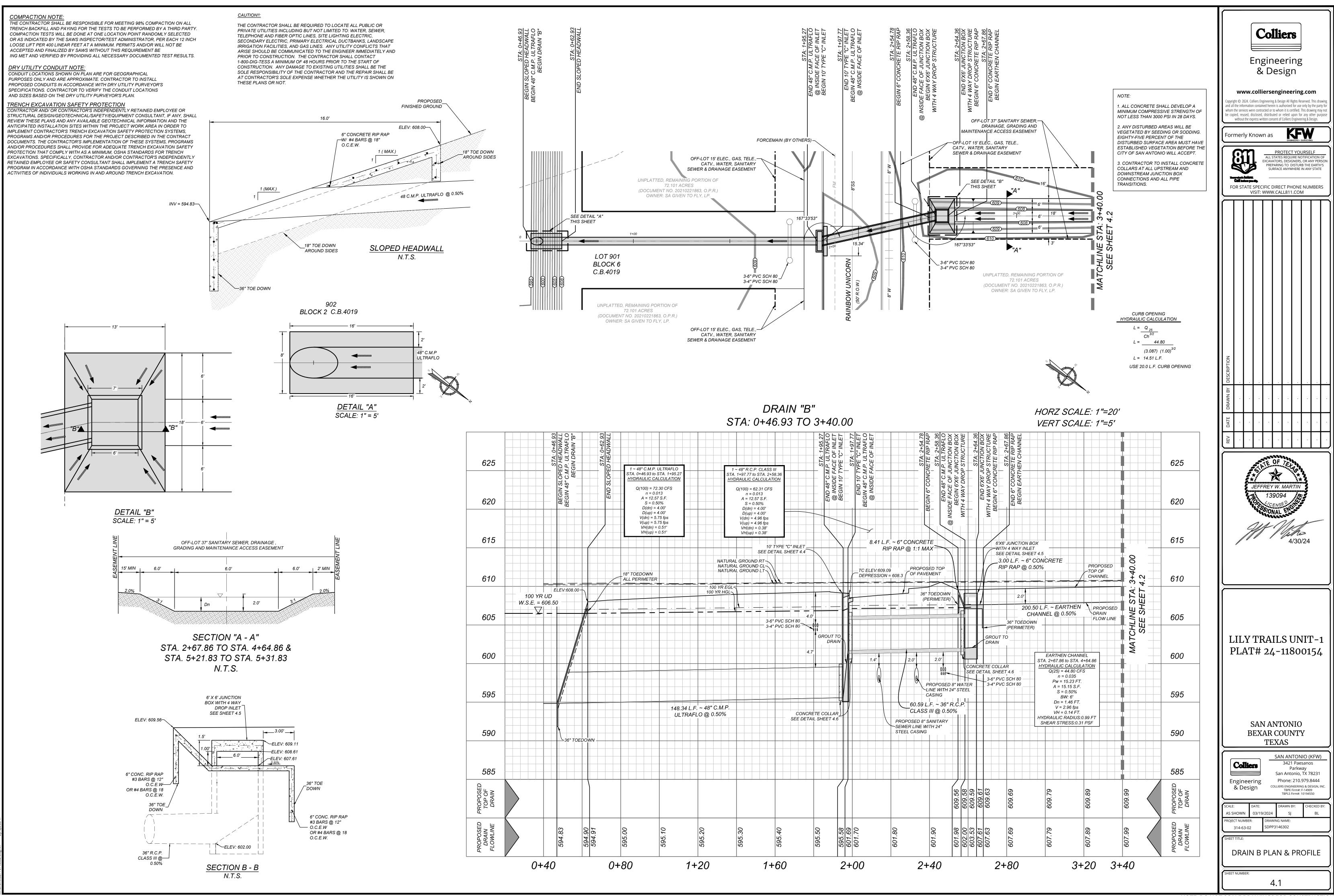
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.











COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BE ING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

DRY UTILITY CONDUIT NOTE:

CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYOR'S PLAN.

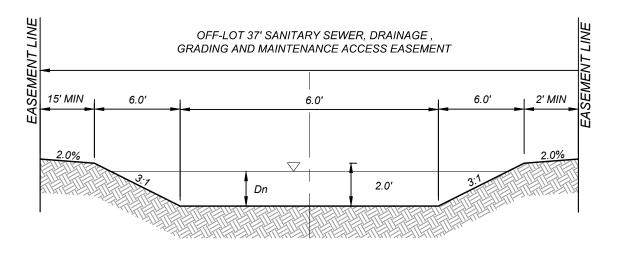
ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND

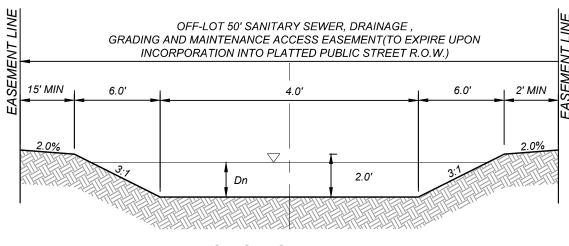
CAUTION!!:

THESE PLANS OR NOT.

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON

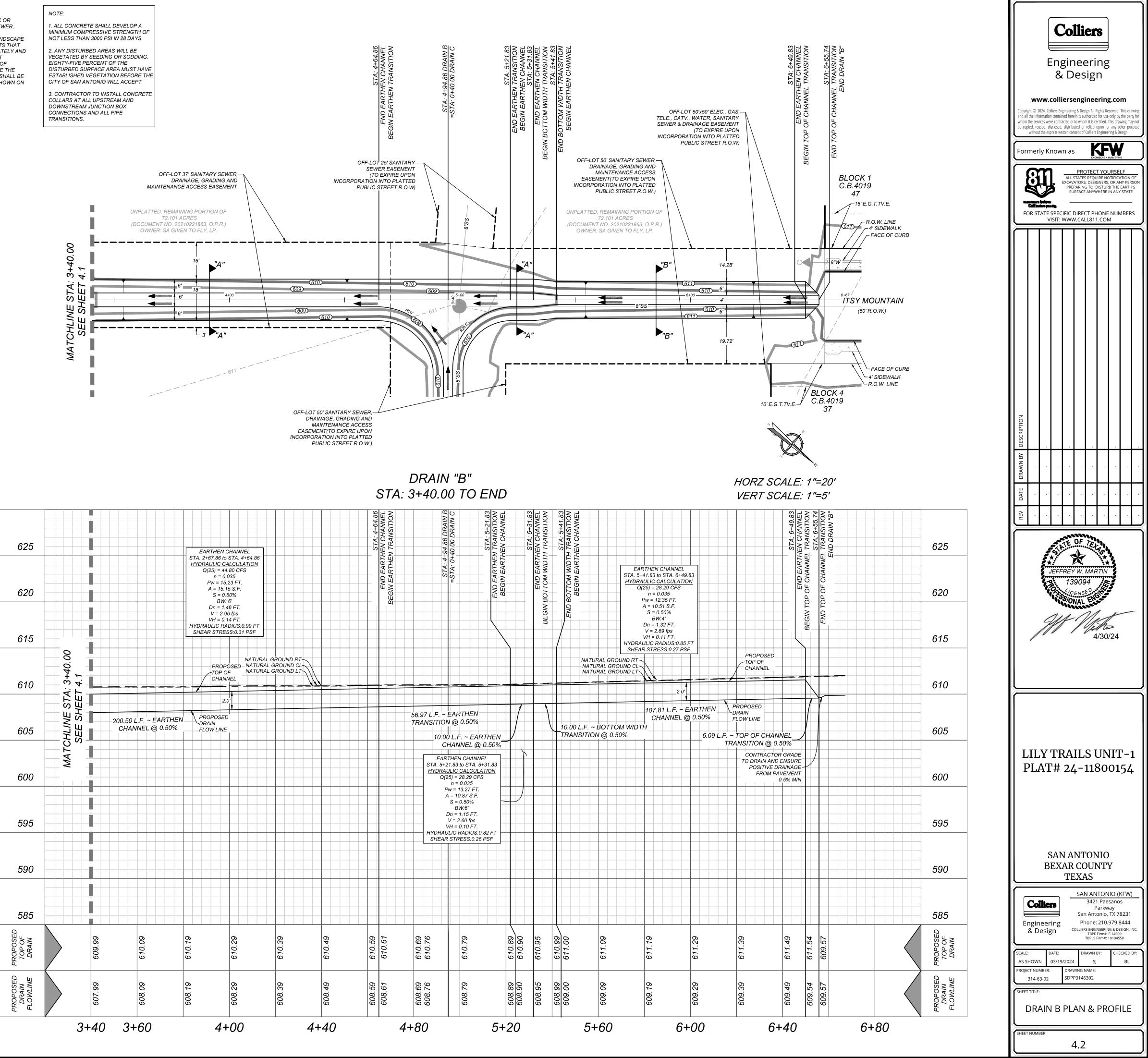


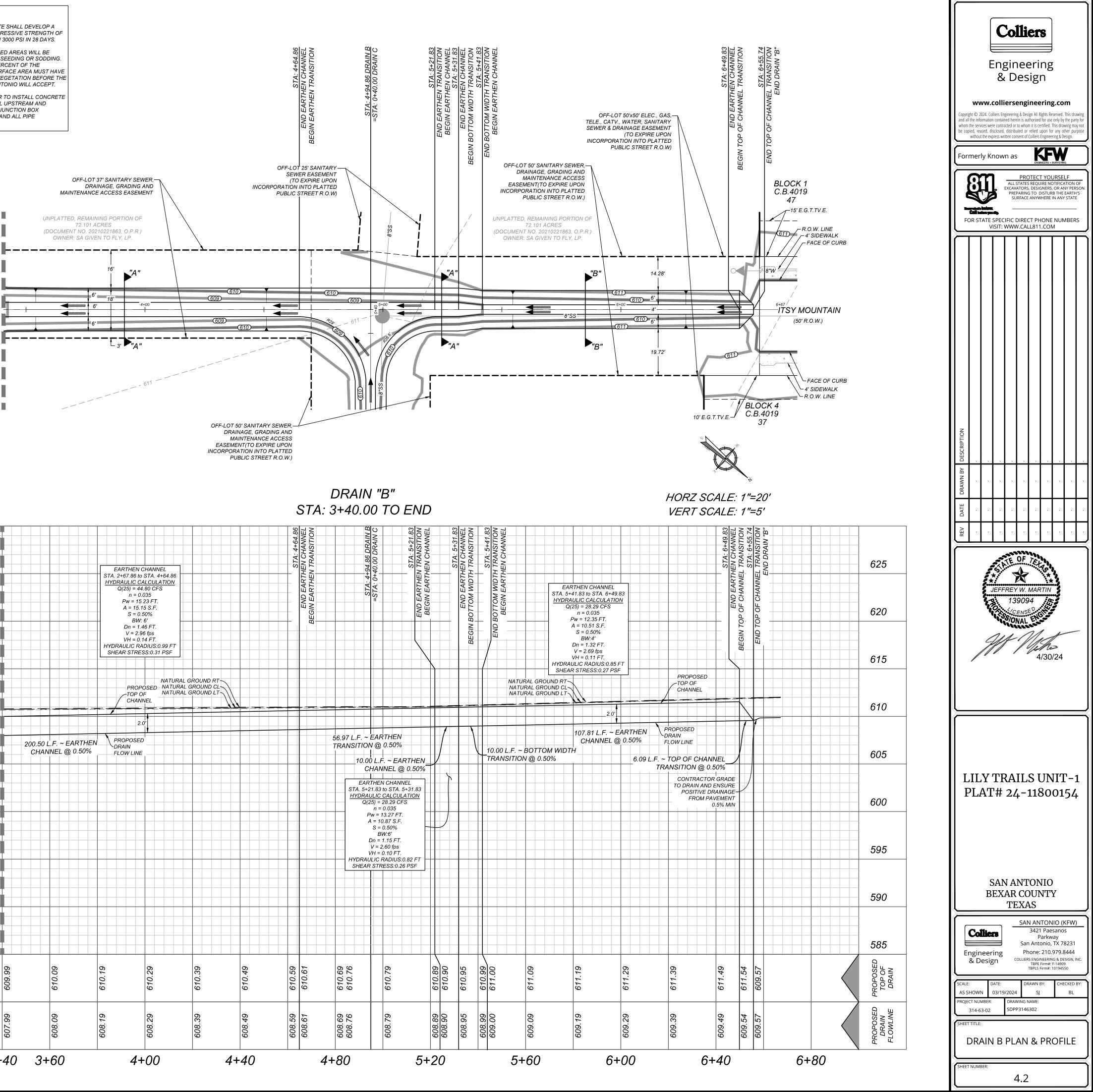
SECTION "A - A" STA. 2+67.86 TO STA. 4+64.86 & STA. 5+21.83 TO STA. 5+31.83 N.T.S.

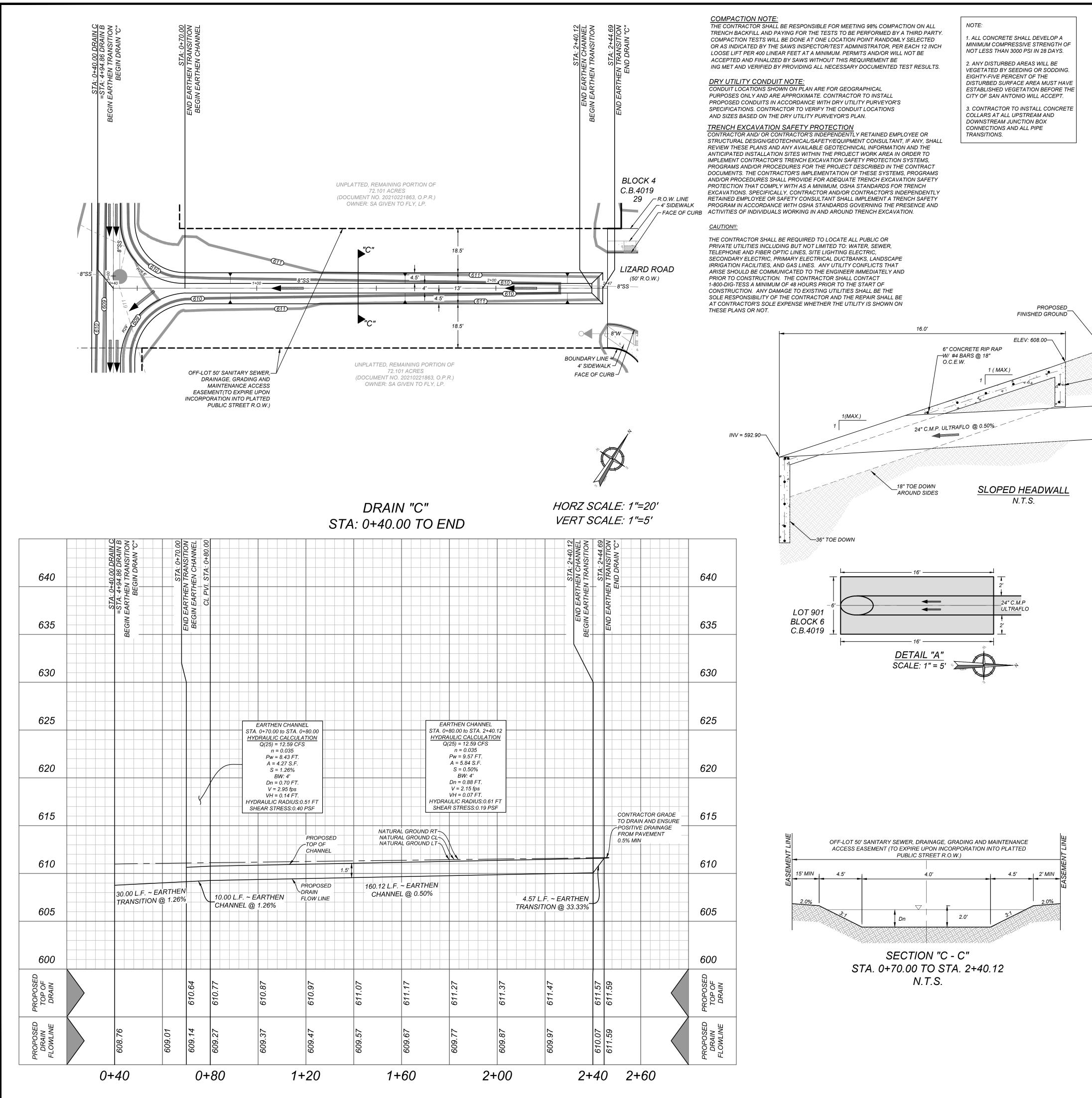


SECTION "B - B" STA. 5+41.83 TO STA. 6+49.83 N.T.S.

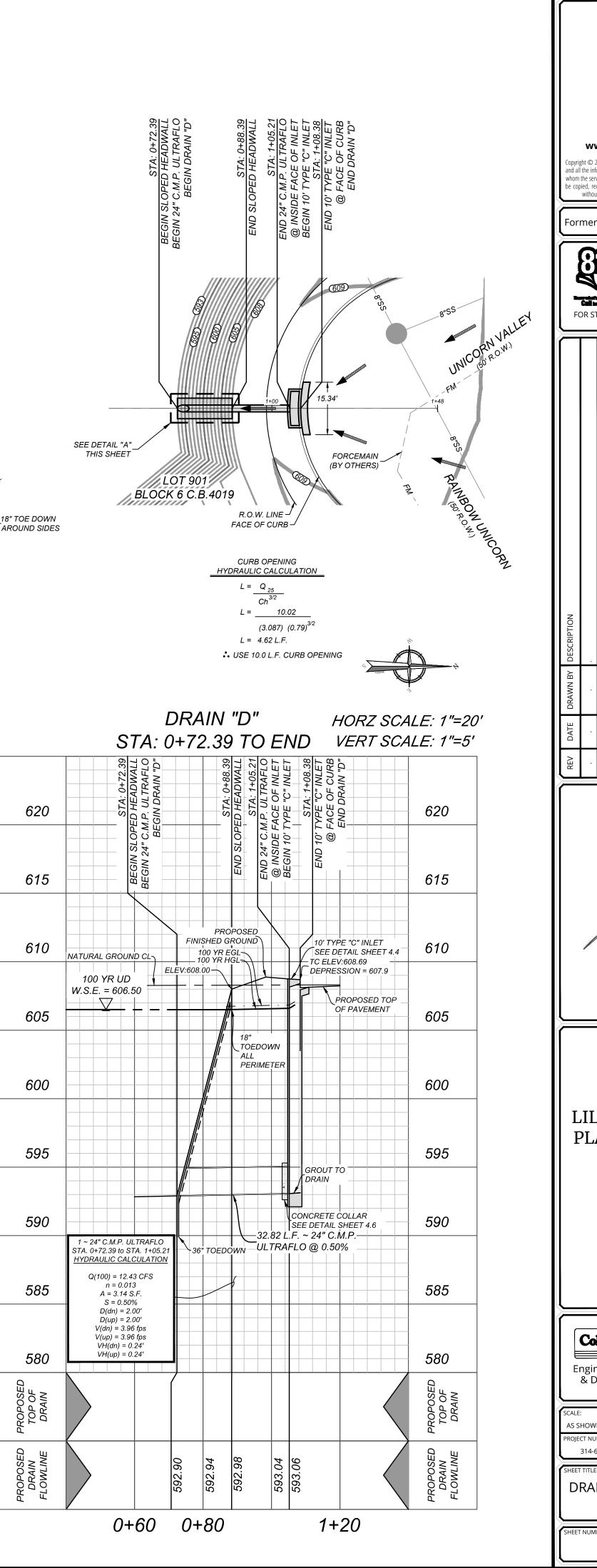
SШ

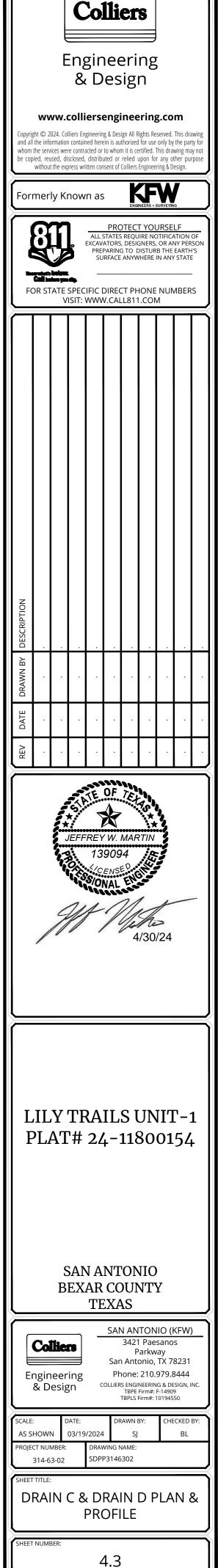


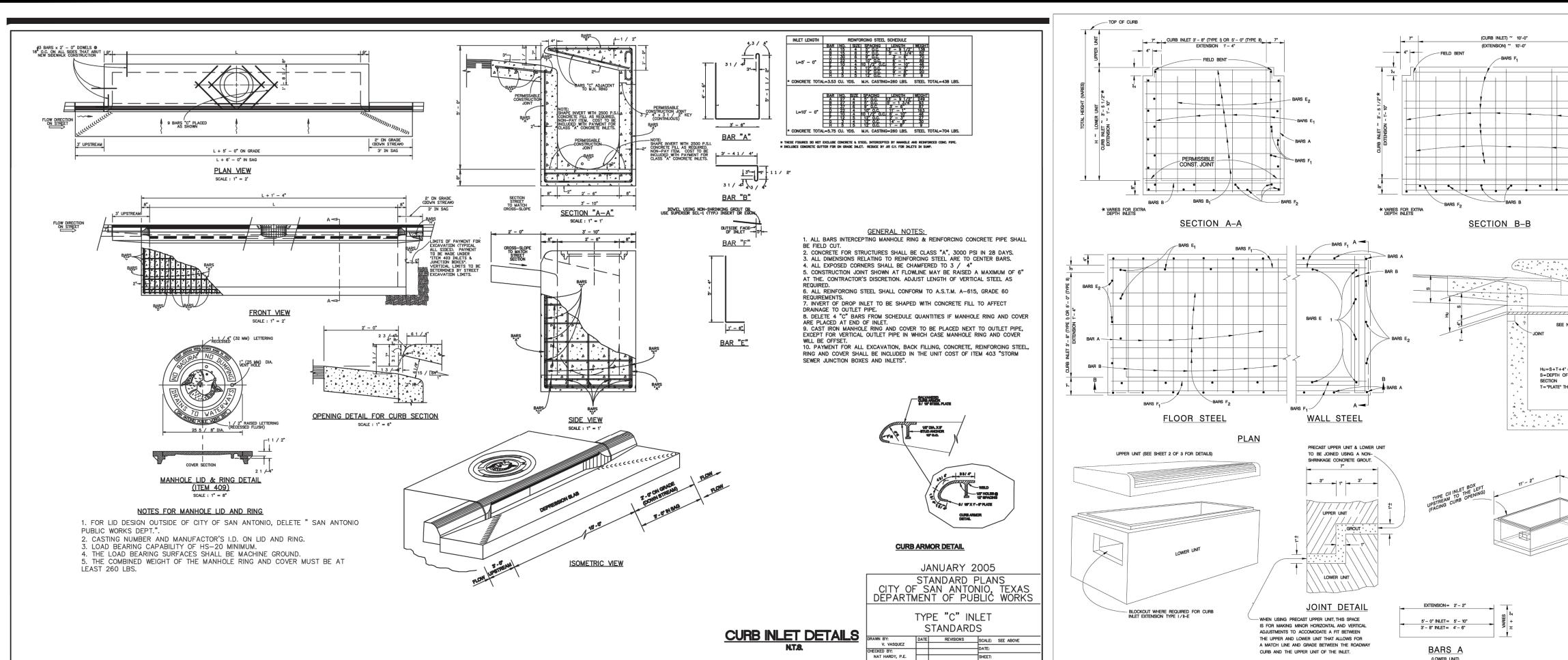


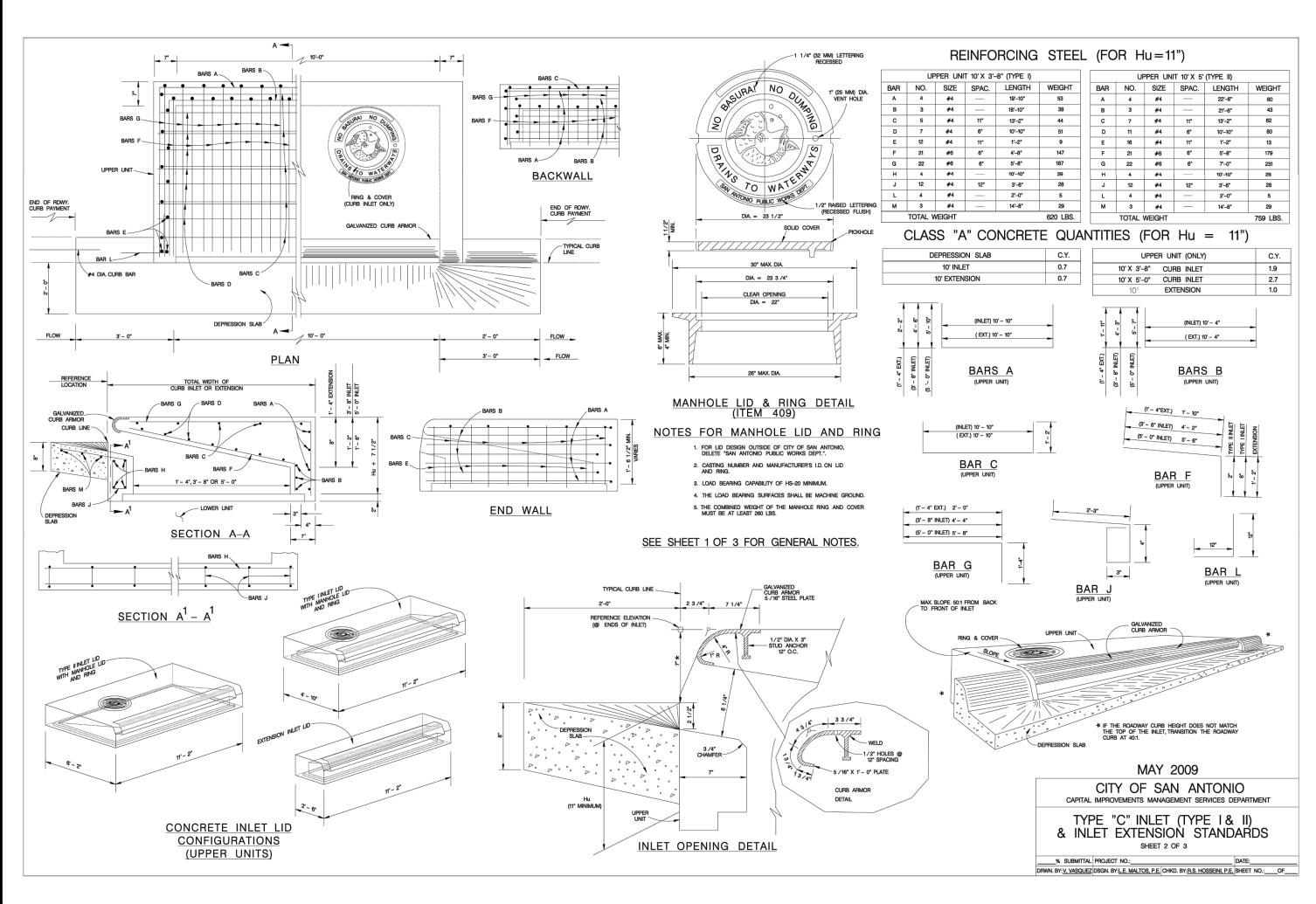


ROPOSE TOP OF DRAIN

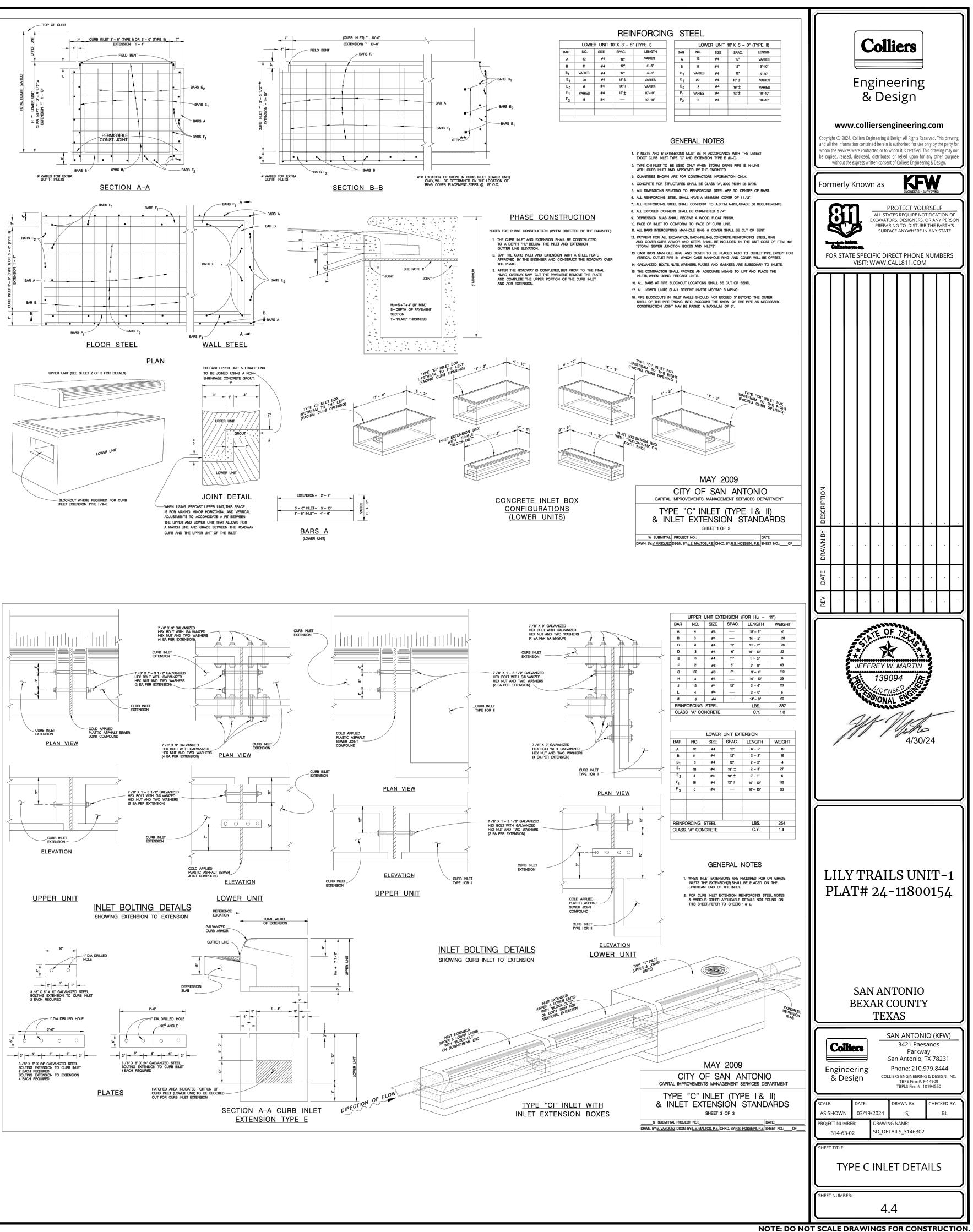






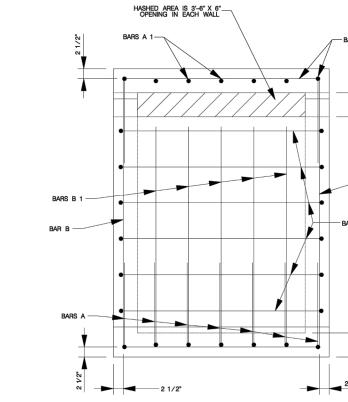


s\SD_DETAILS_3146302.dwg\4.4 By: SJOS

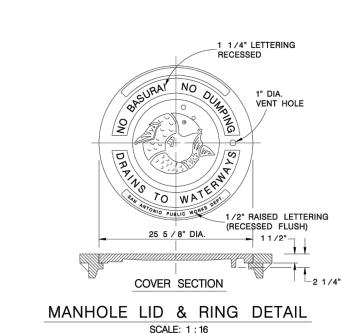


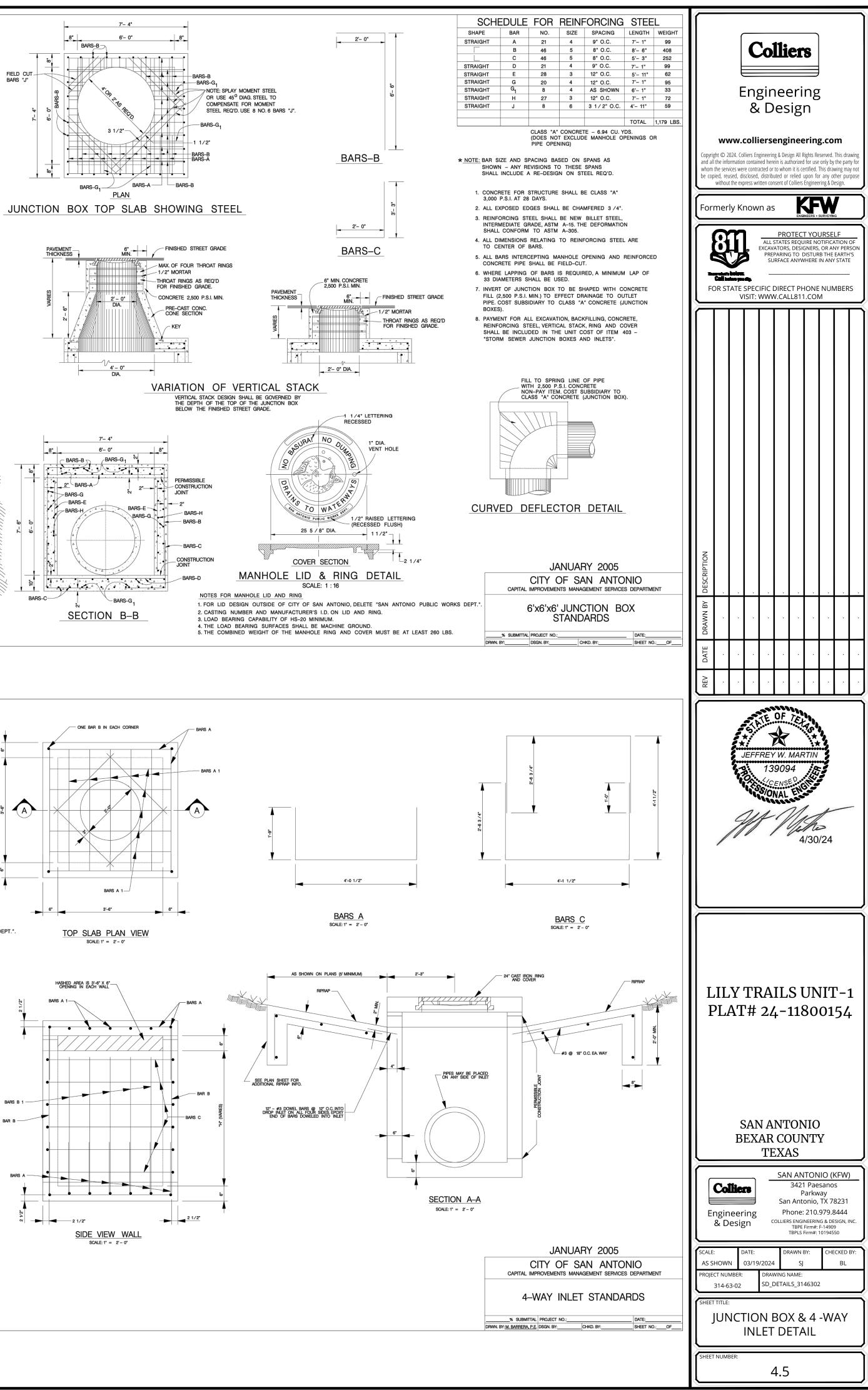
- CLASS A CONCRETE

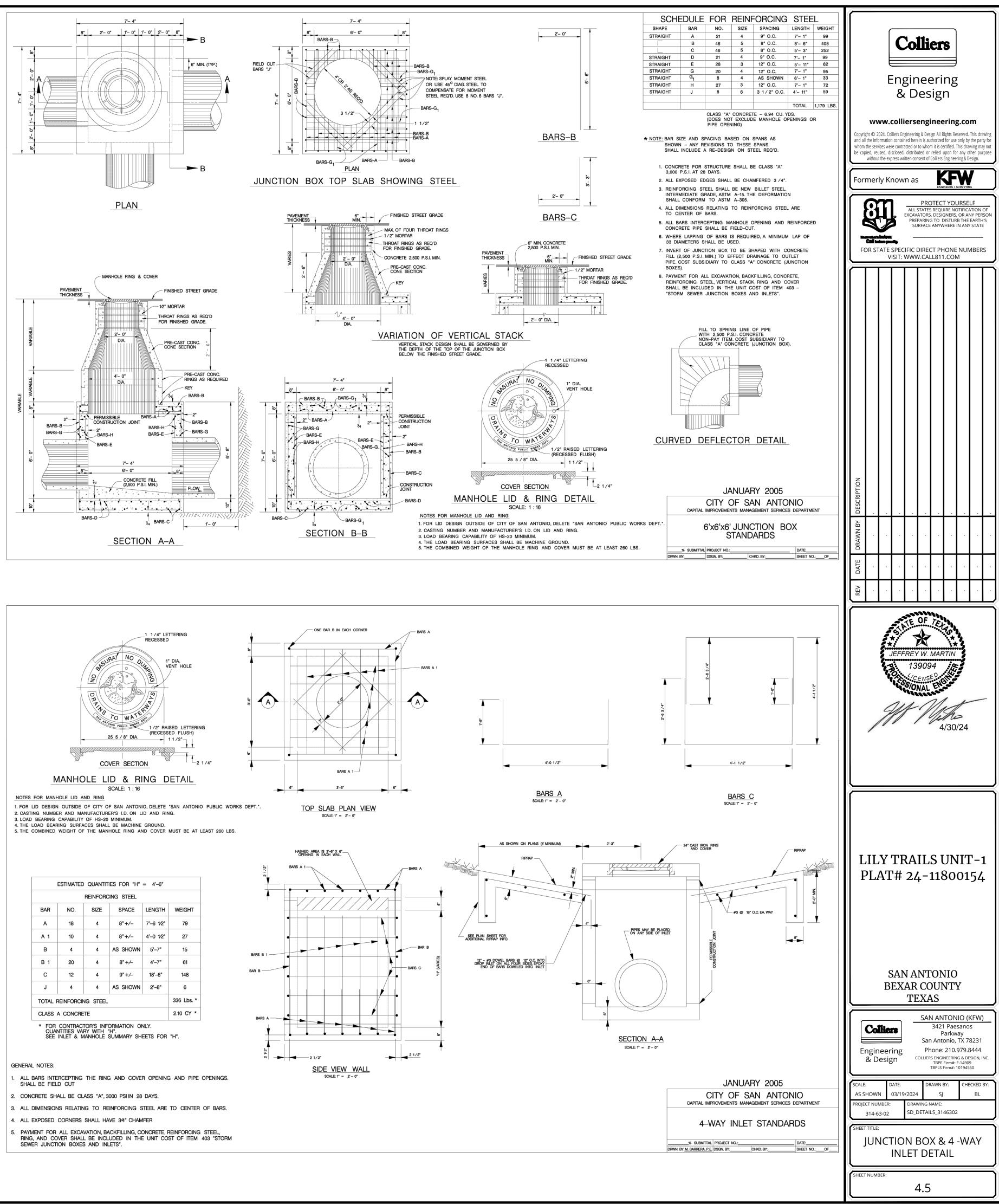
	ESTIMATED	QUANTITI	ES FOR "H"	= 4'-6"	
		REINFORC	ING STEEL		
BAR	NO.	SIZE	SPACE	LENGTH	WEIGHT
А	18	4	8"+/-	7'–6 1⁄2"	79
A 1	10	4	8"+/-	4'-0 1⁄2"	27
В	4	4	AS SHOWN	5'–7"	15
B 1	20	4	8" +⁄-	4'7"	61
С	12	4	9"+⁄-	18'–6"	148
J	4	4	AS SHOWN	2'–8"	6
TOTAL F	REINFORCIN	NG STEEL			336 Lbs.



3. LOAD BEARING CAPABILITY OF HS-20 MINIMUM. 4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND. 5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.

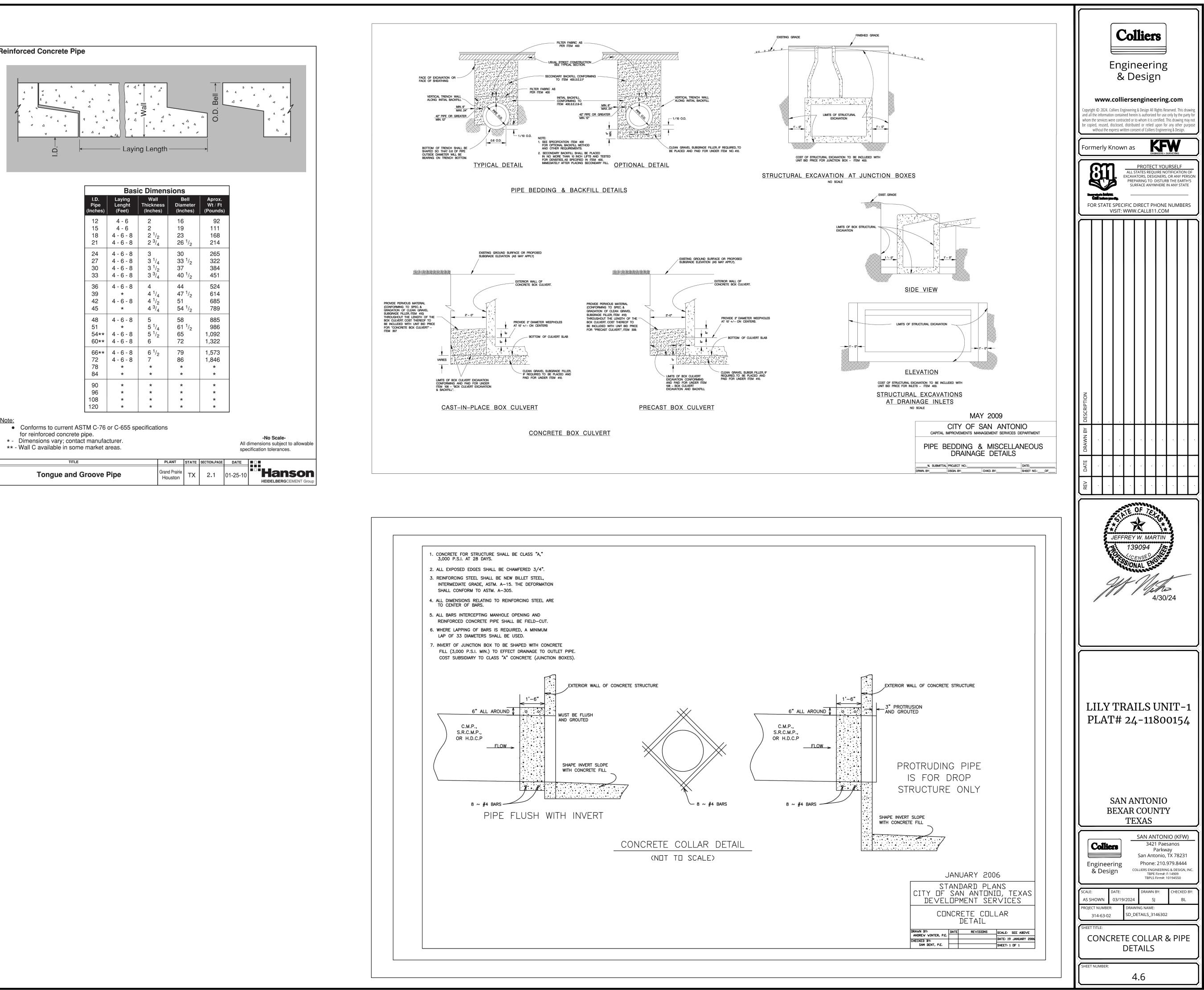






NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

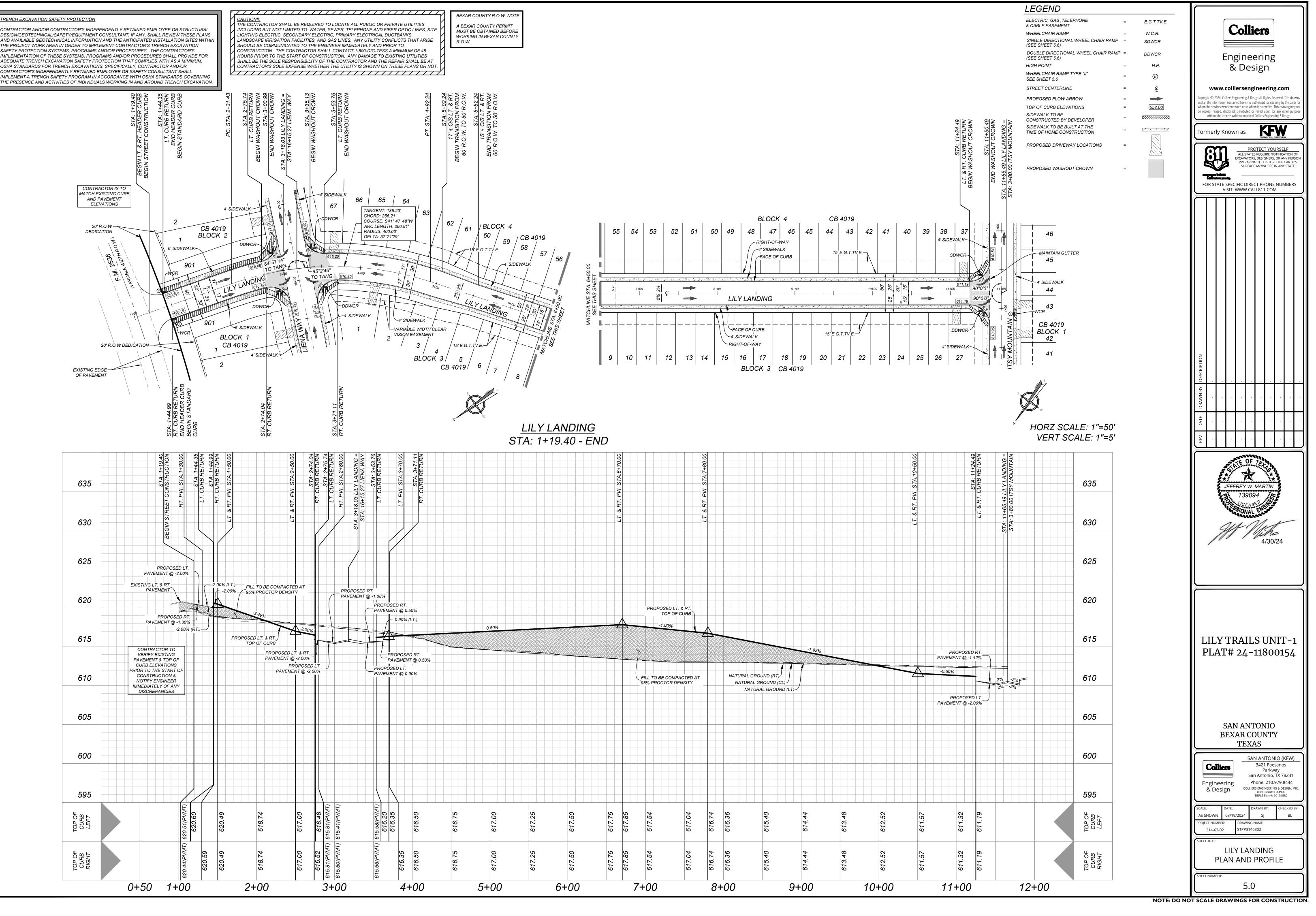
Reinforced Concrete Pipe

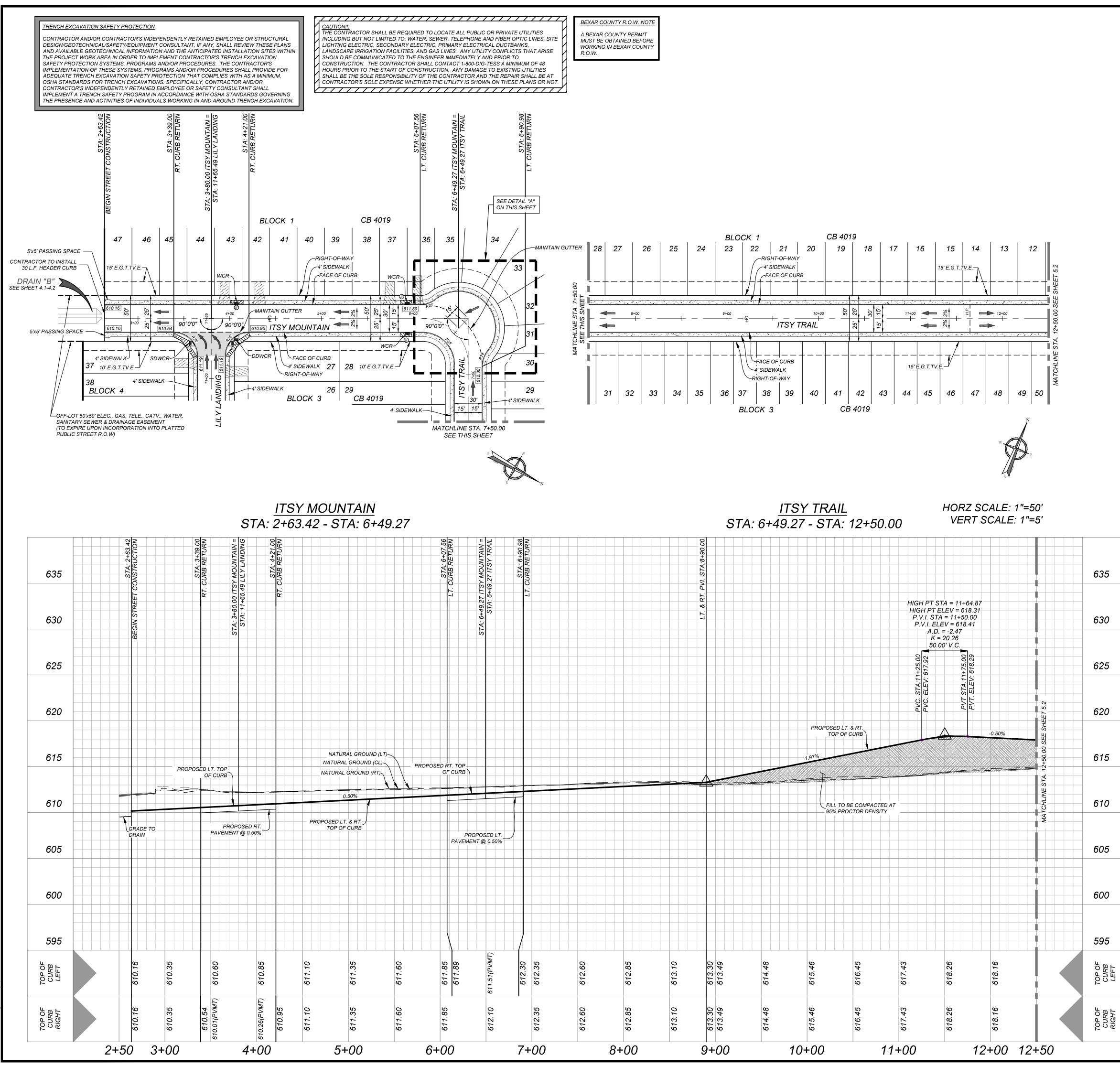


Basic Dimensions						
I.D.	Laying	Wall	Bell	Aprox.		
Pipe	Lenght	Thickness	Diameter	Wt / Ft		
(Inches)	(Feet)	(Inches)	(Inches)	(Pounds		
12	4 - 6	2	16	92		
15	4 - 6	2	19	111		
18	4 - 6 - 8	2 ¹ / ₂	23	168		
21	4 - 6 - 8	2 ³ / ₄	26 ¹ / ₂	214		
24	4 - 6 - 8	3	30	265		
27	4 - 6 - 8	3 ¹ / ₄	33 ¹ / ₂	322		
30	4 - 6 - 8	3 ¹ / ₂	37	384		
33	4 - 6 - 8	3 ³ / ₄	40 ¹ / ₂	451		
36	4 - 6 - 8	4	44	524		
39	*	4 ¹ / ₄	47 ¹ / ₂	614		
42	4 - 6 - 8	4 ¹ / ₂	51	685		
45	*	4 ³ / ₄	54 ¹ / ₂	789		
48	4 - 6 - 8	5	58	885		
51	*	5 ¹ / ₄	61 ¹ / ₂	986		
54**	4 - 6 - 8	5 ¹ / ₂	65	1,092		
60**	4 - 6 - 8	6	72	1,322		
66** 72 78 84	4 - 6 - 8 4 - 6 - 8 *	6 ¹ / ₂ 7 *	79 86 *	1,573 1,846 *		
90 96 108 120	* * *	* * *	* * * *	* * *		

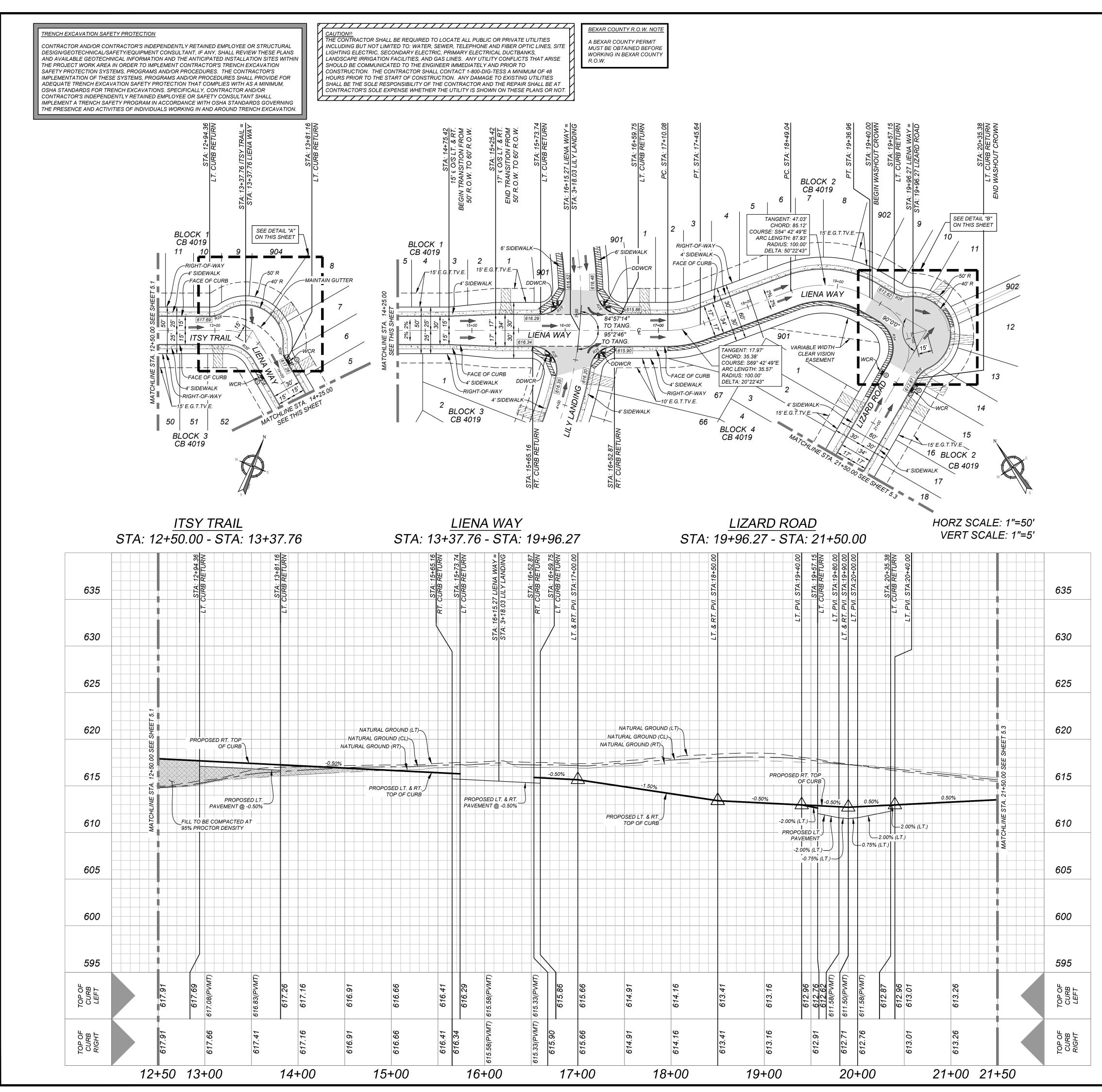
TITLE	PLANT	STATE	SECTION_PAGE
Tongue and Groove Pipe	Grand Prairie Houston	тх	2.1

By: SJOSEPH
EETS\STPP3146302.dwg\5.0

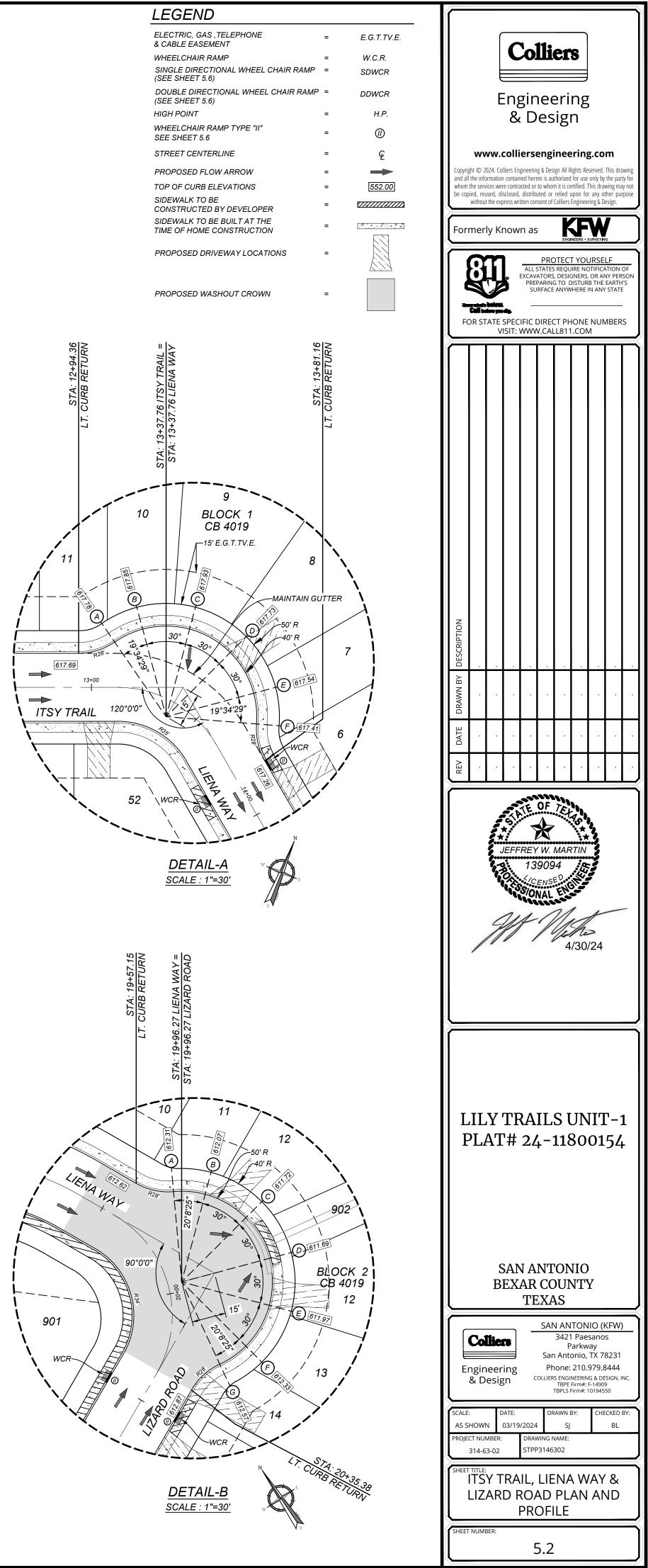




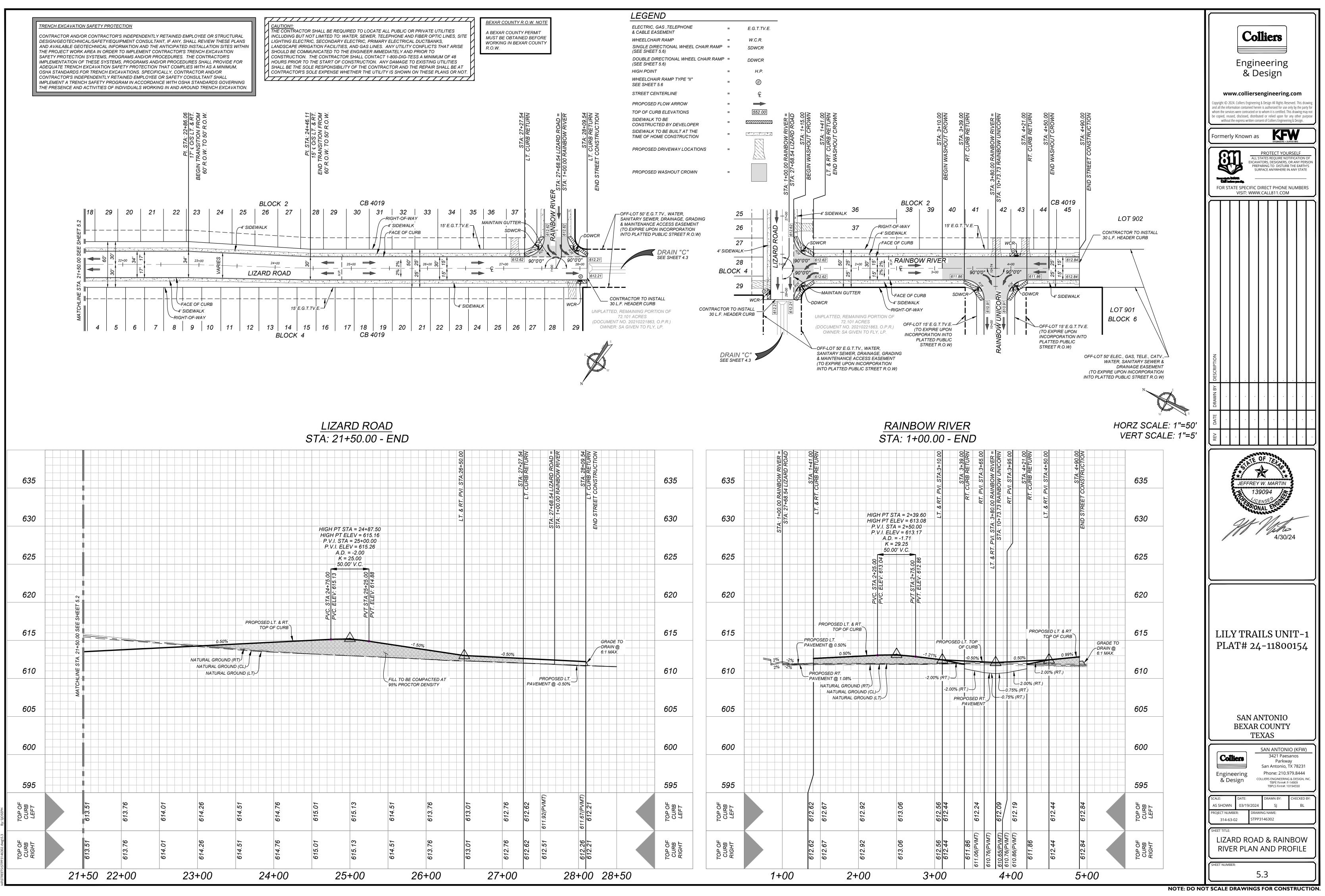
I F	GEND		
ELEC & CA	TRIC, GAS ,TELEPHONE BLE EASEMENT	= E.G.T.TV.E. = W.C.R.	Colliers
(SEE DOU	LE DIRECTIONAL WHEEL CHAIR RAMP SHEET 5.6) BLE DIRECTIONAL WHEEL CHAIR RAMP SHEET 5.6)	0211011	Engineering
HIGH WHE	POINT ELCHAIR RAMP TYPE "II"	= H.P. = (I)	& Design
STRE		= <u><u><u></u><u><u></u><u><u></u><u></u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u>	www.colliersengineering.com Copyright © 2024. Colliers Engineering & Design All Rights Reserved. This drawing
TOP	OF CURB ELEVATIONS	= <u>552.00</u>	and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.
CON SIDE	STRUCTED BY DEVELOPER WALK TO BE BUILT AT THE	= (************************************	Formerly Known as
PRO	POSED DRIVEWAY LOCATIONS	=	PROTECT YOURSELF ALL STATES REQUIRE NOTIFICATION OF
PRO	POSED WASHOUT CROWN	-	EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
			FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM
STA: 6+07.56 LT. CURB RETURN	STA: 6+49.27 ITSY TRAIL STA: 6+49.27 ITSY TRAIL 34 BFOCK 1	STA: 6+90.98 LT. CURB RETURN	Image: Second state sta
36 WCR 611.89 6+00 WCR 90°0'0" 0 WCR 6+00 0 0 0 0 0 0 0 0 0 0 0 0		33 32 AINTAIN GUTTER 612.58 31 672.78 30	LILY TRAILS UNIT-1 PLAT# 24-11800154 SAN ANTONIO BEXAR COUNTY TEXAS
	11S		SAN ANTONIO (KFW) 3421 Paesanos
	$\frac{DETAIL-A}{SCALE : 1''=30'}$	w	Connects Parkway San Antonio, TX 78231 Engineering & Design Phone: 210.979.8444 COLLIERS ENGINEERING & DESIGN, INC. TBPE Firm#: F-14909 TBPLS Firm#: 10194550
	E	N	SCALE: DATE: DRAWN BY: CHECKED BY: AS SHOWN 03/19/2024 SJ BL PROJECT NUMBER: DRAWING NAME: 314-63-02 STPP3146302
			SHEET TITLE: ITSY MOUNTAIN & ITSY TRAIL PLAN AND PROFILE
			SHEET NUMBER: 5.1
			T SCALE DRAWINGS FOR CONSTRUCTION



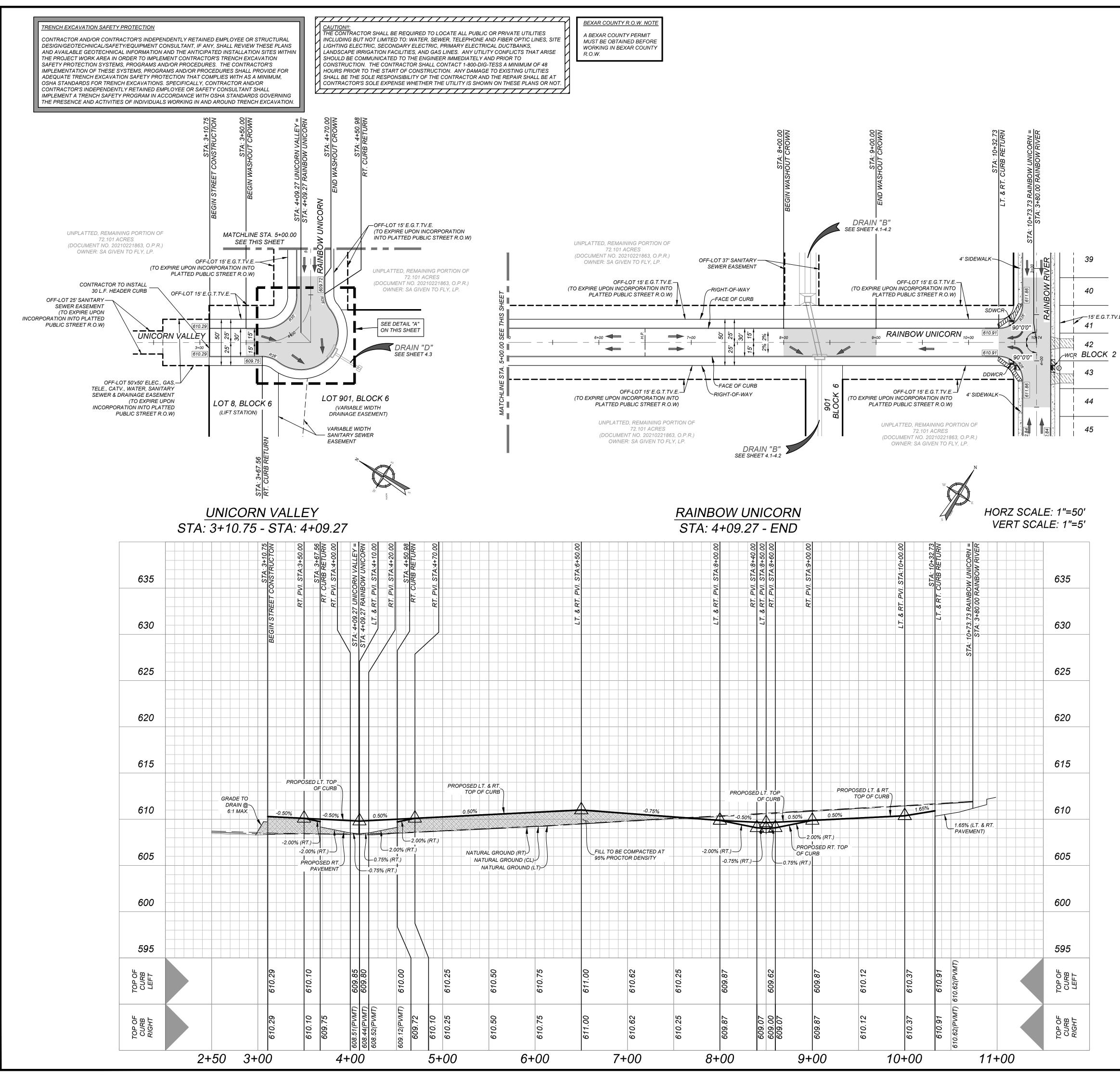
TS\STPP3146302.dwg\5.2 By: SJOSEPH



NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

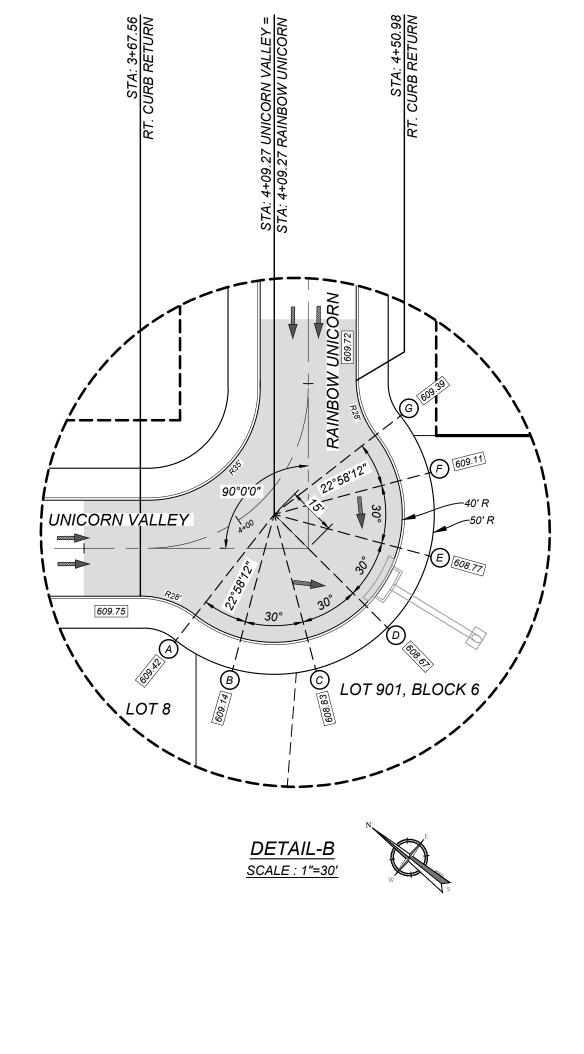


											STA	4: 1+(
//. STA:26+50.00		STA: 27+27.54 CURB RETURN	STA: 27+68.54 LIZARD ROAD = STA: 1+00.00 RAINBOW RIVER	STA: 28+09.54 LT. CURB RETURN STREET CONSTRUCTION		635	635	A: 1+00.00 RAINBOW RIVER =	4 LIZARD ROAD	STA: 1+41.00 LT. & RT. CURB RETURN		
LT. & RT. PVI			STA: 27+68.54 STA: 1+00.00 R	END STREET C		630	630	STA: 1+00.00 RA	STA: 27+68.5		HIGH PT ST HIGH PT EL P.V.I. STA	LEV = 613. A = 2+50.00
						625	625				K = 2 50.00	= -1.71 29.25 0' V.C.
						620	620				PVC. STA:2+25.00 PVC. ELEV: 613.04	PVT STA:2+75.00 PVT FI FV·612 8
				GRADE TO		615	615			PROPOSED LT. & R TOP OF CUR PROPOSED LT. PAVEMENT @ 0.50%	Т ?В	
AT	-0.50%	PAV	PROPOSED LT. EMENT @ -0.50%	DRAIN @ 6:1 MAX.		610	610	2%	-20/	0.50%		
						605	605			NATURAL GROUNI		
						600	600					
						595	595					
613.01	612.76	612.62	611.92(PVMT)	611.67(PVMT) 612.21		TOP OF CURB LEFT	TOP OF CURB LEFT			612.62 612.67	612.92	613.06
613.01	612.76	612.62	612.51	612.26 612.21		TOP OF CURB RIGHT	TOP OF CURB RIGHT			612.62 612.67	612.92	613.06
I)	27+00	_	28	+00 28+50	0			1+0	00	2+	00	

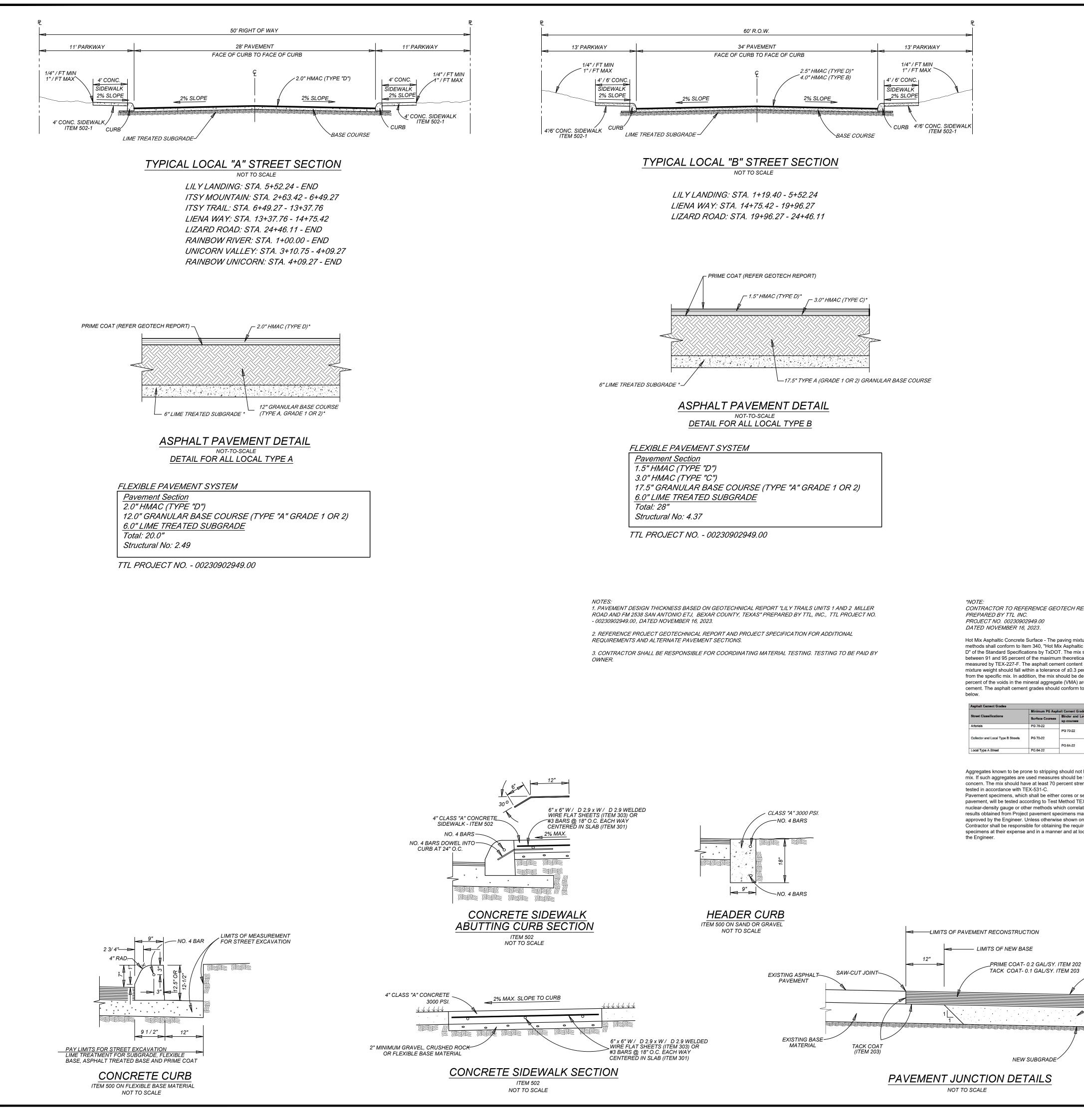


ETS\STPP3146302.dwg\5.4 By: SJOSEPH

LEGEND		
ELECTRIC, GAS ,TELEPHONE & CABLE EASEMENT	=	E.G.T.TV.E.
WHEELCHAIR RAMP	=	W.C.R.
SINGLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.6)	=	SDWCR
DOUBLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.6)	=	DDWCR
HIGH POINT	=	H.P.
WHEELCHAIR RAMP TYPE "II" SEE SHEET 5.6	=	())
STREET CENTERLINE	=	Ę
PROPOSED FLOW ARROW	=	\rightarrow
TOP OF CURB ELEVATIONS	=	552.00
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION	=	
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	



			C					T		
and all whom	ght © 2 the info the serv ied, reu	024. Col ormatior ices wei ised, di	Colli lliers En; o contair re contra sclosed, press wri	ers gineerin hed here acted or distribu	g & Des ein is au to whor uted or	inee ign All R thorized n it is ce relied u	ering tights Re for use ertified. upon fo	served. only by This dra r any o	This dra the par wing ma ther pu	ty for Iy not
For	mer	ly Kı	างพ	n as	;	ENG		SURVEYIN	G	
FC	Reference of the second		SPEC ISIT: V	EXCAV PREI SU	STATES ATORS PARING RFACE	G REQU G DESIG G TO D ANYW	IRE NO GNERS DISTUR (HERE		ATION NY PER EARTH ' STATI	SON I'S E
REV DATE DRAWN BY DESCRIPTION										
	/	The second and the second seco				EN	273 * XTIN	the providence of the providen		
		TA S	TF '# SAN	22 J A AR	r-∶	118 'ON DUN	30	01		
SCALE	ngir & D	esig	ing	c	SAN Sar Ph OLLIER	N AN 3421 Pa Ante ione: s engli TBPE	l Pae Parkw onio, 210. NEERIN Firm#: Firm#:	TX 7 979.8 IG & DE F-1490 101945	s 8231 3444 sign, i	NC.
PROJEC	CT NUI 314-6 TITLE: L	JN		drav stpf)RI / U	ving M 23146 V V NI(AME: 302 AL	RN			
SHEET	NUMI	BER:		[5.4					



CONTRACTOR TO REFERENCE GEOTECH REPORT PREPARED BY TTL INC. PROJECT NO. 00230902949.00 DATED NOVEMBER 16, 2023.

Hot Mix Asphaltic Concrete Surface - The paving mixture and construction methods shall conform to Item 340, "Hot Mix Asphaltic Concrete, Type C or D" of the Standard Specifications by TxDOT. The mix should be compacted between 91 and 95 percent of the maximum theoretical density as measured by TEX-227-F. The asphalt cement content by percent of total mixture weight should fall within a tolerance of ±0.3 percent asphalt cement from the specific mix. In addition, the mix should be designed so 75 to 85 percent of the voids in the mineral aggregate (VMA) are filled with asphalt cement. The asphalt cement grades should conform to the table shown

	Minimum PG Asph	alt Cement Grade		
Street Classifications	Surface Courses	Binder and Level up courses	Base Courses	
Arterials	PG 76-22			
Collector and Local Type B Streets	PG 70-22	PG 70-22	PG 64-22	
conector and Local Type B Streets	FG 70-22	PG 64-22	PG 04-22	
Local Type A Street	PG 64-22	1		

Aggregates known to be prone to stripping should not be used in the hot mix. If such aggregates are used measures should be taken to mitigate this concern. The mix should have at least 70 percent strength retention when tested in accordance with TEX-531-C. Pavement specimens, which shall be either cores or sections of asphaltic pavement, will be tested according to Test Method TEX-207-F. The nuclear-density gauge or other methods which correlate satisfactorily with results obtained from Project pavement specimens may be used when approved by the Engineer. Unless otherwise shown on the plans, the Contractor shall be responsible for obtaining the required pavement specimens at their expense and in a manner and at locations selected by

NEW SUBGRADE

-NEW BASE

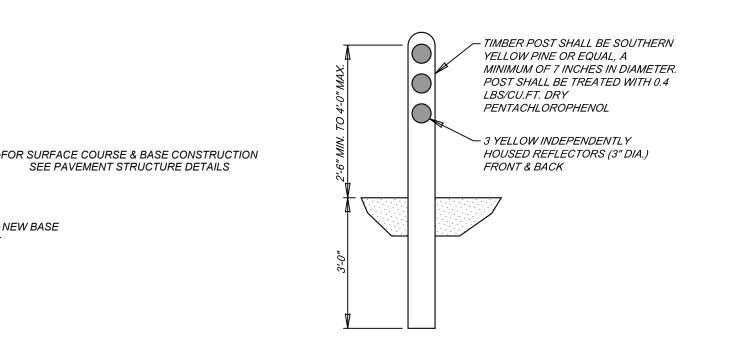
		E	Eng	gir	nee	eri	ng	5		
and all whom be cop	ght © 2 the info the serv ied, reu withou	024. Co ormatior rices wer used, di t the exp	lliers En n contain re contra sclosed, press wr	gineerin ned here acted or distribu itten cor	g & Des ein is au to whoi uted or isent of	inee ign All R thorized m it is ce relied u Colliers	Rights Re I for use ertified. ⁻ upon fo	eserved. only by This dra r any o	This dra the par wing ma ther pu	ty for ay not
		J	SPEC	EXCAV PREI SU	PRC STATES ATORS PARING RFACE	DTEC S REQU S DESIG G TO E ANYW	IRE NO GNERS DISTUR HERE	URSE DTIFIC/ , OR AI B THE IN ANY	LF ATION NY PER EARTH (STATI	ISON I'S E
DATE DRAWN BY DESCRIPTION										
REV DAT			•	•	•	•	•	•		
	/		LEFF OF		OF W. 909 ENS		2711N //30			_
		TA S	SAN	2.Z	, +−∶	S U 118	30 30	01		
	Col				EX/	AS N AN 3421		IIO (I sano		
	ngir & D	ieer esig	ing gn	C	Pł Ollier	n Ante none: IS ENGI TBPE TBPLS I	onio, 210. NEERIN Firm#: Firm#:	TX 7 979.8 IG & DE F-1490 101945	8444 SIGN, I 9 50	
PROJE	HOWI	N MBER: 3-02	03/19				∍ ĭ:	CHE	BL	DY:
		TRE	EET	DI	ET/	AIL	SH	EE	T	

Hot Mix Asphaltic Concrete Base - The paving mixture and construction methods shall conform to Item 340, "Hot Mix Asphaltic Concrete, Type B" of the standard specifications by TxDOT. The mix should be compacted between 95 and 98 percent of the maximum theoretical density as measured by Tex-227-F. The asphalt cement content by percent of total mixture weight should fall within a tolerance of ± 0.3 percent asphalt cement from the specific mix. In addition, the mix should be designed so 77 to 87 percent of the VMA are filled with asphalt cement.

Prime Coat - The prime coat should consist of sealing the base with an oil such as MC-30 or AE-P asphalt cement. The prime coat should be applied at a rate not to exceed 0.35 gallons per square yard with materials that meet TxDOT Item 300. The prime coat will help to minimize the penetration of rainfall and other moisture that penetrates the base.

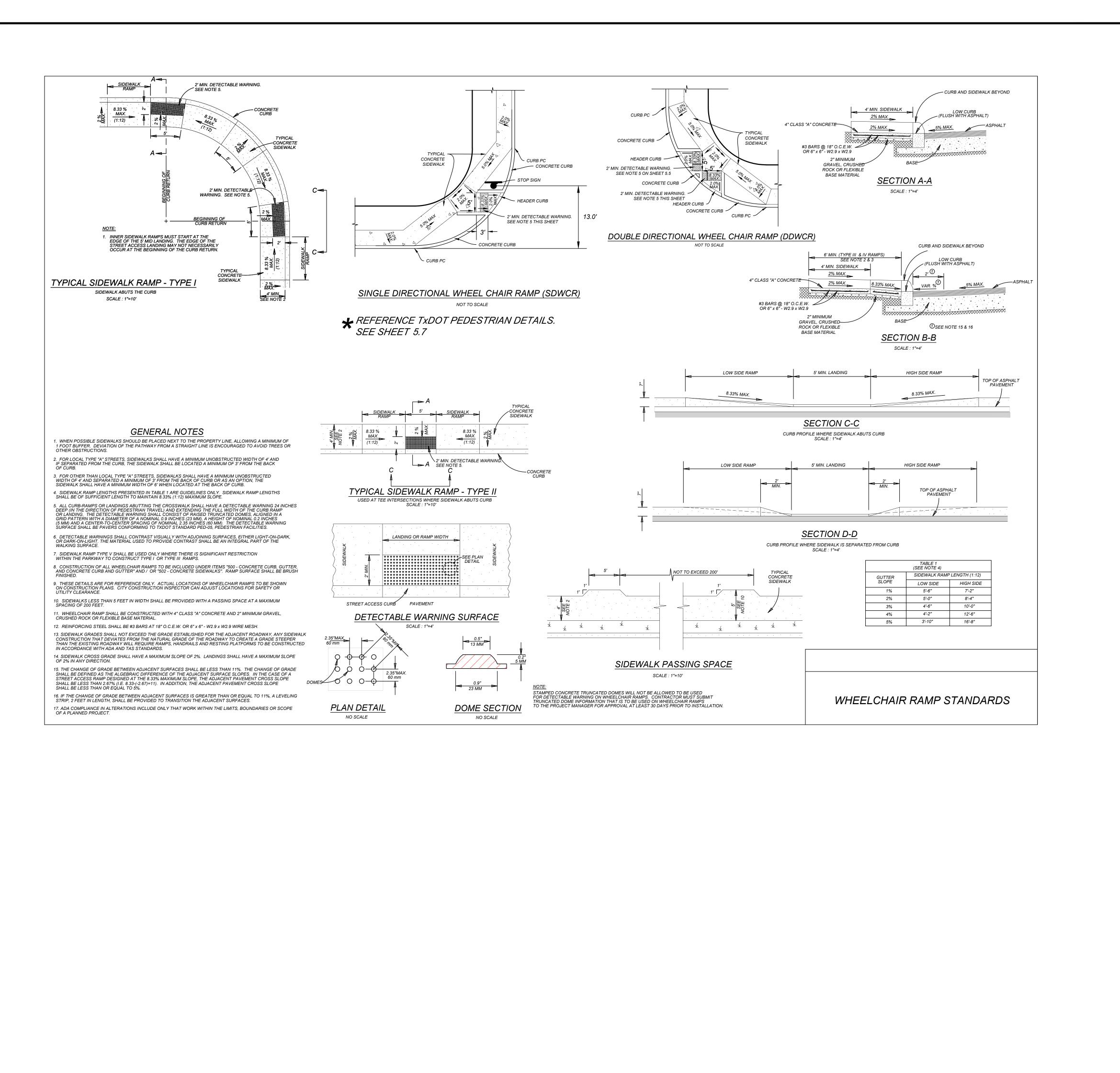
Granular Base Material - Base material may be composed of crushed limestone base meeting all of the requirements of 2014 TxDOT Item 247, Type A, Grade 1 or 2; and should have no more than 15 percent of the material passing the No. 200 sieve. The base should be compacted to at least 95 percent of the maximum dry density determined in accordance with test method TEX-113-E at moisture contents ranging between -2 and +3 percentage points of the optimum moisture content.

Lime Treatment - Lime treatment shall be performed only on the dark brown clay subgrade. The subgrade shall be treated with hydrated lime in accordance with TxDOT Item 260. We anticipate that approximately eight (8) percent hydrated lime will be required (approximately 43 pounds per square yard). The optimum hydrated lime content should result in a soil-lime mixture with a pH of at least 12.4 when tested in accordance with ASTM C 977, Appendix XI.

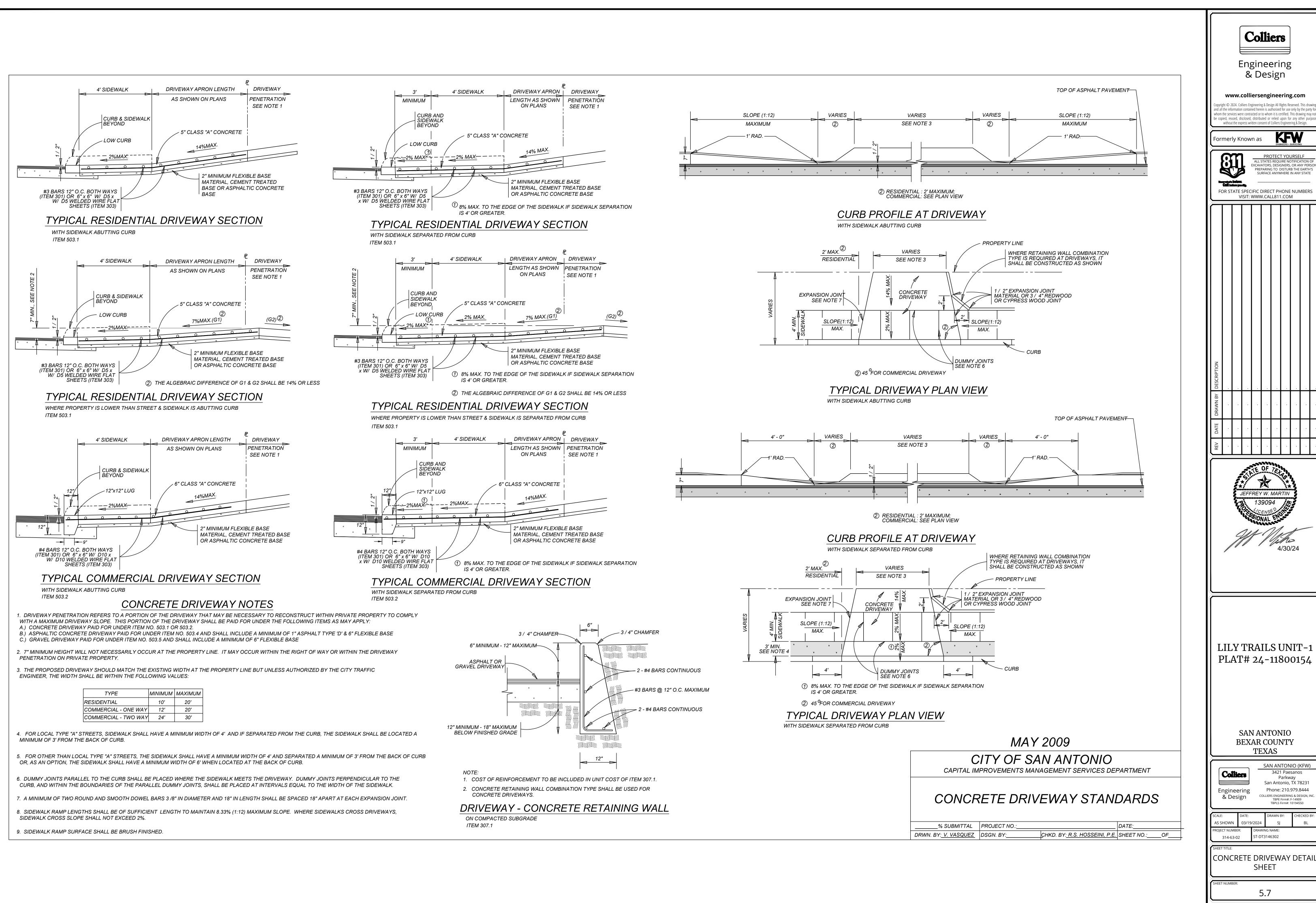


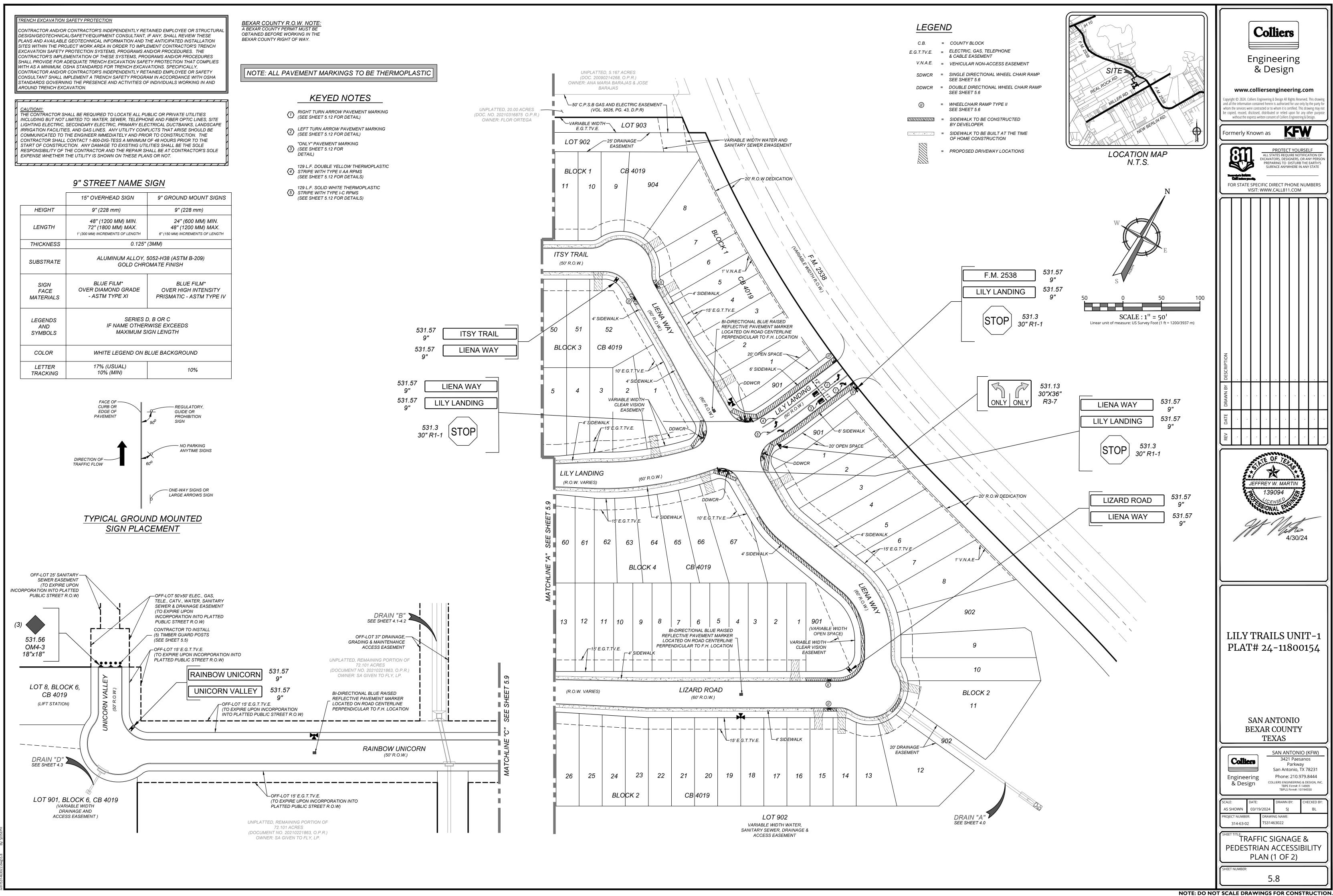
TIMBER GUARD POST DETAIL NOT-TO-SCALE

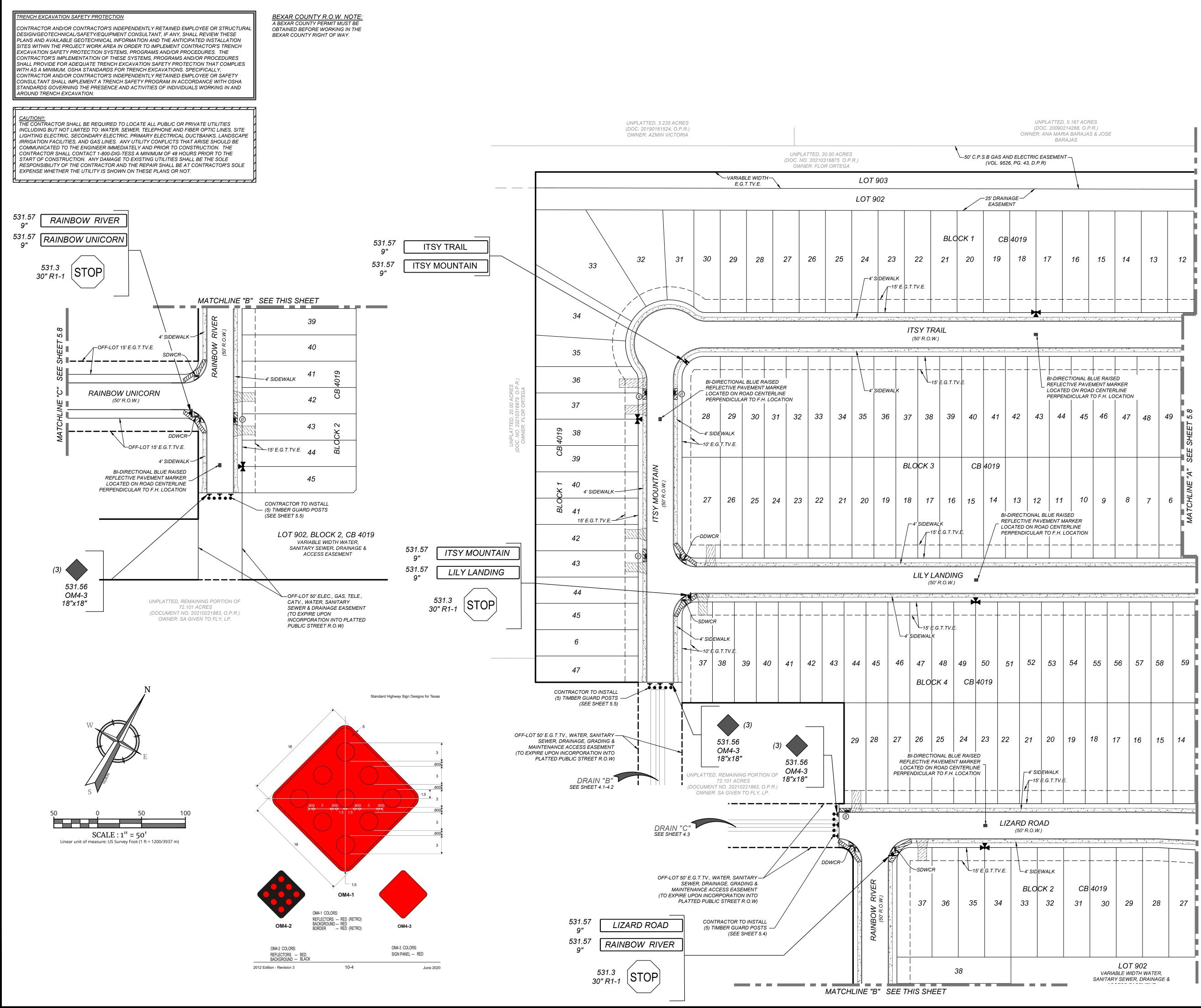
5.5



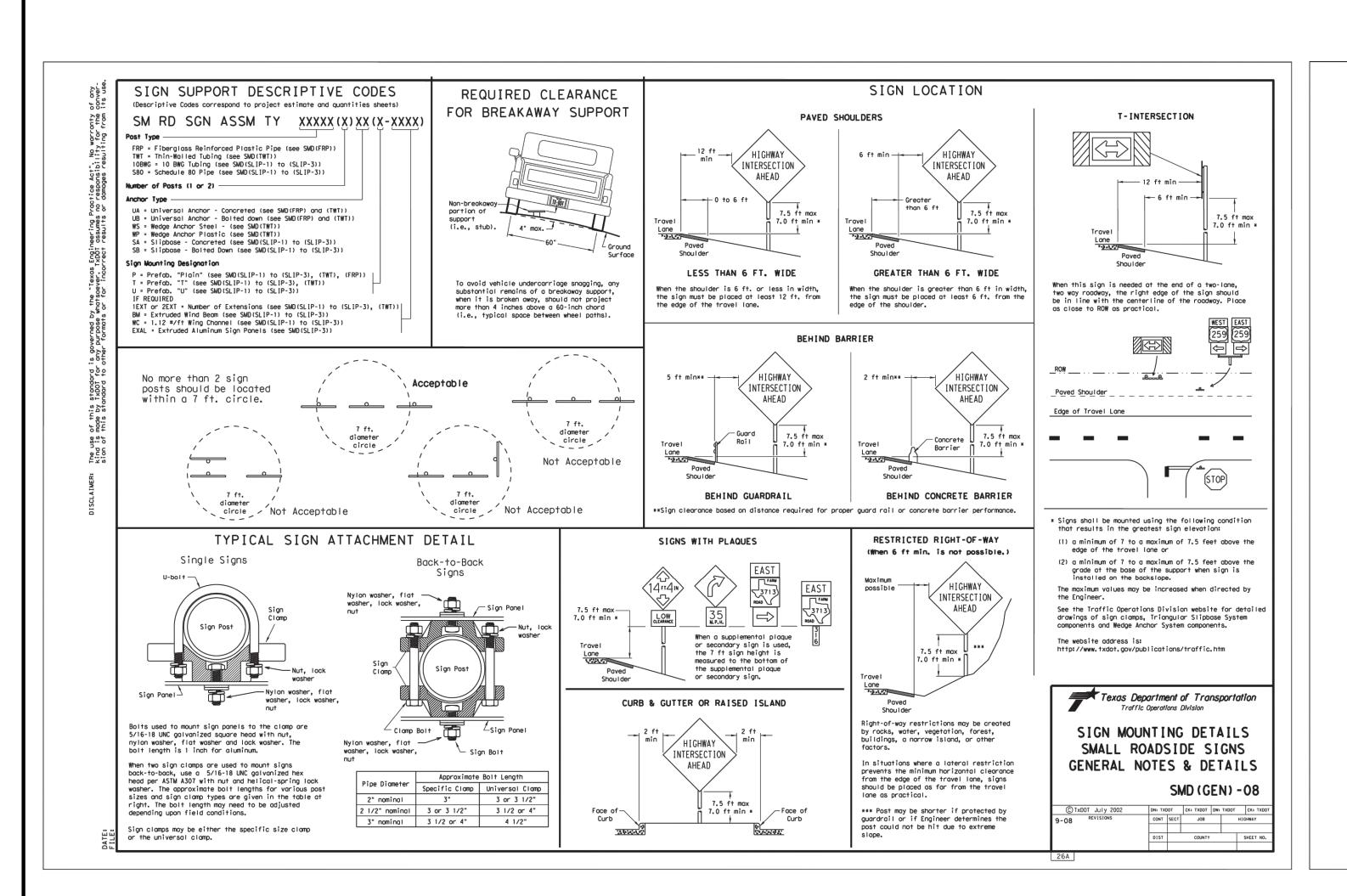
		Ę		gir	nee	eri	ng	5		
and al whom be co	ght © 2 I the info the serv pied, reu	024. Col ormatior ices wer used, di t the exp	lliers En contair re contra sclosed, press wr	gineerin ned here acted or distribu itten cor	ig & Des ein is au to whoi uted or isent of	ithorized m it is ce relied i Colliers	tights Re for use ertified. upon fo Enginee	eserved. only by This dra r any o	This dra the par wing ma ther pu esign.	ty for ay not
F	R ST		SPEC	EXCAV PREI SU	STATES ATORS PARING RFACE	DTEC 5 REQU 5, DESIG 5 TO E 2 ANYW CT PH _L811	IIRE NO GNERS DISTUR (HERE	OTIFICA , OR AI B THE IN ANY	ATION NY PER EARTH / STATE	SON I'S E
ESCRIPTION										
DRAWN BY DESCRIPTION										
DATE DRA		·								
REV										ŀ
	/	and the second s		REY 13 5/0	W. 909 ENS VAL		130 /30	1		
	,IL ?L,	AT S	'# San	22 NA AR	, ⊢⊤	118 118	30	01		
SCALE	ngir & D	esig	ing sn		Sar Ph OLLIER DF	P A Ante None: S ENGI TBPE TBPLS I RAWN I	l Pae Parkw onio, 210. NEERIN Firm#:	sano /ay TX 7 979.8 IG & DE F-1490 101945	S 8231 3444 50 50 ECKED	NC.
PROJE SHEE	атти 314-6 г тітге WH	MBER: 3-02	LC	st-d	VING N T3140	5302 RA				T
SHEE	T NUMI	BER:		C	5.6					

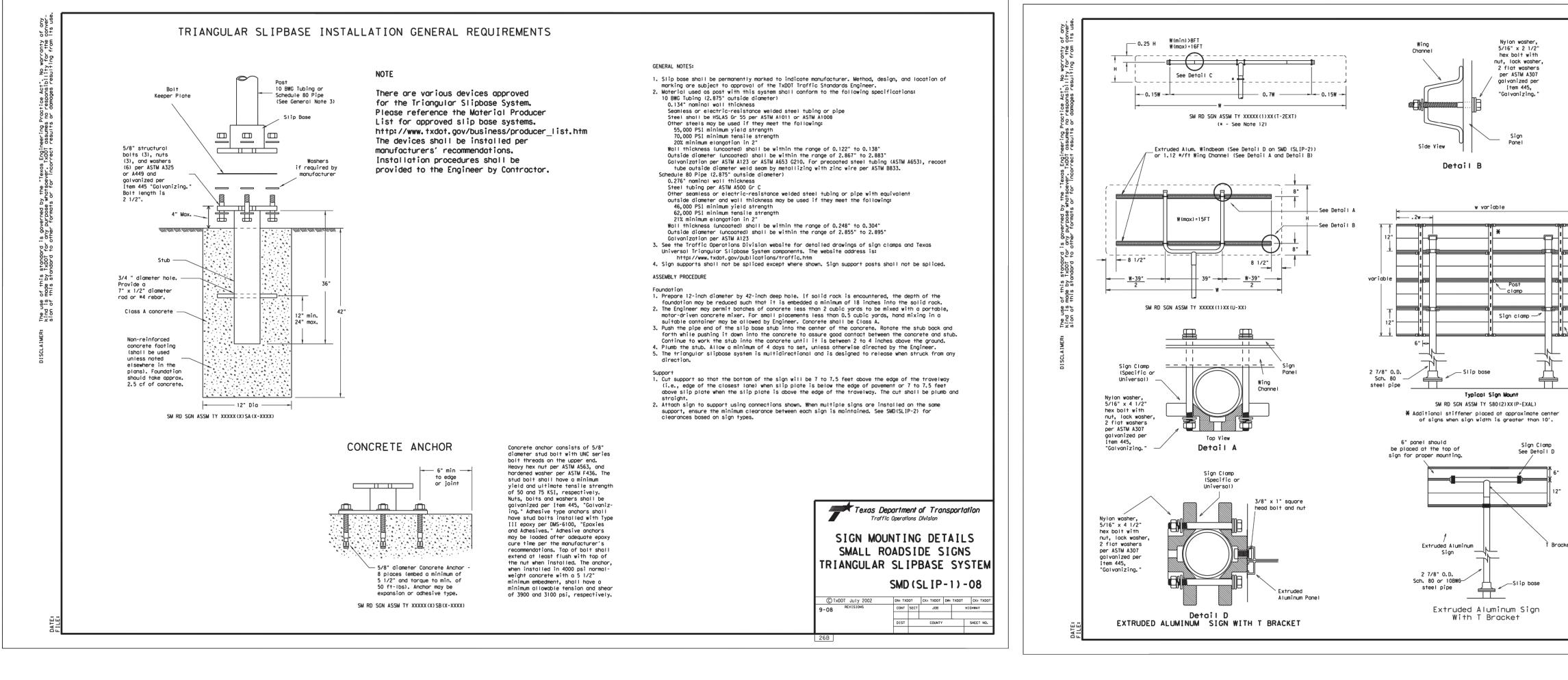


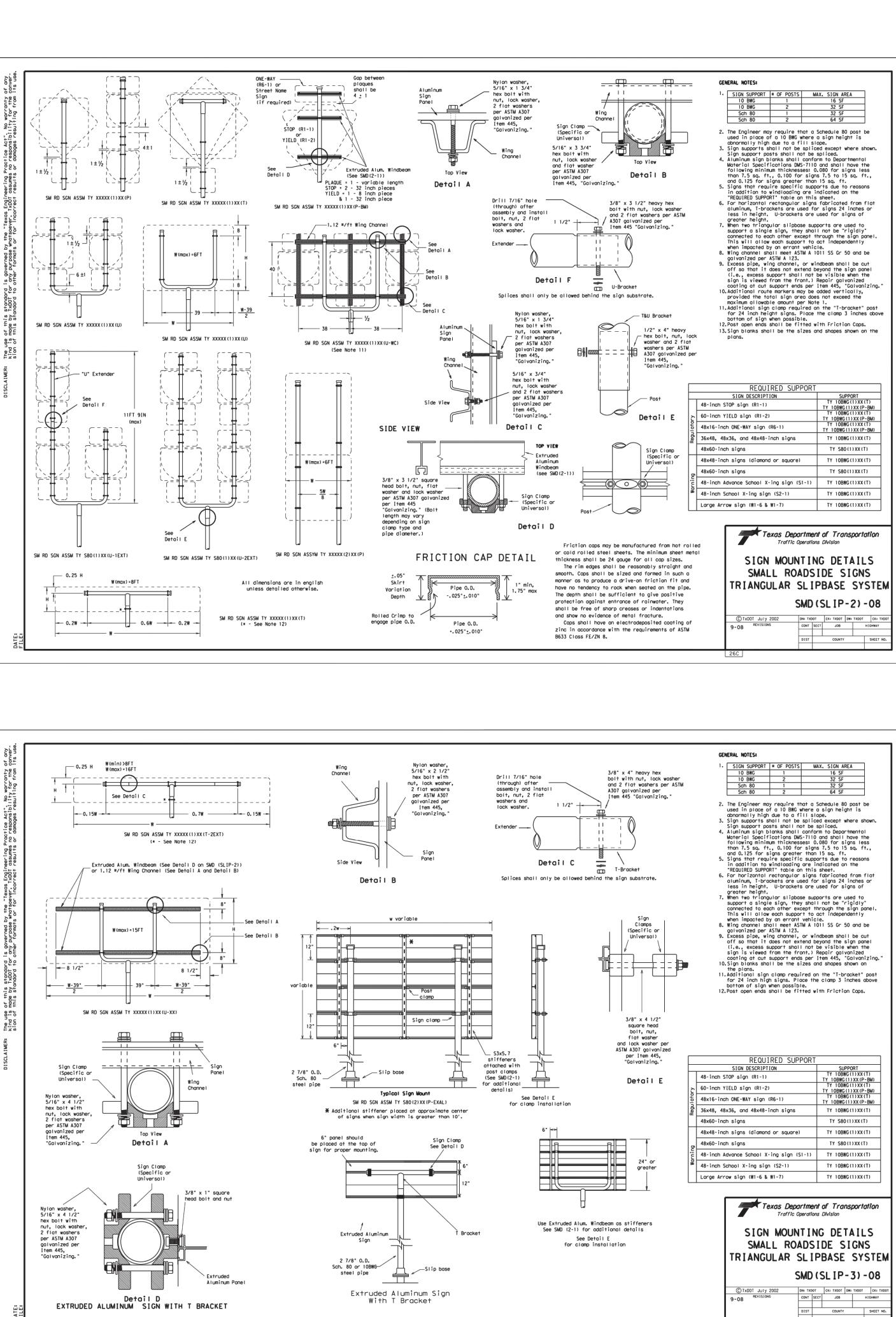




SITE Base REAL ROCK RD. REAL ROCK RD. NEW BERLIN RD.	<section-header><section-header><section-header><section-header><section-header><section-header><section-header><text></text></section-header></section-header></section-header></section-header></section-header></section-header></section-header>
LOCATION MAP N.T.S.	PROTECT YOURSELF ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S
	SURFACE ANYWHERE IN ANY STATE
<image/>	VISIT: WWW.CALLBI1.COM
	LILY TRAILS UNIT-1 PLAT# 24-11800154 SAN ANTONIO BEXAR COUNTY TEXAS
	Colliers3421 Paesanos Parkway San Antonio, TX 78231Engineering & DesignPhone: 210.979.8444 COLLIERS ENGINEERING & DESIGN, INC. TBPLS Firm#: F14909 TBPLS Firm#: 10194550
	SCALE: DATE: DRAWN BY: CHECKED BY: AS SHOWN 03/19/2024 SJ BL PROJECT NUMBER: DRAWING NAME: 314-63-02
	SHEET TITLE: TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN (2 OF 2)
	SHEET NUMBER: 5.9

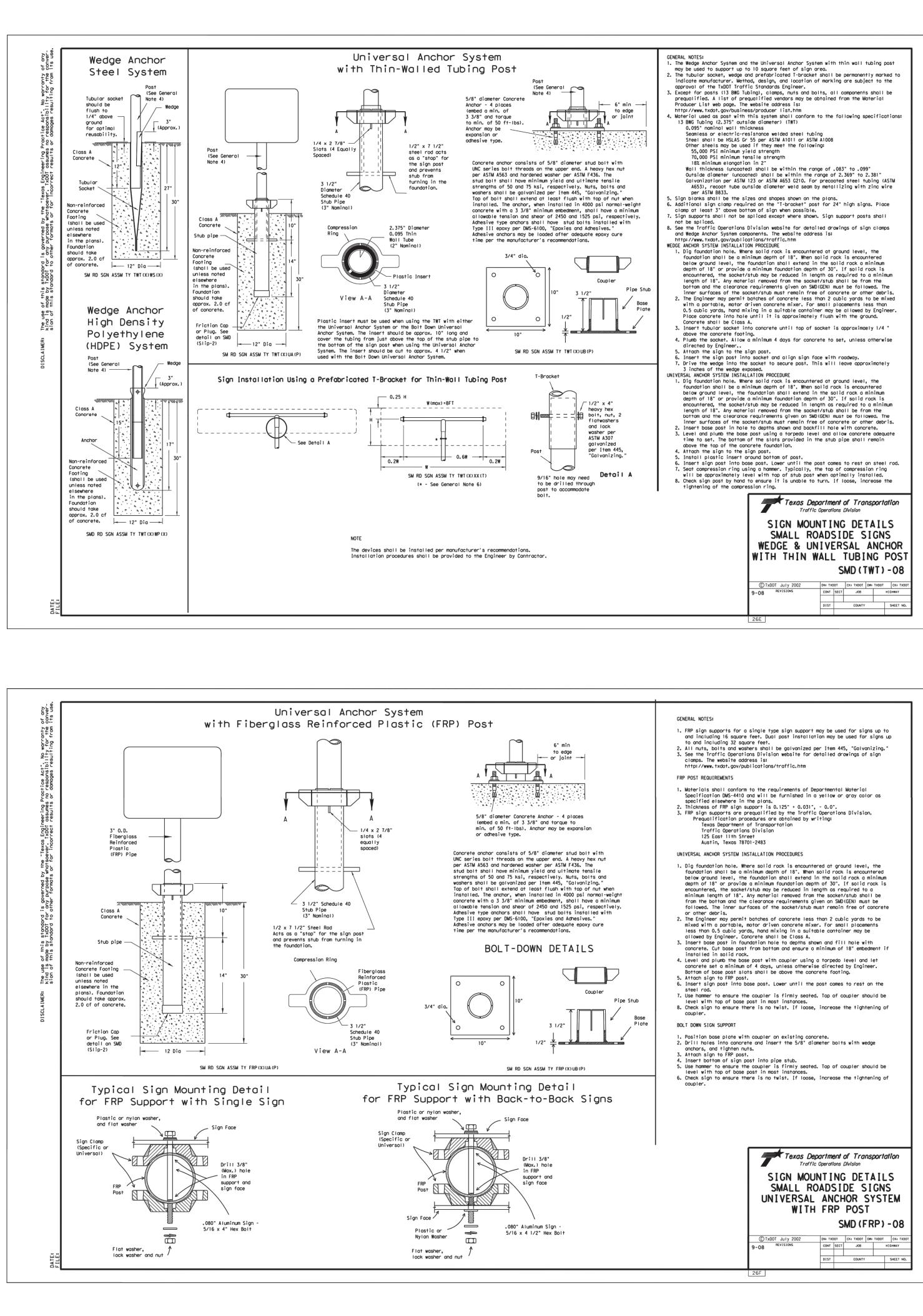


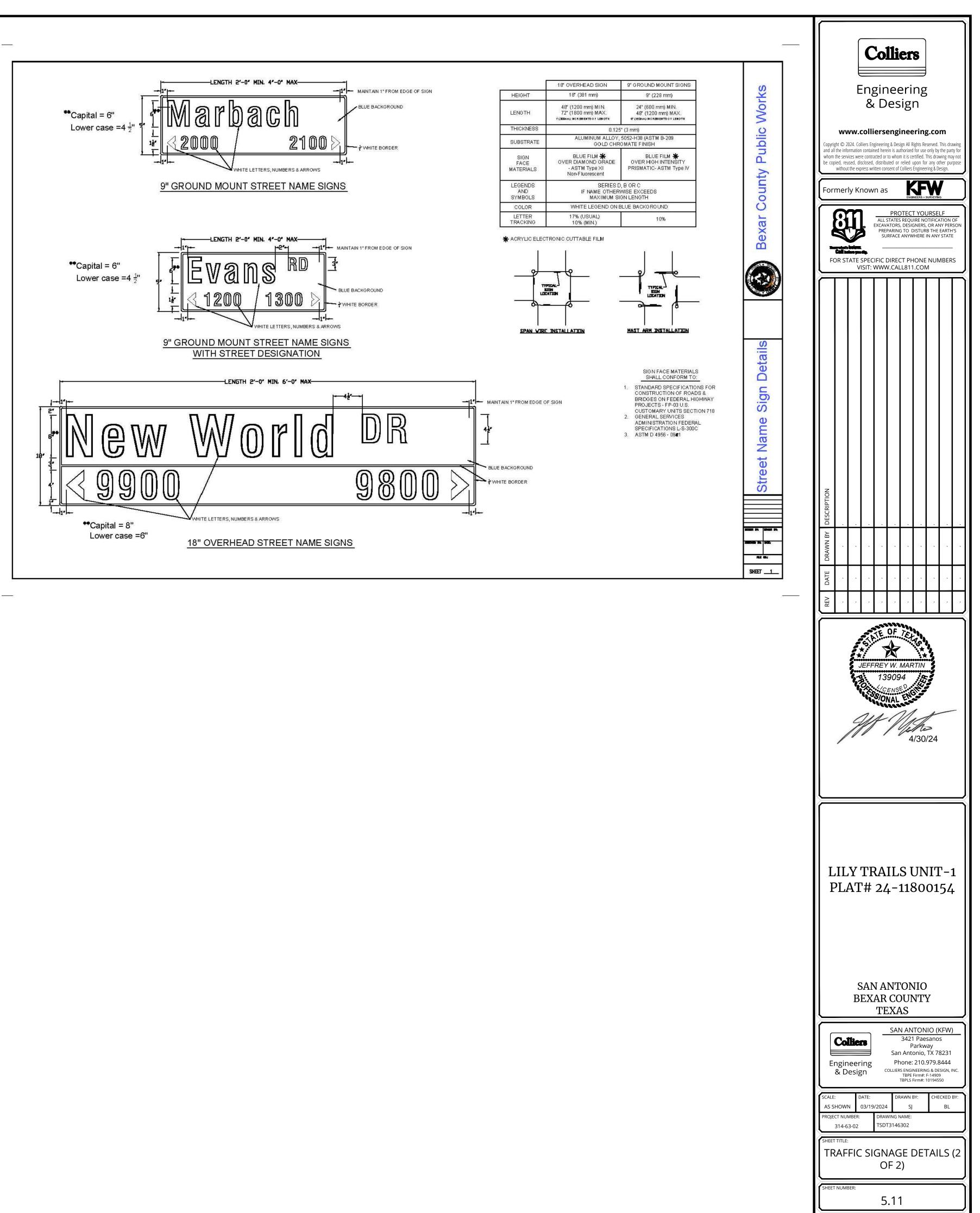


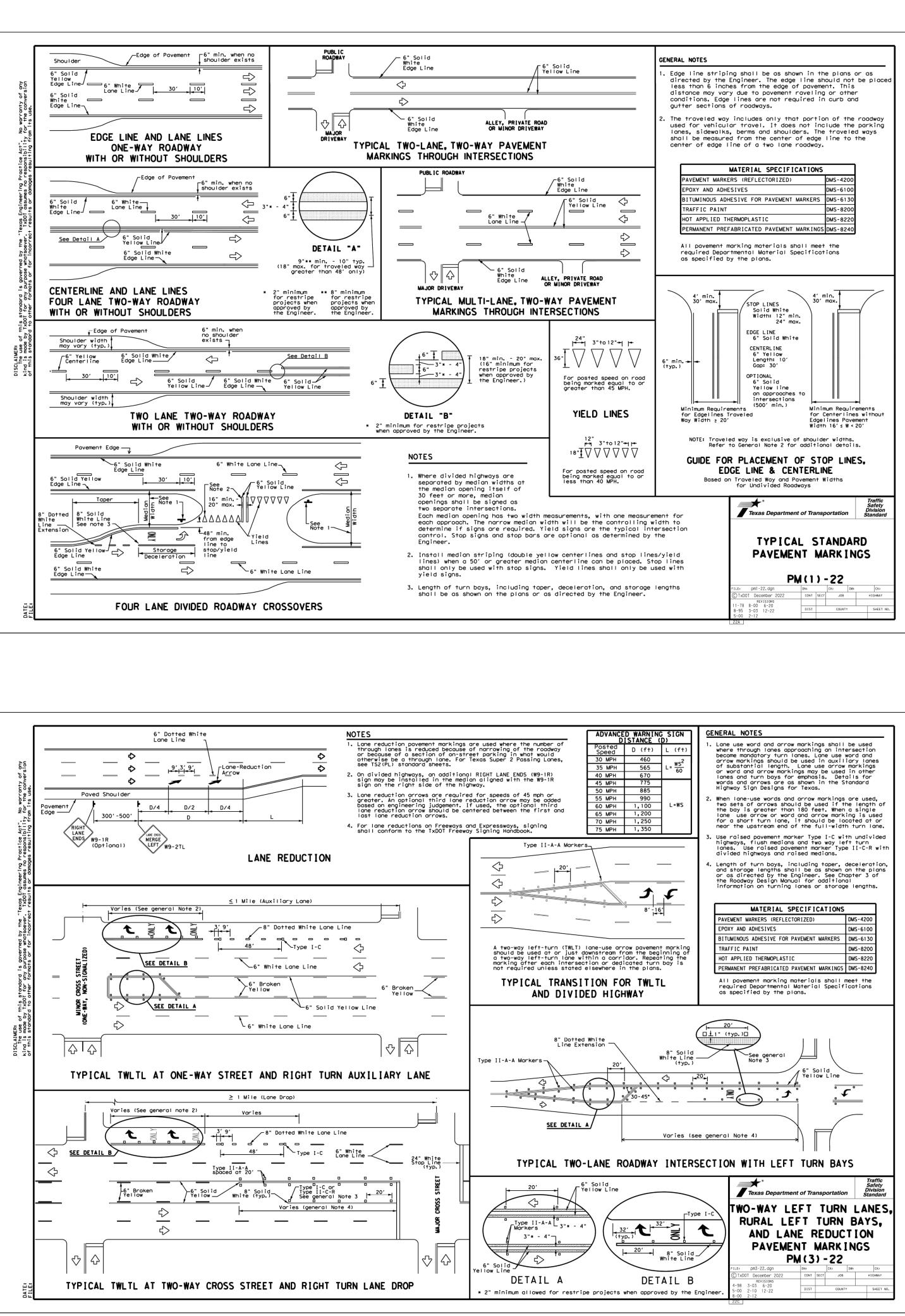


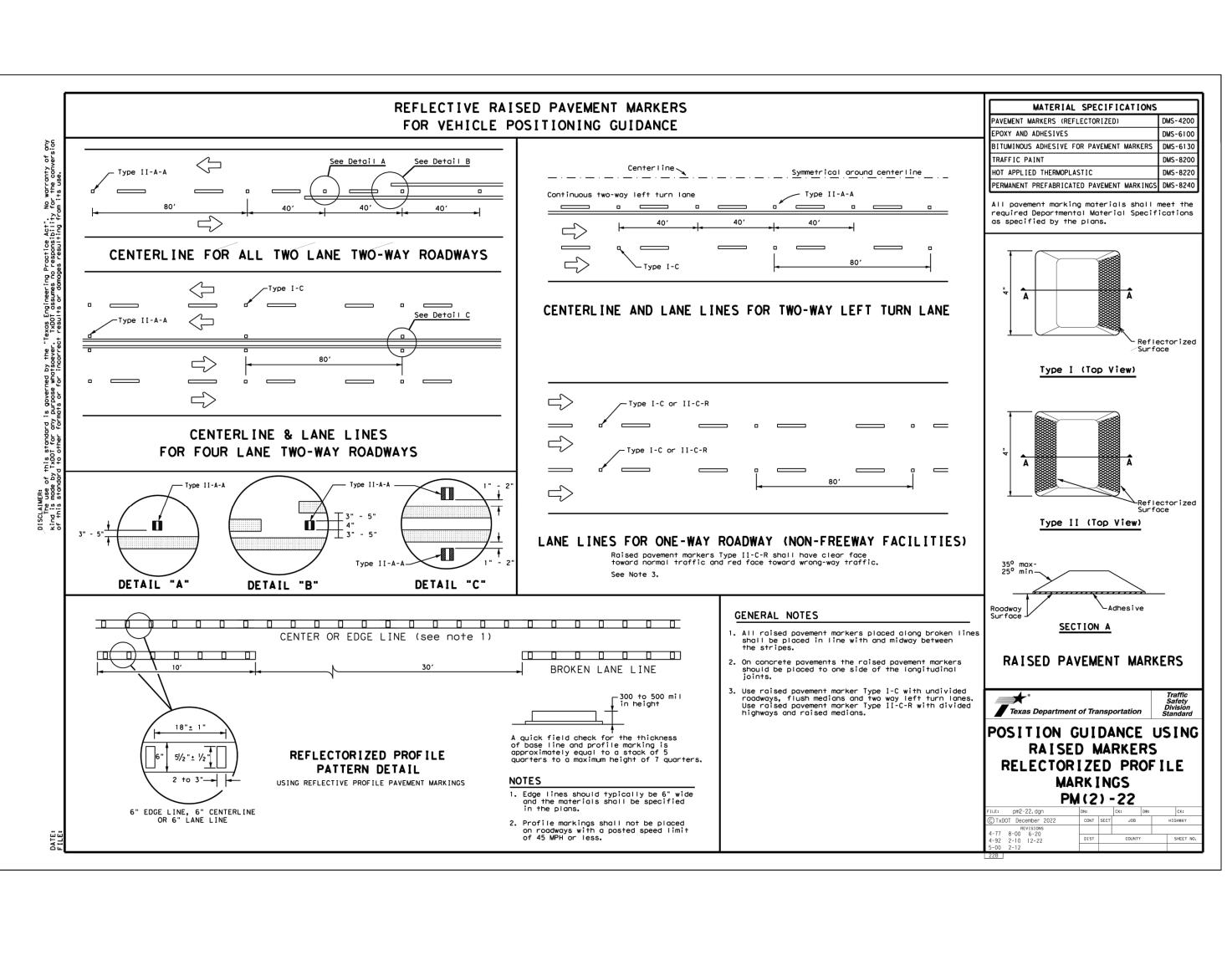
		E		c i gir	nee	eri	ng			
and al whom	ght © 2 I the info the serv pied, reu	024. Col ormatior rices wer used, di:	colli Iliers En o contair re contra sclosed,	gineerin ned here acted or distribu	engi g & Des ein is au to whor uted or	inee ign All R thorized m it is ce relied u	ering tights Re for use ertified. T	served. only by This dra r any o	This dra the par wing ma ther pu	ty for ay not
For				n as		K	F	W		Ť
	8			EXCAV. PREI	STATES ATORS PARINO	DTEC 5 REQU	T YOU	DTIFICA , OR AI B THE	LF ATION NY PER EARTH	SON S
F	Cell DR ST			IFIC I	DIRE	CT PH	IONE	NUN		
DATE DRAWN BY DESCRIPTION										
REV			•		•		•	•		·
	/				OF W. 909 ENS		73 × TIN /30	A V		_
		AT S	'# San	RA 22 NA AR TE	, +−∶	118 'ON DUI	30	01		
	Co	lie	13	_			l Pae arkw	sano ⁄ay	S	
	ngir & D	esig	gn ¯	C	Pł	S ENGI TBPE TBPLS I	210. NEERIN Firm#: Firm#:	979.8 IG & DE F-1490	8444 Esign, 1 9	NC.
PROJE	: HOWI CT NUI 314-6	N MBER:	03/19				BY:	CHE	ECKED BL	BY:
	RAF		: SI	GN O	IAC F 2		DE	ΤΑΙ	LS	(1
SHEET	NUM	BER:		5	.1()				Ĭ

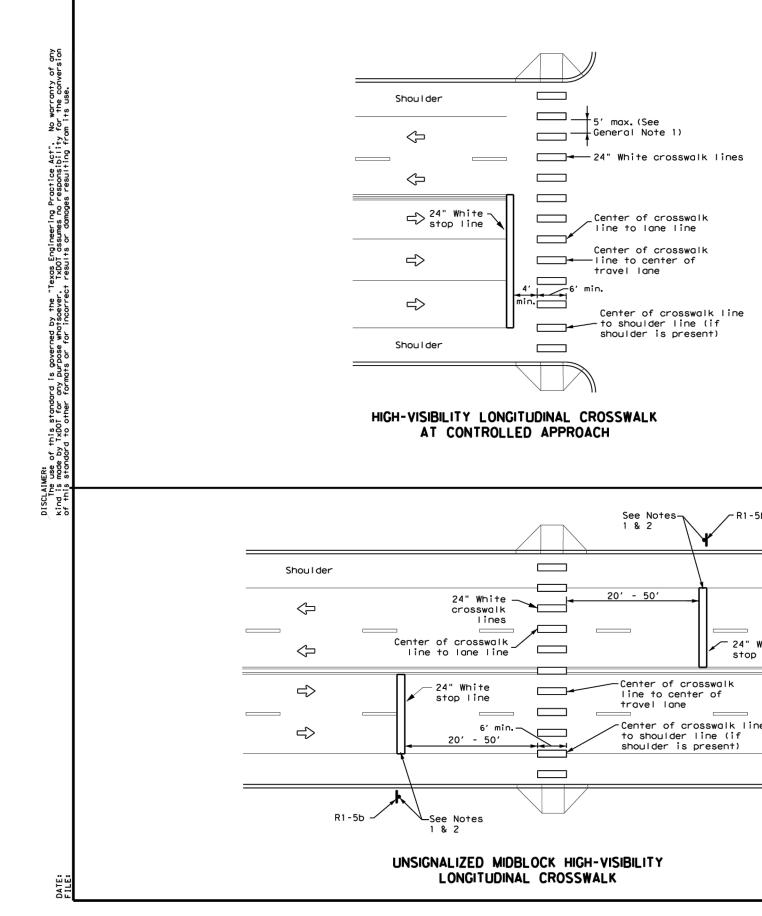
SHEET N











S	GENERAL NOTES 1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present). 2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted. 3. For divided roadways, adjustments in spacing of the crosswalk lines are maintained in their proper location across the travel portion of the roadway. 4. At skewed crosswalks, the crosswalk lines are to remain parallel to the lane lines. 5. Each crosswalk shall be a minimum of 6' wide.	JEFFREY W. MARTIN 139094 CENSED YONAL ENG 4/30/24
e R1 - 5b	 6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices." 7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field. MATERIAL SPECIFICATIONS PAVEMENT MARKERS (REFLECTORIZED) DMS-4200 EPOXY AND ADHESIVES DMS-6100 BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS TRAFFIC PAINT HOT APPLIED THERMOPLASTIC PERMANENT PREFABRICATED PAVEMENT DMS-8240 All povement marking materials shall meet the required Departmental Material Specifications as specified by the plans. 	LILY TRAILS UNIT-1 PLAT# 24-11800154
	NOTES: 1. Use stop bars with Stop Here For Pedestrians (R1-5b) signs at unsignalized midblock cross walks. 2. Use stop bars with STOP HERE ON RED (R10-6 or R10-6a) signs at	SAN ANTONIO BEXAR COUNTY TEXAS
4" White top line	mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons. Traffic Safety Division Texas Department of Transportation	ColliersBand San Antonio (KFW)San Antonio, TX 78231Phone: 210.979.8444Colliers Engineering & DesignColliers Engineering & Design, INC. TBPL Firm#: 10194550
Shoulder	CROSSWAL K PAVEMENT MARK INGS PM (4) -22A FILE: pm4-220, dgn DN1 CK1 © TXDOT December 2022 Cont SECT JOB HIGHWAY 6-20 REVISIONS E Image: Cont SECT JOB HIGHWAY	SCALE: DATE: DRAWN BY: CHECKED BY: AS SHOWN 03/19/2024 SJ BL PROJECT NUMBER: DRAWING NAME: 314-63-02 TSDT3146302 SHEET TITLE: TXDOT PAVEMENT MARKING DETAILS
	6-22 DIST COUNTY SHEET NO. 12-22 ZZD	SHEET NUMBER: 5.12

Colliers

Engineering

& Design

www.colliersengineering.com

pyright © 2024. Colliers Engineering & Design All Rights Reserved. This drav

d all the information contained herein is authorized for use only by the party

hom the services were contracted or to whom it is certified. This drawing may

e copied, reused, disclosed, distributed or relied upon for any other purp

without the express written consent of Colliers Engineering & Design.

FOR STATE SPECIFIC DIRECT PHONE NUMBERS

VISIT: WWW.CALL811.COM

ATE OF TEL

ormerly Known as

Teaconteats bolons. Call paters you do

KFW

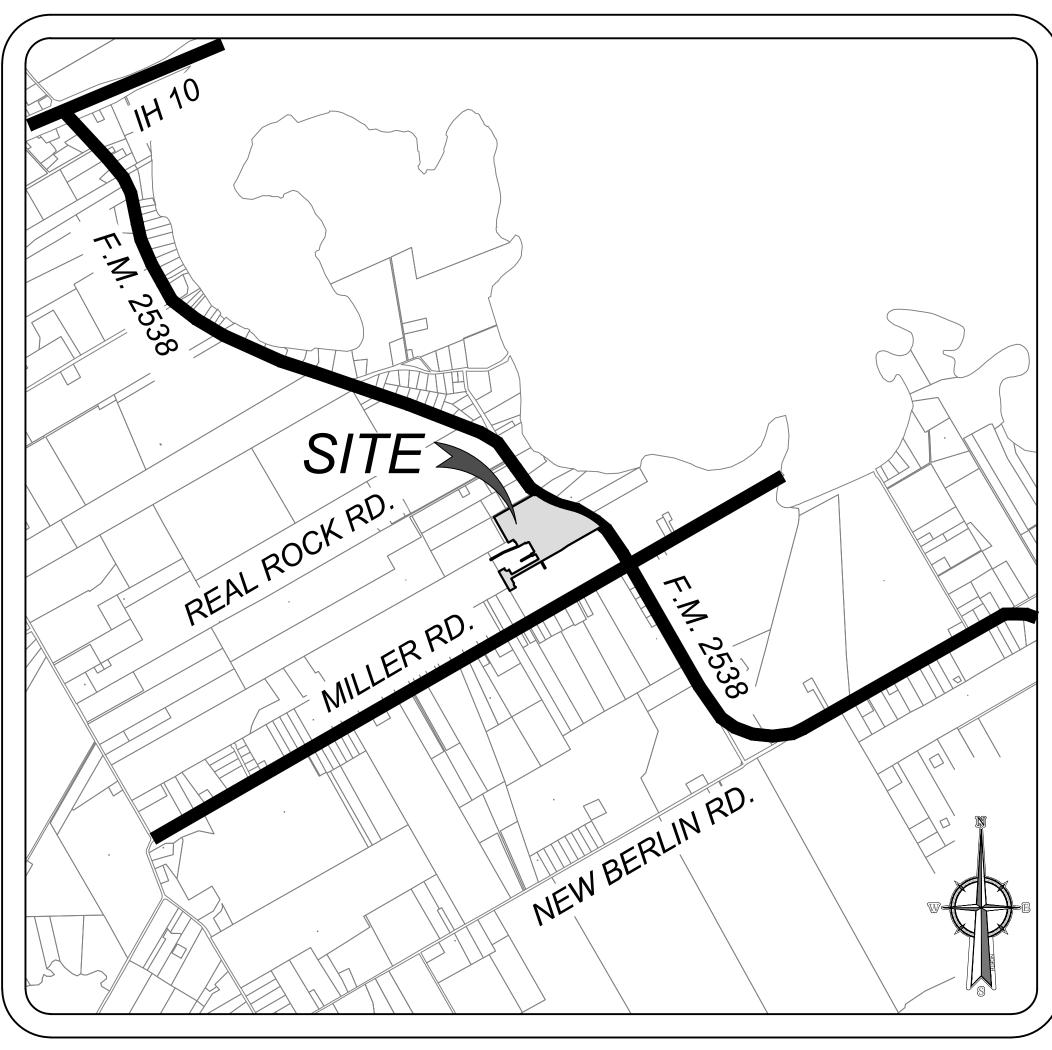
PROTECT YOURSELF

ALL STATES REQUIRE NOTIFICATION OI EXCAVATORS, DESIGNERS, OR ANY PERSO

PREPARING TO DISTURB THE EARTH'S

SURFACE ANYWHERE IN ANY STATE

LILY TRAILS UNIT-1 BEXAR COUNTY, TEXAS SANITARY SEWER IMPROVEMENTS



SANITARY SEWER COV OVERALL SANITARY SE OVERALL SANITARY SE OVERALL SANITARY SE LINE "A" PLAN AND PRO LINE "A" PLAN AND PRO LINE "B" PLAN AND PRO LINE "C" PLAN AND PRO LINE "D" PLAN AND PRO LINE "E" PLAN AND PRO LINE "G" PLAN AND PR SANITARY SEWER NOT SANITARY SEWER NOT SANITARY SEWER DET SANITARY SEWER DET

LOCATION MAP N.T.S.

OWNER/DEVELOPER LENNAR HOMES OF TEXAS LAND & CONSTRUCTION LTD. 100 NE LOOP 410, SUITE 1125 SAN ANTONIO, TEXAS 78216

ſ											
				C	`0	[]i	er	S			
			E	_			eri Sigi	<u> </u>	,)		
	and all whom	ght © 2 I the info the serv	024. Col ormation vices wer used, dis	lliers En contair e contra	gineerin ned here acted or	ng & Des ein is au to whor	ign All R Ithorized m it is ce	ights Re for use rtified.	eserved. only by This dra	This dra the par wing ma	ty for ay not
		withou	t the exp	oress wr	itten cor	nsent of	Colliers	Énginee		esign.	
			J		EXCAV. PRE	STATES ATORS PARING	DTEC S REQU S, DESIC G TO D E ANYW	IRE NO GNERS	DTIFICA , OR AI B THE	ATION NY PER EARTH	ISON
	FC	OR ST	ATE S				CT PH _L811			/IBER	
-											
-											
-											
-											
-	DESCRIPTION										
-	DRAWN BY DESCF										
-	DATE DRAW	•	•				•				•
-	REV D										
		/				OF W. 9099 ENSI	ENG	**	/24		-
				'# San	22 N A	'+-: NT	118 'ON	30	01		
			AT	'# San	22 NA AR	NTI CC EXA	118 'ON DUN		01 Y	54	+
	E	PL	AT		22 NA AR TE	NT CCC SAN Sar Ph COLLIER	118 ON OUP AS NAN 3421 P n Anto aone: s sevail	30 JIO NT TON Pae arkw pnio, 210. VEERINFIRM#:	01 Y IIO (I sano ay TX 7. 979.8	54 (FW) s 8231 3444 3444	-
	E SCALE AS S PROJE	PL	AT S B Ilica neer esig	SAN EX ing		NTI CC SAN Sar Ph COLLIER	1118 ON JUN AS NAN 3421 PD AANto TBPE F TBPES F CANN E SJ VAME:	30 JIO NT Pae arkw onio, 210. VEERIN Firm#:	O1 Y IIO (I sano ray TX 7. 979.8 G & DE F-1490 101945	54 (FW) s 8231 3444 3444) NC.
	E SCALE AS S PROJEC	Col ngir & D : HOWI 314-6	AT B B Heer esig	CAN EX ing n ATE: 03/19			1118 ON OUT AS NAN 34211 PD Anto NANE S ENGIN TBPLS F TBPLS F S ENGIN TBPLS F S ANTE S S ENGIN S S S S S S S S S S S S S S S S S S S	30 JIO NT Pae arkw onio, 210. VEERIN Firm#: 3Y:	O1 Y IIO (I sano ray TX 7. 979.8 G & DD 979.8 G & DD 979.8 CHE	54 (FW) s 8231 3444 sign, 1 s s c c BL	NC.

Sheet List Table

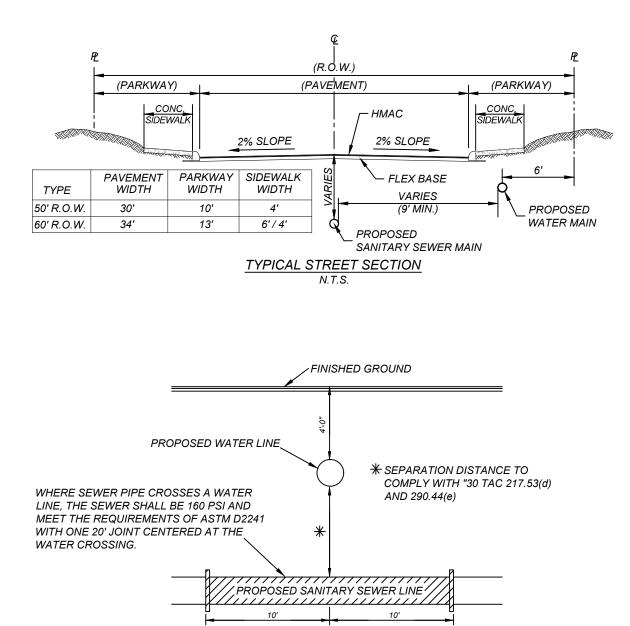
SHEET TITLE	SHEET NUMBER
VER SHEET	6.0
EWER PLAN (1 OF 3)	6.1
EWER PLAN (2 OF 3)	6.2
EWER PLAN (3 OF 2)	6.3
ROFILE	6.4
ROFILE	6.5
ROFILE	6.6
	6.7
	6.8
	6.9
	6.10
TES (1 OF 2)	6.11
TES (2 OF 2)	6.12
TAILS (1 OF 2)	6.13
TAILS (2 OF 2)	6.14

AROUND TRENCH EXCAVATION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS. PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND

<u>CAUTION!!:</u> THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES

INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.





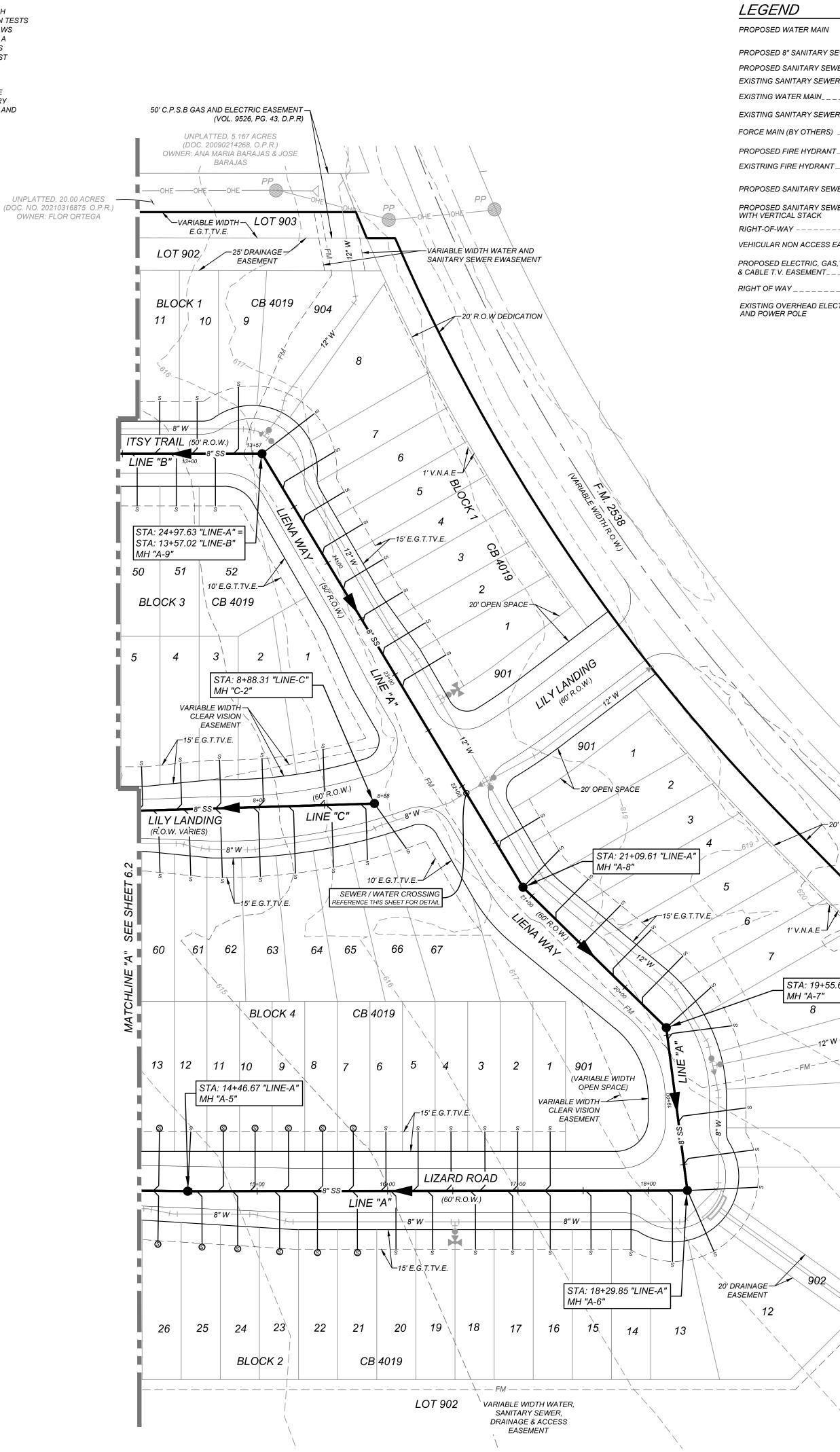
COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

DRY UTILITY CONDUIT NOTE: CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.

NOTE:

- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM).
- PIPE TYPE DESIGNATIONS ARE SDR 26. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS AND DETAILS.



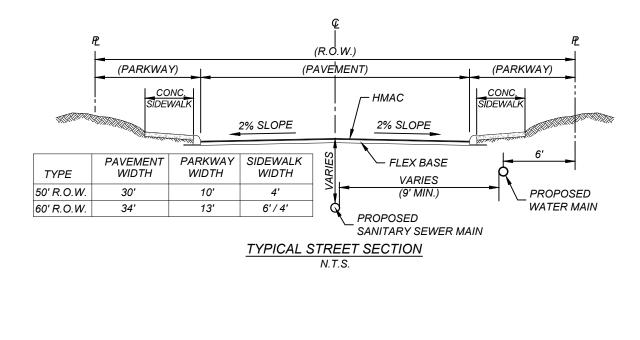
BWER MAIN SEWER MAIN SEWER MAINOLE ER ROW PROCE ROW PROCE ER ROW PROCE ER ROW PROCE PROCE ER ROW PROCE PROCE PROCE PROCE PROCE PROCE PROCE PROCE PROCE PROCE <	<section-header><section-header><section-header><section-header><section-header><section-header><text><text><text><text><text><text><text></text></text></text></text></text></text></text></section-header></section-header></section-header></section-header></section-header></section-header>
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state Image: Second state
20'R.O.W DEDICATION 5.69 "LINE-A" 9 10	LILY TRAILS UNIT-1 PLAT# 24-11800154
10 BLOCK 2 11 DRAIN "A" SEE SHEET 4.0	<section-header><section-header><section-header><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></section-header></section-header></section-header>

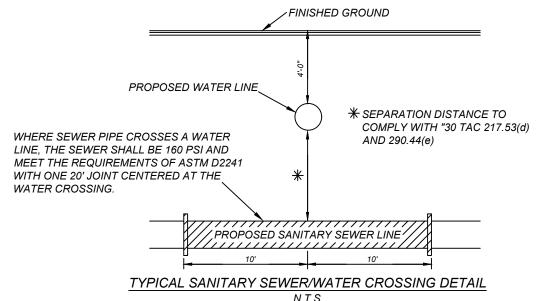
AROUND TRENCH EXCAVATION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS. PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES. AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE

EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.





NOTE

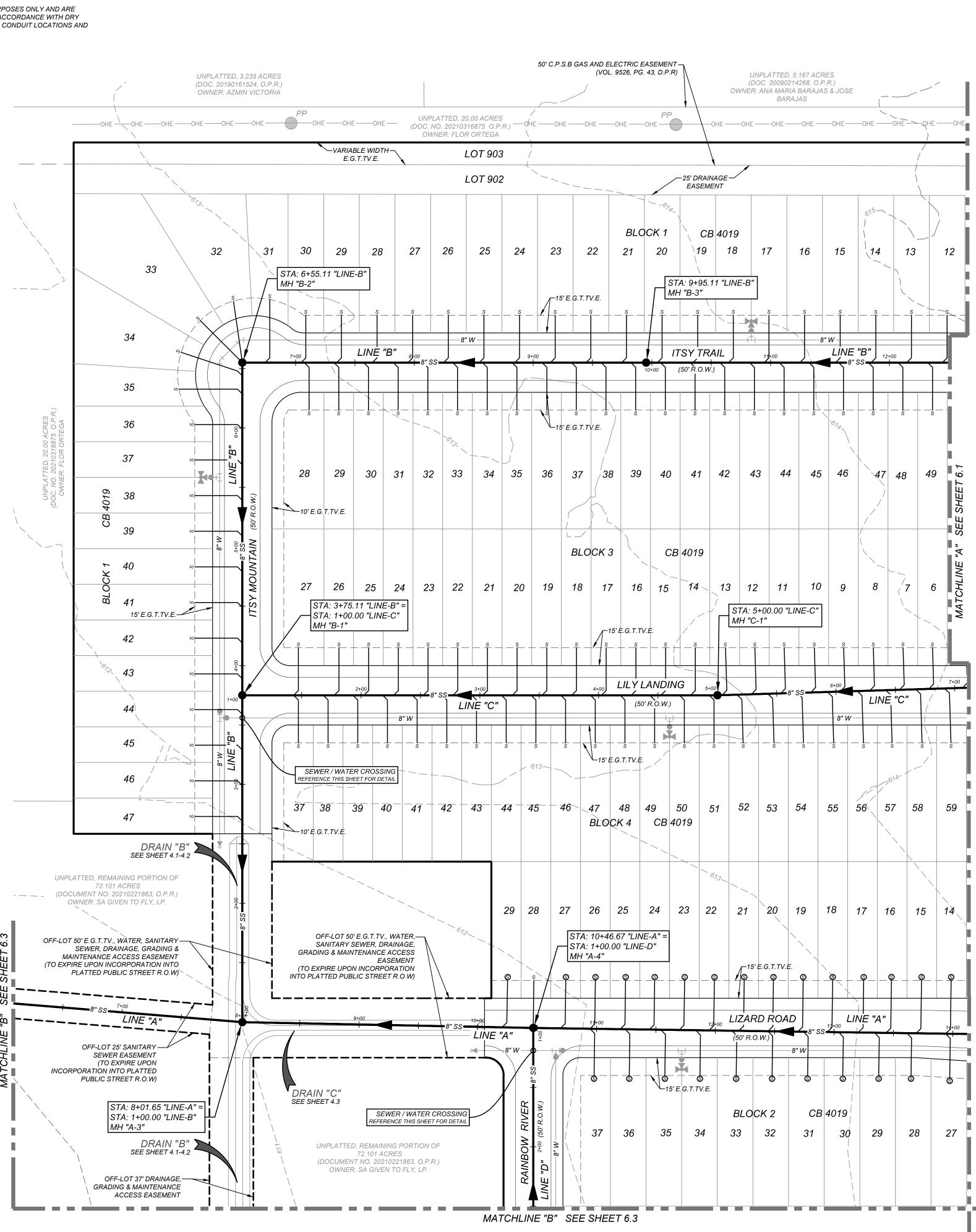
- 1. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM).
- 2. PIPE TYPE DESIGNATIONS ARE SDR 26. 3. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS AND DETAILS.

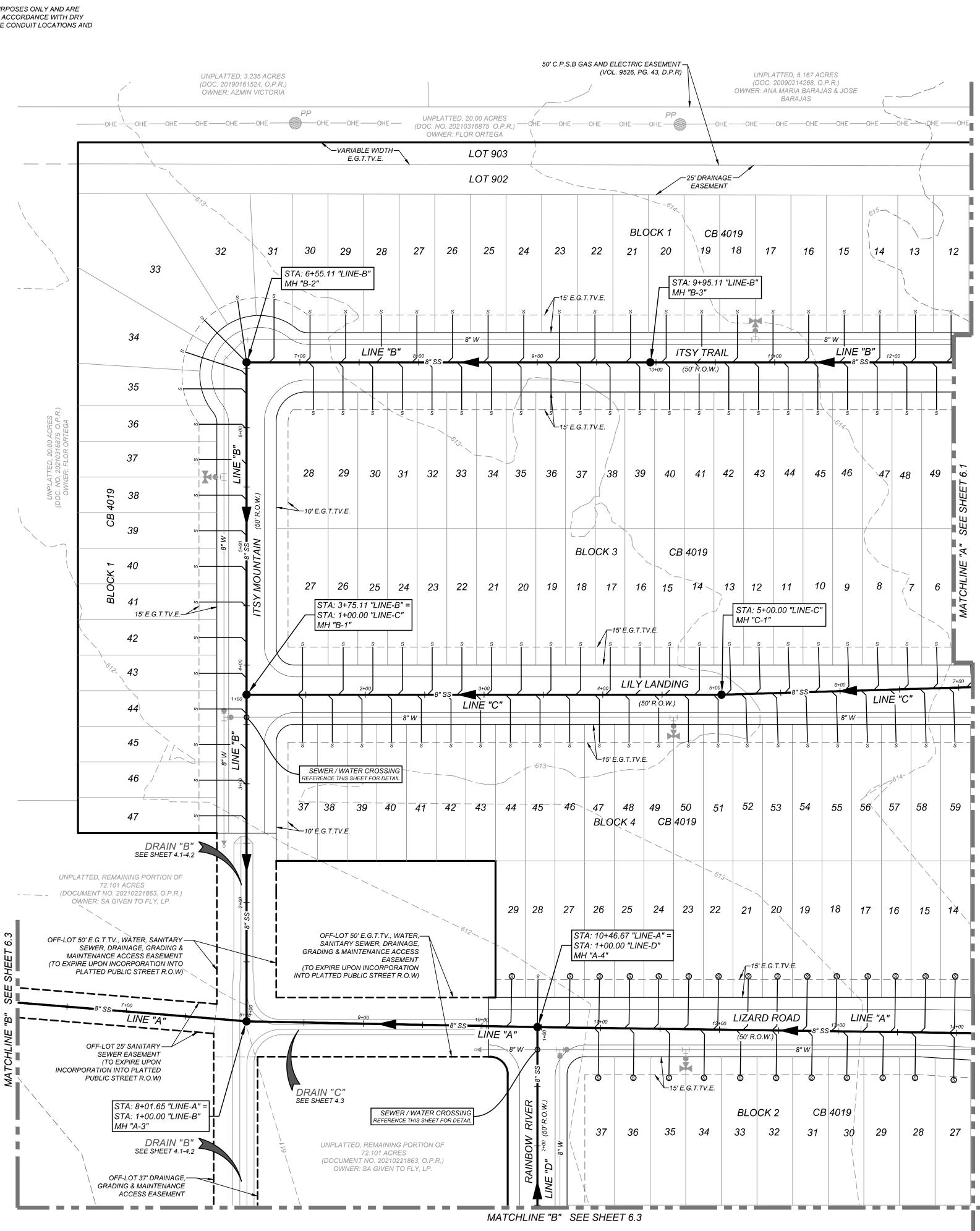
OMPACTION NOTE:

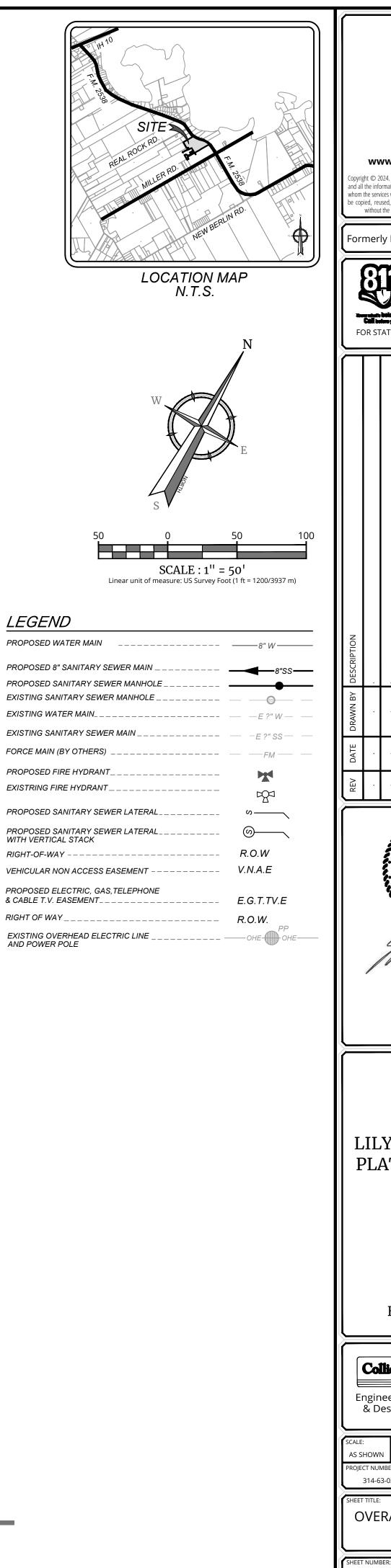
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

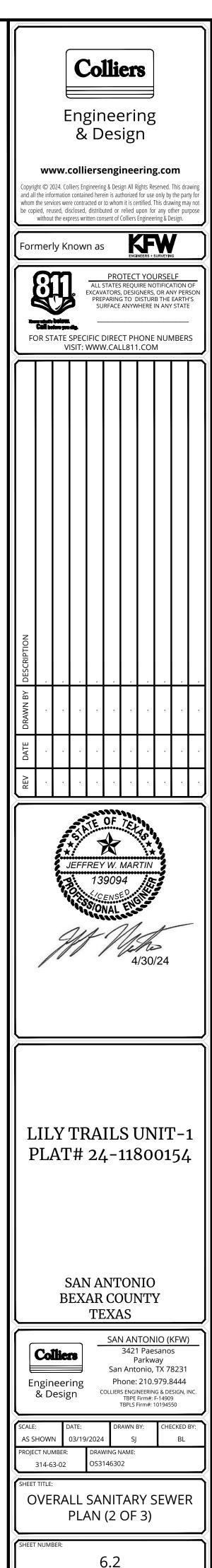
DRY UTILITY CONDUIT NOTE

CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.





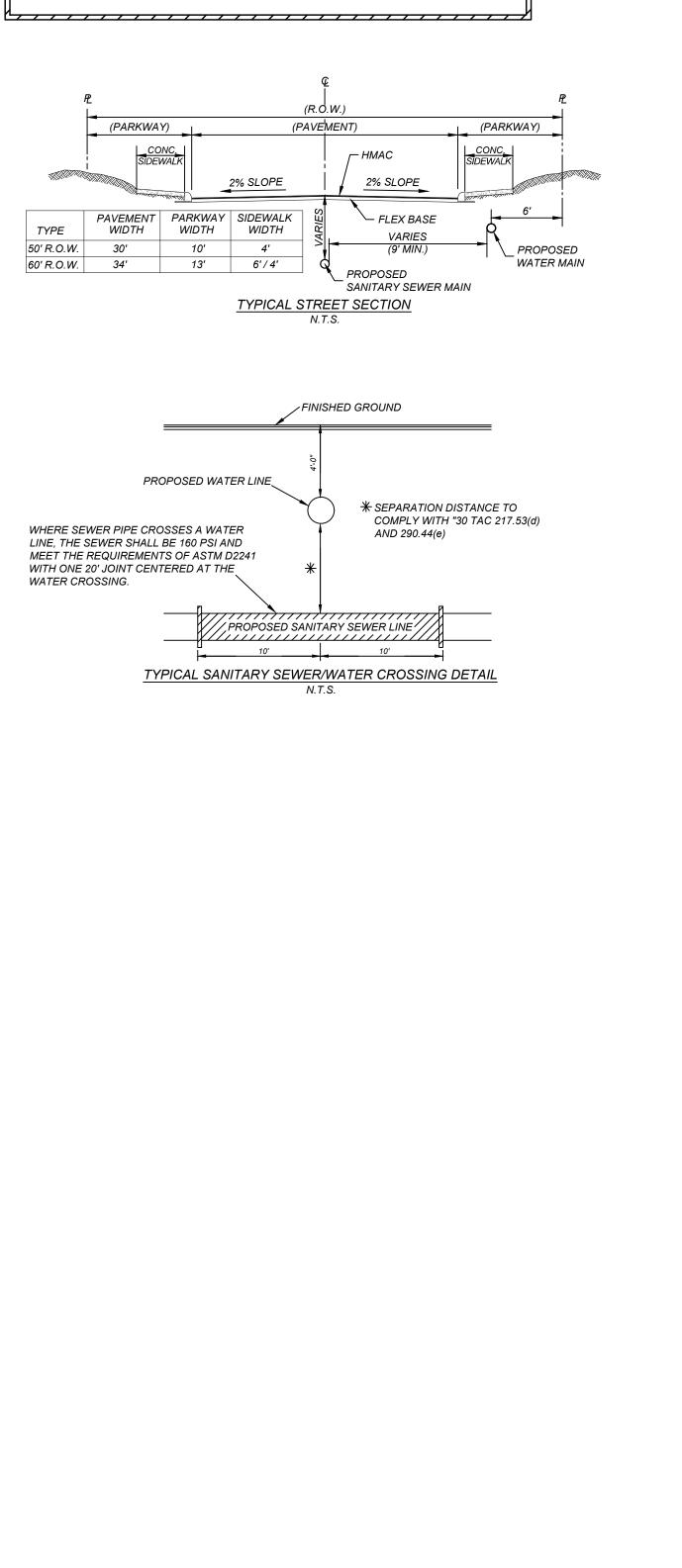




AROUND TRENCH EXCAVATION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS. PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND

<u>CAUTION!!:</u> THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.



OMPACTION NOTE:

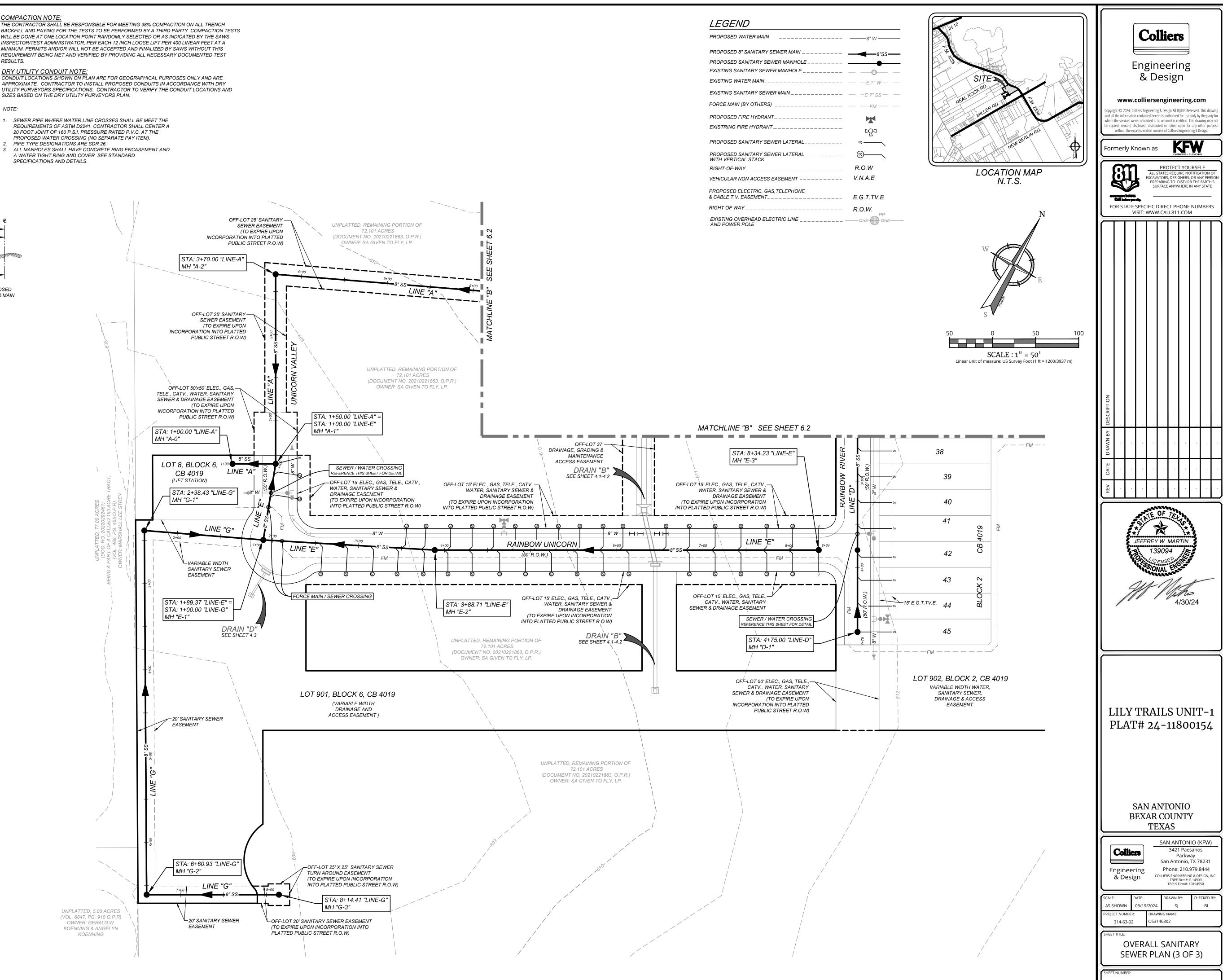
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

DRY UTILITY CONDUIT NOTE

APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.

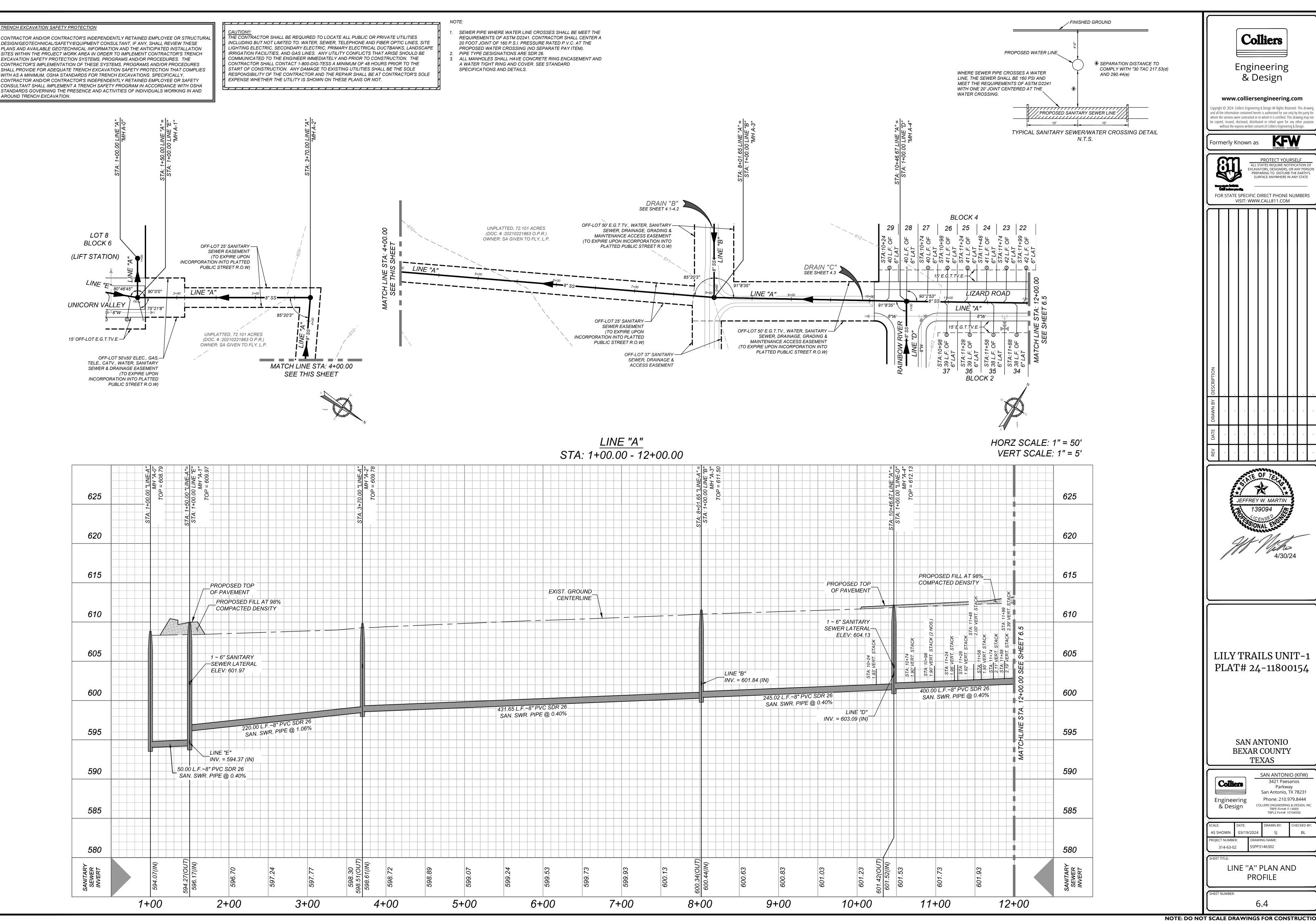
NOTE:

- REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM).
- PIPE TYPE DESIGNATIONS ARE SDR 26. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS AND DETAILS.



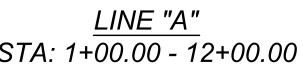
6.3

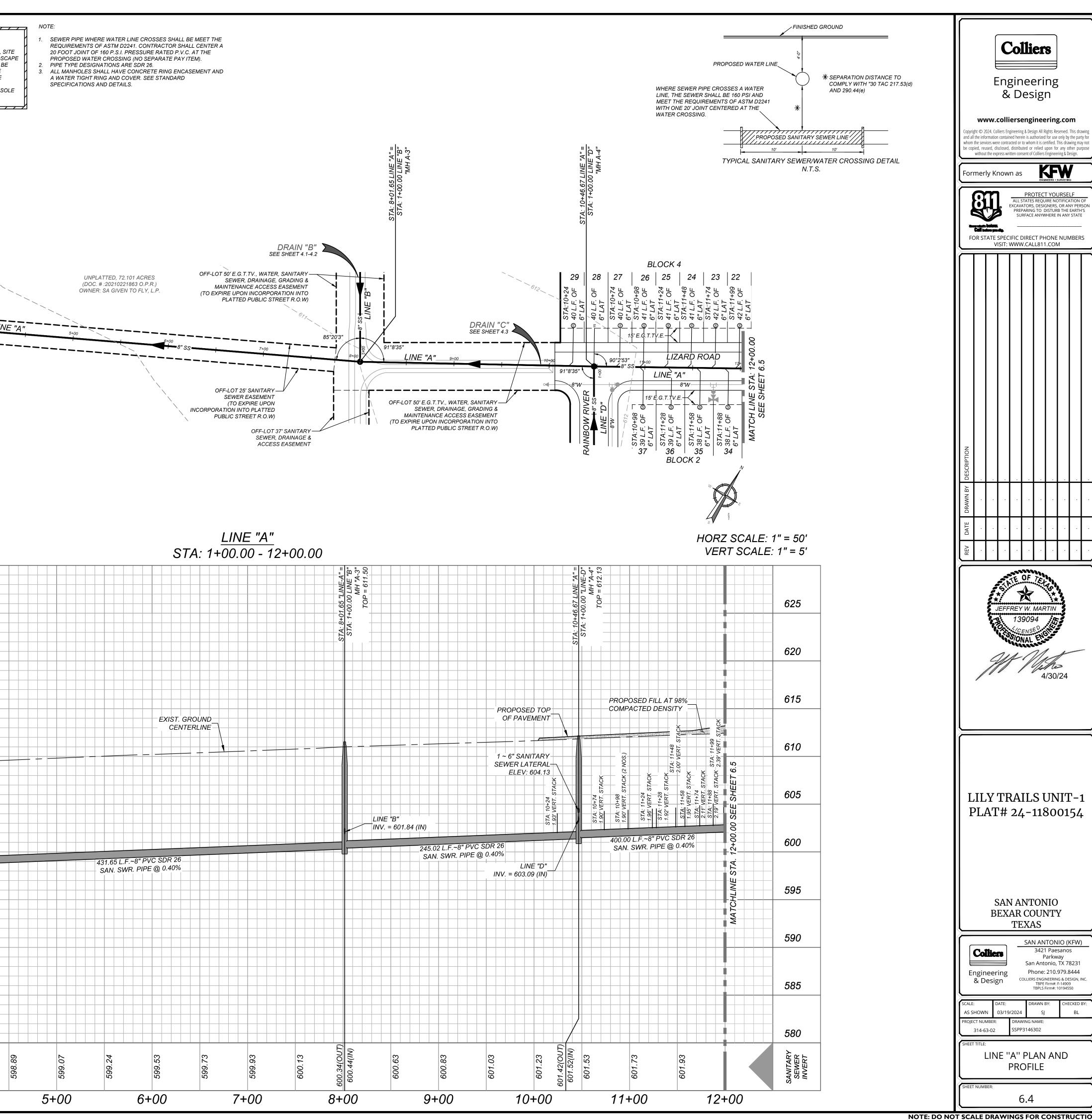
TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

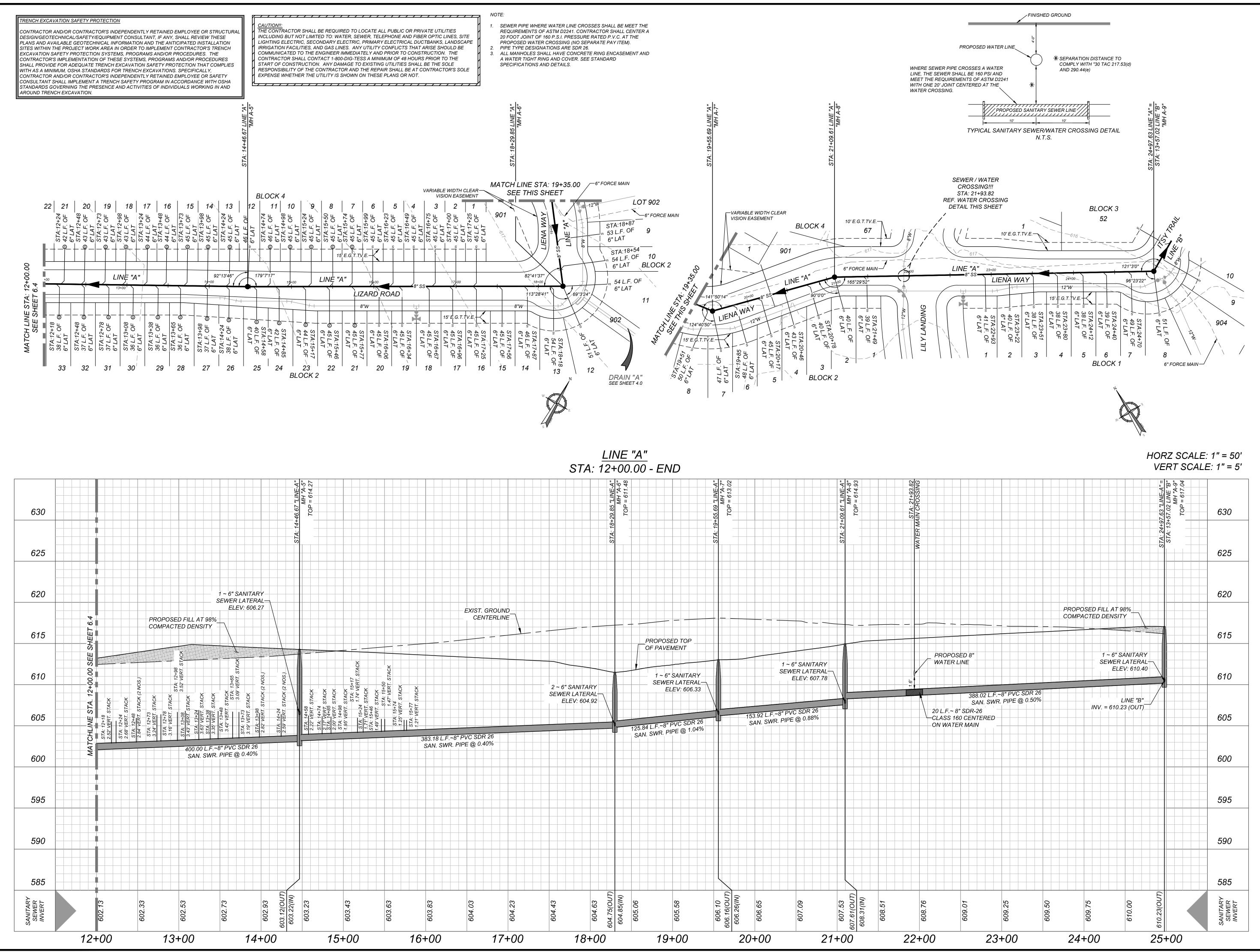




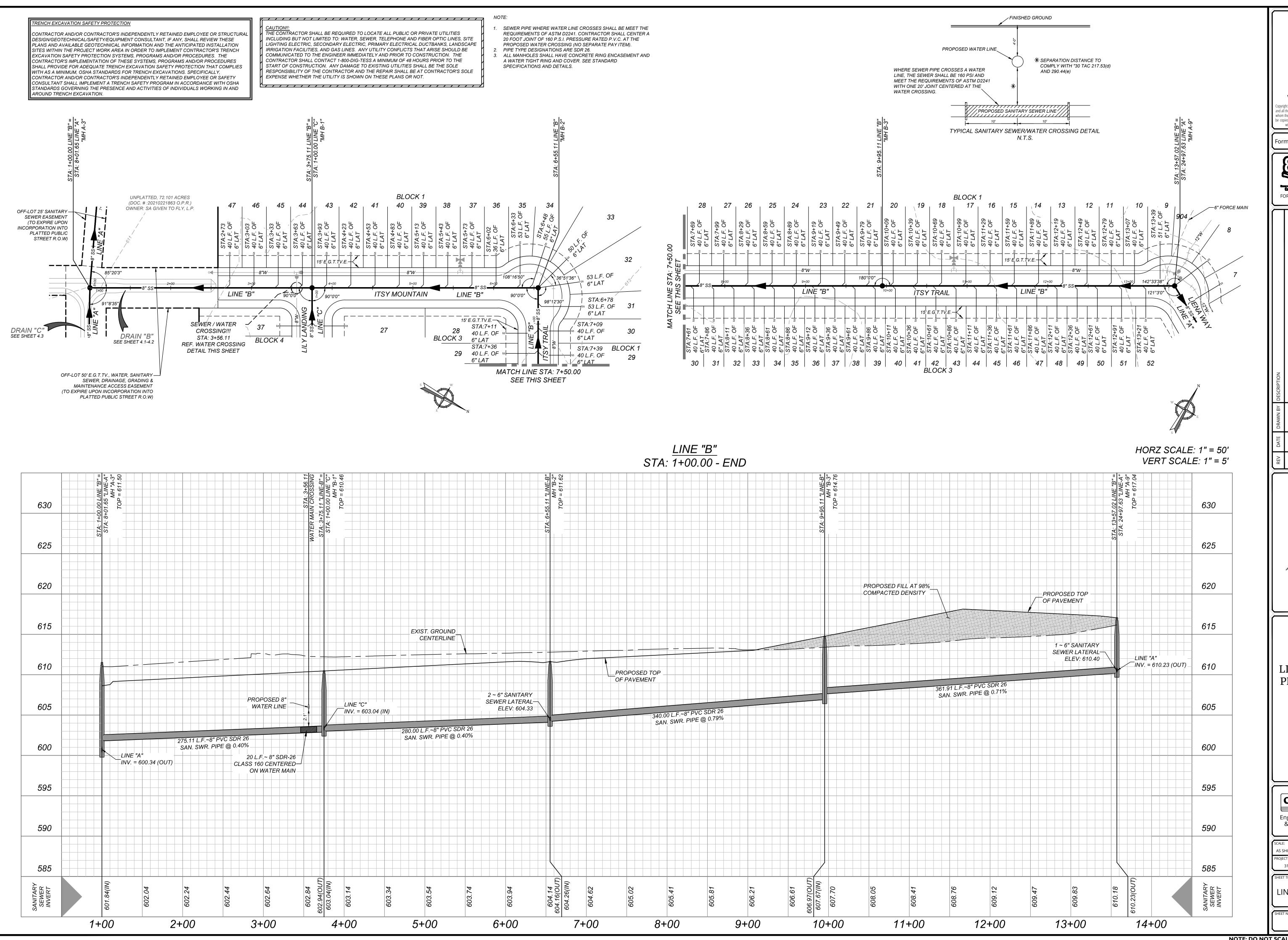
625	1+00.00 "LINE-A"	MH "A-0" TOP = 608.79	STA: 1+00.00 LINE "E" MH "A-1" TOP = 609.97				SIA: 3+70.00 LINE-A MH "A-2" TOP = 609.78	
620	STA:	STA: 1	STA:					
615				DSED TOP				
610			/ PROI	'EMENT POSED FILL A1 PACTED DENS	- 98% ITY			
605			1 ~ 6" S 	ANITARY R LATERAL 601.97				
600								
595					.~8" PVC SDR 2 'R. PIPE @ 1.06	26 26 26 20 20 20 20 20 20 20 20 20 20 20 20 20		
590		50.00 SAN	LINE "E INV. = 5 L.F.~8" PVC SI I. SWR. PIPE @	" 594.37 (IN) DR 26 0.40%				
585								
580								
SANITARY SEWER INVERT		594.07(IN) 594.27(OUT)	596.17(IN)	596.70	597.24	597.77 598.30 598.30	598.61(IN)	598.72
	1+	00	2+	00	3+	00	4+	00







		E	Eng		nee	eri	ng	5			
and all whom	ght © 2 the info the serv ied, rei	2024. Co prmatior vices wer used, di t the exp	colli Iliers En n contair re contra	gineerin ned here acted or distrib	engi g & Des ein is au to whor uted or	inee ign All R thorized m it is ce relied u	ering lights Re for use ertified. upon fo	eserved. only by This dra r any o	This dra the par wing ma ther pu	ty for Iy not	
For	Formerly Known as PROTECT YOURSELF										
FC	ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM										
DATE DRAWN BY DESCRIPTION											
REV											
	JEFFREY W. MARTIN 139094 CENSED VONAL FLOOD VONAL FLOOD 4/30/24										
				22 NA AR	'+−:	118 ON	30	01			
		llic	ing	C	Sar Ph	3421 P A Ante none:	l Pae Parkw onio, 210. NEERIN	sano /ay TX 7 979.8	8231 3444 SIGN, I		
PROJE	& D : HOW 314-6	MBER: 53-02	DATE: 03/19	DRAV	DR		irm#:	101945		BY:	



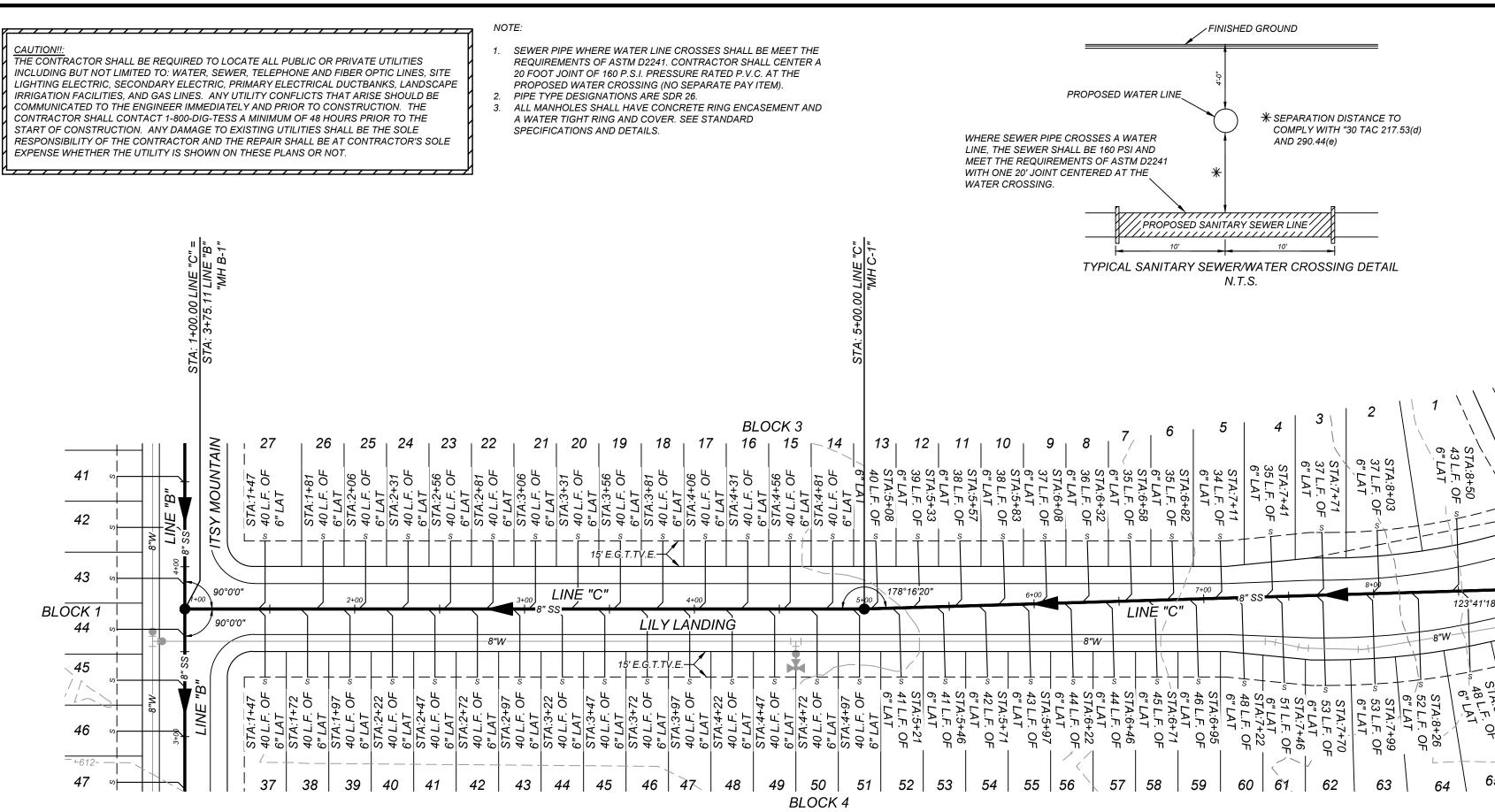
seWER\SSPP3146302.dwg\6.6 By: SJOSEPH

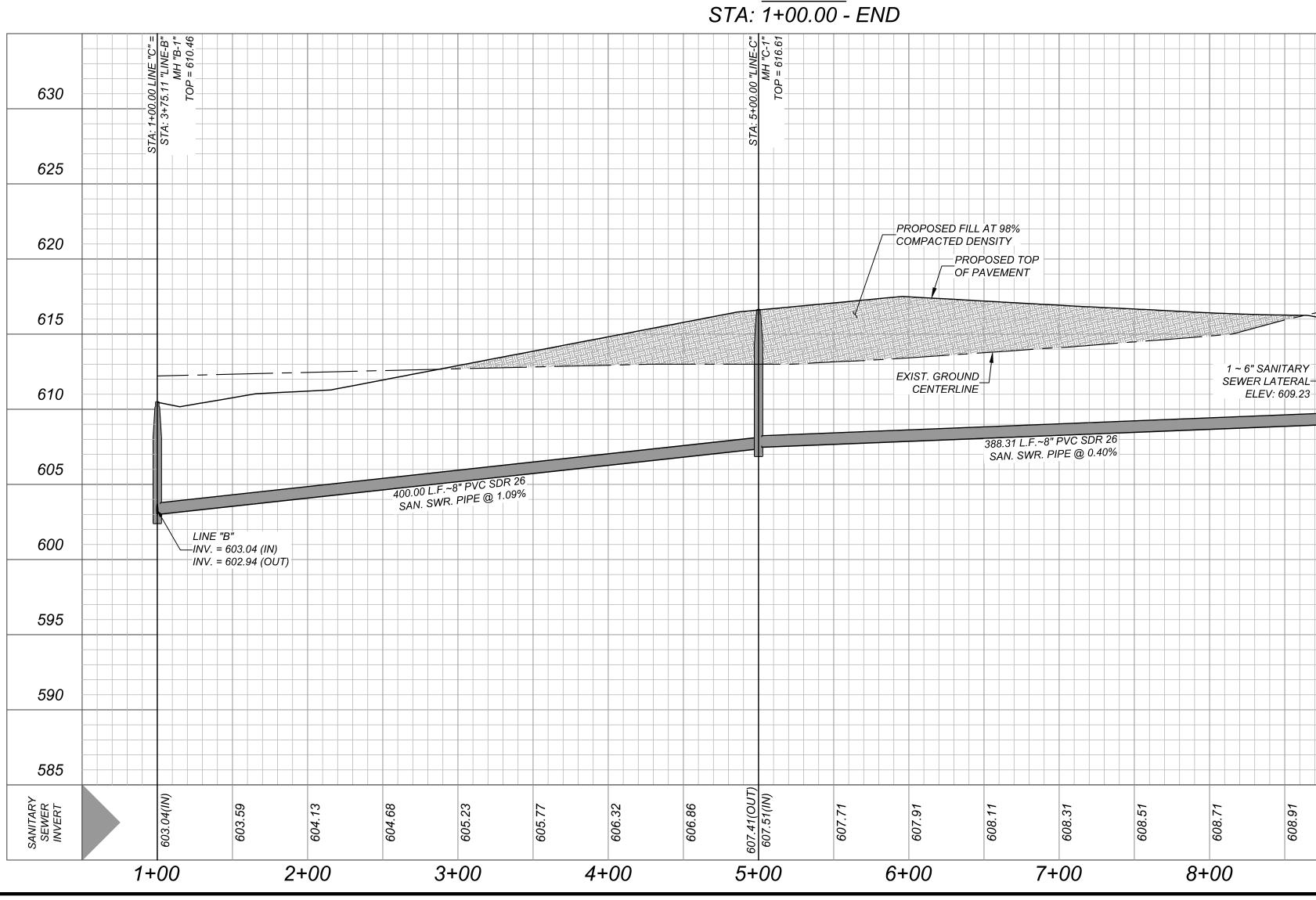
		Ę	C	0	lli	er	8				
		E	-			eri sigi	_	5			
and who	rright © 2 all the info m the serv opied, rei	ormatior vices we	lliers En 1 contaii re contra sclosed,	gineerin ned here acted or distrib	g & Des ein is au to whor uted or	ign All R thorized n it is ce relied u	Rights Re I for use ertified. upon fo	eserved. only by This dra r any o	This dra the par wing ma ther pu	rty for ay not	
Fo	rmer					k	F		/		
	PROTECT YOURSELF ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM										
V DATE DRAWN BY DESCRIPTION											
REV		•	•	•			•		•	Ŀ	
	E OF THE										
		With the second s		13 5/0				/24		_	
		Y AT				MAF P4 EN A S S U 118 S VON	JIO				
		Y AT		RA 22		MAF A S CON OUT A	JIO VIC		54	<u></u>	
		Y AT B Die				MAF A P A A A A A A A A A A A A A	ATIN ATIN A A A A A A A A A A A A A A A A A A A	UI 01 01 UI UI V V V V V V V V V V V V V V V V V	KFW s 8231 3444		
SCAL AS PRO	PLA Engir & D .E: SHOW 314-6	XY AT B B B B B B B B B B B B B B B B B B	SANCEX			MAF A A A A A A A A A A A A A	ATIN ATIN A A A A A A A A A A A A A A A A A A A	UIC (I sano (ay TX 7. 979.8 IIC (I sano (a) Sano Sano (a)	KFW s 8231 3444	, F	
SCAL SCAL PROJ	PL	XY AT B MBER: 3-02	SAN EX ing			MAF A A A A A A A A A A A A A	JIO JIO JIC TON Firm#: BY:	UI 0 1 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0	54 KFW s 8231 3444 ssign, i so ccked BL	F	

AROUND TRENCH EXCAVATION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND





LINE "C"

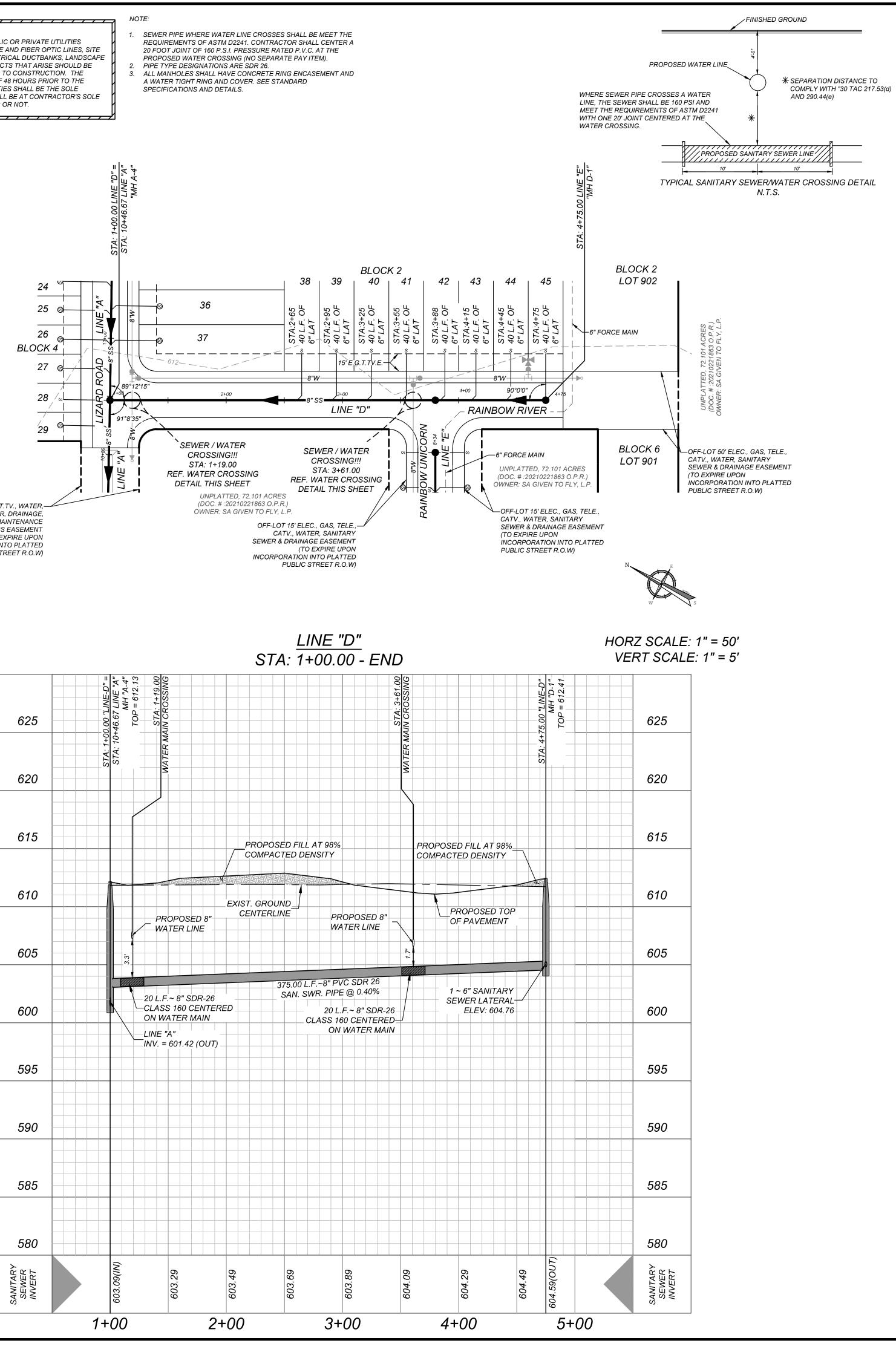
		Copyright © 2024. Colliers Engineering & Design All Rights Reserved. This dra and all the information contained herein is authorized for use only by the par whom the services were contracted or to whom it is certified. This drawing ma be copied, reused, disclosed, distributed or relied upon for any other pur without the express written consent of Colliers Engineering & Design. Formerly Known as Formerly Known as Formerly Survey no PROTECT YOURSELF ALL STATES REQUIRE NOTIFICATION
		EXCAVATORS, DESIGNERS, OR ANY PER PREPARING TO DISTURB THE EARTH SURFACE ANYWHERE IN ANY STATE TOR STATE SPECIFIC DIRECT PHONE NUMBER VISIT: WWW.CALL811.COM
		DateDrawn BYDescription··· </th
		ALL
615 610 605		LILY TRAILS UNIT-: PLAT# 24-11800154
600 595		SAN ANTONIO BEXAR COUNTY TEXAS SAN ANTONIO (KFW) 3421 Paesanos Parkway San Antonio, TX 78231 Engineering Phone: 210,979,8444
SANITARY SEWER INVERT INVERT		Engineering & Design Phone: 210.979.8444 & Design Colliers Engineering & Design, II TBPE Firm#: F-14909 TBPLS Firm#: 10194550 SCALE: DATE: DRAWN BY: CHECKED I AS SHOWN 03/19/2024 SJ BL PROJECT NUMBER: DRAWING NAME: 314-63-02 SSPP3146302 SHEET TITLE: LINE ''C'' PLAN AND PROFIL SHEET NUMBER: 6.7
	625 620 615 610 605 600 595 590 585	E: 1" = 50' LE: 1" = 5' 630 625 620 615 610 605 600 595 590 585

AROUND TRENCH EXCAVATION.

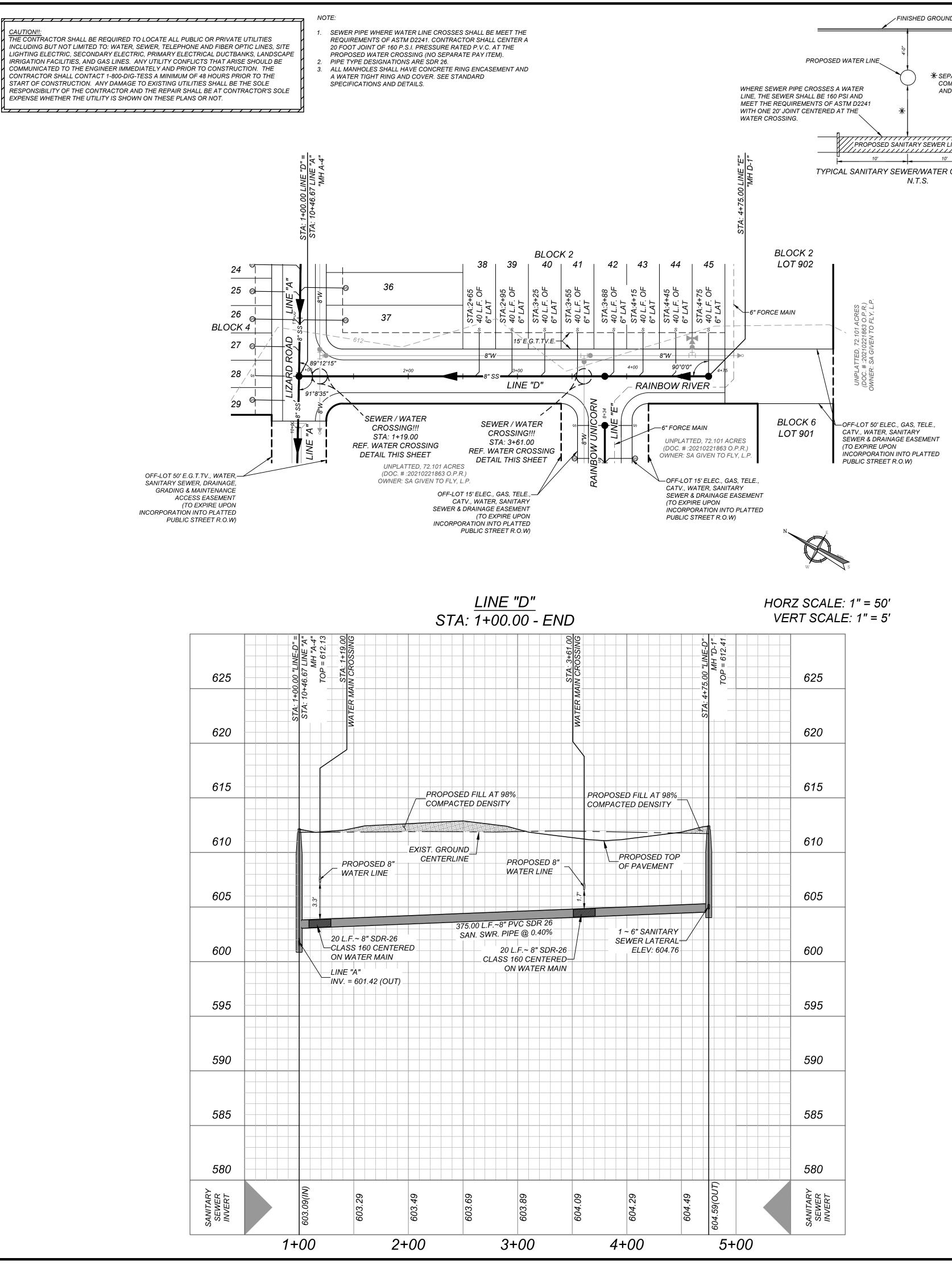
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND

INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.



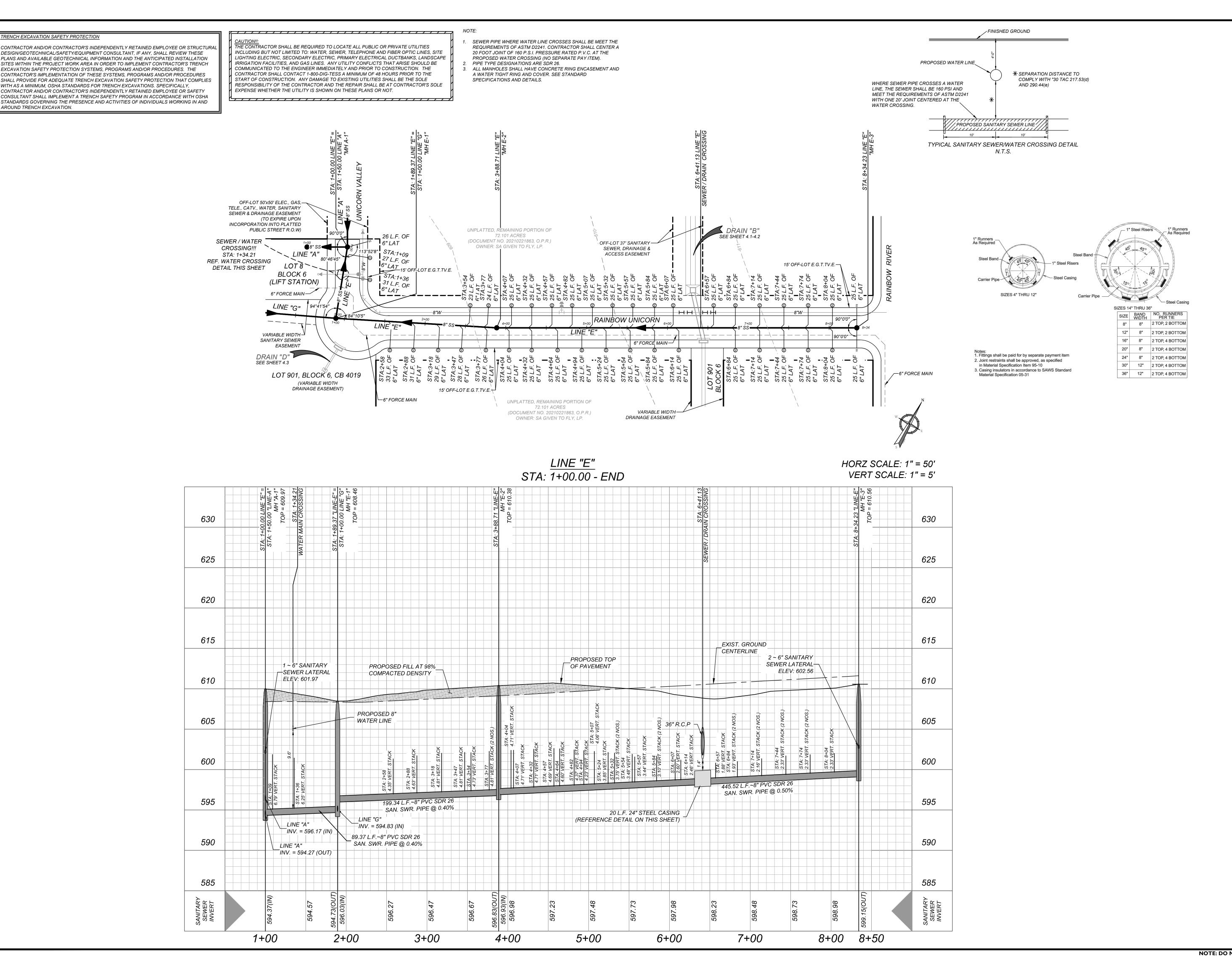
SANITARY SEWER, DRAINAGE, GRADING & MAINTENANCE ACCESS EASEMENT (TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET R.O.W)



			C	` 0		er	8			
			8	gir D	es	ig	n			
and all whom	ght © 2 the info the serv	024. Co ormatior ices wei used, di	lliers En contair re contra sclosed.	gineerin ned here acted or distribu	g & Des ein is au to whoi uted or	ign All F thorized n it is ce relied	Rights Re I for use ertified. upon fo	eserved. only by This dra r any o	This dra the par wing ma ther pu	ty for ay not
For	mer	ly Kı	าอพ	n as	;	ENG	NEERS +		IG	
FC	8 GEC DR ST		SPEC	EXCAV PREI	STATES ATORS PARING RFACE	CT PH	IIRE NO GNERS DISTUR (HERE	OTIFICA , OR AI B THE IN ANY	ATION NY PER EARTH / STATI	I'S I'S E
DRAWN BY DESCRIPTION			-		-					
REV DATE	•	•	•	•	•	•	•	•	•	•
	/				W. 909 VAL	EN	RTIN 130	/24		-
		АТ	`#	2/ 2/	, +	118	30	01		
	Col			AR	CC ZX/	N AN		Y IIO (I sano	KFW] s	
SCALE	ngir & D : :	esig	gn DATE:	c /2024	Ph OLLIER DF	n Ante none: Is engi	onio, 210. NEERIN Firm#: Firm#:	TX 7 979.8 IG & DE F-1490 101945	3444 Esign, 1 9	
PROJE	CT NUI 314-6 TITLE:	MBER: 3-02		DRAV	VING N 23146	JAME: 302	D P	RC		_E
SHEET	NUME	BER:			5.8					

AROUND TRENCH EXCAVATION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

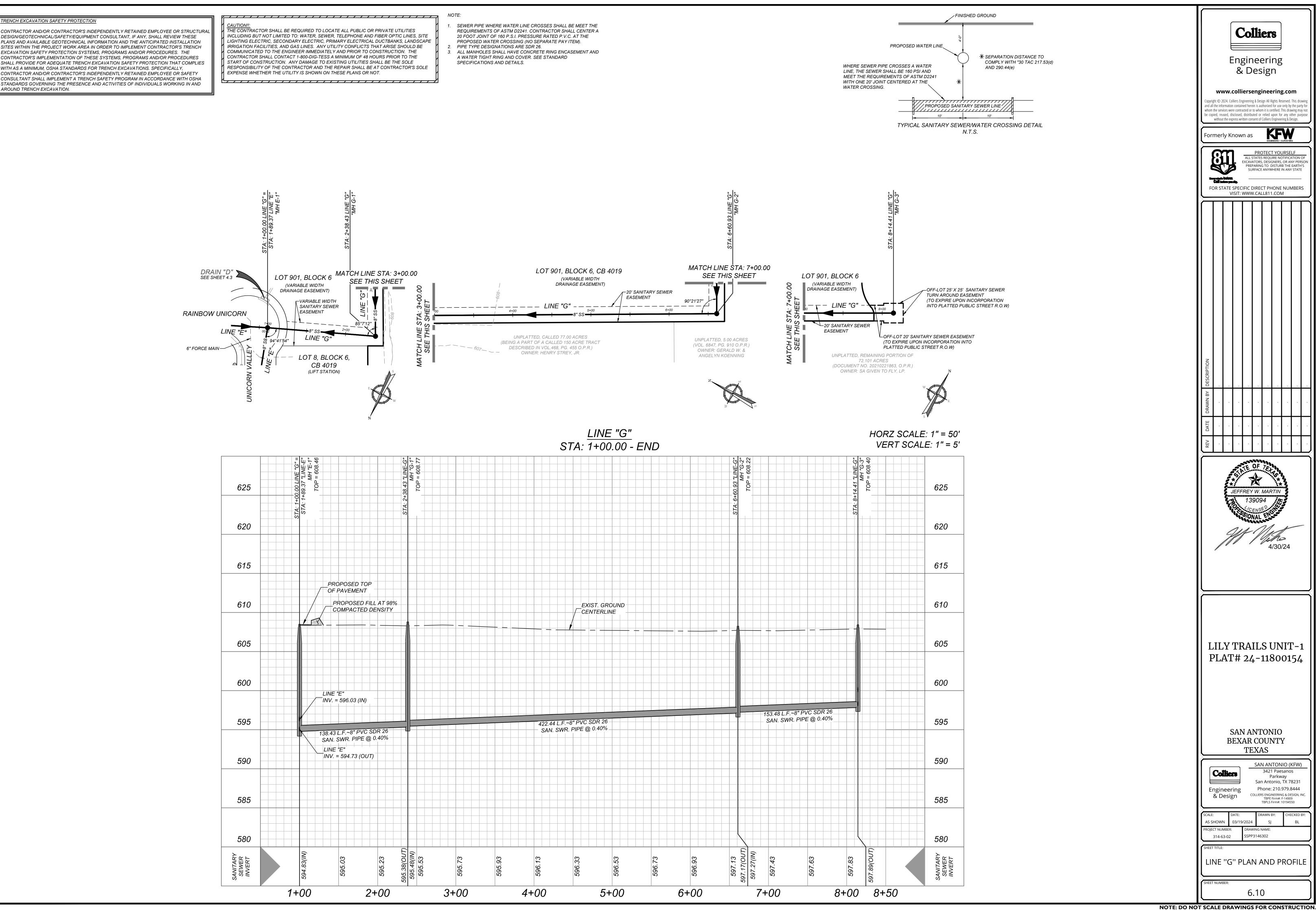


	SANITARY SEWER INVERT	585	590	595	600	605	010	610	615	620	625		630
1+0	594.37(IN)			STA: 1+09								STA: 1+00. STA: 1+5	0.00 "LINE "E" =
0				6.79' VERT. STACK	STACK 9.6'			SEV					TOP = 609.97
	594.57	= 594.27 (C		STA: 1+36 6.25' VERT. STACK	STACK			6" SANITAI VER LATEI V: 601.97				VATER MAI	WATER MAIN CROSSING
2+	594.73(OUT) 596.03(IN)							RY RAL				STA: 1+89. STA: 1+0	STA: 1+89.37 "LINE-E" = STA: 1+00.00 LINE "G"
-00			89.37 L.F			PROPO WATEF							TOP = 608,46
	596.27			199.34 L.F SAN. SW	STA: 2+58 4.35' VERT. STACK STA: 2+88	DSED 8"		OPOSED FIL DMPACTED L					
3+(R 26	.~8" PV	4.63' VERT. STACK								
(506 A7			'C			LE FR						

		Ē	Eng	S ir	nee	eri	ng	5		
and al whom be cop	ght © 2 I the info the serv pied, re	024. Co ormatior rices we used, di t the exp	lliers En n contair re contra sclosed, press wr	ned here acted or distribu itten cor	g & Des ein is au to whor uted or isent of	ign All R thorized n it is ce relied 1	tights Re for use ertified. ⁻ upon fo	eserved. only by This dra r any o	This dra the par wing ma ther pu	ty for iy not
F	B CHC DR ST		SPEC	EXCAV PREI SU	STATES ATORS PARING RFACE	DTEC REQU DESIG TO D ANYW	T YOU IIRE NO SNERS, DISTUR (HERE	, OR AN B THE IN ANY	LF ATION NY PER EARTH ' STATE	SON I'S E
REV DATE DRAWN BY DESCRIPTION										
	/	and the state of t			OF W. 909 VAL		27.11N	1		-
	,II	АТ	` #	2/	,	118	30	01		
	Co			NA AR TE	CC EXA SAN	DUN AS N AN 3421 P	TON Pae	Y IIO (I sano		
SCALE AS S	ngir & D :: :HOW 314-6	esig N MBER:	gn DATE:	/2024 DRAV	Ph OLLIER DF	S ENGI TBPE TBPLS I RAWN E SJ	210. NEERIN Firm#:	979.8 IG & DE F-1490 101945	3444 SIGN, I 9	
	NE NE	''E	'' P		N A) P	RO	FIL	E

AROUND TRENCH EXCAVATION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA



625	0 TIVE	STA: 1+89.37 "LINE-E" MH "E-1" TOP = 608.46		STA: 2+38.43 "LINE-G"	MH "G-1"
020	STA: 1+00.0	STA: 1+89		STA: 2+38	
620					
615			DPOSED TOP PAVEMENT		
610			ROPOSED FILL OMPACTED DE		
605					
600		LINE INV. =	"E" 596.03 (IN)		
595		SAN. S	L.F.~8" PVC SD SWR. PIPE @ 0	IR 26	
590		INV. =	"E" = 594.73 (OUT)		
585					
580					
SANITARY SEWER INVERT		594.83(IN)	595.03	2	595.48(IN)
	1+	00	2+	-00	

GREEN VALLEY SPECIAL UTILITY DISTRICT SANITARY SEWER SYSTEM GENERAL NOTES:

THE STANDARD SPECIFICATIONS AND DRAWING (DD) ARE PROVIDED AS A TECHNICAL RESOURCE FOR ENGINEERING PROFESSIONALS FOR USE IN DESIGN AND CONSTRUCTION OF SEWER COLLECTION SYSTEMS PROJECTS MANAGED AND CONTRACTED BY THE GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD) GENERAL: THE OWNER, DEVELOPER, ENGINEERING FIRM SHALL SUBMIT TO THE GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD) ENGINEER, FOR APPROVAL, TWO (2) COPIES OF ALL PLATES, PLANS AND PROFILES, PLUMBING LAYOUT, WHICH HAVE BEEN DESIGNED AND THE DRAWINGS SEALED BY A REGISTERED PROFESSIONAL ENGINEER. WHEN APPROVED, ONE (1) COPY WILL BE RETURNED TO THE OWNER, DEVELOPER, ENGINEERING FIRM, SO MARKED. THE OWNER WILL BE REQUIRED TO MAKE ALL CHANGES INDICATED BY THE GVSUD ENGINEER, AND RETURN WITH ALL CHANGES, CORRECTIONS, BACK TO GVSUD FOR APPROVAL.

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE GVSUD AND COMPLY WITH:
- A. CURRENT GVSUD TECHNICAL SPECIFICATIONS FOR UTILITIES CONSTRUCTION.
- B. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), FORMERLY TEXAS NATURAL RESOURCE CONSERVATION COMMISSION (TNRCC), DESIGN CRITERIA FOR SEWAGE SYSTEMS 31 TAC 317.1, 31 TAC 317.2 AND 31 TAC 317.3, 30 TAC & 213 40 TAC &217.
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE GVSUD INSPECTIONS DIVISION AT (830)914-2330 OR (210)372-2228 - 48 HOURS PRIOR TO ANY EXCAVATION. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BEFORE ANY EXCAVATION OR START OF PROJECT.
- 3. WORK SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS OR HOLIDAYS BEFORE 7:30 A.M. OR AFTER 4:30 P.M., UNLESS PRIOR APPROVAL IS GRANTED BY THE GVSUD ENGINEER.
- A. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES TO INCLUDE SURFACE LATERALS, SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATION (POT HOLE, VERIFY LOCATION, ELEVATIONS OF ALL) UTILITY SERVICE LINES 48 HOURS PRIOR TO EXCAVATION AND TO PROTECT THE SAME DURING CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES OF EXISTING UTILITIES AND REPAIRS WILL BE AT THE CONTRACTORS EXPENSE.

EXISTING MANHOLES/SEWER

- 4. CONTRACTOR WILL MAINTAIN SERVICE TO ALL EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR WILL MARK, CLEAN ALL DEBRIS, GRAVEL, DIRT, ETC. OUT OF MANHOLES AND ANY STOPPAGES CAUSED BY DEBRIS DURING CONSTRUCTION. CONTRACTOR WILL UNPLUG STOPPAGE AT CONTRACTORS EXPENSE. ANY DAMAGE TO EXISTING MANHOLES OR SEWER MAIN WILL BE CORRECTED AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING OR NEW RINGS, COVERS, OR CONES FROM EQUIPMENT AND MATERIALS USED OR TAKEN THROUGH THE WORK AREA. IF AN EXISTING OR NEW MANHOLE COVER, RING, OR CONE IS DAMAGED BY THE CONTRACTOR IT SHALL BE REPLACED AS DIRECTED BY THE GVSUD INSPECTOR. MANHOLES WILL NEED TO BE RESEALED WITH THE GVSUD APPROVED SEALING. IF SEAL COATING IS BROKEN, CONTRACTOR WILL HAVE MANHOLE RECOATED. RESEAL ALL LEAKS AT CONTRACTORS EXPENSE.
 - A. CONTRACTOR TO ENSURE ALL PLUGS USED TO PLUG SEWER LINES, WHILE TESTING THE PROJECT (SUCH AS AIR PLUGS, SCREW TYPE PLUGS, ETC.) ARE LABELED, MARKED OR TAGGED. PROJECT INSPECTOR WILL RECORD HOW MANY PLUGS ARE BEING USED, LOCATION AND I.D., WITHIN COLLECTION SYSTEM. CONTRACTOR WILL REPORT TO PROJECT INSPECTOR OF ANY LOST OR UNRESTRAINED PLUGS INTO SEWER COLLECTION SYSTEM.
 - B. CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGES TO SEWER COLLECTION SYSTEM STOPPAGES, OVER-FLOWS, BACKUP INTO HOMES CAUSED BY LOST RUN-AWAY SEWER PLUGS THAT WERE USED ON THAT PROJECT OR OUTFALL LINE WASTEWATER TREATMENT PLANTS.
 - C. CONTRACTOR WILL ALSO BE RESPONSIBLE FOR ANY DAMAGE TO WASTEWATER TREATMENT APPARATUS, SUCH AS SCREW PUMPS, ETC. CAUSED BY LOST OF RUN-AWAY SEWER PLUGS. CONTRACTOR WILL BE HELD LIABLE FOR DAMAGES, AS WELL AS COST OF REPAIRS.
- ALL WORK IN THE TEXAS HIGHWAY DEPARTMENT, BEXAR COUNTY, GUADALUPE COUNTY, AND CITY OF CIBOLO RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
- 6. ALL WORK IN PUBLIC STREETS SHALL BE COORDINATED WITH AND APPROVED BY THE BEXAR COUNTY
- OR GUADALUPE COUNTY PUBLIC WORKS DEPARTMENT TRAFFIC DIVISION AND STREET ENGINEER.
 7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.161, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND VALVES THAT ARE
- IN THE PROTECTED AREAS.
 8. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM THE COMPLETE INSTALLATION OF THE SANITARY SEWER LINES.
- THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:
- A. PULL MANDREL AFTER 30 DAYS OF INSTALLATION
- B. PERFORM AIR TEST
- C. PULL WIPER (AFTER STREET HAS BE ASPHALTED IN NEW SUBDIVISIONS)
- D. VACUUM TEST ALL MANHOLES WITHIN THE PROJECT
- E. CCTV-ALL NEW LINE-PAN (TILL ALL SERVICE LATERALS TO 6"X6" CLEAN OUT. FLOOD ALL LINES BEFORE CCTV, SUMMIT DVD)
- 9. CONTRACTOR SHALL SUBMIT FIELD COPY PLANS AND PROFILES SHOWING AS-BUILT WORK AT END OF PROJECT, CCTV DVD AND COMPACTION DENSITY REPORTS FOR MAIN SEWER LINE AND ALL SERVICE LATERALS TRENCHES. WARRANTY LETTERS ON MATERIALS, WORKMANSHIP FOR 24 MONTHS AFTER FINAL ACCEPTANCE.
- 10. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS AT LEAST TWELVE (12) INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREAS. IN PAVED AREAS THE MANHOLE RING SHALL BE FLUSH WITH THE PAVEMENT. ALL NEW INSTALLED MANHOLES WILL BE WITH A 30" INCH OPENING, MINIMUM, WITH THE GVSUD LOGO ON THE COVER. EVERY THIRD MANHOLE COVER WILL HAVE A 1" HOLE FOR A VENT.
- 11. ALL MANHOLES SHALL BE WITH A 30" INCH OPENING, HAVE WATERTIGHT RING AND COVERS, WITH THE GVSUD LOGO. ON PRIVATE PROPERTY, MANHOLE RING AND COVER SHALL BE TYPICAL MANHOLE COVER WATER TIGHT.
 - A. BEFORE BACK FILLING/COMPACTION/CONCRETE ENCASEMENT
 - ALL MANHOLE JOINT SECTION RISERS, CONE SECTIONS AND GRADE RING SHALL BE WRAPPED WITH GATOR WRAP SEALING SYSTEMS, BUTYL ADHESIVE SEALANT WITH A MINIMUM THICKNESS OF 30 MILS. INFI-SHIELD WRAPPED WITH RISER-WRAP SEALING SYSTEM, GATOR WRAP
 - MATERIAL: RUBBER MEETS ASTM C923/MASTIC MEETS ASTM C 990 OR APPROVE BY THE GVSUD ENGINEER SUBSTITUTION ON OUTSIDE FOR I/I, GROUND WATER TABLE.

- 12. IF CONCRETE THROAT RINGS ARE TO BE INSTALLED, A MINIMUM OF TWO AND A MAXIMUM OF FOUR THROAT RINGS WILL BE USED AT EACH MANHOLE FOR ADJUSTMENT.
- 13. INFILTRATION DISHES WILL BE REQUIRED IN MANHOLES <u>WHERE APPLICABLE</u> (I.E., SUCH AS LOW DRAINAGE AREAS) AND EVERY THIRD MANHOLE SHALL BE VENTED. 30" INCH MANHOLE COVER WITH 1" INCH HOLE CENTER OF COVER WHERE APPLICABLE.

<u>Note:</u> Manhole cover inserts shall be FRW Industries, inc., "Inflow Protector-Cover" "Preco Industries Ltd.", "Sewer Guard", or approved equal, and shall be installed in strict accordance with the manufacturer's recommendations. The contractor shall be responsible for making the necessary field measurements for the manufacturer prior to construction.

- A. ALL MANHOLES MUST HAVE 350-400 FEET SPACING BETWEEN MANHOLES TO PROVIDE ACCESS TO SEWER LINES FOR CLEANING, ON THE GVSUD PUBLIC SEWER EASEMENT. A 16 FOOT GATE WITH LOCK WILL BE PROVIDED BY THE CONTRACTOR FOR ACCESS TO CLEANING AND MAINTAINING SEWER LINES.
- B. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN TWENTY-FOUR (24) INCHES ABOVE THE OUTFLOW ELEVATION. DROP SHALL BE LOCATED OUTSIDE THE MANHOLE WITH ITS FLOW LINE ELEVATION LOCATED BETWEEN THE CENTER LINE AND TOP OF SEWER LINE.
- ALL MANHOLES WILL BE CONCRETE ENCASEMENT 1 FOOT AROUND RING, 28-INCH DEEP AFTER GATOR WRAP SEALING SYSTEM HAS BEEN APPLIED.
 NEW MANHOLE PROTECTIVE COATING, UNER IS FOR THE DURDOSE OF INFIL TRATION RECAUSE OF HIGH
- 15. NEW MANHOLE PROTECTIVE COATING, LINER IS FOR THE PURPOSE OF INFILTRATION BECAUSE OF HIGH WATER TABLE. APPLICATION PROCEDURES ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND PER THE FOLLOWING SPECIFICATIONS:
 - A. MANHOLE PROTECTIVE COATING: CONTRACTOR WILL BE RESPONSIBLE FOR MANHOLES ON PROJECT SAFETY ASSESSMENT; CONFINED SPACE ENTRY SET BY OCCUPATIONAL SAFETY AND HEALTH STANDARDS, 29 CFR 1910.146 APP E.
 - B. THE CONTRACTOR, SHALL NOTIFY THE GVSUD UTILITIES INSPECTIONS DEPARTMENT WITH A MINIMUM OF 2 DAYS ADVANCE NOTICE OF THE START OF ANY FIELD SURFACE PREPARATION WORK OF COATING APPLICATION WORK OF MANHOLES.
 - C. ALL NEW MANHOLES IN NEW DEVELOPMENTS SHALL BE 30" INCH OPENING, WATERTIGHT AND THE INTERIOR WALL COATED WITH A GVSUD APPROVED SEWER STRUCTURE FOR ALL MANHOLES, SEWPERCOAT 2000 HR REGULAR, WITH THE REQUIRED ONE-INCH THICK APPLICATION.

APPROVED MATERIALS ARE AS FOLLOWS:

CEMENTITIOUS COATING WITH REQUIRED HALF-INCH THICK APPLICATION

- SEWPERCOAT 2000 HR REGULAR
- REFRATTA HAC 100
- MAXIMUM CA PLUS

EPOXY COATING: WITH SPECIFIED THICKNESS APPLICATION

- AROMATIC POLYUREA SCP DROPLINER REQUIRED THICKNESS <u>125 MILS</u>
- D. WARRANTY LETTER ON MANHOLE PROTECTIVE COATING FOR 10 YEARS AFTER FINAL ACCEPTANCE OF PROTECTIVE COATINGS CONTRACTOR IS NOT RELIEVED OF ITS RESPONSIBILITIES UNDER THE CONTRACT DOCUMENTS.
 - ANY CONNECTIONS TO EXISTING MANHOLES WILL REQUIRE A 36-INCH CRADLE TO SUPPORT INCOMING PIPE. A RUBBER GASKET WILL ALSO BE REQUIRED (CENTERED AT MANHOLE WALL) WITH GROUTING AT INTERIOR AND EXTERIOR PENETRATIONS.
 PENETRATION INTO MANHOLE WILL BE CORE DRILLED. ANY DAMAGE EXITING THE MANHOLE WILL BE REPLACED AT CONTRACTOR'S EXPENSE. IF COATING SEAL IS BROKEN, THE MANHOLE WILL BE RECOATED WITH THE SAME MATERIALS. IF EXISTING SEWER MANHOLE SEAL COATING IS BROKEN, ALL OF MANHOLE WILL BE RELEASED WITH SAME MATERIALS AND ONE-INCH THICKNESS.
 - ii. ANY AND ALL EXISTING MANHOLES WITHIN CONSTRUCTION PROJECT THAT TIE IN, ARE DONE BY CONTRACTOR TO STUB-OUT ADJUSTMENT, RECONSTRUCTION, OR LEAKING. MANHOLE WILL BE COAT SEALED AT CONTRACTOR'S EXPENSE.
 - iii. MANHOLES WITH STUB-OUTS (8") INCH OR LARGER MUST BE LOCATED AT THE END OF ALL SEWER LINES THAT MAY BE EXTENDED IN THE FUTURE. MANHOLES PLACED AT THE END OF THE WASTEWATER COLLECTION SYSTEM PIPES THAT MAY BE EXTENDED IN THE FUTURE MUST INCLUDE STUB-OUTS WITH PLUGS.

PIPING

- 16. THE KIND AND DESCRIPTION OF THE PIPE CONDUIT IS SHOWN ON THE PLANS (IF PVC, SDR AND ASTM/ANSI DESIGNATION CLASS). AS SDR 26 PVC, ASTM D-3034 WITH A MINIMUM STIFFNESS OF 115 PSI TEXAS ADMINISTRATIVE CODE (TAC) RULES TO INCLUDE30 TAC & 213, OR ANY REVISIONS THERE TO APPLICABLE TECQ, 30 TAC 7 217, FOR ALL NEW DEVELOPMENT.
- 17. THE USE OF ASBESTOS CEMENT PIPE WILL BE PROHIBITED UNDER THIS CONTRACT. ALL DUCTILE IRON PIPE USED IN THIS SYSTEM SHALL BE CORROSION PROTECTED ON BOTH THE INTERIOR AND EXTERIOR SURFACES. ALL CORROSION PROTECTION SHALL BE APPLIED AND INSTALLED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUSLY PROTECTED SURFACE AFTER FINAL PIPE INSTALLATION.
- 18. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH; MINIMUM PIPE STIFFNESS OF 150 PSI.
- 19. ALL SEWER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS.
- 20. SEWER PIPE CONNECTIONS TO PRECAST MANHOLES SHALL BE APPROVED BY THE GVSUD. THIS CONNECTION SHALL USE FLEXIBLE "BOOT" TYPE CONNECTOR SUCH AS THE PSX POSITIVE SEAL SYSTEM OR ENGINEER APPROVED EQUAL AND COMPLY WITH ASTM C-923. SEWER PIPE CONNECTIONS TO MONOLITHIC MANHOLES WILL BE AS SHOWN ON THE STANDARD DETAIL SHEET. ANY CHANGES IN THESE METHODS MUST BE APPROVED BY GVSUD ENGINEER.
- 21. ALL PIPE TRENCHING, BEDDING AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH APPROPRIATE ASTM/ANSI SPECIFICATIONS [REFERENCE 31 TAC 317.2(A)(5)(A); ASTMC-12 (ANSI A106.2) OR ASTM D-2321 (ANSI K65.171)]. ALL COMPACTION @ 98% DENSITY TESTS ACROSS THE BOARD, 1 RANDOM DENSITY TEST PER LIFT FOR EVERY 400 FEET.
 - A. SAND MIGRATION, SEEPAGE PREVENTION COLLAR WHEN CHANGING THE INITIAL BACKFILL FROM SELECT INITIAL BACKFILL TO OPTIONAL SELECT INITIAL BACKFILL. A TWO (2) FOOT LONG CLASS D CONCRETE ENCASEMENT, EVERY 180 FEET ALONG PIPE AND 20 FEET FROM WALL OF MANHOLE IN EACH DIRECTION. NO EXTRA PAY ITEM.

B. BEDDING SHALL CONSIST OF TXDO i. THE BEDDING SHALL MEET

E BE	DDING SHAL	L MEET
a.	2"	100.0%
b.	1 ¾"	100.0%
C.	1 1⁄2"	100.0%
d.	1"	52.6%
e.	³ ⁄4"	10.7%
	3/1	4 00/

f. %" 1.3% C. SEWER LINE LOCATION

i. SEWER LINES SHALL BE SI

TO SERVE ADJACENT PRO

- a. IN PHASED CONST EXTENDED THE EN
- ii. NO PUBLIC SEWER LINE SH
- iii. SIZES AND GRADES FOR S

ENGINEER AND CONSIDER/ DEVELOPMENT. NO SANITA

BE LESS THAN EIGHT (8) IN

- 22. WHEN SEWER LATERALS ARE TO BE CO BEEN EARLIER PROVIDED, THE CONNEC PER 31 TAC 313.5(C) (7). NEW INVERT TO
- 23. ALL RESIDENTIAL SERVICE LATERALS SE PROPERTY LINE AT (6 X 6) CAPPED AND S SEWER LATERALS AND BRING UP TO THI DETAILS)
 - AA. SEWER SERVICE LATERALS. THE SI
 - FOLLOWS UNLESS OTHERWISE DIR
 i. IN GENERAL FOR SINGLE FA MINIMUM. HOUSE LATERALS TEN(10) FOOT SEPARATION I EXTENDED AT A FORTY-FIVE
 - GRADE AND CAPPED. USE S ii. MULTIPLE UNITS, APARTME

MANUFACTURING AND INDU

TRAPS AND INTERCEPTORS (F

UNIFORM PLUMBING CODE, CI COMMERCIAL BUILDINGS WILL

OIL SEPARATORS

WHICH INCLUDE OIL SEPARATO CLEANERS, CHEMICAL PLANTS ANY PLACE WHERE OIL OR SOI SYSTEM. THE SIZING CRITERIA ALL FIXTURES, APPLIANCE OR

SAND INTERCEPTORS

SAND INTERCEPTORS SHALL B ESTABLISHMENTS, GARAGES, O WHERE HEAVY SOLIDS MAY BE CRITERIA FOR A SAND INTERCO RETENTION TIMES TO OBTAIN

AUTOMATIC CAR WASHES

WITH HIGH PRESSURE SPRAY FOR A 4-BAY VEHICLE WASH, T EACH ADDITIONAL WASH BAY WASHES SHALL INSTALL A 20

NEUTRALIZING DEVICES

IN NO CASE SHALL CORROSIVE MIGHT DESTROY OR INJURE A NOXIOUS OR TOXIC FUMES, DIS THOROUGHLY NEUTRALIZED B NEUTRALIZING DEVICE. SUCH D NEUTRALIZING MEDIUM, CONSI CONTENTS NON-INJURIOUS BE

LINT TRAPS

PUBLIC AND PRIVATE WASHAT EQUIPPED WITH A CONVENIEN SIMILAR DEVICE THAT WILL PR MATERIAL FROM ENTERING TH DEVICE SHALL PREVENT PASS THAN 1/2" INCH DIAMETER. THE FIXTURES, APPLIANCES AND A INTERCEPTOR MAY BE INSTALL REGISTERED ENGINEER WITH

			En	Collie gineer & Desig	ing	
OT-GRADE 4 (1 1/2"-1 5/8") COMMONLY KNOWN AS 3 T THE FOLLOWING GRADATION: %	SEWER GRAVEL.		Copyright © 2024. Colliers f and all the information conta whom the services were con be copied, reused, disclose	ained herein is authoriz tracted or to whom it is	Rights Reserved. T ed for use only by t certified. This draw I upon for any oth	This drawing the party for ving may not her purpose
%			Formerly Know	vn as		a
			្រ្ញា	PROTE ALL STATES REC	CT YOURSEL	
				EXCAVATORS, DES PREPARING TO	GIGNERS, OR AN	IY PERSON EARTH'S
IZED AND EXTENDED THROUGH THE LIMITS OF A			FOR STATE SPE VISIT	CIFIC DIRECT P : WWW.CALL81		1BERS
OPERTY, WITH MANHOLE AND STUB-OUT AT END (TRUCTION OF THOROUGHFARES, THE SEWER LIN NTIRE LENGTH OF THE THOROUGHFARE BEING C HALL BE LOCATED NEARER THAN FIVE (5) FEET FF SANITARY SEWER SHALL BE AS REQUIRED BY THE RATION SHALL BE GIVE AS TO POSSIBLE EXTENSION ARY SEWERS, OTHER THAN LATERALS AND FORCE NCH IN DIAMETER.	E SHALL BE ONSTRUCTED. ROM ANY TREE. GVSUD DNS FOR FUTURE					
ONNECTED TO EXISTING SEWER MAINS AND NO S CTION MUST BE MADE WITH AN APPROVED SERVI O BE BUILT, SMOOTH CHANNEL FOR NEW PIPE/SLO GHALL BE SDR 26 WITH RATING OF 115 PSI, BE EXT O SEALED. ATTACH SEWER BURIAL TAPE TO THE E HE GROUND LEVEL FOR MARKER (GREEN). (SEE H	CE SADDLE AS OPE AT 2% FLOW. ENDED TO THE IND OF ALL					
SIZES AND LOCATIONS OF LATERALS SHALL BE DE RECTED BY THE GVSUD ENGINEER: AMILY DWELLING, THE LATERAL SIZE SHALL BE FO S SHALL BE IN STALL CENTER OF THE LOT AND SH I FROM THE WATER SERVICE. THE SERVICE SHALL E (45) DEGREE ANGLE TO FOUR (4) FEET ABOVE T SEWER BURIAL TAPE TO MARK ALL SEWER SERVI	DUR (4) INCH IALL HAVE A L THEN BE THE FINISHED		DESCRIPTION			
ENTS, LOCAL RETAIL AND COMMERCIAL SIX (6) IN(USTRIAL - EIGHT (8) INCH MINIMUM, OR LARGER A			BY DESC		<u> </u>	
FOG - TECQ)			DRAWN F			
ITY OF SAN ANTONIO BUILDING INSPECTIONS DEF L HAVE TRAPS (FOG-TECQ).	PARTMENT. ALL		REV DATE			
TOR-GASOLINE SERVICE STATIONS, CAR WASHES S, GAS PLANTS, HIDE PROCESSORS, TESTING LAE DLVENTS MAY BE INTRODUCED IN TO THE SANITA A FOR OIL SEPARATORS SHALL BE BASED ON THE R APPURTENANCE, DRAINING INTO SEWER SYSTE	BORATORIES, OR RY SEWER E G.P.M. RATE OF			FREY W. MA 139094	RTIN	
BE INSTALLED IN THE SEWER SYSTEM OF THE FO CAR WASHES, SERVICE STATIONS, OR ANY PLAC E INTRODUCED INTO THE SANITARY SEWER SYST CEPTOR SHALL BE BASED ON THE REQUIRED G.P. THE TANK SIZE IN GALLONS CAPACITY.	E OF BUSINESS FEM. THE SIZING		J.	SICENSED	61999 Alan 4/30/24	
'S AND/OR BRUSHES INSTALL A 50 G.P.M. INTERCE THE SIZE OF THE INTERCEPTOR SHALL INCREASE OVER 4. SINGLE BAY OR PORTABLE WASHER TYF G.P.M. INTERCEPTOR MINIMUM.	10 G.P.M. FOR					
E LIQUIDS, SPENT ACIDS, OR OTHER HARMFUL CA A DRAIN, SEWER, SOIL, OR WASTE PIPE, OR WHICH DISCHARGE INTO THE SANITARY SEWER SYSTEM V BY PASSING THOROUGHLY CONSTRUCTED AND A DEVICE SHALL BE PROVIDED WITH A SUFFICIENT SISTING OF LIMESTONE OR MARBLE CHIPS, SO AS EFORE BEING DISCHARGED INTO THE SANITARY S	H MIGHT CREATE WITH OUT BEING CCEPTABLE INTAKE OF THE MAKE ITS		LILY T PLAT#			
TERIAS AND COMMERCIAL LAUNDRIES SHALL INS NTLY LOCATED AND EASILY REMOVABLE WIRE BA REVENT THE STRINGS, RAGS, BUTTONS, OR OTHE HE SANITARY SEWER SYSTEM. THE BASKET OR O SAGE TO THE SANITARY SEWER SYSTEM OF SOLI IE LINT TRAP SIZE SHALL BE BASED ON THE TOTA APPURTENANCES DRAINING TO IT IN LIEU OF A LIN L. THE INTERCEPTOR SHALL BE SIZED AND DESIG I HIS SEAL AND SIGNATURE ON THE DRAWINGS.	SKET OR OTHER ER PROHIBITED THER SIMILAR DS GREATER L G.P.M. OF ALL NT TRAP, A LINT			N ANTO XAR COU TEXAS	NTY	
			Colliers	342	NTONIO (K 21 Paesanos Parkway tonio, TX 78	5
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	SANITARY SEWER SYS GENERAL NOTES (1 O		Engineering & Design	COLLIERS EN TBP	e: 210.979.8 GINEERING & DES E Firm#: F-14909 S Firm#: 1019455	SIGN, INC.
REVISED: OCTOBER 2021	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. G-1	SCALE: DATE: AS SHOWN 03/1 PROJECT NUMBER:		5]	CKED BY: BL
			314-63-02	SSDT3146302		
				RY SEWE		ES

SILVER RECOVERY UNITS

SILVER RECOVERY UNITS SHALL BE INSTALLED IN WASTE LINES(S) LEADING FROM X-RAY PROCESSING, PHOTOGRAPHIC PROCESSING, AND/OR ANY PROCEDURES IN ESTABLISHMENT SUCH AS MEDICAL LABS, DENTAL LABS, PHOTO FINISHERS, PRINTERS, GRAPHIC ARTS PRODUCTION FACILITIES, HOSPITAL FACILITIES, VETERINARY HOSPITALS, OR OTHER ESTABLISHMENTS WHERE SILVER MAY BE INTRODUCED INTO THE SANITARY SEWER SYSTEM.

SOLID INTERCEPTORS

SOLIDS INTERCEPTORS SHALL BE INSTALLED WHEN PRE-TREATMENT OF WASTE STREAMS IS NECESSARY TO PREVENT SOLIDS GREATER THAN $\frac{1}{2}$ " IN DIAMETER, WHICH MAY CAUSE LINE STOPPAGE FROM ENTERING THE SANITARY SEWER SYSTEM.

INTERCEPTORS

- a. INTERCEPTORS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN APPROVED BY THE GVSUD CONSISTING OF A MINIMUM OF TWO COMPARTMENTS WITH FITTINGS DESIGNED FOR GREASE RETENTION AND PROVIDE FOR A MINIMUM OF TWELVE (12) MINUTES RETENTION
- b. THERE SHALL BE AN ADEQUATE NUMBER OF MANHOLES TO PROVIDE ACCESS FOR CLEANING ALL AREAS OF AN INTERCEPTOR, ONE MANHOLE PER TRAP COMPARTMENT. MANHOLE COVERS SHALL BE GAS TIGHT IN CONSTRUCTION HAVING A MINIMUM OPENING DIMENSION OF 20 INCHES (0.5 M).
- c. IN AREAS WHERE TRAFFIC MAY EXIST THE INTERCEPTOR SHALL BE DESIGNED TO HAVE ADEQUATE REINFORCEMENT AND COVER.
- d. ALL INTERCEPTORS SHALL HAVE THE SIZE OF THE INTERCEPTOR (IN GALLON PER MINUTE OR GALLON CAPACITY) PERMANENTLY AFFIXED TO THE DEVICE.
- e. ALL CONCRETE UTILIZED IN THE CONSTRUCTION OF INTERCEPTOR SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI.
- f. AN EFFLUENT SAMPLING WELL ON ALL INTERCEPTORS SHALL BE REQUIRED. THE SAMPLE WELL SHALL HAVE A RISER A MINIMUM OF 6" INCHES IN DIAMETER AND SHALL BE INSTALLED AFTER THE CONFLUENCE OF ALL WASTE STREAMS FROM THE FACILITY AND PRIOR TO DISCHARGING INTO SANITARY SEWER COLLECTION SYSTEM. THE WELL SHALL BE PERPENDICULAR TO THE EFFLUENT LATERAL TO ALLOW VISUAL OBSERVATION OF THE FLOW STREAM AND PROVIDE FOR SAMPLING OF WASTEWATER.

WATERTIGHT TESTING (24 HOURS)

- g. ALL INTERCEPTORS SHALL BE WATER TESTED OUT AT JOB SITE AFTER BEING INSTALLED (PLUG BOTH ENDS AND FILL TO TOP OF INTERCEPTOR). INTERCEPTOR SHALL SHOW NO LEAKAGE FROM SECTION SEAMS, PINHOLES, OR OTHER IMPERFECTIONS. ANY LEAKAGE IS CAUSE FOR REJECTION. WHEN LEAKAGE OCCURS, ADDITIONAL WATER TESTING SHALL BE MADE. AFTER CORRECTING MEASURE TEST, REPORTS SHALL SHOW TOTAL NUMBER OF INTERCEPTORS TESTED. WHEN LEAKAGE OCCURS, CORRECTIVE MEASURES TAKEN SHALL BE REPORTED BY GVSUD INSPECTORS. GVSUD INSPECTORS SHALL RECORD IN DAILY LOG WITH PROJECT NAME, DATE IT WAS TESTED AND COMPLETED.
- B. MANHOLES WILL BE REQUIRED ON SIX (6) INCH AND LARGER LATERALS WHERE THEY CONNECT TO THE MAIN.
 - a. LATERALS WILL NOT BE ATTACHED TO SEWER MAINS THAT ARE DEEPER THAN TWELVE (12) FEET.
 - FITTINGS ARE NOT PERMITTED ON LATERALS BETWEEN THE WYE AND THE PROPERTY LINE.
 - c. DEEP CUT OR DROP CONNECTIONS SHALL NOT BE PERMITTED.
 - d. A MINIMUM OF ONE (1) LATERAL PER BUILDING SHALL BE REQUIRED. ALSO, A MINIMUM OF ONE (1) LATERAL PER RESIDENTIAL LOT SHALL BE REQUIRED. DUPLEXES SHALL HAVE TWO (2) LATERALS THAT SHALL BE INDEPENDENTLY ATTACHED TO THE MAIN.
 - e. ALL SEWER LATERAL CROSSING WATER MAINS SHALL CONFORM TO THE REQUIREMENTS OF THE TCEQ CHAPTER 317 (DESIGN CRITERIA FOR SEWERAGE SYSTEMS) LATEST REVISION, SDR 26 150 PSI, OR DUCTILE IRON PIPE, CONCRETE ENCASEMENT.
- 24. WHERE REQUIRED CONCRETE ENCASEMENT SHALL BE PLACED FOR FULL WIDTH OF THE TRENCH TO A PLAIN SIX (6) INCHES ABOVE THE TOP OF THE PIPE WITH PAY UNITS AS SHOWN ON THE STANDARD DETAILS SHEET.
- 25. A MINIMUM OF FOUR (4) FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER MAIN AND LATERALS AT GRADE, OTHERWISE CONCRETE ENCASEMENT IS REQUIRED.
- 26. WHERE POROUS MATERIAL, INCLUDING "SUBGRADE FILLER" IS USED FOR BACKFILL IN THE BEDDING AND INITIAL BACKFILL ZONES, SEEPAGE RETAINERS ARE REQUIRED AT AN APPROXIMATE OF 180 FEET. RETAINERS SHALL CONSIST OF CLASS "D" CONCRETE ENCASEMENT. THE RETAINERS SHALL EXTEND FROM THE BOTTOM OF THE TRENCH TO THE TOP OF THE GRANULAR MATERIAL FOR THE ENTIRE TRENCH WIDTH. ENCASEMENT SHALL BE 24 INCHES LONG. NO EXTRA PAY ITEM

BLASTING

- 27. WHEN ALLOWABLE, BLASTING SHALL BE PREFORMED IN ACCORDANCE WITH THE ABOVE CRITERIA ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION 312 TAC 313.5(C) (6).
- 28. BLASTING SEWER LINE EXCAVATION MUST BE DONE IN SUCH A MANNER AS TO MINIMIZE THE FRACTURING OF ROCK BEYOND THE REQUIRED EXCAVATION. THE CONTRACTOR SHALL CONSIDER THE ELEVATION OF THE EXISTING SANITARY SEWER MAIN IN RELATION TO THE BLASTING CHARGE AND RELATIVE DIRECTION OF EXISTING AND PROPOSED TRENCHES. BLASTING WITHIN SUCH AREAS SHALL BE ACCOMPLISHED ONLY BY QUALIFIED BLASTING CONTRACTORS WHO HOLD BLASTING LICENSES FROM A QUALIFIED AGENCY SUCH AS THE SAN ANTONIO FIRE DEPARTMENT IN BEXAR COUNTY. ANY DAMAGE TO EXISTING SANITARY SEWERS RESULTING FROM BLASTING SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- 29. NO BLASTING SHALL BE PERFORMED WITHIN 75 FEET OF EXISTING UTILITIES.

TESTING

30. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE FOLLOWING:

- A. 317.2(A)(5)(B); DEFLECTION TEST FOR FLEXIBLE AND SEMI-RIGID PIPE CONDUCTED AFTER FINAL BACKFILL AS BEEN IN PLACE AT LEAST 30 DAYS.
- B. 317.2(A)(4)(A) & (B) OR GVSUD SPECIFICATIONS INFILTRATION AND OR EXFILTRATION AND OR LOW-PRESSURE AIR TEST.
- C. 313.5(C)(10)(C) OR GVSUD SPECIFICATIONS: ALL MANHOLES AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES.
- D. IN THE EVENT THAT TESTING REQUIREMENTS CONFLICT, THE LATEST TCEQ DESIGN CRITERIA SHALL BE USED.
- 31. SEWER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.
- 32. SANITARY SEWER CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WHICH REQUIRE PENETRATION INTO MANHOLE WILL BE CORE DRILLED. ANY DAMAGE TO EXISTING MANHOLE WILL BE REPLACED AT CONTRACTORS EXPENSE AND WILL REQUIRE SUCCESSFUL TESTING OF THE EXISTING MANHOLE IN ACCORDANCE WITH THE GVSUD SPECIFICATIONS. HANG A GOLF BALL IN FRONT OF CAMERA, PIPE GRADE IS OUT OF TOLERANCE IF GOLF BALL BECOMES 50% SUBMERGED.
- 33. AFTER CONSTRUCTION, TESTING WILL BE DONE BY PAN/TILT TV CAMERA BY THE CONTRACTOR AND OBSERVED BY INSPECTOR, WASTEWATER ENGINEERING PERSONNEL AND CONTRACTOR AS CAMERA IS RUN THROUGH THE LINES. PAN/TILT ALL 6" SERVICE LATERALS TO 6"X6" STUB-OUT. VIDEOS MUST INCLUDE SUBDIVISION NAME, MANHOLE NUMBER, SERVICE LATERAL STATION NUMBER, FLOW DIRECTION, LOCATION ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED, JOINT, GRAVEL, DIRT, MUST BE CLEANED OUT, REPLACE AT CONTRACTOR'S EXPENSE. NEW SEWER SYSTEM WILL BE FLOODED WITH H20 BEFORE BEING TV. ALL SEWER LINES MUST BE PRESSURE CLEANED TO INCLUDE SERVICE LATERALS 6" INCH TO STUB-OUT. ALL VIDEOS SHALL BE SUBMITTED IN DVD FORMAT WITH WRITTEN REPORTS.
- 34. A COPY OF ALL TESTING REPORTS INCLUDING BACKFILL COMPACTION TESTS SHALL BE FORWARDED TO GVSUD.
 - A. DENSITY TEST WILL BE REQUIRED ON ALL SANITARY SEWER TRENCHES INCLUDING SERVICE LATERALS. SERVICE LATERALS TO BE CHOSEN RANDOMLY BY FIELD INSPECTOR. DENSITIES ON SERVICE LATERAL SHALL NOT EXCEED 25% OF TOTAL NUMBER OF SERVICES.

EXCAVATION

- 35. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTORS IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITHIN OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- 36. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100 YEAR FLOODPLAIN WITHOUT AN APPROVED FLOODPLAIN PERMIT.
- 37. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO GVSUD SPECIFICATIONS.

WATERLINE CROSSING

38. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN SEWER LINES AND WATERLINES CANNOT BE MAINTAINED, THE INSTALLATION OF SEWER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ RULES (31 TAC 317.3 APPENDIX E), SDR 26 ASTM 150 PSI OR CONCRETE ENCASEMENT DUCT IRON.

EROSION AND SEDIMENTATION

- 39. THE TCEQ AND THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTED ON THE PROJECT PLAN AND PROFILE SHEETS.
- 40. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY GVSUD.

SUPPLEMENTING

- 41. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER PAY ITEM 10 WHICH IT RELATES TO.
- 42. UNLESS THE DEVELOPMENT IS PRIVATELY OWNED, THE DEVELOPERS DEDICATES THE SANITARY SEWER MAIN AND MANHOLES TO THE GVSUD. UPON COMPLETION BY THE DEVELOPER AND FINAL ACCEPTANCE BY THE GVSUD. GVSUD WILL OWN AND MAINTAIN THE SANITARY SEWER MAINS AND MANHOLES WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION.
- 43. WORK COMPLETED BY CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE CONSENT OF THE GVSUD CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- 44. GVSUD IS NOT TO BE RESPONSIBLE FOR ANY ABNORMALITIES ON STUB-OUT, INVERT, GRADE OR SLOPE FOR ANY EXISTING MANHOLE TIE IN OR SERVICE LATERAL TIE IN.
- 45. ENGINEER, DEVELOPER, AND BUILDER, WILL HAVE PLUMBER AND CONTRACTOR WITH BID PRICE ON NEW INSTALLATION OF ALL 4" INCH SEWER SERVICE LATERALS TO COMPLY WITH TRENCH SAFETY (OSHA) SHORING PROTECTION ON ALL NEW INSTALLATION OF 4" INCH SEWER SERVICE LATERALS. GVSUD WILL NOT BE HELD RESPONSIBLE FOR ANY INJURIES OR DEATH CAUSED BY TRENCH FAILURE OR A WRONG OR DAMAGE DONE TO A PERSON OR TO HIS PROPERTY, OSHA GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- 46. ALL 4" INCH SEWER SERVICE LATERALS WILL BE HYDRAULIC TESTED AND OR LOW AIR PRESSURE TESTED. ALL 4" INCH SEWER SERVICE LATERALS WILL BE TELEVISED (TV) FROM 4" INCH CLEAN OUT AT OUTSIDE EACH RESIDENCE TO 6"X6" CLEAN OUT. CONTRACTOR AND PLUMBER WILL SUBMIT REPORTS AND/OR VIDEOS TO GVSUD, WITH THE FOLLOWING INFORMATION: SUBDIVISION NAME, LOT NUMBER, BLOCK

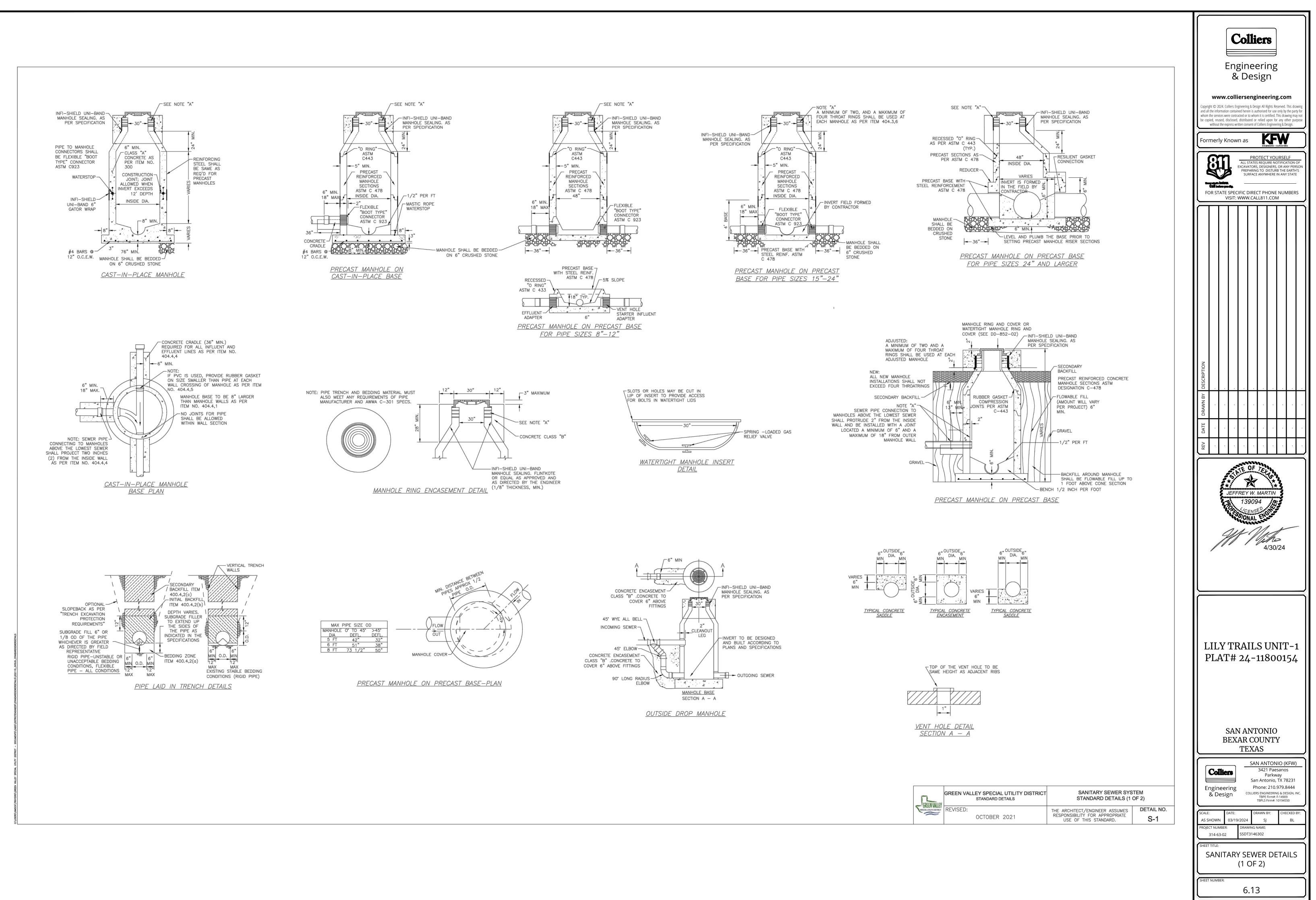
NUMBER, STATION NUMBER, STREET NAME AND ADDRE PLUMBER WILL BE PROVIDED PLAN/PROFILE BY ENGINEER/E GVSUD INSPECTOR ON DAILY TESTING AND TELEVISION BY SEWER SERVICE LATERALS THAT HAVE NOT BEEN INSPECT TO BE RE-DUG AT CONTRACTOR/PLUMBER EXPENSE AND R

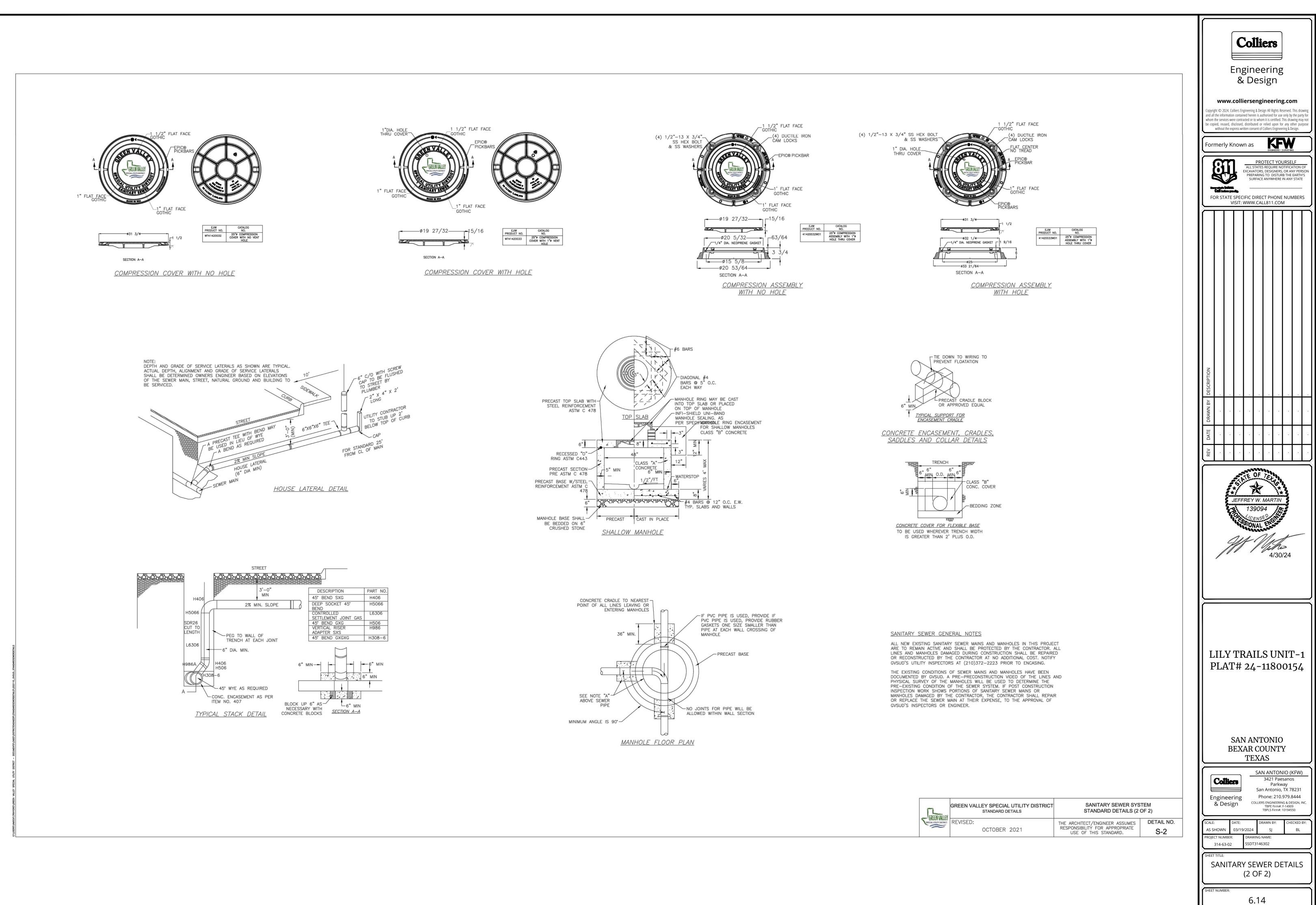
- A. A PROPERTY LINE CLEAN OUT (6"X6") SHALL BE IN IN THE SIDEWALK OR DRIVEWAY SHALL HAVE A CA SIDEWALK OR DRIVEWAY SHALL BE LOCATED ON I TWELVE (12") INCHES BY TWELVE (12") INCHES BY OUTS SHALL INCLUDE A LID WITH SEWER IN GREE
- 47. N1 FENCING: ANY AND ALL FENCING, INCLUDING ELEC THE PLANS, MUST BE MAINTAINED AT ALL TIMES. ANY A CONTRACTOR MUST BE REPLACED TO EQUAL OR BETT AND AS APPROVED BY THE PROJECT MANAGER. GAPS LOCATIONS WHERE THE SEWER LINE EASEMENT CROS LIVESTOCK MUST BE MAINTAINED AT ALL TIMES.
- 48. N2 DAMAGE TO ADJACENT LAND: THE CONTRACTOR I THE IDENTIFIED CONSTRUCTION LIMITS. ANY AND ALL CONTRACTOR RESULTING FROM HIS STRAYING BEYON THE CONTRACTOR TO THE SATISFACTION OF THE ENG
- 49. N3 PROPERTY OWNER ACCESS: THE CONTRACTOR M AT ALL TIMES. IF NORMAL ACCESS IS DAMAGED DURING REPLACE THE ACCESS TO EQUAL OR BETTER CONDITION APPROVED BY THE ENGINEER.
- 50. N4 CONTRACTOR IS RESPONSIBLE FOR LOCATION AN SHOWN ON THE PLANS. SHOULD THE CONTRACTOR DA RESPONSIBLE FOR ALL COSTS TO REPAIR THE UTILITIE SOLELY RESPONSIBLE FOR LOST REVENUE, LOSSES, E CONTRACTORS WORK. CONTRACTOR SHALL NOTIFY GN PRIOR TO BEGINNING WORK. CONTRACTOR SHALL VER DISCREPANCIES TO THE ENGINEER.
- 51. N5 CLEARING PERMANENT EASEMENTS: THE LIMITS OF PERMANENT EASEMENTS, AS DELINEATED IN THESE PL SPECIFICATION. THE CONTRACTOR MAY BE DIRECTED CERTAIN TRESS WITHIN THE LIMITS OF THE PERMANEN BE REMOVED FROM SITE. NO BRUSH PILES TO REMAIN TRASH WILL NOT BE ACCEPTABLE.
- 52. N7 CONTRACTOR SHALL PROVIDE APPROPRIATE SAF PROTECT THE PUBLIC. THIS INCLUDES SUBSTANTIAL B OPEN EXCAVATIONS, EQUIPMENT, ETC. THE SITE MUST IS THE CONTRACTORS RESPONSIBILITY TO TAKE NECE THROUGHOUT THE DURATION OF THE PROJECT.
- 53. N14 SHOULD CONTRACTOR SELECT A TRENCH EXCAVA SEEDING OR PAVING AND FINAL SITE PREPARATION (I.E RESPONSIBLE FOR MEETING PLAN AND SPECIFICATION ADDITIONAL COST TO GVSUD.
- 54. N16 WARNING: NOTE THAT CERTAIN PORTIONS OF THE UTILITIES. THE CONTRACTORS WILL BE REQUIRED TO F SUPPORTIVE SHORING MAY BE REQUIRED. IT IS SPECIF PROTECT HIS WORKERS, EXISTING UTILITIES, AND FINIT
- 55. N17 OVERHEAD ELECTRIC, CITY PUBLIC SERVICE (CPS MUST BE MAINTAINED BETWEEN ALL EQUIPMENT AND I PUBLIC SERVICE AT 353-2700 AT LEAST 48 HOURS PRIO CPS OVERHEAD ELECTRIC LINE CONTRACTOR SHALL M REQUIREMENTS.
- 56. N23 BYPASS PUMPING: THE CONTRACTOR IS RESPONS COMPLETE THE WORK. BYPASS PUMPS SHALL BE ADEC STORM EVENTS. CONTRACTOR SHALL HAVE STANDBY PRIMARY PUMP FAILS. CONTRACTOR WILL BE SOLELY I UNAUTHORIZED DISCHARGE AND ANY ASSOCIATED FIN
- 57. N26 CONTRACTOR SHALL BACKFILL ALL OPEN TRENCH NO INSTALL MORE PIPE THAN CAN BE COVERED. NO OF END OF OPEN PIPE WILL BE PLUGGED OVERNIGHT.
- 58. N33 THE PROJECT AREA MAY BE SUBJECT TO ARCHEC ENCOUNTER ANY ARCHEOLOGICAL DEPOSITS DURING SHALL STOP ALL WORK IN THE AREA OF THE DEPOSITS
- 59. N37 CONTRACTOR TO NOTE THAT PORTIONS OF THE O YEAR FLOODPLAIN. THE CONTRACTOR IS REQUIRED TO OBSTRUCTIONS TO FLOOD FLOWS. POTENTIAL OBSTR EQUIPMENT, TEMPORARY ROADS ACROSS CHANNEL, E UNDER THREATENING WEATHER CONDITIONS WHERE IMMEDIATELY REMOVED BY THE CONTRACTOR AT NO ASSUMES ALL RISK FOR UNFINISHED WORK.

-'GREEN VALL

							С	ol	ie	rs]	
						E	<u> </u>	gine De		•	7 5 5	
E	ESS OF EACH SEWER SERVICE LATE BUILDER. PLUMBER WILL WORK CLOS MAKING ARRANGEMENTS 48 HOURS ED OR APPROVED AND/OR COVERED	SELY WITH THE IN ADVANCE.		and al whom	ight © 20 Il the infor 1 the servio pied, reus	024. Coll ormation ices were ised, dis	lliers Engi containe re contrac sclosed, (erser ineering & ed herein cted or to distributed ten conser	Design A is authoria whom it is d or relie	II Rights zed for u s certifiec ed upon	Reserved use only by d. This dra for any o	l. This di awing m other pu
IS A F	E-INSPECTED. STALLED FOR RESIDENTIAL SERVICE AST IRON BOOT. CLEAN OUT NOT LOO REINFORCED CONCRETE PAD A MINI SIX (6") INCHES THICK. ALL PROPER ⁻ N COLOR.	CATED IN A IMUM OF		For	merl	y Kr] .	ALL STA XCAVAT	PROTE ATES REC ORS, DE RING TO ACE AN	QUIRE N SIGNER D DISTU	NOTIFIC RS, OR A JRB THE	ATION
A T	CTRIC FENCE, WHETHER OR NOTE ID AND ALL DAMAGES DIRECTLY ATTRIE TER CONDITIONS AT THE CONTRACTO IN THE FENCING MUST BE PROVIDED SSES FENCING. FENCING REQUIRED	BUTED TO THE OR'S EXPENSE D AT ALL		F				FIC DII				MBEF
	MUST AVOID DAMAGE TO ADJACENT CLAIMS DIRECTORY ATTRIBUTED TO ID THE CONSTRUCTION LIMITS MUST INEER WITH THE APPROPRIATE LANI IUST MAINTAIN ACCESS FOR PRIVAT G CONSTRUCTION THE CONTRACTO ONS AT THE CONTRACTOR'S EXPENS	THE BE SETTLED BY DOWNER. E INDIVIDUALS R MUST										
	ID PROTECTION ALL UTILITIES WHET MAGE ANY UTILITIES THE CONTRAC IS TO THEIR ORIGINAL CONDITION. C ETC CLAIMED BY UTILITY COMPANIES VSUD AND IMPACTED UTILITY COMPA RIFY THE LOCATION OF UTILITIES AND	TOR WILL BE CONTRACTOR IS DUE TO ANIES 48 HRS. D REPORT ANY										
L N I	DF BOTH THE EXISTING AND PARALLI LANS, MUST BE CLEARED IN ACCORE BY THE ENGINEER TO PROTECT AND IT CONSTRUCTION EASEMENTS. ALL AFTER CONSTRUCTION. BURNING O	DANCE WITH THE DAVOID BRUSH MUST OF BRUSH OR		DESCRIPTION								
s/	E ACCESS AND BARRICADE WORK A ARRICADES AROUND ALL TRENCHES BE LEFT IN SECURE SAFE CONDITIONS SSARY PRECAUTIONS TO PROTECT	S, BORE PITS, DN AT NIGHT. IT		DRAWN BY DE					· ·		<u> </u>	
N	ATION PROCEDURE THAT EXTENDS ⁻ E. SLOPE BACK PROTECTION SYSTEM I REQUIREMENTS TO THE NEW LIMIT E PROJECT MAY PARALLEL AND/OR C	M) HE WILL BE 'S AT NO		REV DATE								
	PROTECT EXISTING UTILITIES. ADDIT FICALLY THE CONTRACTORS RESPON SHED WORK THROUGHOUT THE JOB AN APPROPRIATELY SAFE OVERHE PERSONNEL. THE CONTRACTOR SHA R TO ANY CONSTRUCTION IN THE VI MAINTAIN CPS RECOMMENDED CLEAN SIBLE FOR ALL BYPASS PUMPING REP	IONAL NSIBILITY TO AD CLEARANCE ALL NOTIFY CITY CINITY OF THE RANCE						REY V 139	N. MA	IRTIN INTIN		
H F V	QUATE TO HANDLE PEAK FLOW EVEN PUMPS AVAILABLE TO BYPASS FLOW RESPONSIBLE FOR ALL COSTS FOR (NES. HES AT THE END OF THE DAY. CONTR PEN TRENCHES WILL BE PERMITTED	V IN CASE CLEANUP OF AN RACTOR SHALL			/	IT.	Ŋ	11	N	//// 4/30	0/24	
	DLOGICAL MONITORING, SHOULD THE CONSTRUCTION OPERATIONS, THE SAND IMMEDIATELY CALL THE PROJE CONSTRUCTION ARE WITHIN THE LIM D KEEP THE CHANNEL CLEAR OF PO JCTIONS INCLUDE HEAVY CONSTRUCTIONS EXCAVATED MATERIAL, STOCKPILED FLOODING IS LIKELY, OBSTRUCTIONS	CONTRACTOR ECT MANAGER. IITS OF THE 100 TENTIAL CTION DEBRIS, ETC.										
Α	ADDITIONAL COST TO GVSUD. THE C	ONTRACTOR				_		24 24		_		
							EX/	I AN AR (TE)	COU	JNT		
	GREEN VALLEY SPECIAL UTILITY DISTRICT			E E	Col ingin & De	ieeri	ing		San Ar Phon LIERS EN TBF	21 Pa Park ntonic le: 21(IGINEER PE Firm#	iesanc way o, TX 7 0.979.	78231 8444 ESIGN,
	REVISED: OCTOBER 2021	GENERAL NOTES (2 C THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. G-2		E: SHOWN	N C	ATE: 03/19/2	2024 DRAWIN	DRAWI	n by: Sj		ECKED BL
				SHEE	314-63 T TITLE:	3-02	AR'	ssdt3' Y SE	146302 EWE		101	ES
							((2 0	īΖ	1		

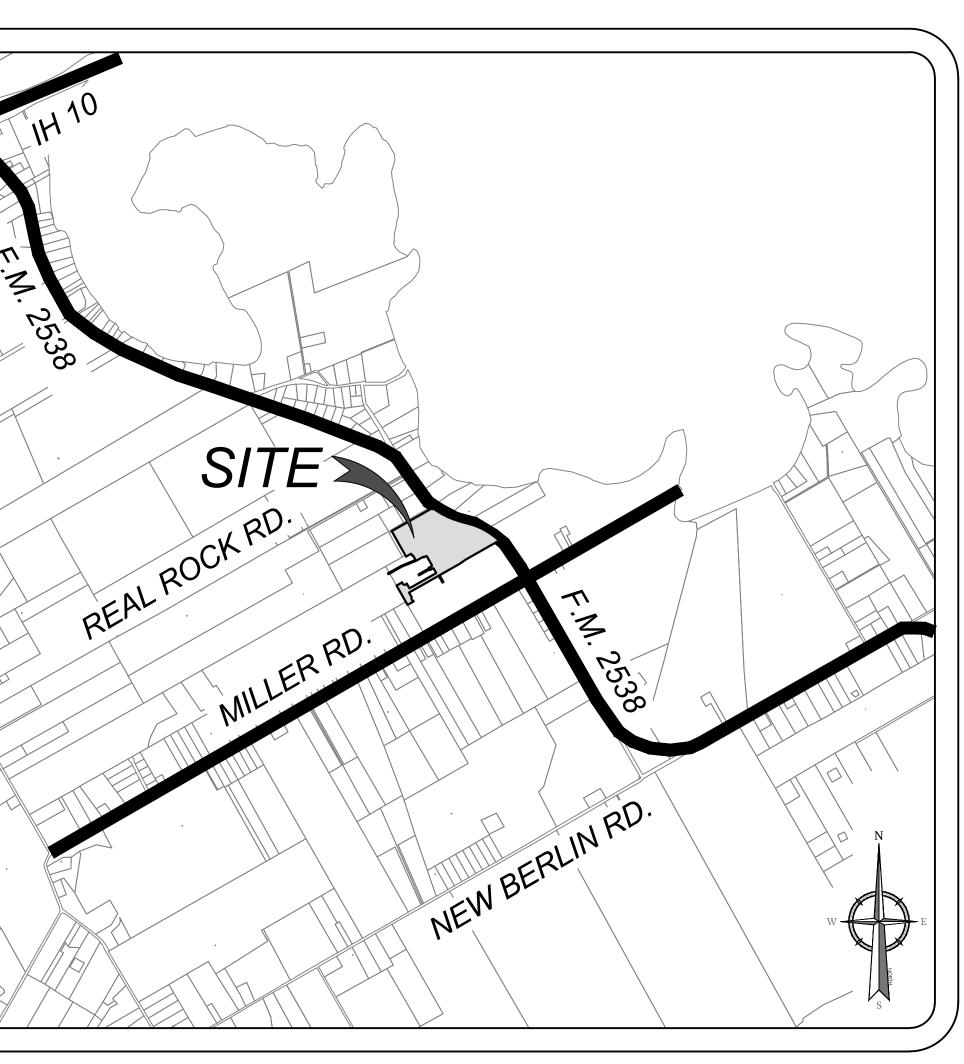
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.





TER\CVOW3146302.dwg\7.0 By: SJOSEPH

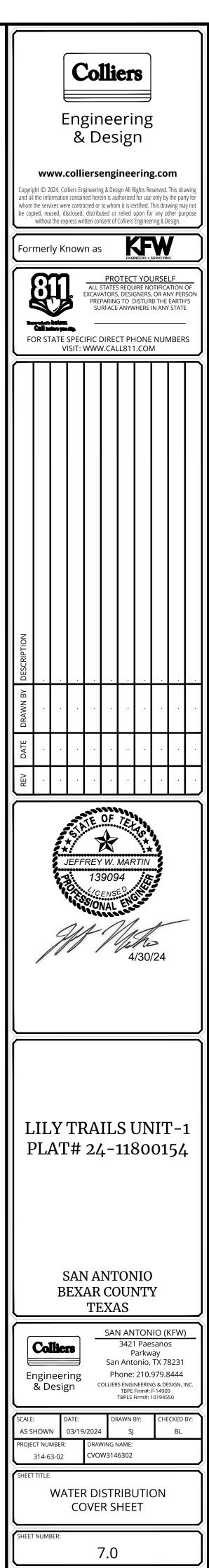
LILY TRAILS UNIT-1 BEXAR COUNTY, TEXAS WATER IMPROVEMENTS



WATER DIS WATER DIS WATER DIS WATER DIS WATER DE

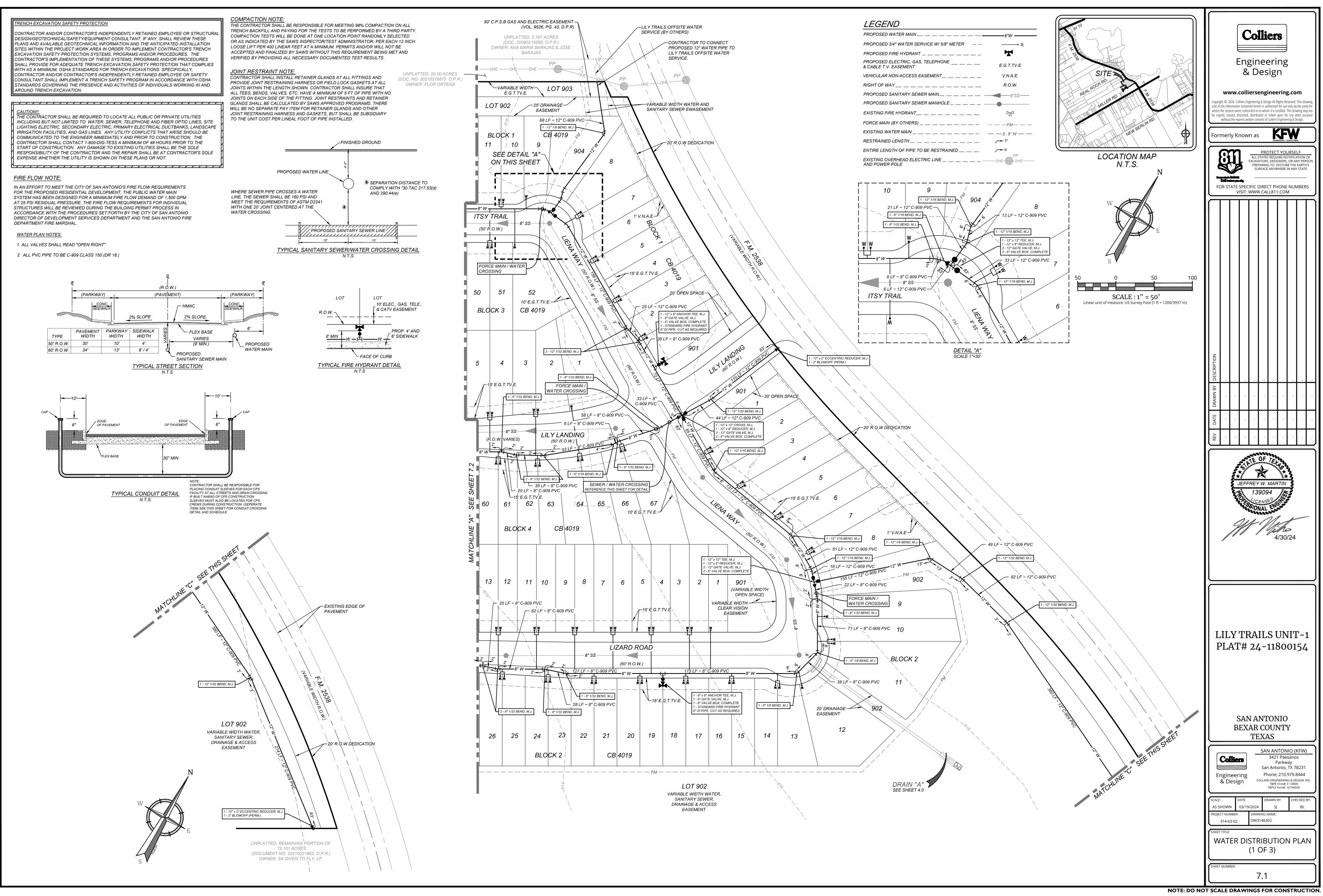
LOCATION MAP N.T.S.

OWNER/DEVELOPER LENNAR HOMES OF TEXAS LAND & CONSTRUCTION LTD. 100 NE LOOP 410, SUITE 1125 SAN ANTONIO, TEXAS 78216

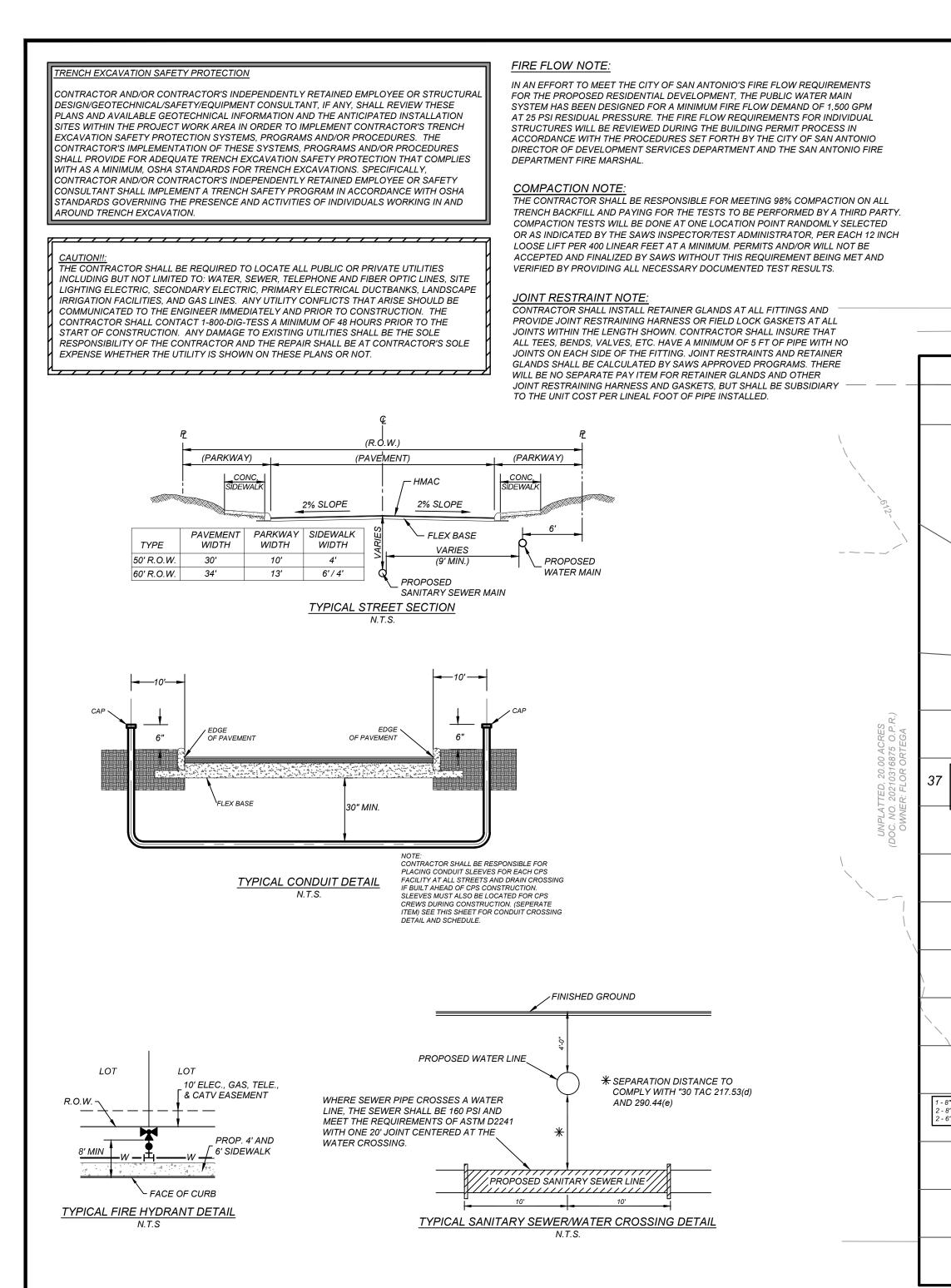


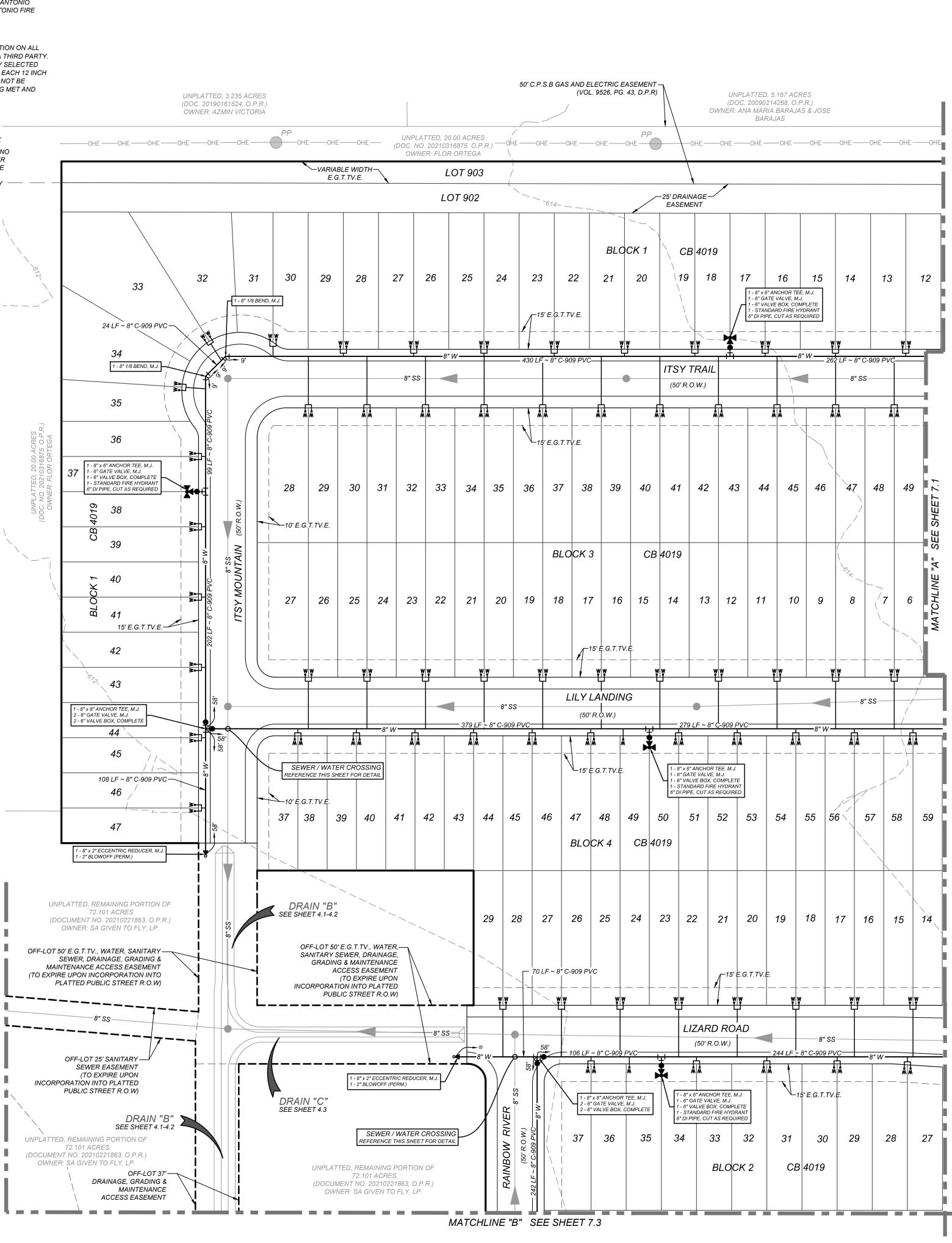
Sheet List Table

SHEET TITLE	SHEET NUMBER
ISTRIBUTION COVER SHEET	7.0
ISTRIBUTION PLAN (1 OF 3)	7.1
ISTRIBUTION PLAN (2 OF 3)	7.2
ISTRIBUTION PLAN (3 OF 3)	7.3
ETAIL SHEET (1 OF 2)	7.4
ETAIL SHEET (2 OF 2)	7.5



0W3146302.dwg\7.1 By: SJOSE

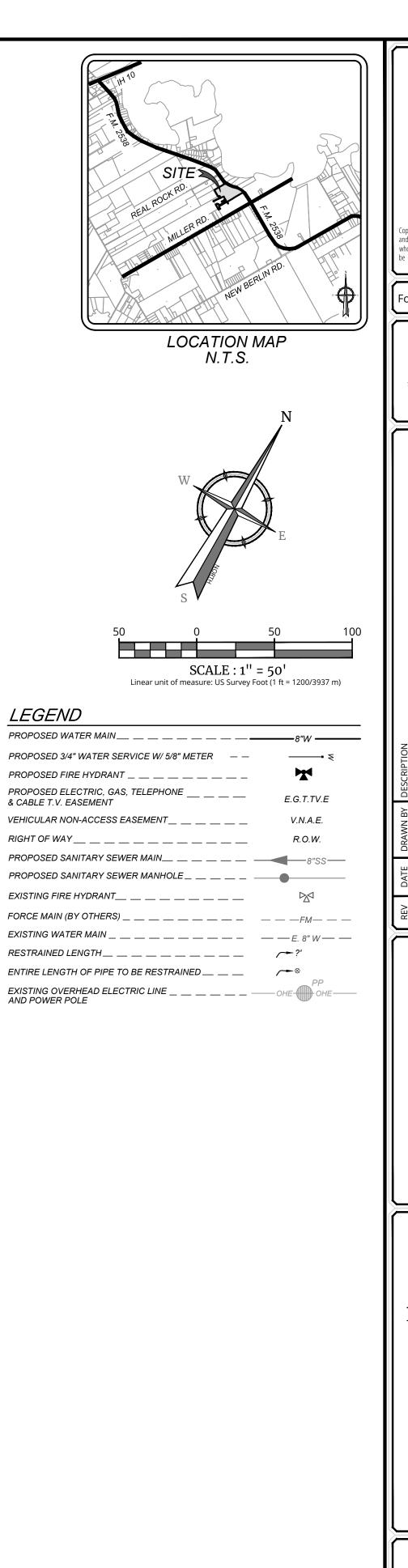


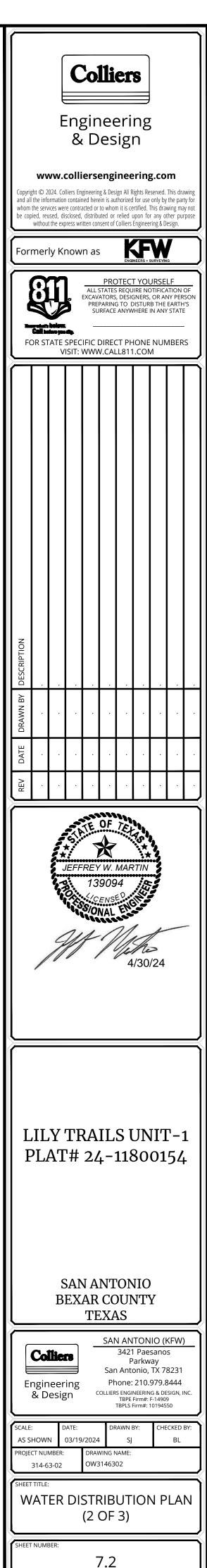


2. ALL PVC PIPE TO BE C-909 CLASS 150 (DR 18.)

1. ALL VALVES SHALL READ "OPEN RIGHT"

WATER PLAN NOTES:



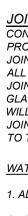


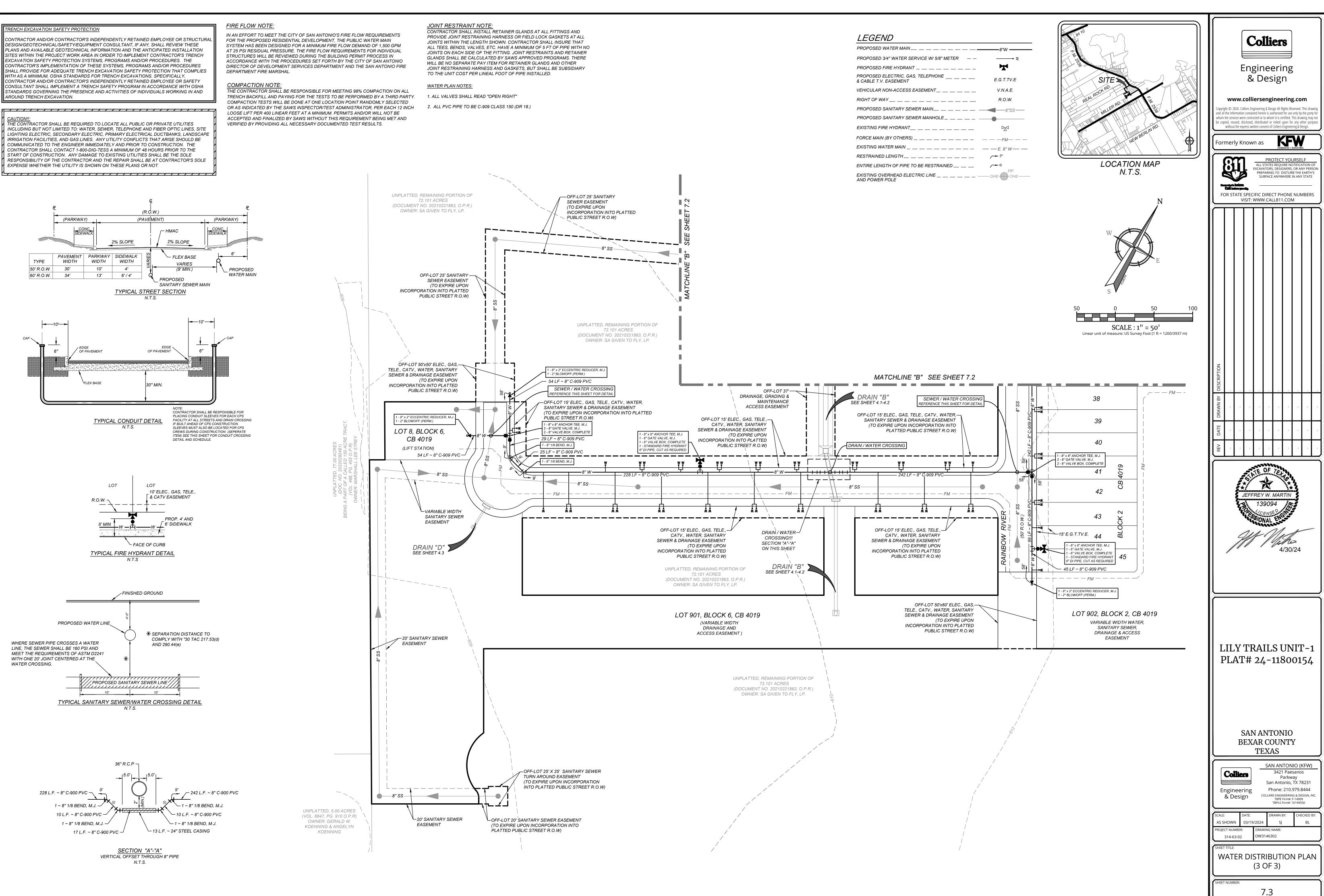
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE

(PARKWAY)





RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

2% SLOPE

PAVEMENT PARKWAY SIDEWALK

(R O W)

(PAVEMENT)

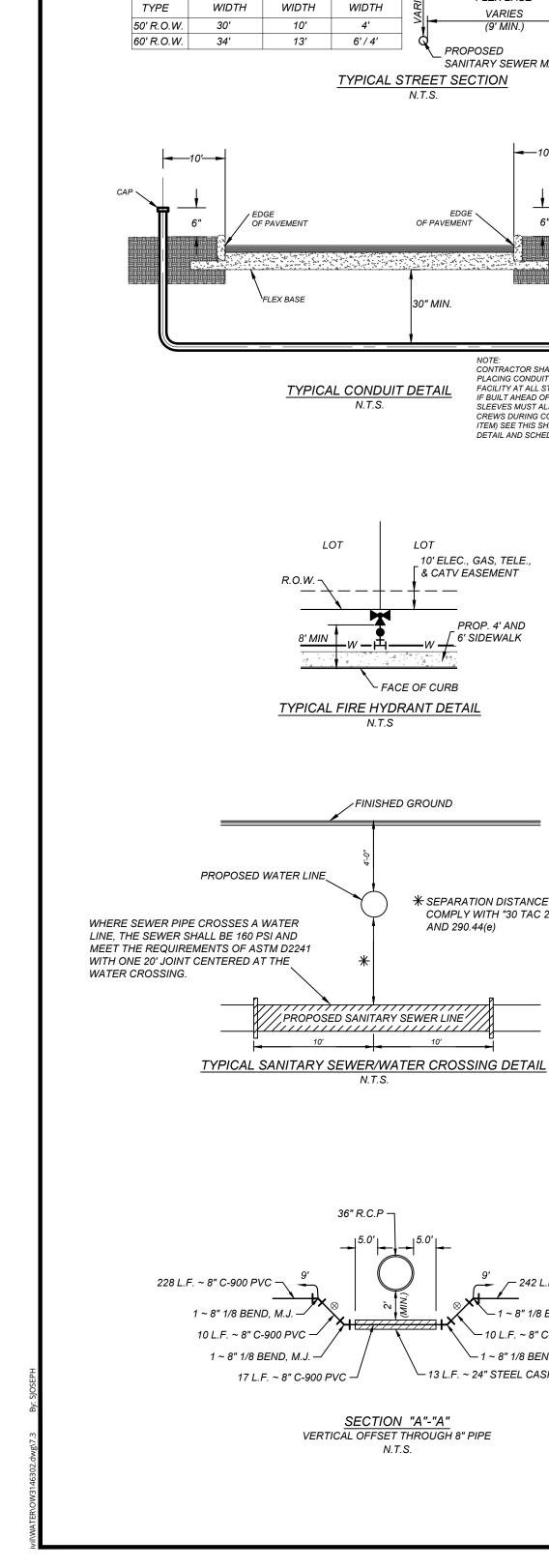
N.T.S.

OF PAVEME

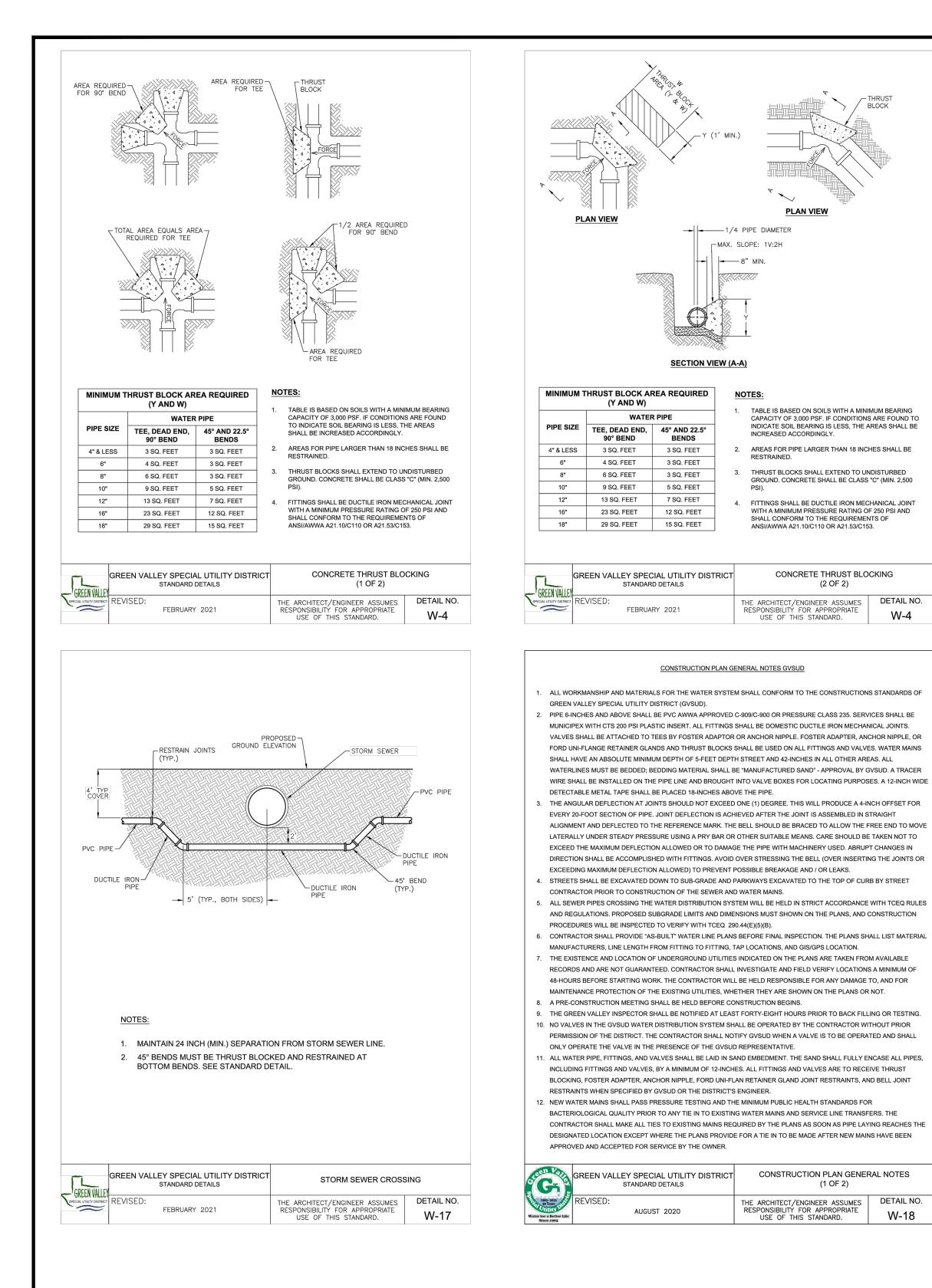
LOT

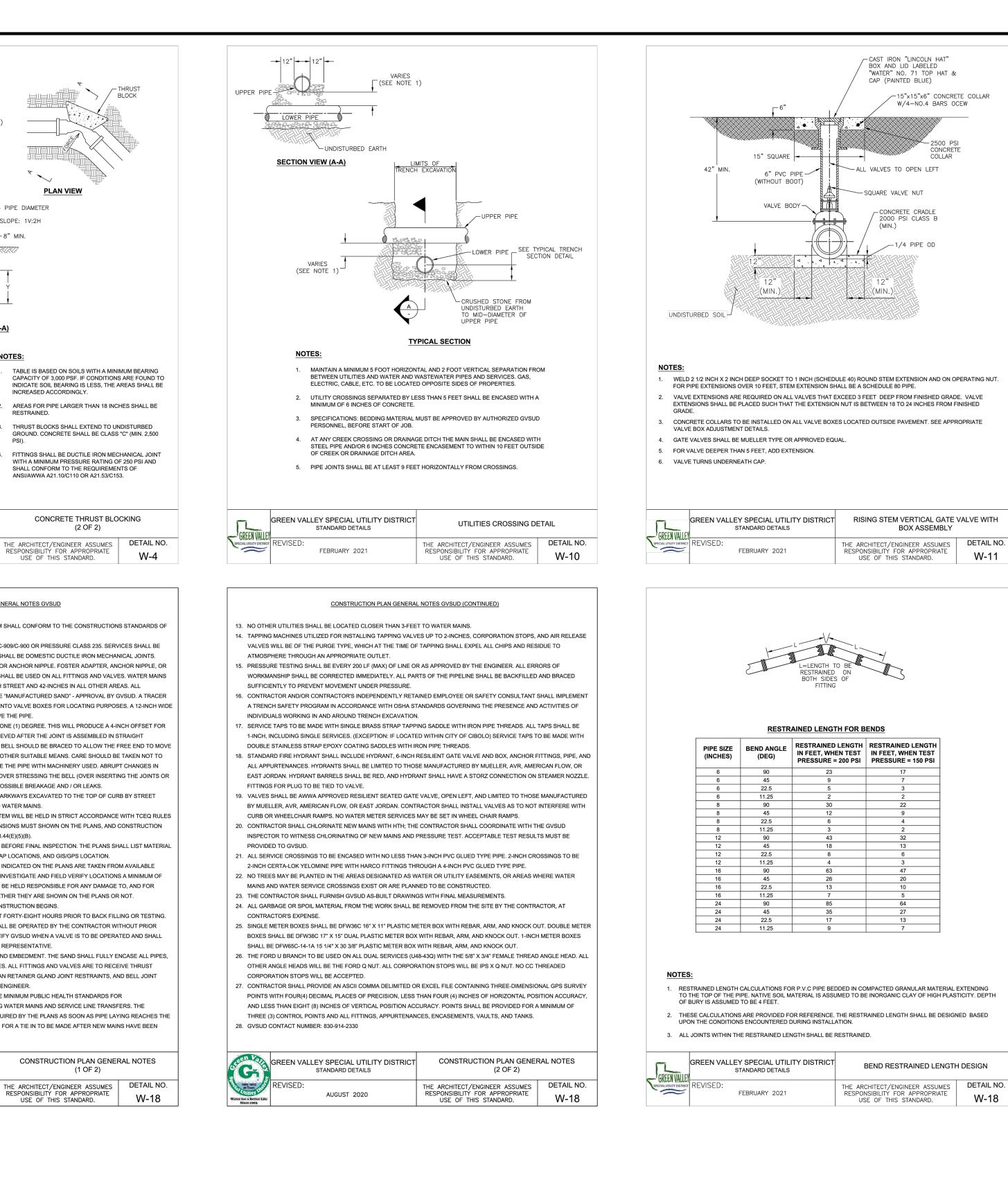
AND 290.44(e)

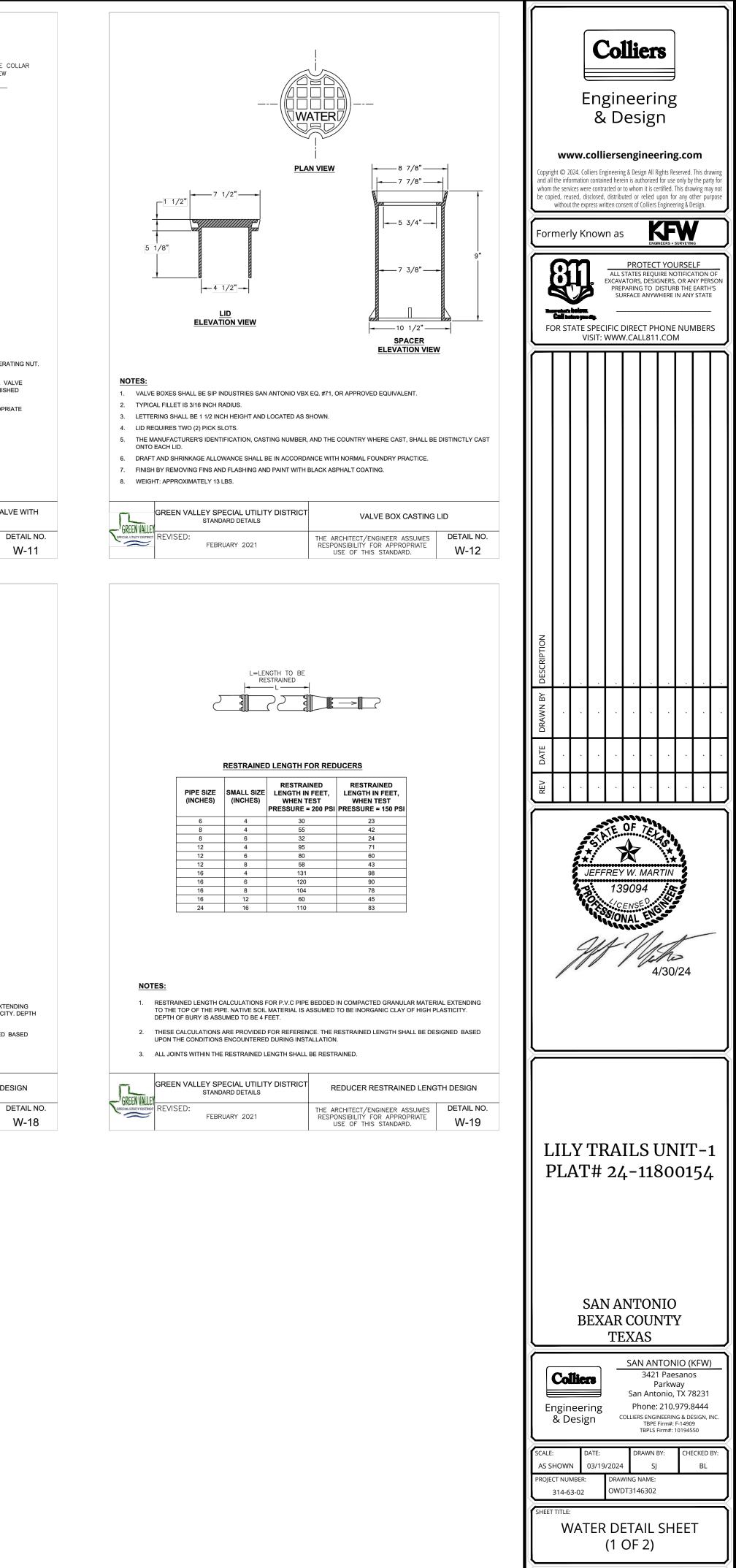
PROPOSED



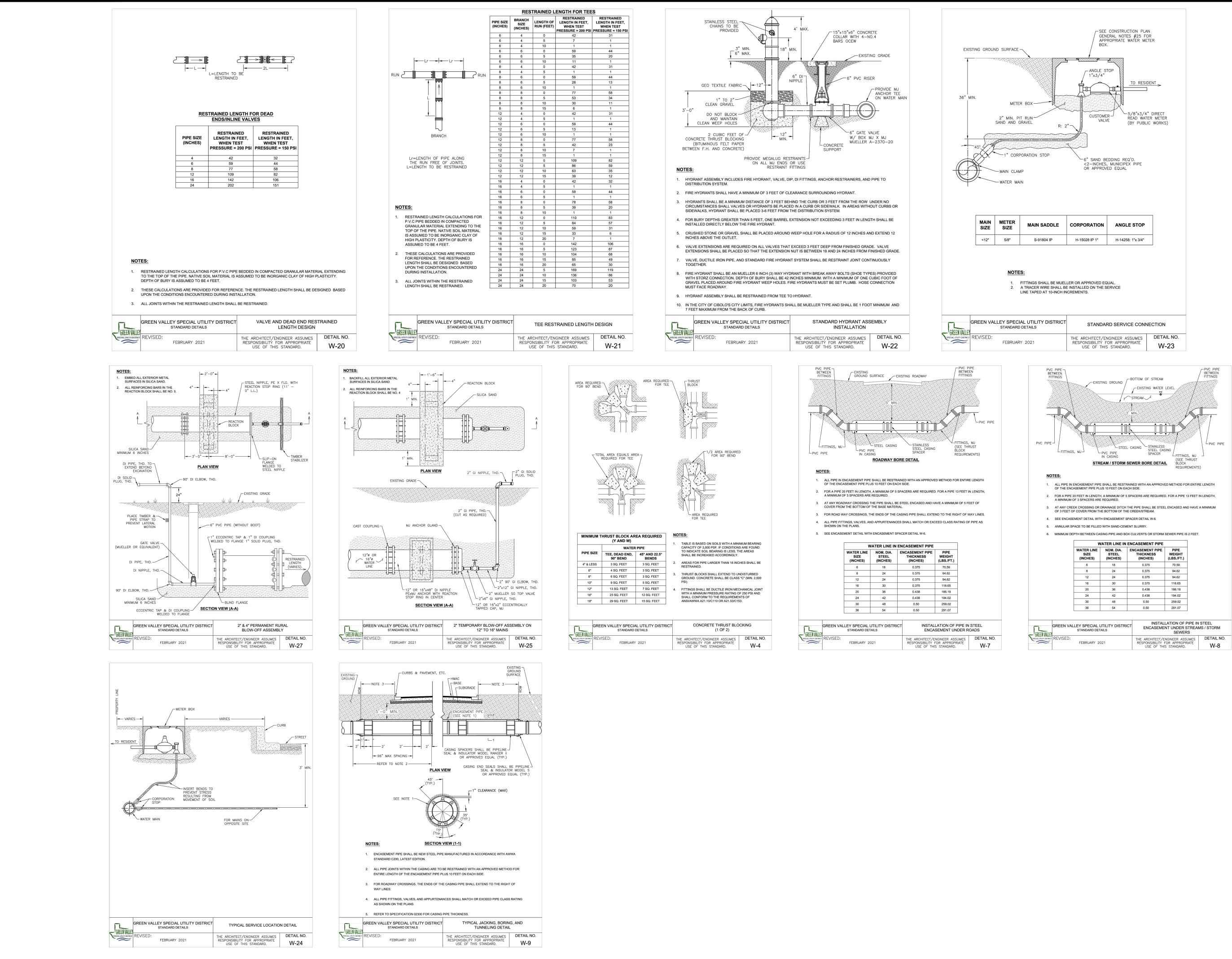
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



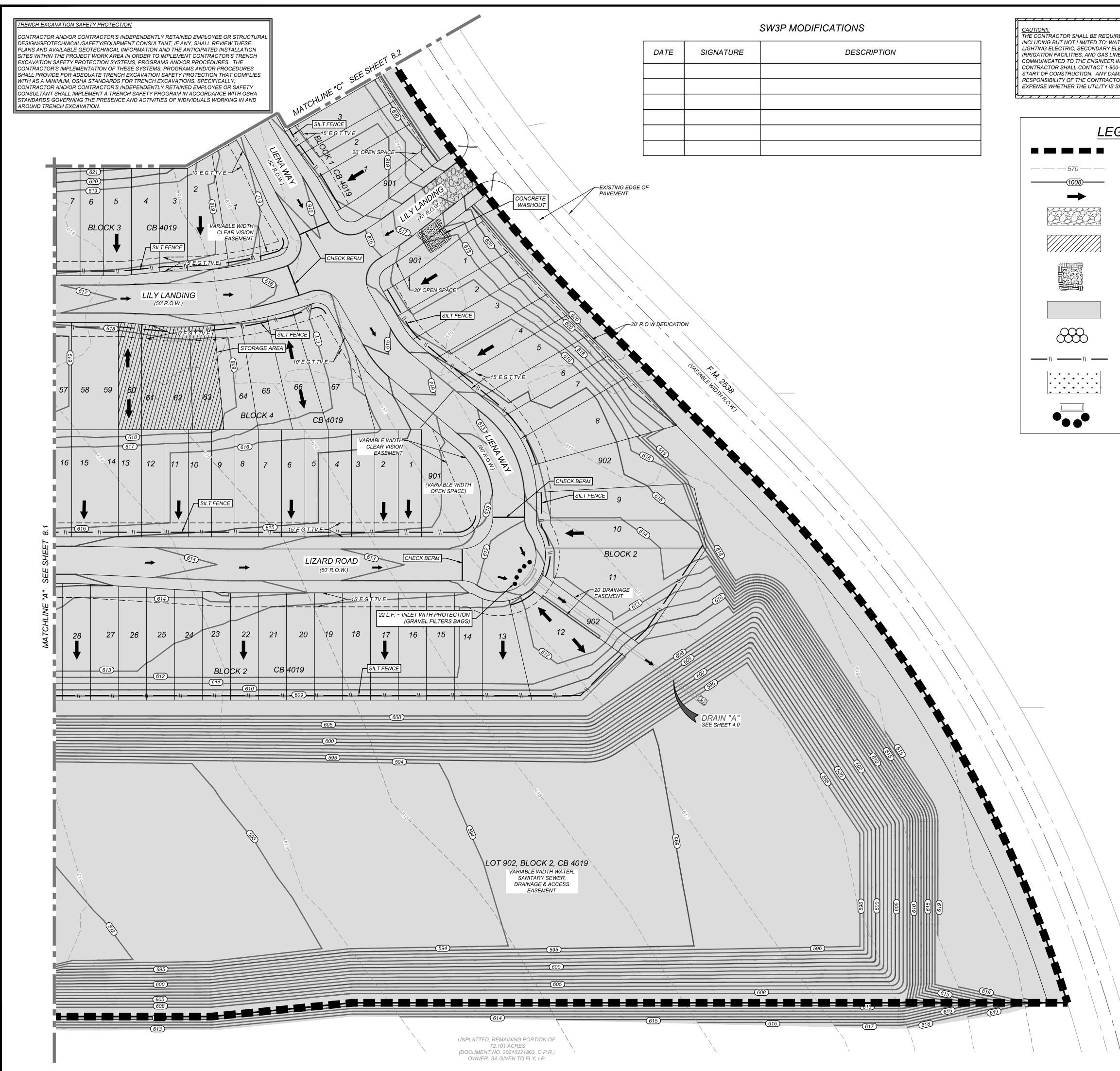




NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



		Ę						Ŧ		
Ĭ	nt © 20 he info ne servi ed, reu without	VVV.C D24. Col ormation ices wer issed, dis the exp	Colli liers Eng contair e contra sclosed, rress wri	gineerin hed here acted or distribu	engi g & Desi ein is au to whor uted or isent of	inee	n ering ights Re for use rtified. ⁻ upon fo	g.CO eserved. only by This drar r any o	This dra the par wing ma ther pu	ty for Iy not
Form			SPEC	ALL S EXCAV PREI SU		DTEC REQU , DESIC G TO E ANYW	T YOU IIRE NO SNERS, DISTUR HERE	OTIFICA OR AN B THE IN ANY	LF ATION NY PER EARTH ' STATE	ISON I'S E
DRAWN BY DESCRIPTION										
DATE DRAWN		•	•	•	•	•	•	•	•	•
REV D,										
			EFF ON STATE	REY 13 5/0		EN	73 * TIN 130	//24		
		AT S	'# SAN	22 J A AR	IL , , , , , , , , , , , , , , , , , , ,	118 'ON DUN	30	01		
⊨ En	igin	eer esig	ing	C	Sar Ph OLLIER	P Anto None: S ENGII	Pae arkw onio, 210. NEERIN Firm#:	sano /ay TX 7 979.8 979.8 10 & DE F-1490 101945	s 8231 3444 sign, i	NC.
AS SH PROJEC	T NUN 14-6	N (MBER:				SJ NAME:	э т :		BL	Б Ү:
SHEET		WA	TEF		ETA OF		SHE	ET		
SHEET	NUME	BER:		-	7.5					



P3146302.dwg\8.0 By: SJOSEF

ED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES TER, SEWER, TELEPHONE AND FIBER OPTIC LINES, S ECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSO ES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE MMEDIATELY AND PRIOR TO CONSTRUCTION. THE -DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE MAGE TO EXISTING UTILITIES SHALL BE THE SOLE OR AND THE REPAIR SHALL BE AT CONTRACTOR'S SO HOWN ON THESE PLANS OR NOT.	
	REAL ROCK RD
GEND	REAL MILLER RD
LIMITS OF CONSTRUCTION	
EXISTING CONTOURS	
PROPOSED CONTOURS	LOCAT
FLOW ARROW	N.
STABILIZED CONSTRUCTION ENTRANCE/EXIT	
CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.	
CONCRETE TRUCK WASHOUT PIT	W
DISTURBED AREA	
ROCK BERM	S
SILT FENCE	50 0 50
NATURAL VEGETATIVE BUFFER	SCALE : 1" = 50'

INLET WITH PROTECTION

(GRAVEL FILTERS BAGS)

PROJECT COMPLETION:

 ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LOCATION MAP

N.T.S.

- 2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

<u>GENERAL:</u>

- 1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
- 2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
- 3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

INSTALLATION:

- 1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
- 2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
- 3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UP GRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

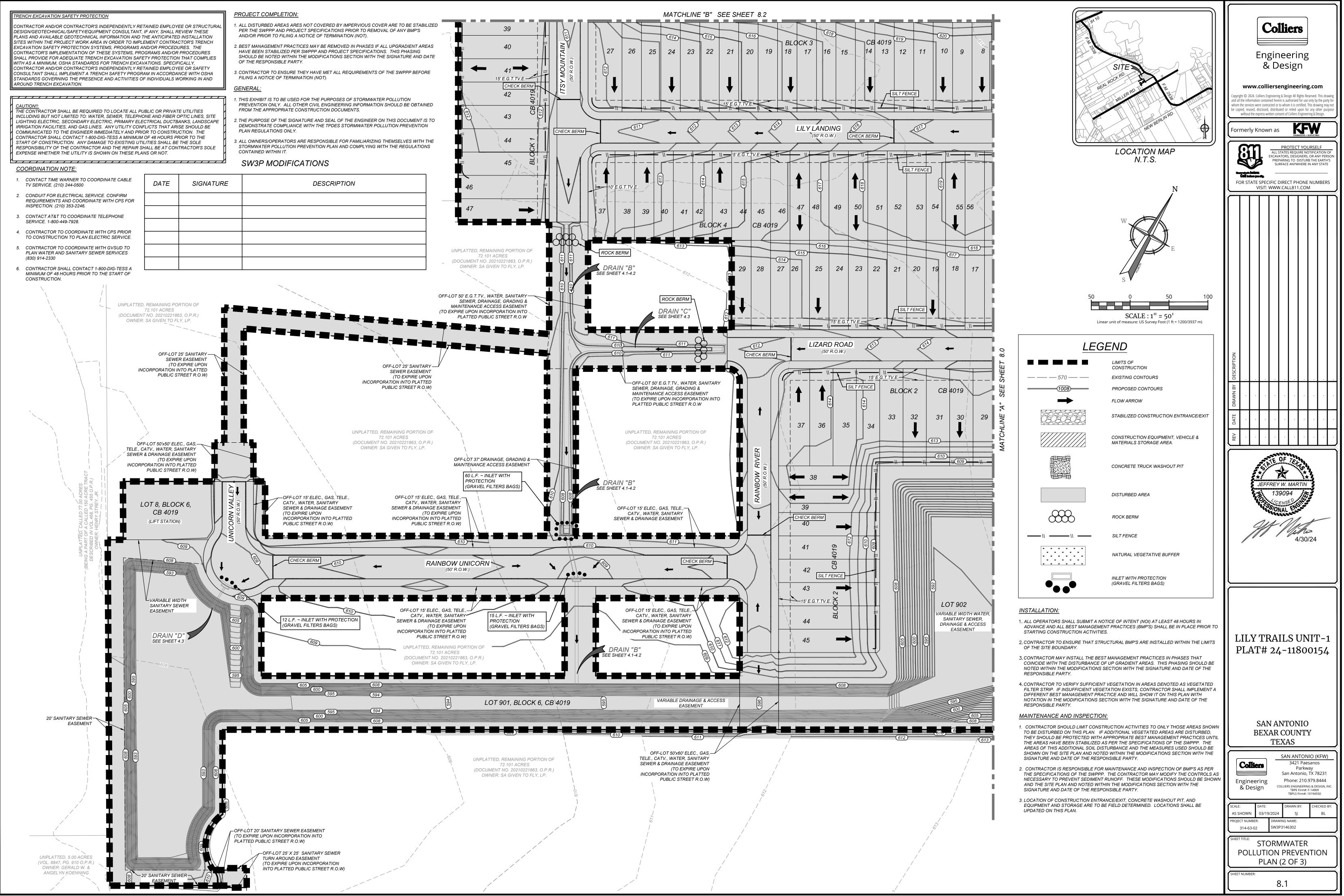
MAINTENANCE AND INSPECTION:

- 1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

COORDINATION NOTE:

- 1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
- 2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246.
- 3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
- 4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
- 5. CONTRACTOR TO COORDINATE WITH GVSUD TO PLAN WATER AND SANITARY SEWER SERVICES (830) 914-2330
- CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

17											
			E		gir	nee	eri	ng	-		
	and all whom be cop	ght © 2 the info the serv ied, reu without	024. Col ormatior ices wer ised, di t the exp	lliers En contair re contra sclosed, oress wr	gineerin ned here acted or distribu itten cor	g & Des ein is au to whor uted or isent of	ign All R thorized n it is ce relied 1	tights Re for use ertified. 1 upon fo Enginee	served. only by This dra r any o	This dra the par wing ma ther pu	ty for ay not
	For	mer	ly Kı	now		PRC	DTEC		JRSE	LF	
	FC	Call DR ST		SPEC	EXCAV PREI SU	ATORS PARING RFACE	, DESIG G TO E ANYW	IONE		NY PER EARTH STATE	SON I'S E
	DATE DRAWN BY DESCRIPTION										
	REV			•	•	•	•		•	•	·
		/			1.	OF W. 909 ENS		*	/24		_
			TA S	'# San	22 J A AR	, +−∶	118 'ON DUI	UN 30	01		
		Col ngin & D	ieer	ing	_	SAN Sar Ph OLLIER	N AN 3421 P n Ante none: s ENGI TBPE	TON Pae Parkw onio, 210. NEERIN Firm#: Firm#:	sano ay TX 7 979.8 ^{G & DE} F-1490	s 8231 3444 sign, i	
	SCALE AS S PROJE	HOWI	N	DATE: 03/19		VING N		BY:	CHE	CKED BL	BY:
	SHEET	314-6 TITLE:	S				/AT	ER /EN			\dashv



3P3146302.dwg\8.1 By: S

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

AROUND TRENCH EXCAVATION.

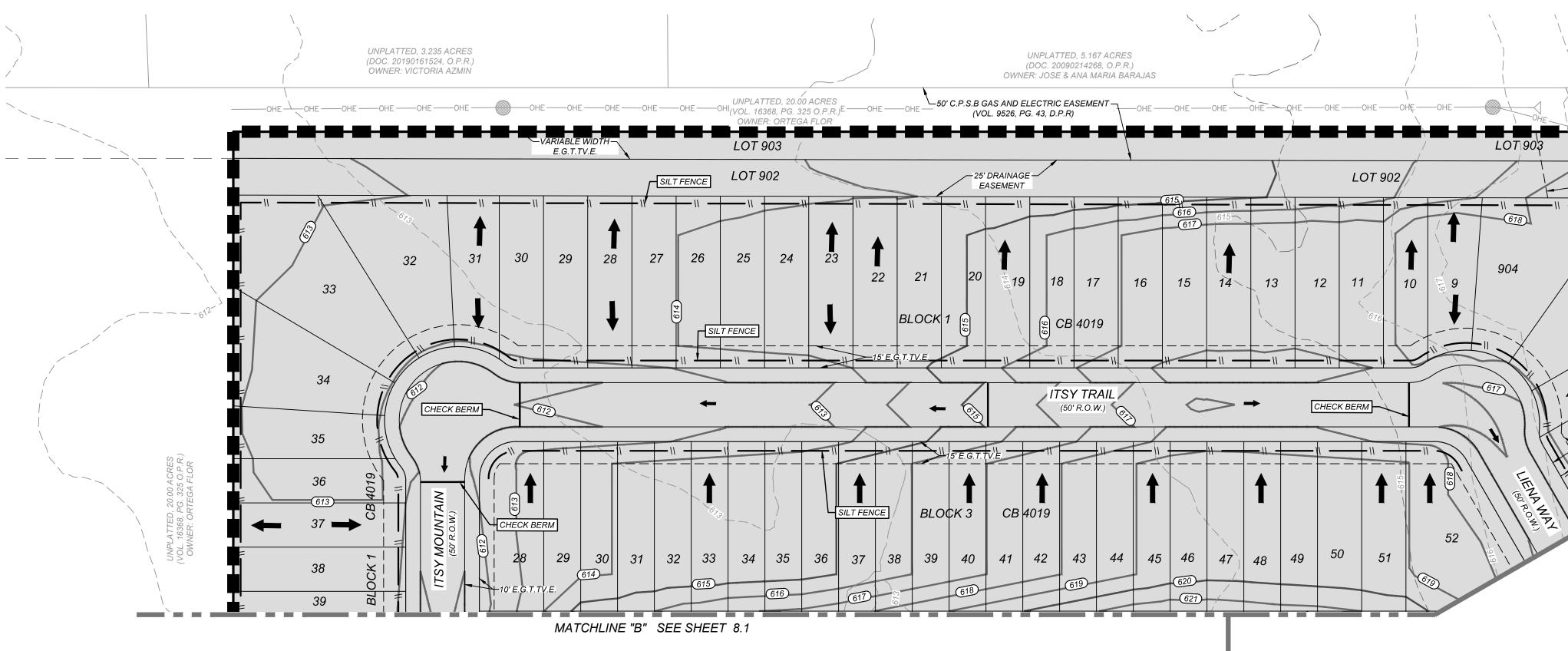
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA

STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION



/3P3146302.dwg\8.2 Bv: SIOSEP

COORDINATION NOTE:

- 1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
- 2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246.
- 3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
- 4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
- 5. CONTRACTOR TO COORDINATE WITH GVSUD TO PLAN WATER AND SANITARY SEWER SERVICES (830) 914-2330
- CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

- PROJECT COMPLETION:
- 1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
- 2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

<u>GENERAL:</u>

- 1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
- 2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
- 3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

INSTALLATION:

- 1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
- 2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
- 3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UP GRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

- 1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

