SAPPHIRE GROVE PHASE 1D

BEXAR COUNTY, TEXAS STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OF BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
- PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF. IN THE THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED
- IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES. THEY SHALL BE REPLACED
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)

COSA SIGNAL OPERATIONS 207-7720 / 207-7765 TEXAS STATE WIDE ONE CALL LOCATOR CITY PUBLIC SERVICE ENERGY - TIME WARNER - AT&T - MCI

- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATE- RIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.
- IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY. IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT. IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
- IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS. C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND / OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND / OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL. THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM
- CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.
- CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACT OR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CON-TRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION AND PRESERVATION GENERAL NOTES

- NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED. MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
- 4. ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
- ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
- 6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
- NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHI THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT, ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE, ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
- SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE
- NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREE
- RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.
- 11. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.

ACCESSIBILITY REQUIREMENTS

LOCAL RESIDENCES AND BUSINESSES

- 12. ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND / OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).
- 13. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE. BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
- 14. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (207-0278).
- 15. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
- 16. TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO

2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY

APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY

ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES

SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.

ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE

FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE

NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS, UNLESS A TEMPORARY ASPHALT

3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE

IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.

SAN ANTONIO ET SAN ANTONIO ETJ

LOCATION MAP N.T.S.

TBPE Firm #: 9513 • TBPLS Firm #: 10122300

DECEMBER 2009 CITY OF SAN ANTONIO CITY OF SAN ANTONIO **GENERAL NOTES**

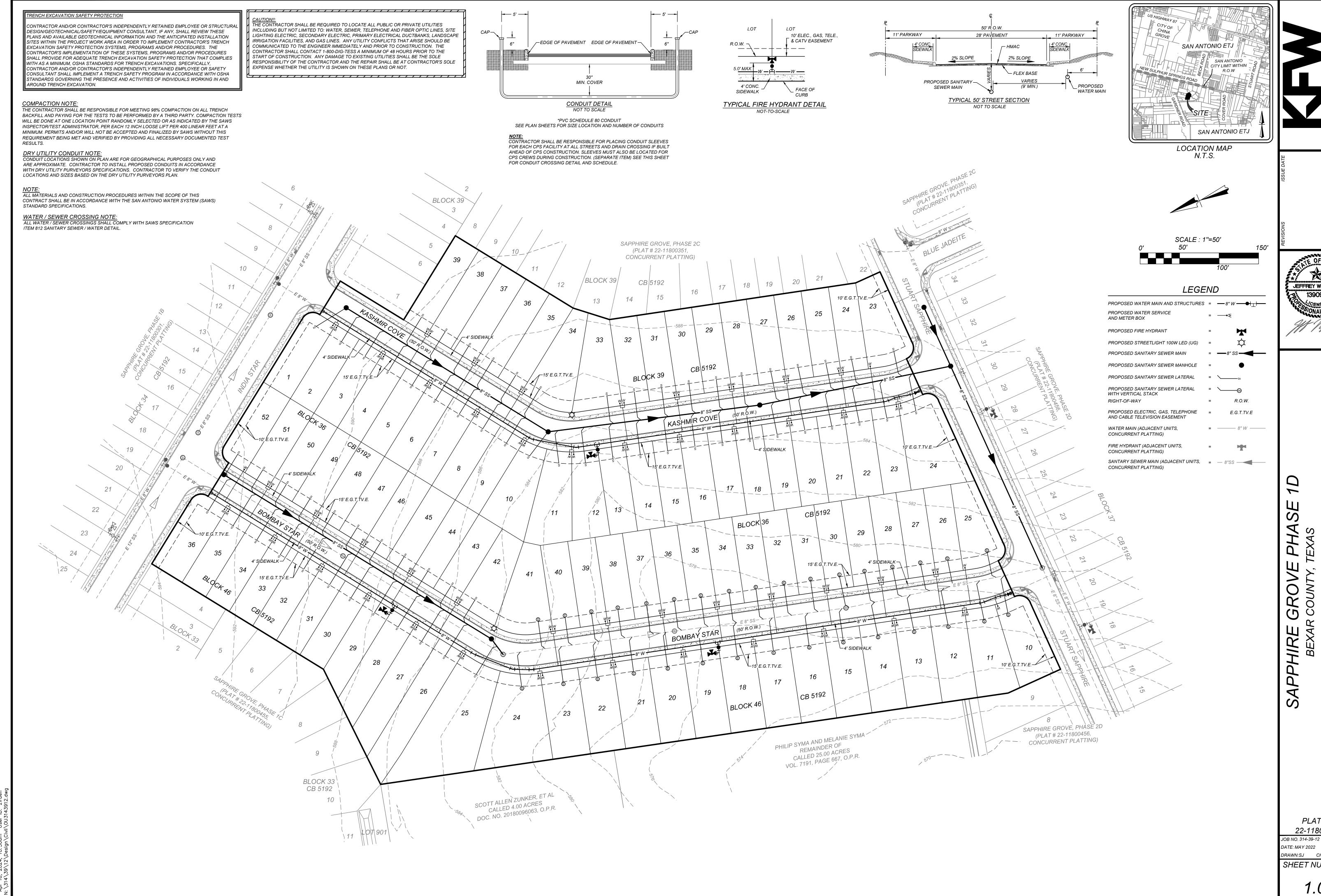
DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

DEVELOPER: LENNAR HOMES OF TEXAS LAND & CONSTRUCTION, LTD. 100 NE Loop 410, SUITE 1155 SAN ANTONIO, TEXAS 78216 PHONE: (210) 403-6282

Sheet List Table

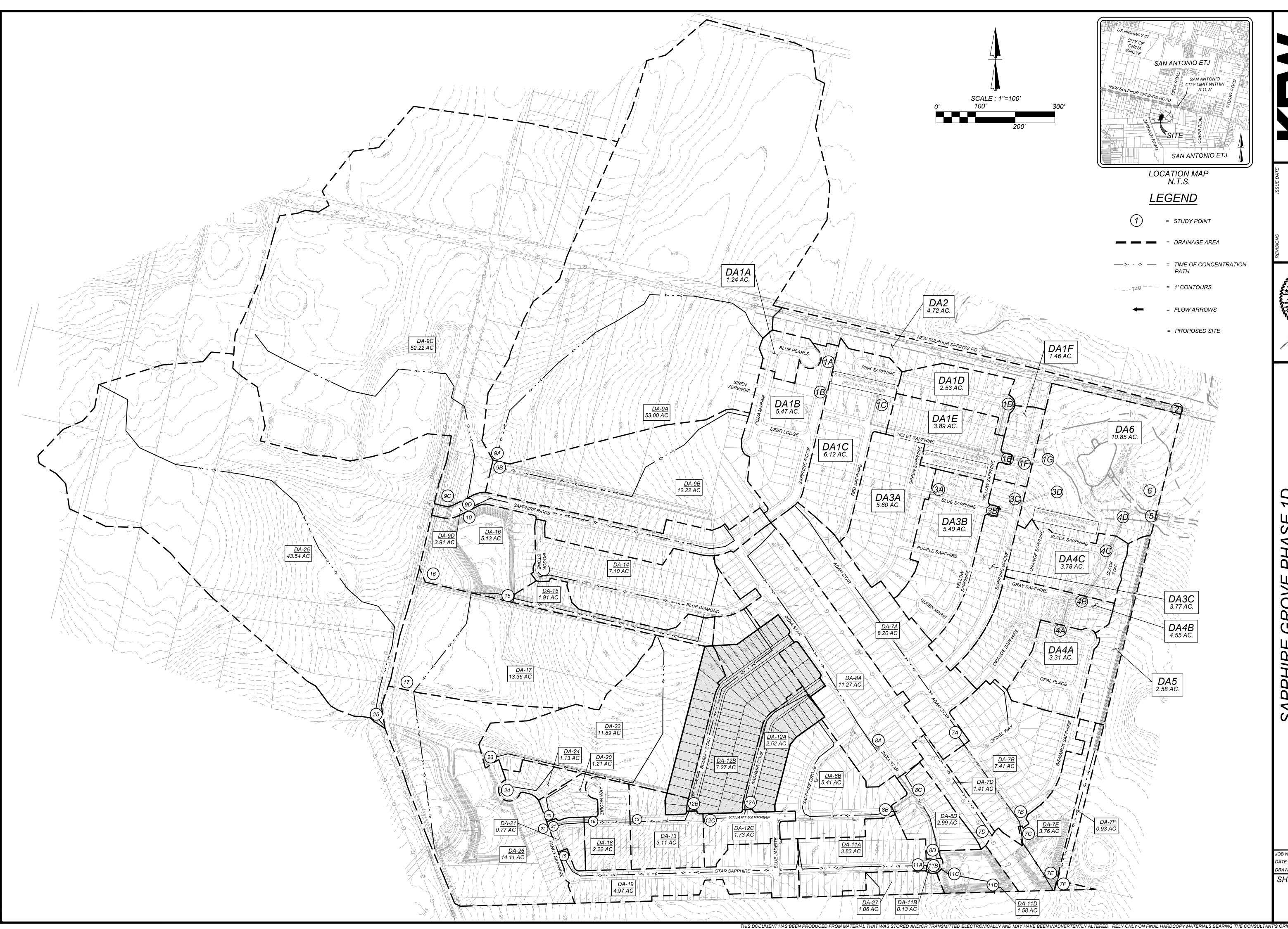
Sheet Title	Sheet Number
COVER SHEET	0.0
OVERALL UTILITY PLAN	1.0
MASTER DRAINAGE PLAN (1 OF 2)	2.0
MASTER DRAINAGE PLAN (2 OF 2)	2.1
OVERALL GRADING SHEET	3.0
BOMBAY STAR PLAN & PROFILE	5.0
KASHMIR COVE PLAN & PROFILE	5.1
STREET DETAIL SHEET	5.2
CONCRETE DRIVEWAY DETAIL SHEET	5.3
TRAFFIC SIGNAGE AND PEDESTRIAN PLAN	5.4
WHEELCHAIR RAMP DETAIL SHEET	5.5
TXDOT PED-18 DETAILS	5.6
SANITARY SEWER IMPROVEMENTS	6.0
OVERALL SANITARY SEWER PLAN	6.1
LINE "Y" PLAN & PROFILE	6.2
LINE "Z" PLAN & PROFILE	6.3
LINE "X" & "Y1" PLAN & PROFILE	6.4
WATER IMPROVEMENTS	7.0
OVERALL WATER DISTRIBUTION PLAN	7.1
WATER DISTRIBUTION DETAIL PLAN	7.2
WATER DISTRIBUTION DETAIL PLAN	7.3
WATER DISTRIBUTION DETAIL PLAN	7.4
STORM WATER POLLUTION PREVENTION PLAN	8.0
STORM WATER POLLUTION PREVENTION DETAILS	8.1



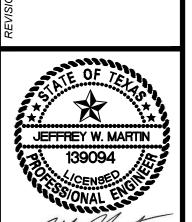


PLAT NO. 22-11800457

SHEET NUMBER:





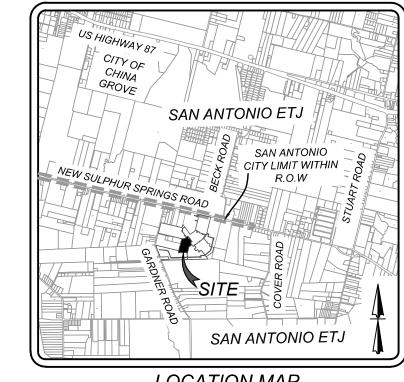


PLAT NO. 22-11800457

JOB NO. 314-39-12 DATE: MAY 2022

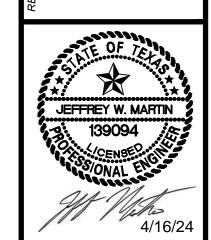
SHEET NUMBER:

IONALI	METHOD													
	Drainage	Area		TCARRYOVE	Tovrl	Tsc	Tch	Тс	15	125	1100	Q5	Q25	Q100
udy Pt.			С	R									-	-
1.4	Area	(Acres)	0.77	(min)	(min)	(min)	(min)	(min)	(in/hr)	(in/hr)	(in/hr)	(ft3/s)	(ft3/s)	(ft3/s
1A	DA1A	1.24	0.77		14.5	2.1	0.0	16.6	4.97	6.85	8.53	4.74	6.54	8.15
1.0	DA1B	5.47	0.77		145	T . 0		20.2	4.40	6.16	7.65	22.15	21.02	20.55
1B	DA1A+DA1B	6.71	0.77		14.5	5.8	0.0	20.3	4.48	6.16	7.65	23.15	31.82	39.55
1C	DATC	6.12	0.77		11.0	7.1	0.0	18.1	4.75	6.54	8.14	22.39	30.82	38.35
1D	DA1D	2.53	0.77		11.1	2.7	0.0	13.8	5.46	7.58	9.46	10.64	14.77	18.44
1E	DA1E	3.89	0.77		14.5	3.5	0.0	18.0	4.76	6.56	8.16	14.27	19.65	24.45
				off Captured b	-							7.30	8.96	10.30
		Amount	of Runoff	Not Captured	l by On-Grad	le Inlets @ 1	.55% (2 - 15'	Inlets)				6.97	10.69	14.15
1F	DA1F w/ Runoff from DA1E	1.46	0.77		14.5	2.6	0.0	17.1	4.89	6.74	8.39	12.47	18.27	23.58
1 G	DA1A THRU DA1F	20.71	0.57	20.3	0.0	0.0	3.6	23.9	4.13	5.66	7.03	48.73	66.83	82.95
2	DA2	4.72	0.95		12.5	13.0	0.0	25.5	4.00	5.48	6.80	17.92	24.56	30.47
3A	DA3A	5.60	0.77		14.5	5.0	0.0	19.5	4.57	6.29	7.82	19.72	27.12	33.72
		Amou	nt of Run	off Captured b	y On-Grade	Inlets @ 1.0	% (2 - 20' Inl	ets)				16.98	20.96	24.02
		Amount	of Runof	f Not Captured	d by On-Grad	de Inlets @ 1	.0% (2 - 20'	Inlets)				2.74	6.16	9.70
3B	DA3B w/ Runoff from DA3A	5.40	0.77		14.5	5.1	0.0	19.6	4.56	6.27	7.80	21.71	32.25	42.13
<u> </u>	Briss wy Ranen Hein Brish			off Captured b					7.30	0.27	7.00	12.20	15.10	17.18
				-	-									
	D120 / D 656 D120			Not Captured			· · · · · · · · · · · · · · · · · · ·	1				9.51	17.15	24.95
3C	DA3C w/ Runoff from DA3B	3.77	0.77		19.6	0.0	0.4	20.0	4.51	6.21	7.71	22.62	35.16	47.34
3D	DA3A THRU DA3C	14.77	0.77			1	I					I		
4A	DA4A	3.31	0.77		14.5	5.7	0.0	20.2	4.49	6.17	7.67	11.45	15.74	19.56
4B	DA4B	4.55	0.77		14.5	5.2	0.0	19.7	4.55	6.26	7.78	15.94	21.92	27.25
4C	DA4C	3.78	0.77		14.5	3.2	0.0	17.7	4.81	6.62	8.24	13.99	19.27	23.98
4D	DA4A THRU DA4C	11.64	0.77											
5	DA5	2.58	0.77		14.5	7.0	0.0	21.5	4.35	5.98	7.43	8.65	11.88	14.75
	DA6	10.85	0.77											
6	DA1 THRU DA6	65.27	0.72		23.9	0.0	2.5	26.4	3.93	5.38	6.68	184.44	252.74	313.53
7A	DA7A	8.20	0.72		14.0	2.0	3.1	19.1	4.62	6.36	7.91	29.18	40.14	49.92
7B	DA7B	7.41	0.77			1.0	2.0		4.91	6.76		27.99	38.58	48.04
					14.0			17.0			8.42			
7C	DA7A + DA7B	15.61	0.77		19.0	0.0	2.0	21.0	4.40	6.05	7.52	52.94	72.72	90.35
7D	DA7D	1.41	0.41		14.0	4.0	0.0	18.0	4.76	6.56	8.16	2.75	3.79	4.72
	DA7E	3.76	0.77			ı		<u> </u>		1		T		
7E	PT.7C + DA7E	19.37	0.77		21.0	0.0	1.0	22.0	4.30	5.91	7.34	44.80	0.00	103.10
	DA7F	0.93	0.77											
7F	DA5+DA7F	3.51	0.77		14.0	5.0	0.0	19.0	4.63	6.37	7.93	12.52	17.23	21.42
8A	DA8A	11.27	0.70		14.0	1.0	3.0	18.0	4.76	6.56	8.16	37.58	51.74	64.38
8B	DA8B	5.41	0.77		14.0	0.0	2.0	16.0	5.06	6.99	8.71	21.10	29.11	36.27
8C	DA8A + DA8B	16.68	0.77		14.0	1.0	1.0	16.0	5.06	6.99	8.71	65.04	89.75	111.82
8D	DA8D	2.99	0.77		10.0	1.0	1.0	12.0	5.81	8.12	10.14	13.38	18.69	23.35
9A	DA9A	53.00	0.72		14.0	4.0	3.0	21.0	4.40	6.05	7.52	168.08	230.88	286.85
9B	DA9B	10.73	0.72		14.0	4.0	2.0	20.0	4.51	6.21	7.71	34.88	47.94	59.59
9C	DA9C	52.22	0.72		14.0	4.0	4.0	22.0	4.30	5.91	7.34	161.78	222.08	275.81
9D	DA9D	5.77	0.77		12.0	3.0	3.0	18.0	4.76	6.56	8.16	21.16	29.14	36.26
10	DA10	121.72	0.77		22.0	0.0	0.0	22.0	4.30	5.91	7.34	403.28	553.60	687.54
1A	DA11A	5.07	0.77		14.0	0.0	2.0	16.0	5.06	6.99	8.71	19.77	27.28	33.99
	DA11B	0.13	0.96											
1 1 B	PT.8D + PT.11A + DA11B	8.19	0.77		16.0	0.0	0.0	16.0	5.06	6.99	8.71	32.06	44.24	55.12
I1C	DA11C	41.55	0.77		16.0	0.0	0.0	16.0	5.06	6.99	8.71	162.02	223.57	278.55
1D	DA11D	1.58	0.77		16.0	0.0	1.0	17.0	4.91	6.76	8.42	60.30	0.00	139.20
2A	DA12A	2.52	0.77		14.0	0.0	2.0	16.0	5.06	6.99	8.71	9.83	13.56	16.89
2A 2B	DA12B	7.27	0.77		14.0	1.0	3.0	18.0	4.76	6.56	8.16	26.67	36.72	45.69
۷ ا					14.0	1.0	3.0	10.0	7.70	00	0.10	20.07	30.72	73.09
26	DA12C	1.77	0.77		100				4.5-		0.15	100	22.5	
I2C	PT.12A + DA12C	4.29	0.77		16.0	0.0	1.0	17.0	4.91	6.76	8.42	16.21	22.34	27.81
	DA13	3.11	0.77			1	ı							
13	PT.12B + PT.12C + DA13	14.67	0.77		18.0	0.0	1.0	19.0	4.63	6.37	7.93	52.34	72.00	89.54
3A	DA13B	5.15	0.77			RUNNOFF	CAPTURED F	FROM 2 - TYP	E 'C' INLETS	ON GRADE			25.30	
3B	DA13C	9.52	0.77			REMAIN	NING RUNOF	F FROM CURE	3 INLETS ON	GRADE			46.70	
14	DA14	5.95	0.77		14.0	2.0	2.0	18.0	4.76	6.56	8.16	21.82	30.05	37.39
15	DA15	3.34	0.77		14.0	10.0	0.0	24.0	4.12	5.65	7.01	10.59	14.53	18.03
16	DA16	155.97	0.77			l .		S JUNCTION F		<u> </u>	i	262.40	409.20	603.00
17	DA17	13.36	0.72		25.0	0.0	1.0	26.0	3.96	5.42	6.73	38.06	52.16	64.71
	DA17	2.25	0.72			J.0	1.0		3.30	J. 12	0.75		J=.10	J 1.7 1
1 Q			0.77		10.0	0.0	1.0	20.0	A F 1	6 21	7 71	40.01	F6 34	60.00
18	PT. 13B+DA18	11.77			19.0	0.0	1.0	20.0	4.51	6.21	7.71	40.91	56.24	69.90
8A		5.20	0.77					FROM 2 - TYPI					24.86	
8B		6.57	0.77				1	F FROM CURE					31.38	
9	DA19	5.32	0.77		14.0	0.0	3.0	17.0	4.91	6.76	8.42	20.10	27.70	34.49
9A		2.89	0.77			RUNNOFF	CAPTURED F	FROM 2 - TYP	E 'C' INLETS	ON GRADE			15.06	
9B		2.43	0.77			REMAIN	NING RUNOF	F FROM CURE	3 INLETS ON	GRADE			12.64	
20	DA20	1.21	0.77		14.0	1.0	0.0	15.0	5.24	7.24	9.03	4.88	6.75	8.41
	DA21	0.77	0.77											
21	PT.18B + PT.19B + PT.20 + DA21	10.98	0.77		20.0	0.0	0.0	20.0	4.51	6.21	7.71	38.17	52.46	65.21
22	PT.13A + PT. 18A + PT.19A + PT.21	24.22	0.77		20.0	0.0	0.0	20.0	4.51	6.21	7.71	84.19	115.73	143.85
3A	DA23A	8.43	0.77		14.0	5.0	1.0	20.0	4.51	6.21	7.71	27.40	37.66	46.82
<u> </u>					14.0	٥.٠	1.0	20.0	۱۲.۳	0.21	1./1	47.40	37.00	+0.82
2.5	DA23B	3.46	0.72			_	-							_
23B	DA23B + DA23A	11.89	0.72		20.0	0.0	2.0	22.0	4.30	5.91	7.34	36.84	50.57	62.80
24	DA24	1.33	0.77		14.0	2.0	1.0	17.0	4.91	6.76	8.42	5.02	6.93	8.62
	DA25	43.54	0.72		14.0	4.0	6.0	24.0	4.12	5.65	7.01	129.13	177.09	219.80
25	<u> </u>													$\overline{}$
25 26	DA26	262.66	0.77				SEE HM	S JUNCTION F	RESULTS			419.10	647.00	939.90



LOCATION MAP N.T.S.

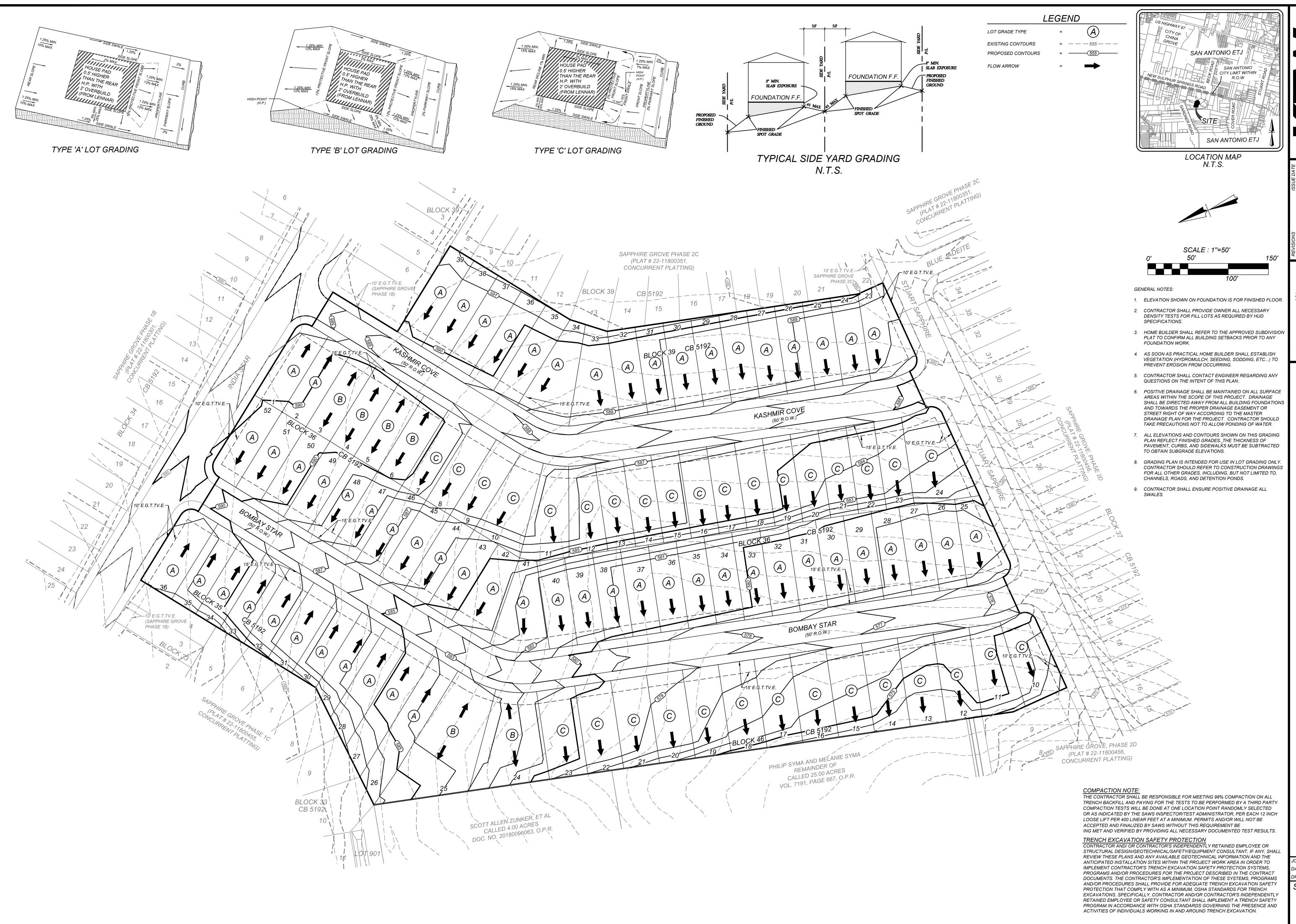




2)

DRAINAGE

PLAT NO. 22-11800457 JOB NO. 314-39-12 DATE: MAY 2022 DRAWN:SJ CHECKED:TE SHEET NUMBER:



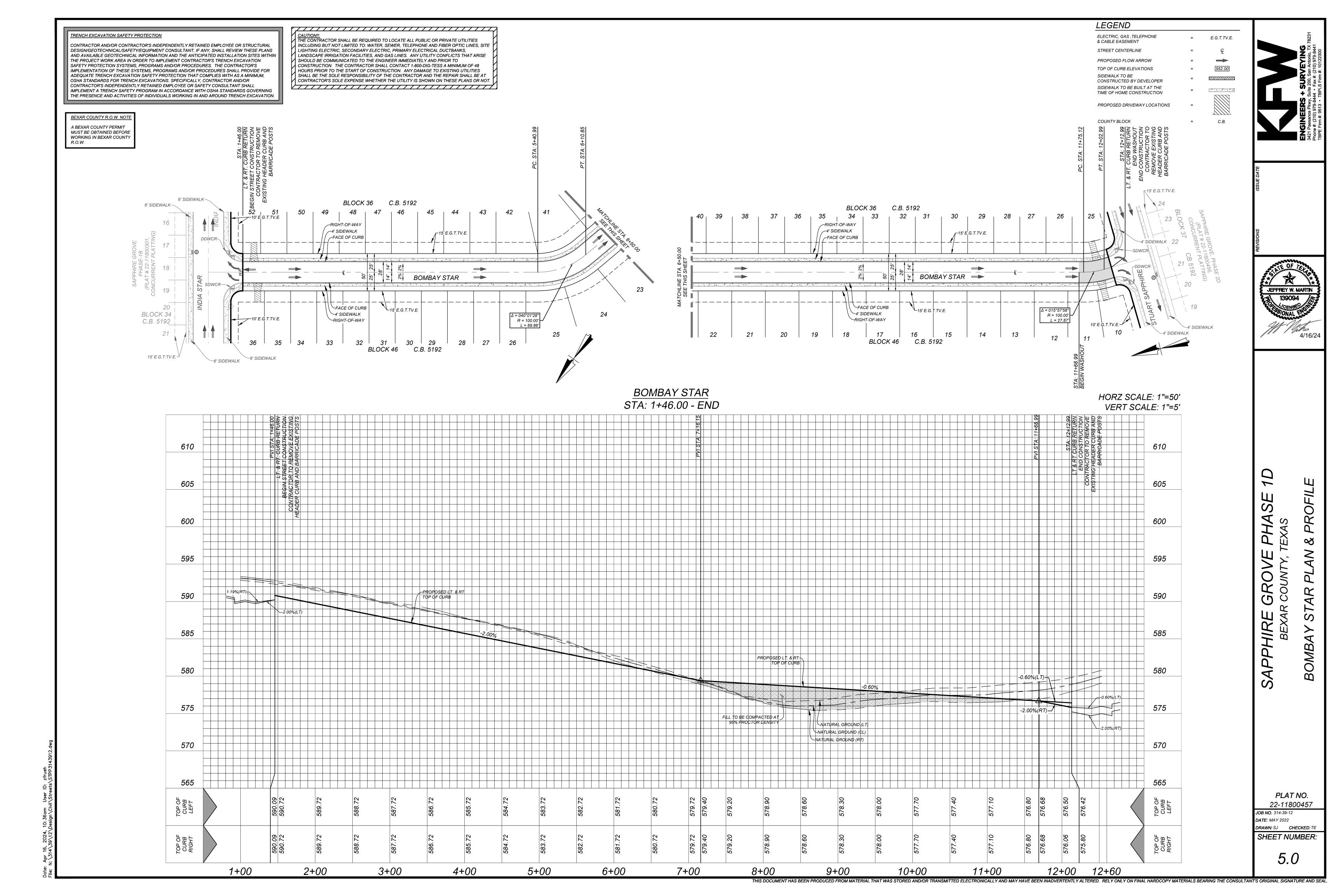
JEFFREY W. MARTIN

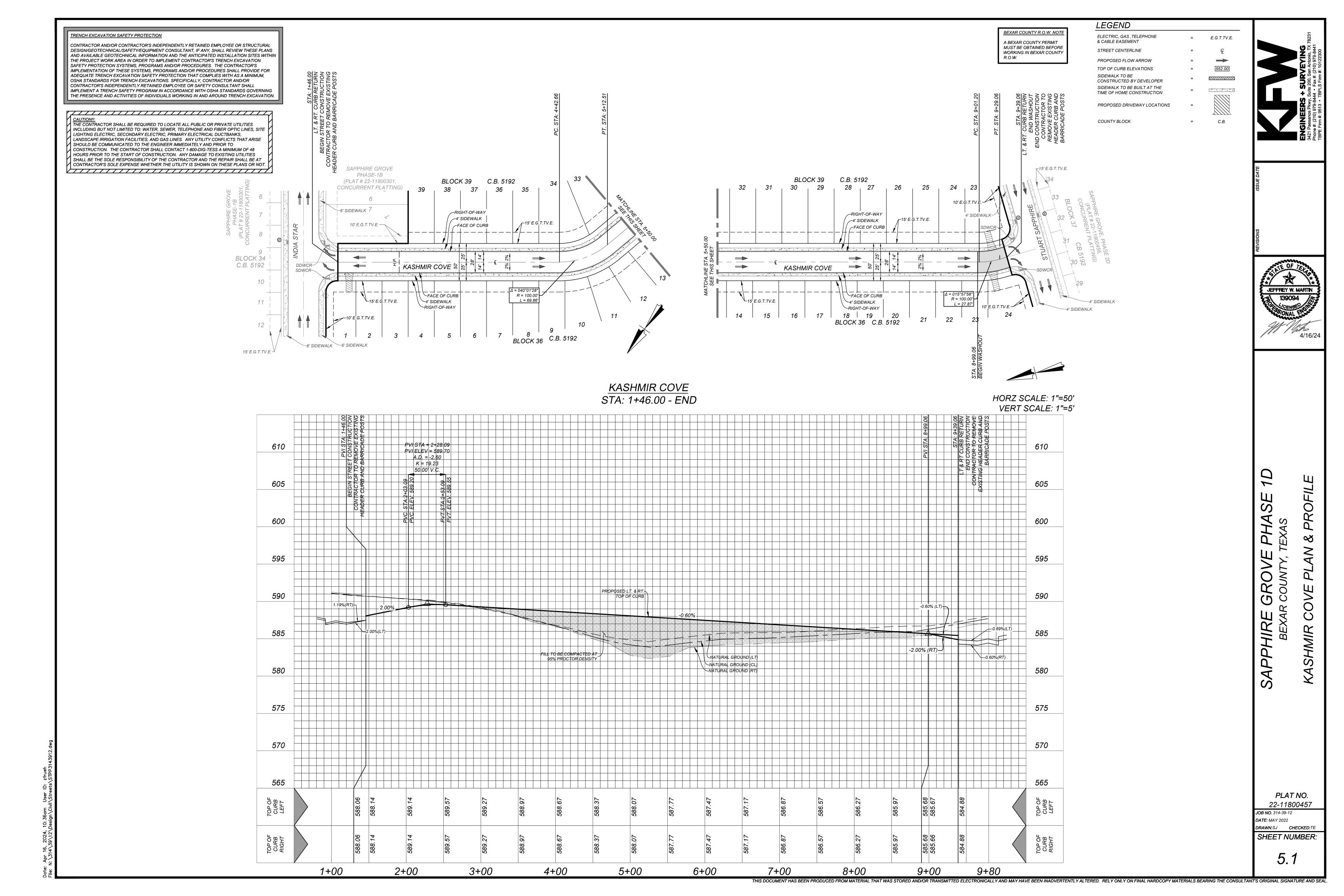
9

PLAT NO. 22-11800457

JOB NO. 314-39-12 DATE: MAY 2022 RAWN: SJ CHECKED: TE

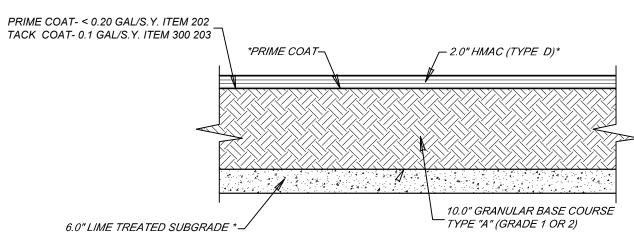
SHEET NUMBER:



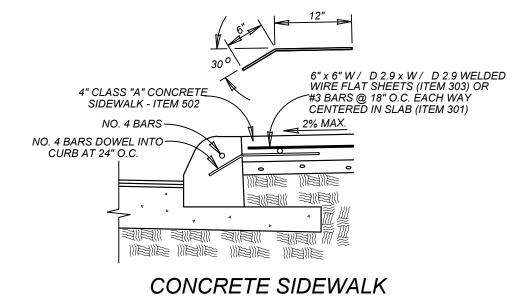


TYPICAL LOCAL "A" STREET SECTION NOT TO SCALE

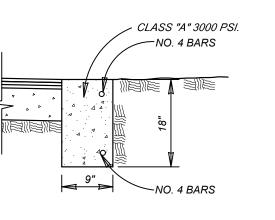
BOMBAY STAR: STA: 1+46.00 - STA: 12+12.99 KASHMIR COVE: STA: 1+46.00 - STA: 9+39.06



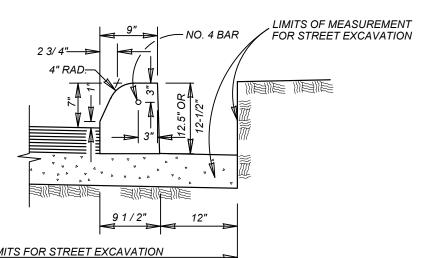
ASPHALT PAVEMENT DETAIL NOT-TO-SCALE DETAIL FOR ALL LOCAL TYPE A







HEADER CURB ITEM 500 ON SAND OR GRAVEL NOT TO SCALE



PAY LIMITS FOR STREET EXCAVATION

LIME TREATMENT FOR SUBGRADE, FLEXIBLE

→ BASE, ASPHALT TREATED BASE AND PRIME COAT

NOT TO SCALE

*NOTE: LIME OR CEMENT CONTENT OF 6.0 PERCENT OF THE DRY WEIGHT OF THE SOIL TO BE TREATED SHOULD BE USED. SUBGRADE TREATMENT SHALL BE APPLIED AT A RATE OF 35 LBS/S.Y. AS PER GEOTECHNICAL REPORT BY TTL, INC. **NOTE: ASPHALT PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH

THE CURRENT CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITEMS NO. 200, 202, 203, 204, AND 205 (PRIME COAT APPLIED AT A RATE NOT TO EXCEED 0.20 GAL/S.Y. AND TACK COAT APPLIED AT A RATE NOT TO EXCEED 0.10 GAL/S.Y.).

***NOTE: GEOTECHNICAL ENGINEER TO BE ON SITE TO MAKE FINAL SUBGRADE DETERMINATION. CHANGES TO THIS PAVEMENT DESIGN SHALL BE SUBMITTED TO COSA-DSD & BEXAR COUNTY PRIOR TO PLACEMENT OF BASE MATERIAL.

GENERAL NOTES:

1. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.

FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD: • AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO

- THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING; MINIMUM PASSING 1 3/4" SIEVE MINIMUM PASSING 3/4" SIEVE MINIMUM PASSING NO. 4 SIEVE
- SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN.
- COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED);
 CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD
- TOTAL AT LEAST 5 DAYS).
- VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN +/- 1.0

NOTES:

ANY FILL USED TO RAISE THE SUBGRADE:

- SHOULD NOT CONTAIN ANY DELETERIOUS MATERIAL. SHOULD HAVE A CBR VALUE OF 4.0 OR GREATER
- SHOULD NOT HAVE GRAVELS LARGER THAN 3 INCH IN SIZE
- SHOULD HAVE THE "LIME PERCENTAGE/APPLICATION RATE" RE-RUN PRIOR TO INSTALLATION
- PI SHOULD BE LESS THAN 20

FLEXIBLE PAVEMENT SYSTEM

Pavement Section 2.0" HMAC (TYPE "D")

10.0" GRANULAR BASE COURSE (TYPE "A" GRADE 1 OR 2)

6.0" LIME TREATED SUBGRADE (35 LBS/SY) Total: 18.0"

Structural No: 2.28

C.B.R = 4.0

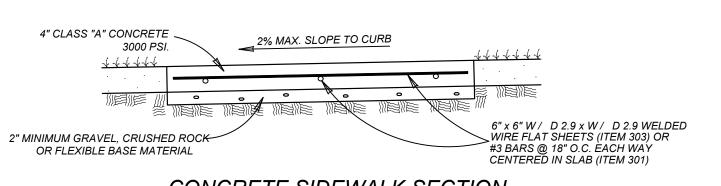
TTL PROJECT NO. 00200902069.01 JANUARY 24, 2022

1. PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT BY TTL, INC OF SAN ANTONIO, REPORT NO. 00200902069.01 DATED JANUARY 24, 2022

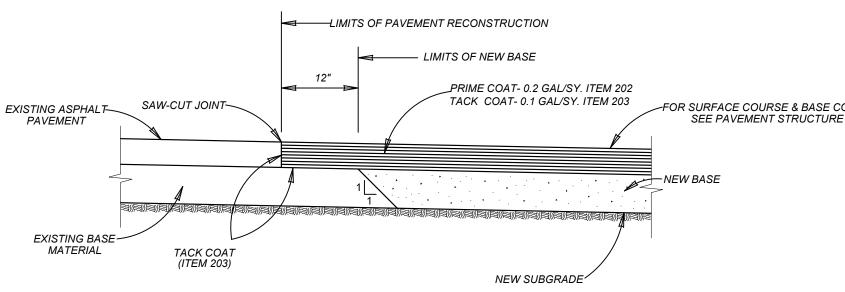
2. REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATION FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.

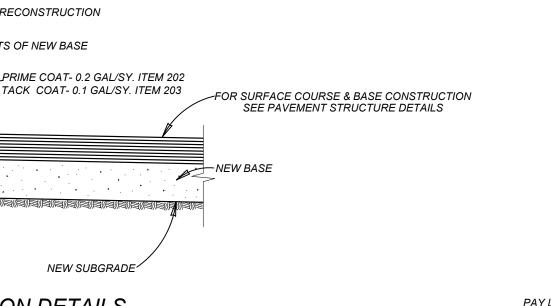
4. THERE SHALL BE NO SUBSTITUTION OF LIME.







PAVEMENT JUNCTION DETAILS NOT TO SCALE



CONCRETE CURB ITEM 500 ON FLEXIBLE BASE MATERIAL

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL

SHEET NUMBER:

DRAWN: SJ CHECKED: TE

PLAT NO.

22-11800457

JOB NO. 314-39-12

DATE: MAY 2022

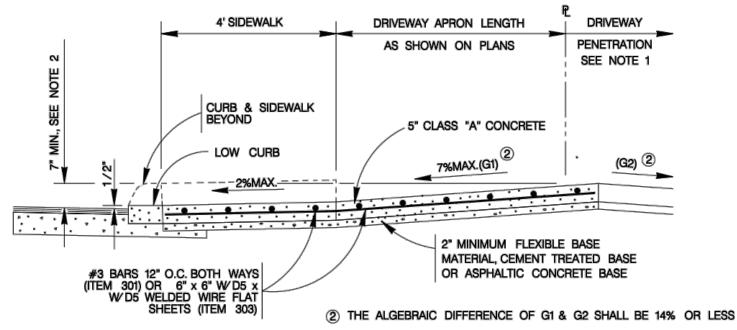
TOP OF ASPHALT PAVEMENT

SHEET NUMBER:

DRIVEWAY 4' SIDEWALK DRIVEWAY APRON LENGTH PENETRATION AS SHOWN ON PLANS SEE NOTE 1 CURB & SIDEWALK BEYOND - 5" CLASS "A" CONCRETE LOW CURB 2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE

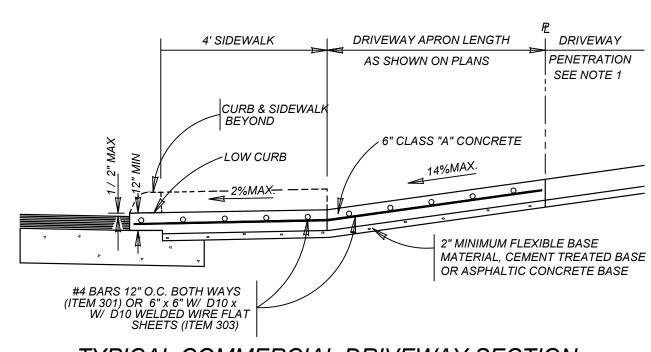
TYPICAL RESIDENTIAL DRIVEWAY SECTION

ITEM 503.1



TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION WITH SIDEWALK ABUTTING CURB

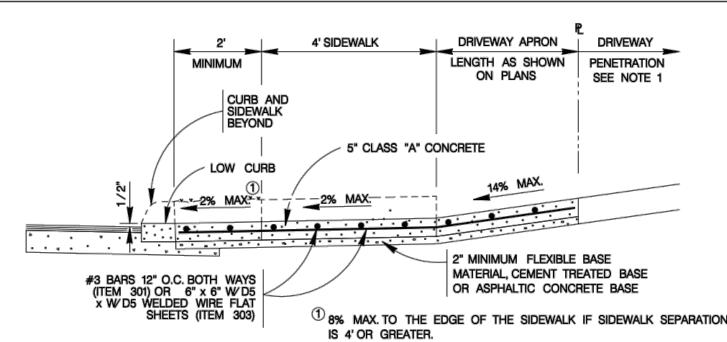
CONCRETE DRIVEWAY NOTES

- 1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY: A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2. B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
- 2. 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
- 3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMU
RESIDENTIAL	10'	20'
COMMERCIAL - ONE WAY	12'	20'
COMMERCIAL - TWO WAY	24'	30'

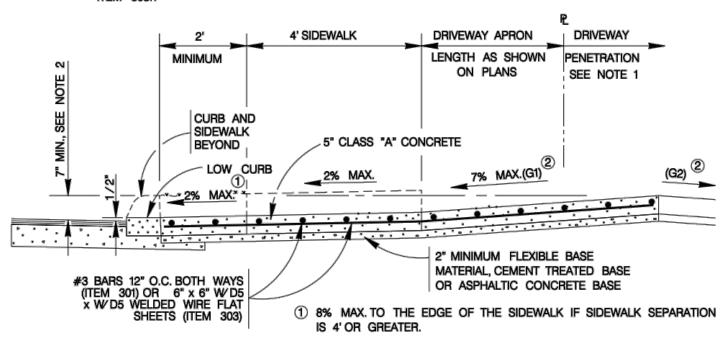
- 4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
- 5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6'WHEN LOCATED AT THE BACK OF CURB.
- 6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
- 7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3 /8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
- 8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- 9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.

ITEM 503.2



TYPICAL RESIDENTIAL DRIVEWAY SECTION

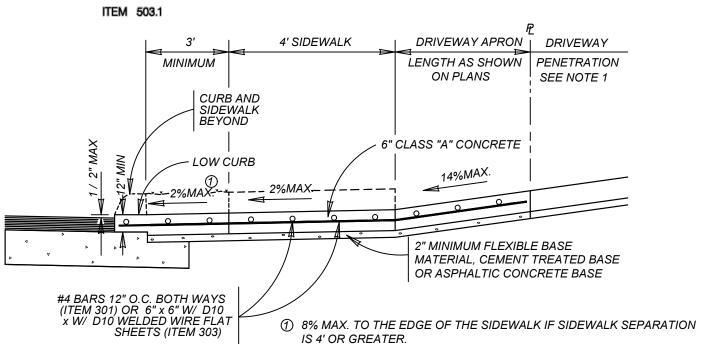
WITH SIDEWALK SEPARATED FROM CURB ITEM 503.1



2) THE ALGEBRAIC DIFFERENCE OF G1 & G2 SHALL BE 14% OR LESS

TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB



TYPICAL COMMERCIAL DRIVEWAY SECTION WITH SIDEWALK SEPARATED FROM CURB

ITEM 307.1

3 / 4" CHAMFER -6" MINIMUM - 12" MAXIMUM-ASPHALT OR GRAVEL DRIVEWAY - 2 - #4 BARS CONTINUOUS #3 BARS @ 12" O.C. MAXIMUM 12" MINIMUM - 18" MAXIMUM BELOW FINISHED GRADE

1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.

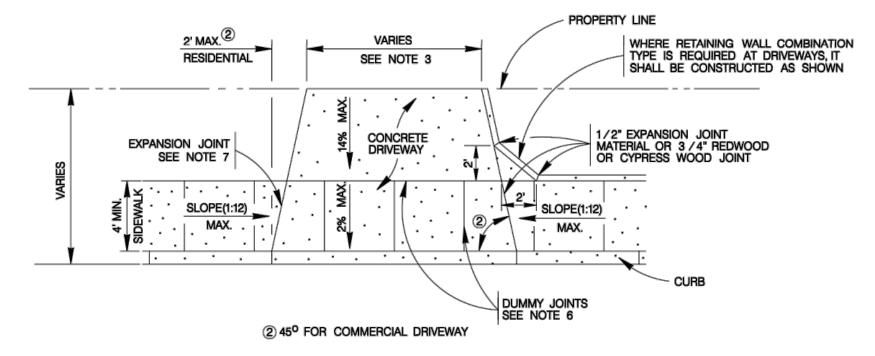
CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY - CONCRETE RETAINING WALL ON COMPACTED SUBGRADE

VARIES SLOPE (1:12) VARIES VARIES SLOPE (1:12) SEE NOTE 3 MAXIMUM MAXIMUM

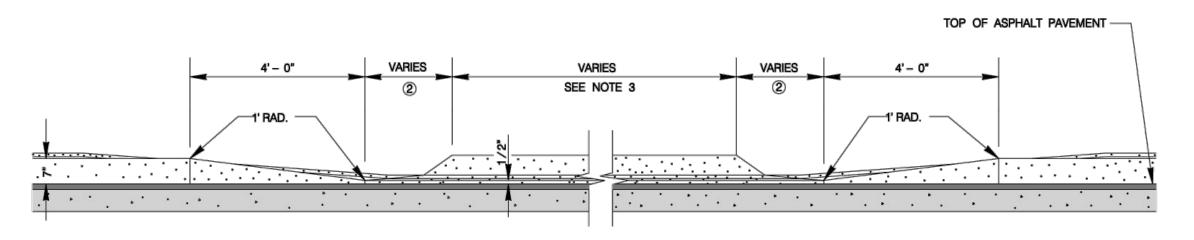
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



TYPICAL DRIVEWAY PLAN VIEW

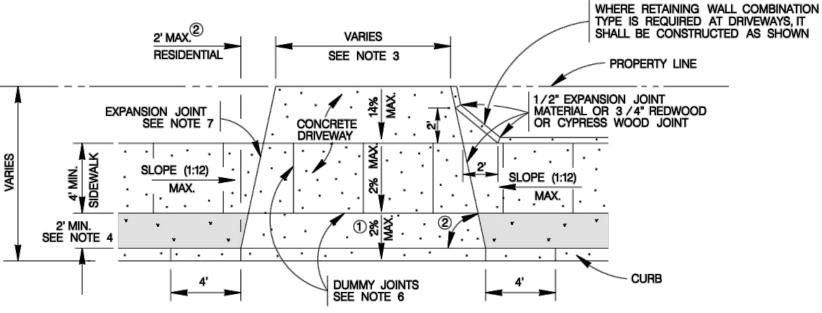
WITH SIDEWALK ABUTTING CURB



② RESIDENTIAL : 2' MAXIMUM; COMMERCIAL: SEE PLAN VIEW

CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



1 8% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.

2 45° FOR COMMERCIAL DRIVEWAY

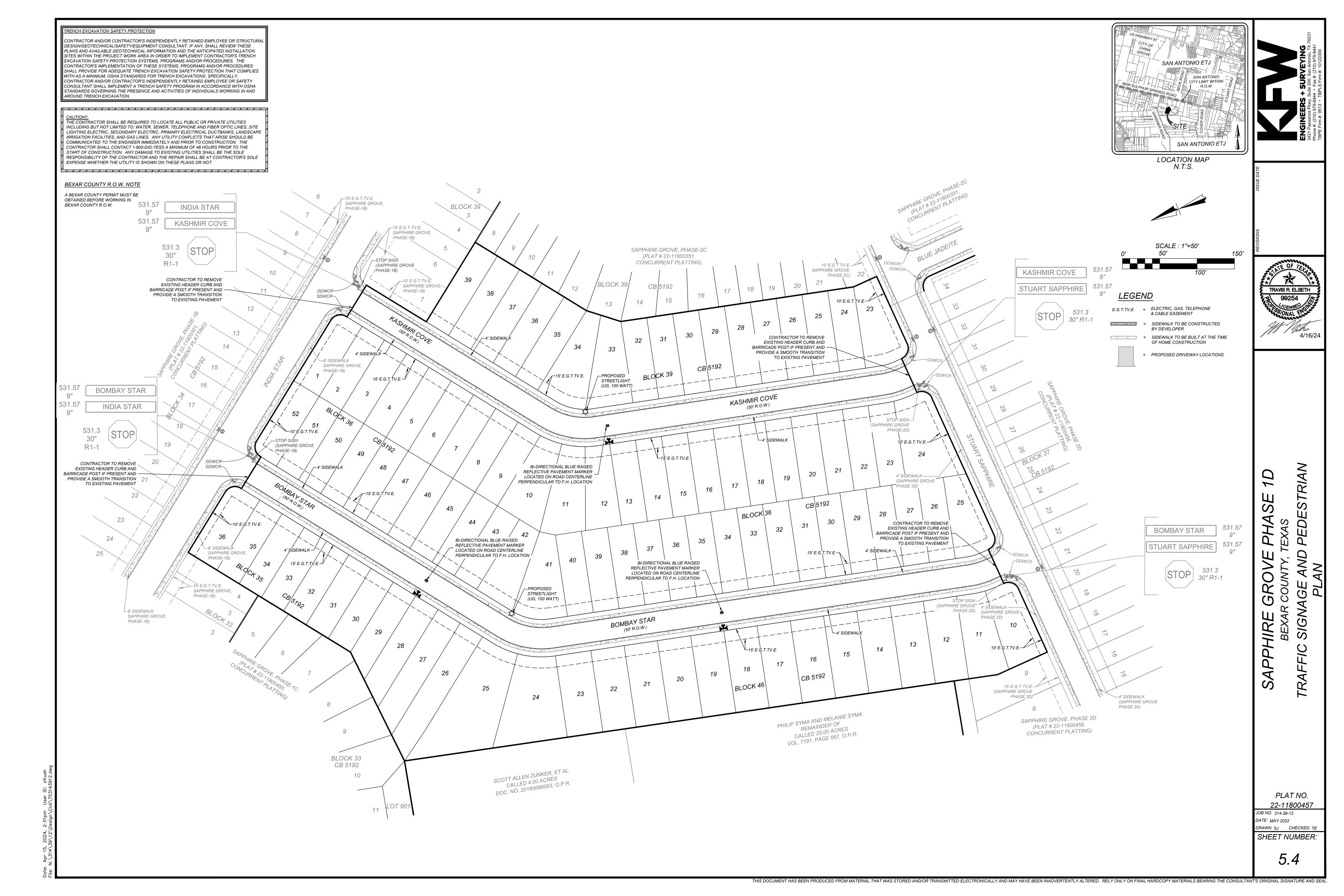
TYPICAL DRIVEWAY PLAN VIEW WITH SIDEWALK SEPARATED FROM CURB

MAY 2009

CITY OF SAN ANTONIO CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

% SUBMITTAL	PROJECT NO.:		DATE:
WN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.:



 $^{\uparrow}$ $^{\mp}$

NOTE.

STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.

SIDEWALK PASSING SPACE

SCALE: 1"=10'

2' MIN. DETECTABLE WARNING.

2' MIN. DETECTABLE WARNING. SEE NOTE 5.

CONCRETE

8.33 %

2' MIN. DETECTABLE WARNIN

→ A SEE NOTE 5.

GENERAL NOTES

2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK

3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.

7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.

9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.

10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.

11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.

13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER

THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.

14. SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE

15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE

16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.

17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE

SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.

12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.

STREET ACCESS CURB PAVEMENT

∕o o o⊸¢

PLAN DETAIL

NO SCALE

DETECTABLE WARNING SURFACE

SCALE : 1"=4"

2.35"MAX 60 mm

DOME SECTION

NO SCALE

4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.

TYPICAL SIDEWALK RAMP - TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB SCALE : 1"=10'

TYPICAL SIDEWALK RAMP - TYPE I SEE NOTE

SIDEWALK ABUTS THE CURB

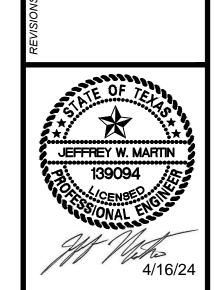
SCALE: 1"=10'

EDGE OF THE 5' MID LANDING. THE EDGE OF THE STREET ACCESS LANDING MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.

WALKING SURFACE.

OF A PLANNED PROJECT.





S NNO 9

SHE

PLAT NO. 22-11800457

JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: TE SHEET NUMBER:

4'-2"

3'-10"

MAY 2009

CITY OF SAN ANTONIO

WHEELCHAIR RAMP STANDARDS

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

4%

% SUBMITTAL PROJECT NO.

DRWN. BY: V. VASQUEZ DSGN. BY:_

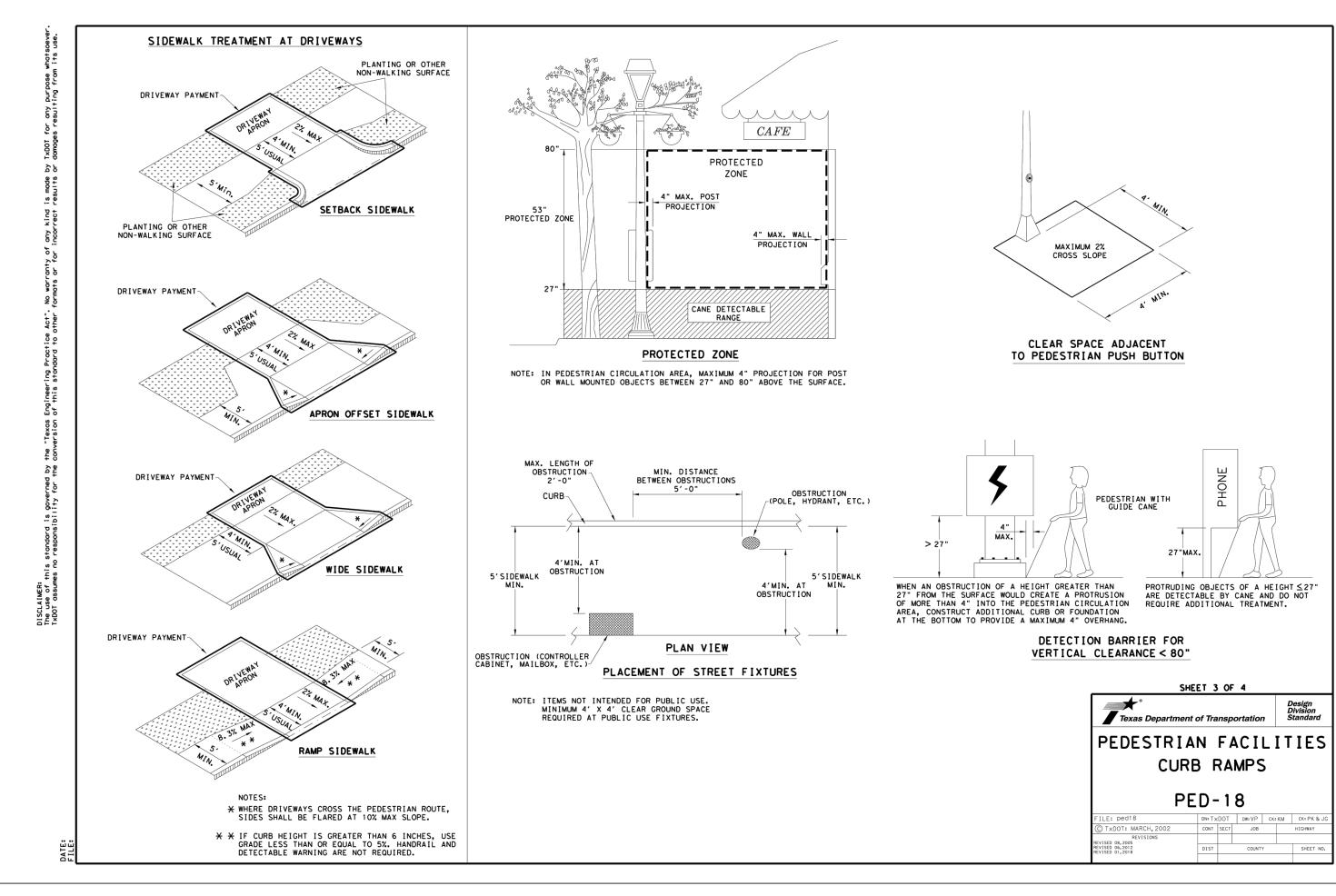
THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL

12'-6"

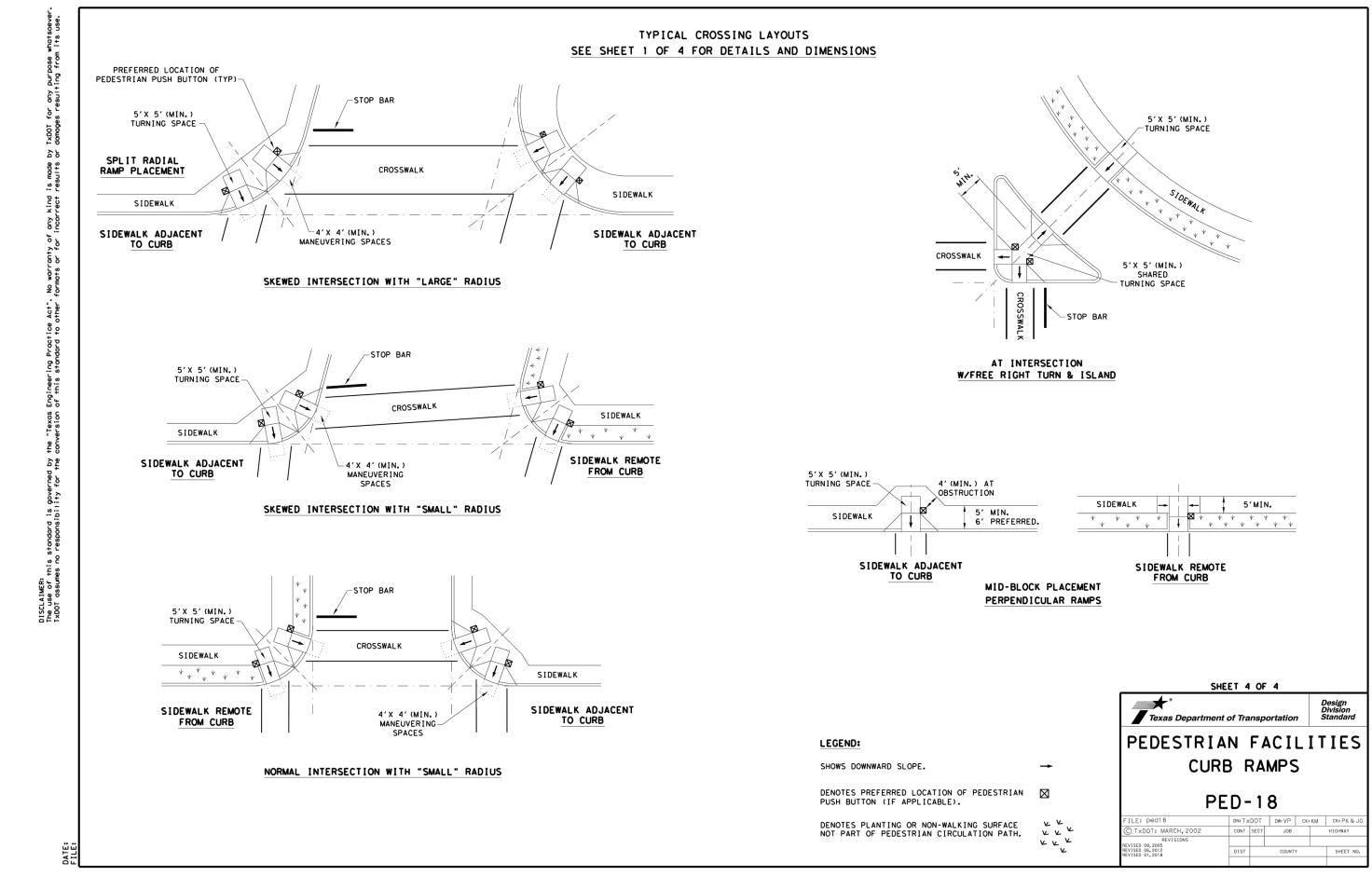
16'-8"

CHKD. BY: R.S. HOSSEINI, P.E. SHEET NO.:

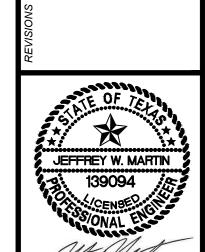
CURB RAMPS



DETECTABLE WARNING PAVERS (IF USED) DETECTABLE WARNING SURFACE PEDESTRIAN TRAVEL DIRECTION 25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed. . Install a curb ramp or blended transition at each pedestrian street crossing. 2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running 26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw. should be used. Adjust curb ramp length or grade of approach sidewalks as directed. SPACE . Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%. . The minimum sidewalk width is 5′. Where the sidewalk is adjacent to the back of curb, 2'(Min.) a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406. PARALLEL CURB RAMP 5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%. 28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE. 6. Clear space at the bottom of curb ramps shall be a minimum of $4' \times 4'$ wholly contained within the crosswalk and wholly outside the parallel vehicular travel path. or clear ground space. Provide flored sides where the pedestrian circulation path crosses the curb ramp. Flored sides shall be sloped at 10% maximum, measured parallel to the curb. 29. Street grades and cross slopes shall be as shown elsewhere in the plans. PEDESTRIAN TRAVEL 30. Changes in level greater than 1/4 inch are not permitted. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected. 31. The least possible grade should be used to maximize accessibility. The running slope TURNING SPACE of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409. RAMP To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible 32. Handrail extensions shall not protrude into the usable landing area or into intersecting passage over or through them. 33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks". 2''(MIN.) . Small channelization islands, which do not provide a minimum $5^{\prime}x$ 5^{\prime} landing at the top of curb ramps, shall be cut through level with the surface of the street. 34. Sidewalk details are shown elsewhere in the plans. PERPENDICULAR CURB RAMP elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed. TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks". PEDESTRIAN TRAVEL DIRECTION 4. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless TURNING SPACE 15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed. DETECTABLE WARNING PAVER | PREFABRICATED DETECTABLE WITH TRUNCATED DOMES WARNING PANEL BOTH ENDS OF THE DETECTABLE WARNING SURFACE SHALL BE 5' OR LESS FROM BACK OF CURB. 16. Provide a smooth transition where the curb ramps connect to the street. 7. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter. DETECTABLE WARNING SURFACE 8. Existing features that comply with applicable standards may remain in place unless NO.3 REBAR AT 18" (MAX) ON-CENTER J BOTH WAYS OR AS DIRECTED OF DETECTABLE WARNING DETECTABLE WARNING MATERIAL 19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved DIRECTIONAL CURB RAMP TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN. cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans. SECTION VIEW DETAIL 20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance SHEET 2 OF 4 CURB RAMP AT DETECTIBLE WARNINGS with manufacturer's specifications. 21. Detectable warning surfaces must be firm, stable and slip resistant. 22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the PEDESTRIAN FACILITIES pedestrian access route enters the street. CURB RAMPS 23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius. 24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



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PLAT NO. 22-11800457 JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: TE

SHEET NUMBER:

SAPPHIRE GROVE PHASE-1D

SAN ANTONIO, TEXAS SANITARY SEWER IMPROVEMENTS

GROVE SAN ANTONIO ETJ SAN ANTONIO CITY LIMIT WITHIN R.O.WSAN ANTONIO ETJ

LOCATION MAP N.T.S.

PHONE: (210) 403-6282



OWNER/DEVELOPER: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD. 100 NE LOOP 410, SUITE 1155 SAN ANTONIO, TX 78216



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SEWER: UPPER MEDINA WATERSHED-DOS RIOS W.R.C DEVELOPER'S NAME: <u>LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD.</u> DEVELOPER'S ADDRESS: 100 NE LOOP 410, SUITE 1155

SAWS JOB#: <u>24-1517</u>

CITY: SAN ANTONIO TOTAL ACREAGE: 11.93 Ac. SAWS BLOCK MAP#: <u>116546,116544, 114544 & 114546</u> TOTAL LINEAR FOOTAGE OF PIPE: 1873 L.F. ~ 8" SDR 26 PIPE

GENERAL CONSTRUCTION

Sheet List Table

Sheet Number

6.0

6.1

6.2

6.3

6.4

Sheet Title

SANITARY SEWER IMPROVEMENTS

OVERALL SANITARY SEWER PLAN

LINE "X" & "Y1" PLAN & PROFILE

LINE "Y" PLAN & PROFILE

LINE "Z" PLAN & PROFILE

PERMIT S.A.W.S. JOB# 24-1517

COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

SAWS CONSTRUCTION NOTE

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
- A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
- B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage". C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer
- D. Current City of San Antonio "Standard Specifications for Public Works Construction" E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- 2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or
- 3. The Contractor shall obtain the SAWS Standard Details from the SAWS website,
- http://www.saws.org/business center/specs. Unless otherwise noted within the design plans. 4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property
- owners 48 hours prior to beginning any work. 5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for
- construction and to protect them during construction at no cost to SAWS. 6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for
 - SAWS Utility Locates: http://www.saws.org/Service/Locates
 - COSA Drainage (210) 207-0724 or (210) 207-6026 COSA Traffic Signal Operations (210) 206-8480
 - COSA Traffic Signal Damages (210) 207-3951 Texas State Wide One Call Locator 1-800-545-6005 or 811
- 7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if
- damages are made as a result of the project's construction. 8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in
- accordance with respective construction specifications and permit requirements. 9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances
- when excavating near trees. 10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an
- 11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org. Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org. Any and all SAWS utility work installed without
- holiday/weekend approval will be subject to be uncovered for proper inspection. 12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results
- 13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
- For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014 Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for
- Handling Asbestos Cement Pipe". Valve removal: Where the contractor is to abandon a water main, the control valve located on the
- abandoning branch will be removed and replaced with a cap/plug. (NSPI) 4. Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
- All valves shall read "open right". PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 809 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below _809_ feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if *PRV is/are required for such lot(s), only single service connections
- shall be allowed. *Note: A pressure regulator is also known as a pressure reducing valve (PRV). Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection
- 8. Backflow Prevention Devices:
- All irrigation services within residential areas are required to have backflow prevention devices. All commercial backflow prevention devices must be approved by SAWS prior to installation. 9. Final connection to the existing water main shall not be made until the water main has been pressure

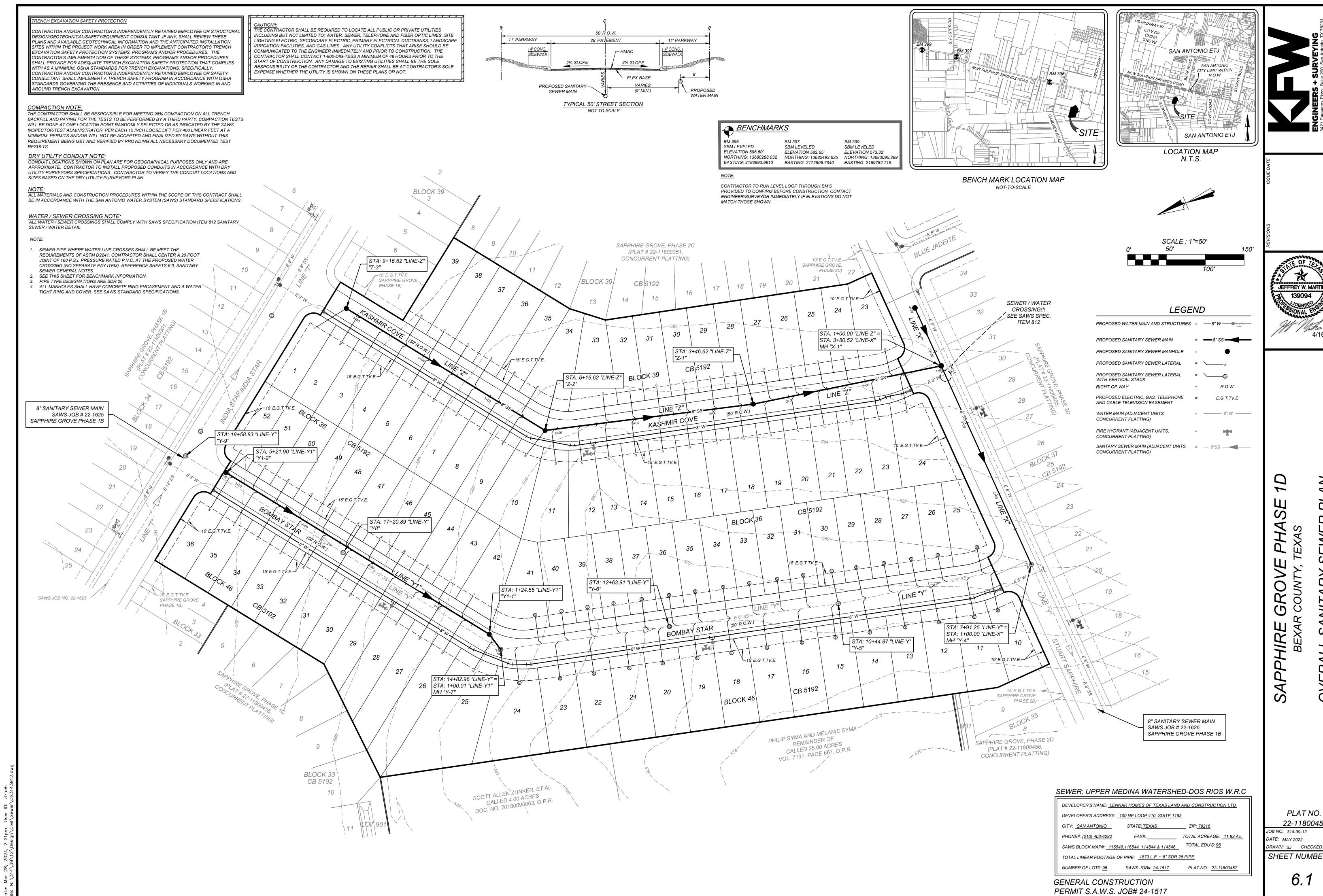
tested, chlorinated, and SAWS has released the main for tie-in and use.

- The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:
- A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. Provide the address of the spill and an estimated volume or flow.
- B. Attempt to eliminate the source of the SSO. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
- D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose
- of contaminated soil/materials.
- Clean the affected sewer mains and remove any debris. Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours. Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies. No separate measurement or payment shall be made for this work. All work shall be done according to
- guidelines set by the TCEQ and SAWS. 2. If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".
- Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins: this is at no additional cost to
- SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly. 4. Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(e)(4)(B). Contractor shall center a 20' joint of 160 psi pressure rated PVC at the proposed water crossing.
- 5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements. (NSPI)

6. Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled

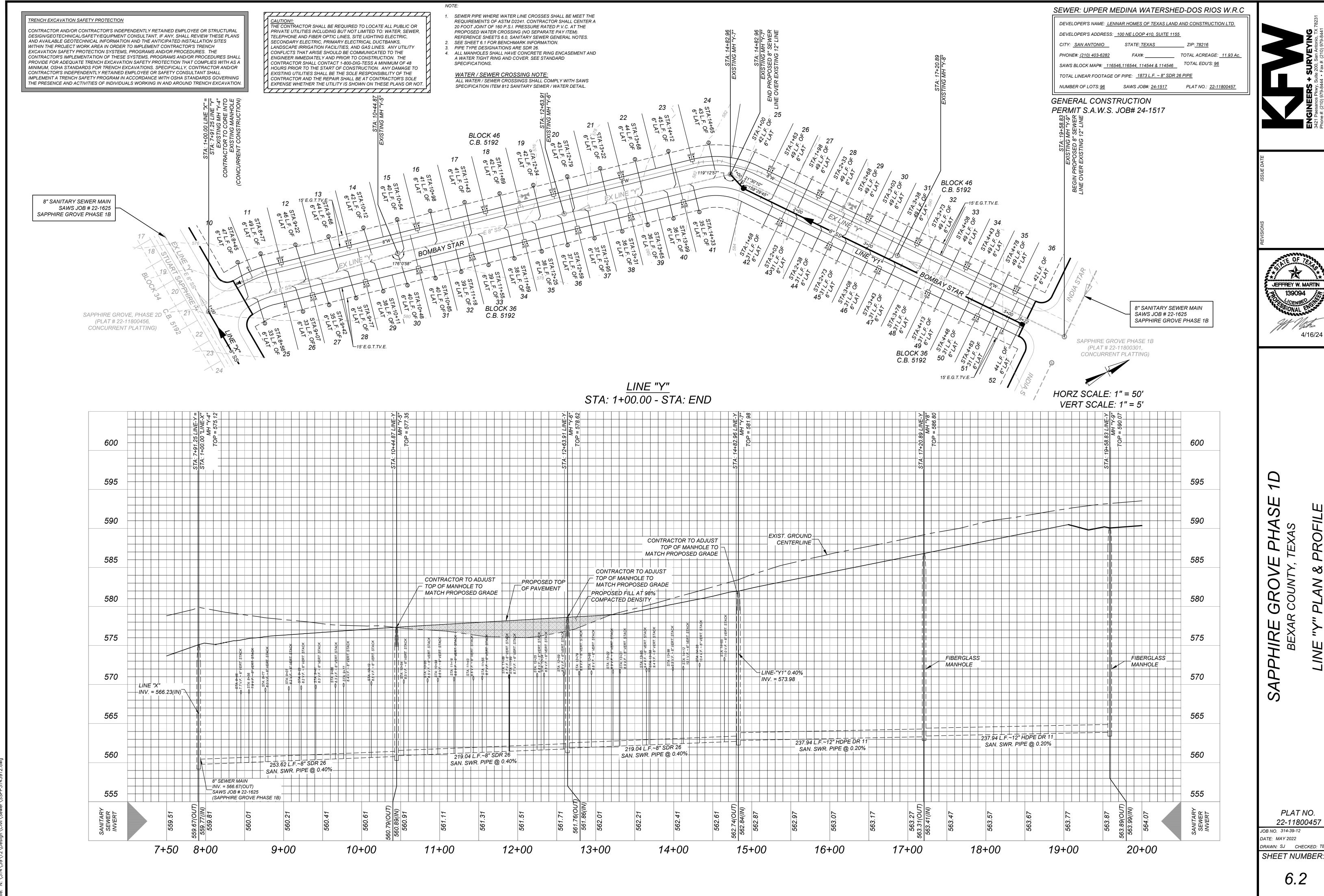
- water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge regardless of size.
- Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications For Water and Sanitary Sewer Construction.
- 8. All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.





22-11800457 JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: TE SHEET NUMBER:

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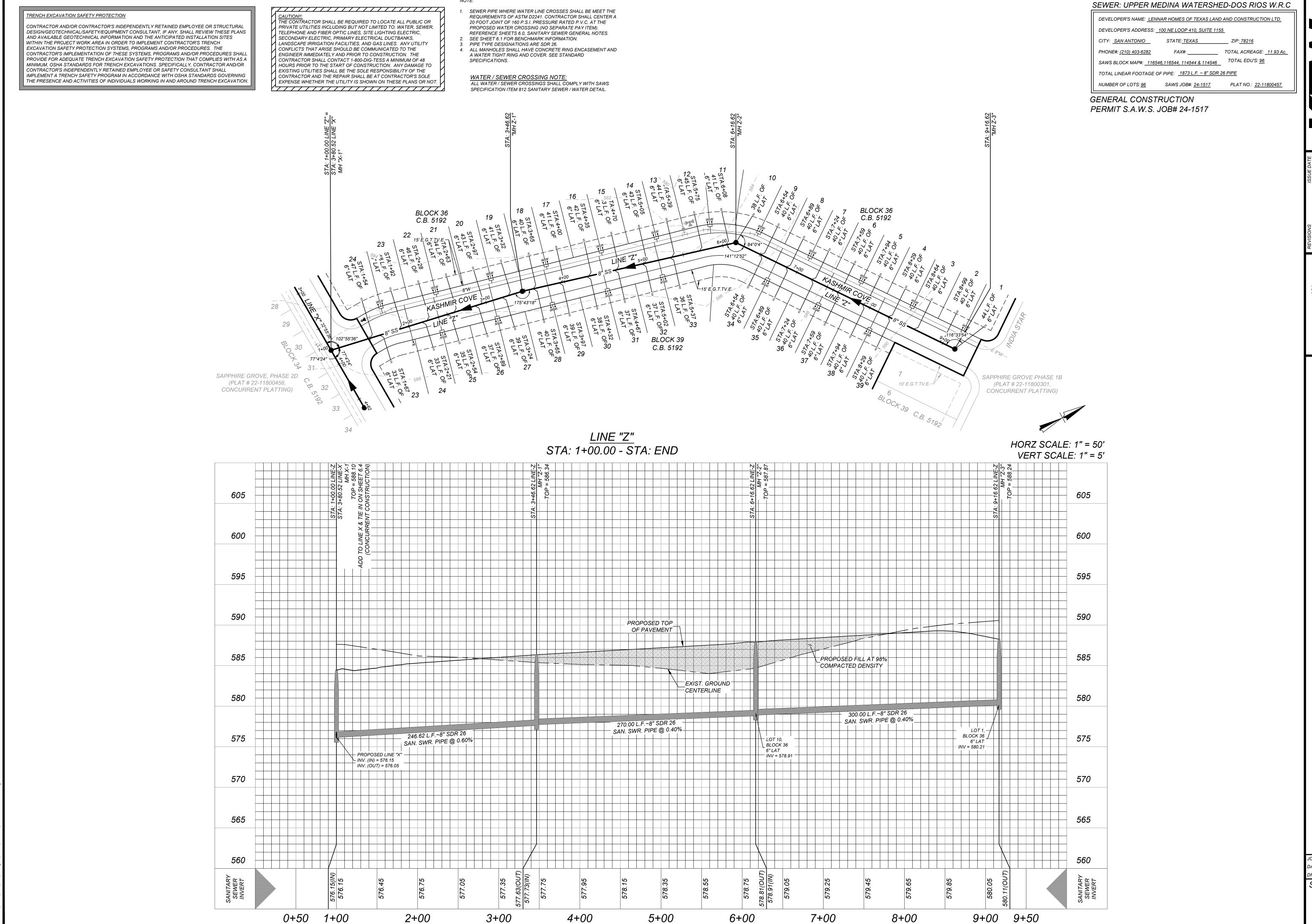


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PLAT NO. 22-11800457

JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: TE

6.2

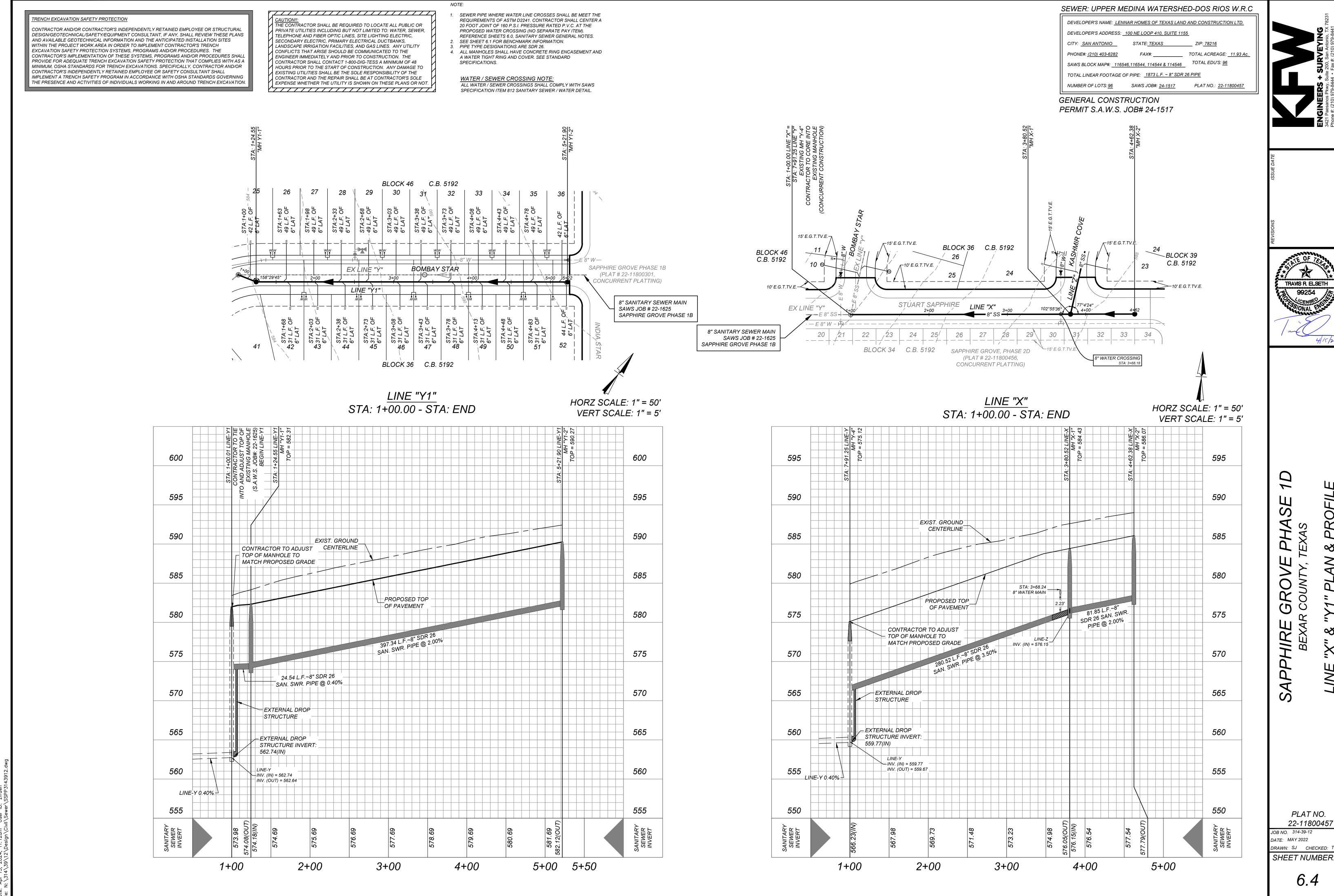


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PLAT NO. 22-11800457

JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: TE SHEET NUMBER:

6.3



SHEET NUMBER:

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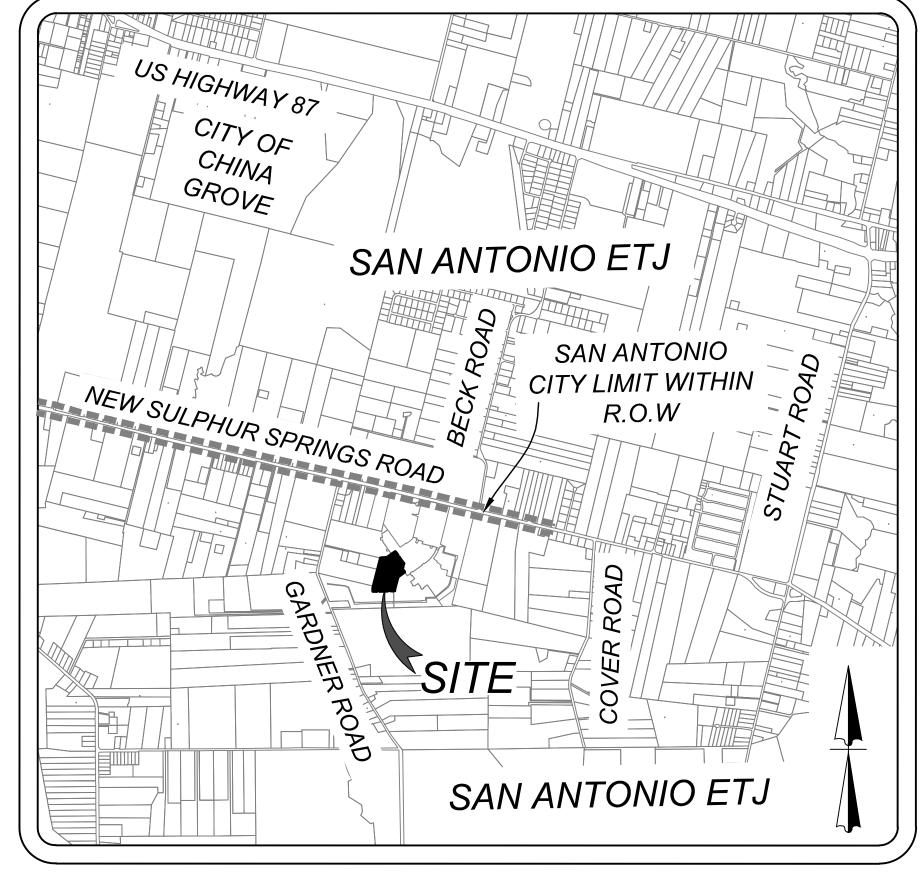
6.4

GENERAL NOTES

- ALL VALVES SHALL REMAIN CLOSED UNTIL MAINS HAVE BEEN DISINFECTED, FLUSHED. AND RELEASED FOR PUBLIC USE BY THE ENGINEER.
- 2. EXISTING UTILITIES SHOWN ARE TAKEN FROM VARIOUS UTILITY COMPANY RECORDS. CONTRACTORS SHALL VERIFY THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO BEGINNING CONSTRUCTION. CONTRACTORS SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND DRAINAGE STRUCTURES DURING CONSTRUCTION.
- 3. ALL EXCAVATION SHALL BE UNCLASSIFIED REGARDLESS OF MATERIAL ENCOUNTERED.
- 4. BIDDERS ARE NOTIFIED TO MAKE SUBSURFACE INVESTIGATIONS AS THEY DEEM NECESSARY. NO ADDITIONAL PAYMENT WILL BE MADE FOR WATER, SAND, GRAVEL OR OTHER UNSTABLE CONDITIONS ENCOUNTERED IN EXCAVATIONS
- DETOUR OF TRAFFIC AROUND WORK ACTIVITIES, MAINTENANCE OF TRAFFIC CONTROL SIGNS, AND FLAGMEN ARE THE CONTRACTOR'S RESPONSIBILITY. NO SEPARATE PAYMENT WILL BE MADE.
- 6. THE CONTRACTOR SHALL PROTECT ALL OPEN EXCAVATIONS AND EQUIPMENT FROM CHILDREN, PEDESTRIANS, AND VEHICLES IN THE AREA.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF ALL FENCES IN THE WORK AREA TO THEIR ORIGINAL CONDITION PRIOR TO COMPLETION OF THE CONTRACT. THIS SHALL APPLY TO ALL FENCES IN THE WORK AREA WHETHER THEY ARE SHOWN ON THE PLANS OR NOT.
- 8. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC.
 ANY CONSTRUCTION STAKES, MARKS, ETC., DESTROYED OR REMOVED BY THE
 CONTRACTOR OR HIS EMPLOYEES SHALL BE REPLACED AT THE CONTRACTOR'S
 EXPENSE.
- THE CONTRACTOR SHALL CONFER WITH EACH INDIVIDUAL PROPERTY OWNER AS TO THE LOCATION OF EACH INDIVIDUAL METER BOX.
- CONTRACTOR SHALL DISINFECT ALL NEW WATER MAINS BEFORE TYING INTO EXISTING WATER MAINS.
- 11. ALL VALVES SHALL BE PERMANENTLY MARKED BY THE USE OF A VALVE MARKER. NO SEPARATE PAY ITEM.
- 12. 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(S) 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 ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- 13. CONTRACTOR SHALL MAINTAIN FENCING FOR THE CONTAINMENT OF LIVESTOCK DURING CONSTRUCTION. ALL FENCES REMOVED FOR CONSTRUCTION SHALL BE REPLACED. ALL REQUIRED FENCING SHALL BE INCIDENTAL TO CONSTRUCTION AND NOT A SEPARATE PAY ITEM.
- 14. ALL DRIVEWAYS, INCLUDING DRAIN PIPES, CULVERTS AND HEADWALLS, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO EQUAL OR BETTER THAN PRECONSTRUCTION CONDITION. ASPHALT DRIVES ARE NOT ALLOWED TO BE CUT WITHOUT OWNERS PERMISSION. INSTALLATION OF WATER MAINS CROSSING CONCRETE DRIVES WILL BE BORED. ALL DRAIN PIPE, CULVERT AND HEADWALL REPAIR SHALL BE INCIDENTAL TO CONSTRUCTION AND NOT A SEPARATE PAY ITEM. DRIVEWAY PAVEMENT REPAIR SHALL BE PAID FOR AS PER ITEM NO. 02950, "CUTTING AND PATCHING ASPHALT PAVEMENT, ASPHALT DRIVES, CONCRETE DRIVES, OR GRAVEL ROADS AND DRIVES". PAYMENT FOR BORES UNDER CONCRETE DRIVES DRIVES SHALL BE PAID FOR AS PER ITEM 02445 "BORING AND CASING PIPE UNDER HIGHWAYS, RAILROADS, OR OTHER AREAS".
- 15. LOCATIONS OF COMBINATION AIR VALVES WHERE SHOWN ON PLANS ARE APPROXIMATE. FINAL LOCATIONS TO BE ADJUSTED IN FIELD AT TIME OF CONSTRUCTION AT THE DIRECTION OF THE ENGINEER.
- 16. ALL WORK SHALL BE SCHEDULED TO TAKE PLACE ON MONDAY THROUGH FRIDAY, DURING NORMAL WORK HOURS. CONTRACTOR SHALL NOTIFY ECSUD 48 HOURS PRIOR TO SERVICE SHUT OFF AFFECTING CUSTOMERS. SERVICE SHALL NOT BE SHUT OFF FOR MORE THAN EIGHT (8) HOURS AT A TIME.
- 7. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PROPERTY, INCLUDING, BUT NOT LIMITED TO, FENCES, PAVEMENT, DRIVEWAYS, LAWNS, CULVERTS, AND TREES, AT NO COST TO THE OWNER.
- 18. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL AT ALL CULVERT, STREAM AND DRAINAGE SWALE CROSSINGS. EROSION CONTROL MEASURES SHALL INCLUDE AS A MINIMUM SILT FENCES. SILT FENCES SHALL BE INSTALLED PRIOR TO DISTURBANCE OF THE WORK AREAS AND SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE DISTURBED AREAS UPSTREAM. EROSION CONTROL SHALL BE COORDINATED WITH THE ENGINEER.
- 19. THE CONTRACTOR SHALL REMOVE AND REPLACE ANY MAILBOXES, TRAFFIC OR ROAD SIGNS ENCOUNTERED. NO SEPARATE PAY ITEM.
- 20. CONTRACTOR SHALL SUBMIT TO ENGINEER PROPOSED CONSTRUCTION SEQUENCE PRIOR TO BEGINNING CONSTRUCTION.
- 21. ALL FITTINGS ARE TO BE DUCTILE IRON, MECHANICAL JOINT TYPE, UNLESS OTHERWISE NOTED ON PLANS
- 22. ALL THRUST BLOCKS SHALL BE INSPECTED BY OWNER AND/OR ENGINEER PRIOR TO BACKFILLING.
- 23. ALL EXISTING VALVES SHOWN ON PLANS TO BE ABANDONED, SHALL HAVE BOXES REMOVED AND SHALL BE BACKFILLED ACCORDING TO SPECIFICATIONS. NO SEPARATE PAY ITEM.
- 24. CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION AND STAGING WITHIN EXISTING UTILITY EASEMENTS, UNLESS OTHER ARRANGEMENTS ARE MADE WITH OWNER AND/OR TxDOT.
- 25. WHERE THE NEW WATER MAIN SHOWN ON THE PLANS REQUIRES CROSSING AN EXISTING WATER MAIN OR OTHER UTILITY, THE CONTRACTOR SHALL VERTICALLY DEFLECT THE PROPOSED WATER MAIN. DEFLECTION SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. FITTINGS ARE NOT PERMISSIBLE, UNLESS OTHERWISE SHOWN ON THE PLANS. NO SEPARATE PAY ITEM.
- 26. WATER MAINS SHALL BE INSTALLED WITH 48" MINIMUM COVER OVER THE TOP OF THE PIPE, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.
- 27. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL CONCRETE FOUNDATIONS, VAULT BOXES AND OVERFLOW BOXES THROUGHOUT THE PROJECT SITE.
- 28. CONTRACTOR TO INSTALL DIRECT BURIAL ELECTRICALLY CONTINUOUS TRACER WIRE WITH ACCESS POINTS, ADJACENT TO ALL WATER MAINS, N.S.P.I.

SAPPHRE GROVE PHASE 1D

BEXAR COUNTY, TEXAS WATER IMPROVEMENTS



LOCATION MAP N.T.S.

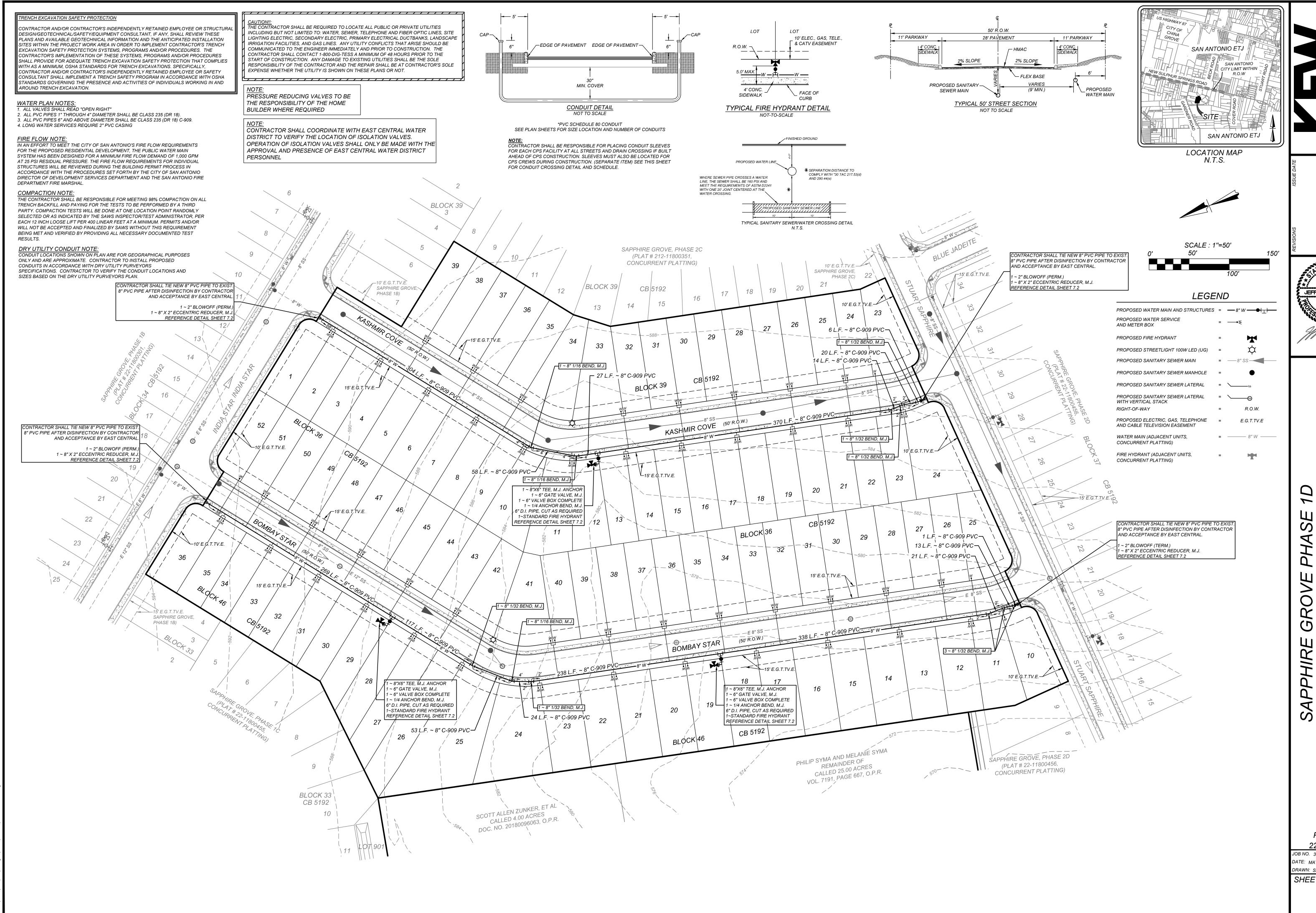


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OWNER/DEVELOPER: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD. 100 NE LOOP 410,. SUITE 1155 SAN ANTONIO, TX 78216 PHONE: (210) 403-6282

Sheet List Table

Citoot List Table	
Sheet Title	Sheet Number
WATER IMPROVEMENTS	7.0
OVERALL WATER DISTRIBUTION PLAN	7.
WATER DISTRIBUTION DETAIL PLAN	7.2
WATER DISTRIBUTION DETAIL PLAN	7.3
WATER DISTRIBUTION DETAIL PLAN	7.4



ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

JEFFREY W. MARTIN
139094

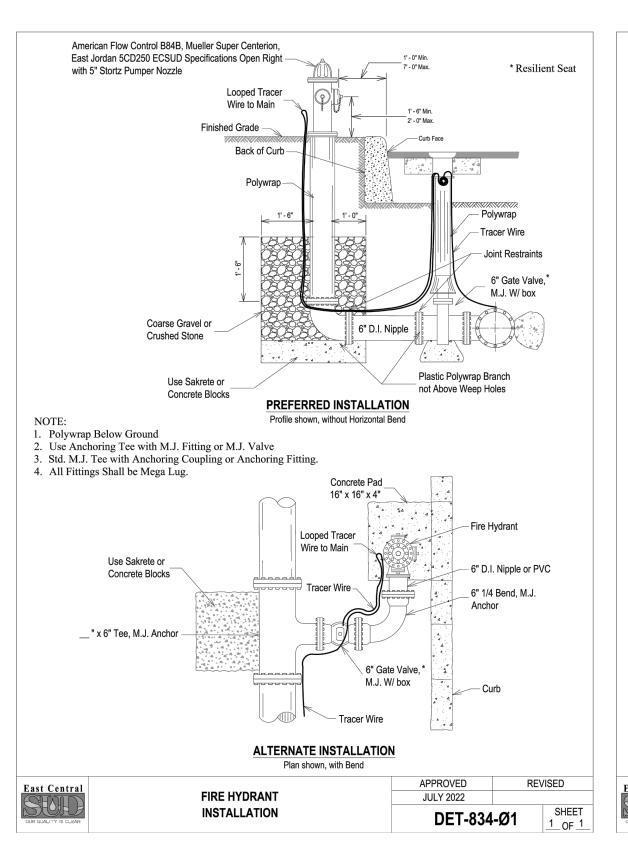
WALE 1000 A 100 A

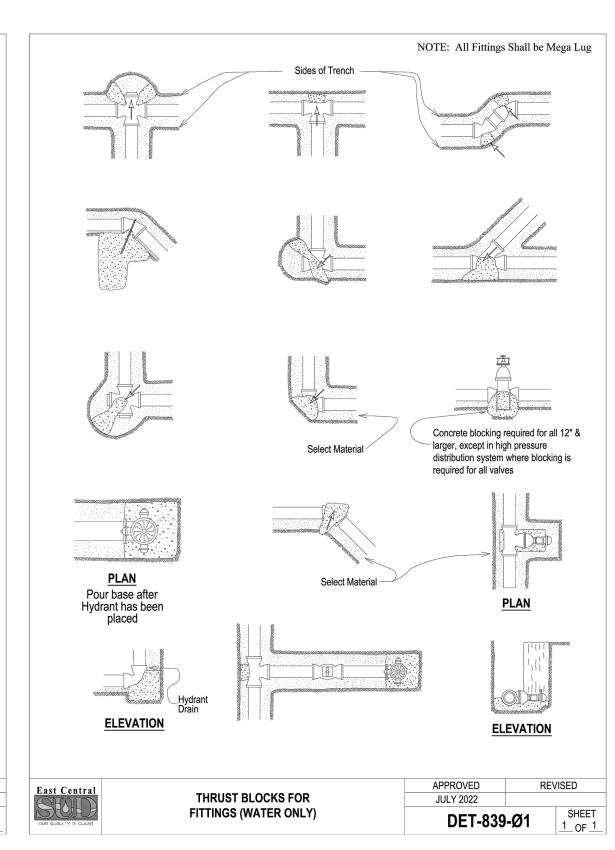
SAPPHIRE GROVE PHASE 1D BEXAR COUNTY, TEXAS

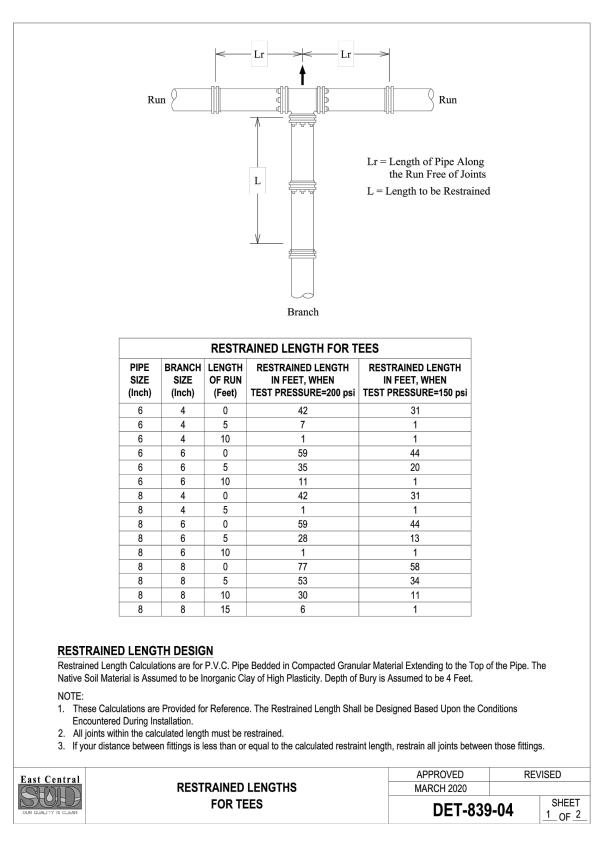
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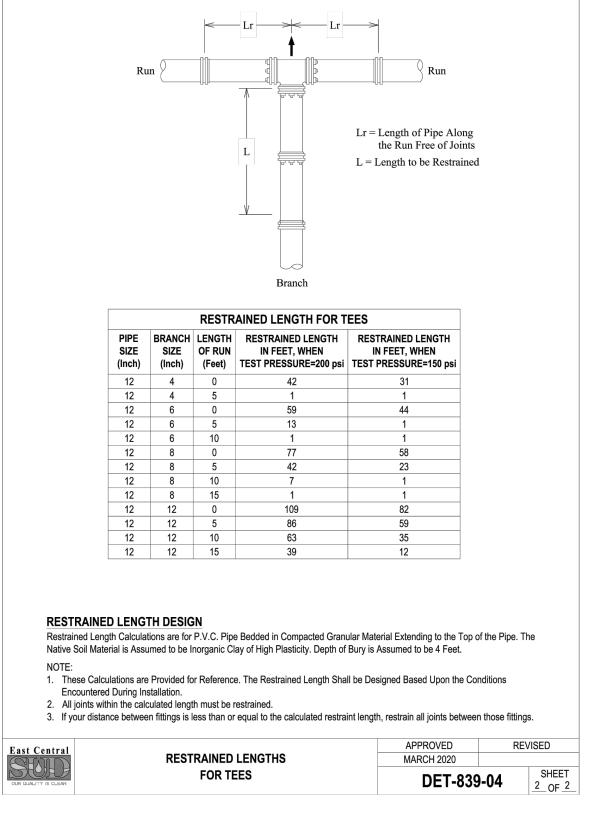
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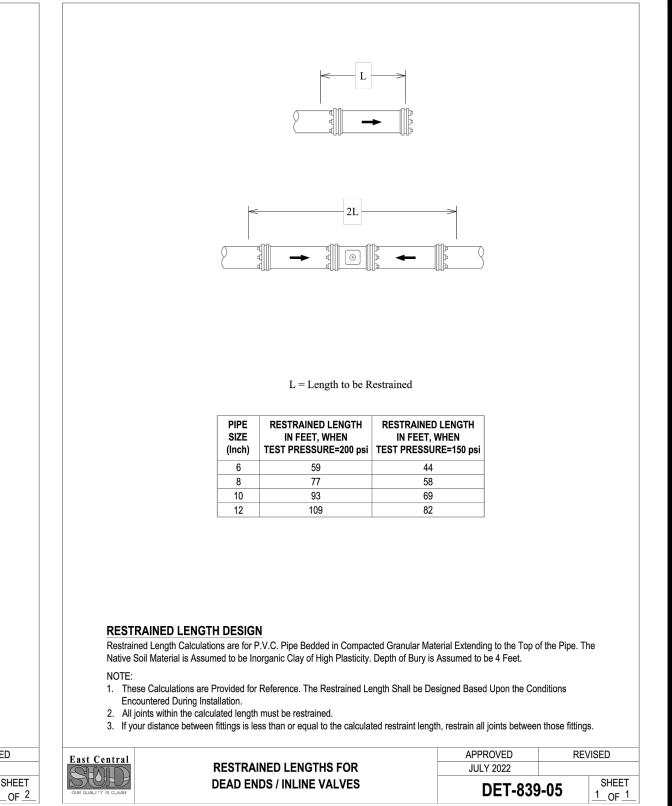
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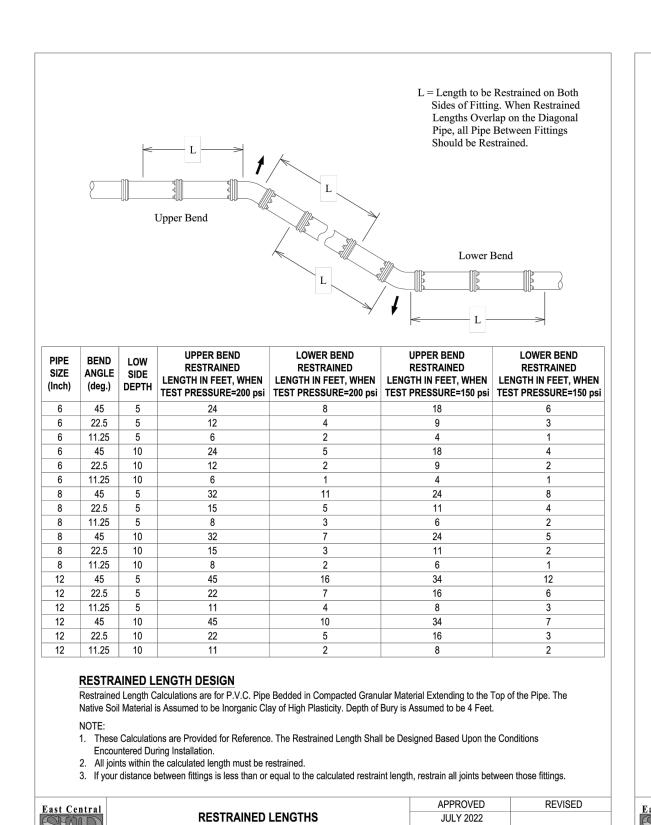






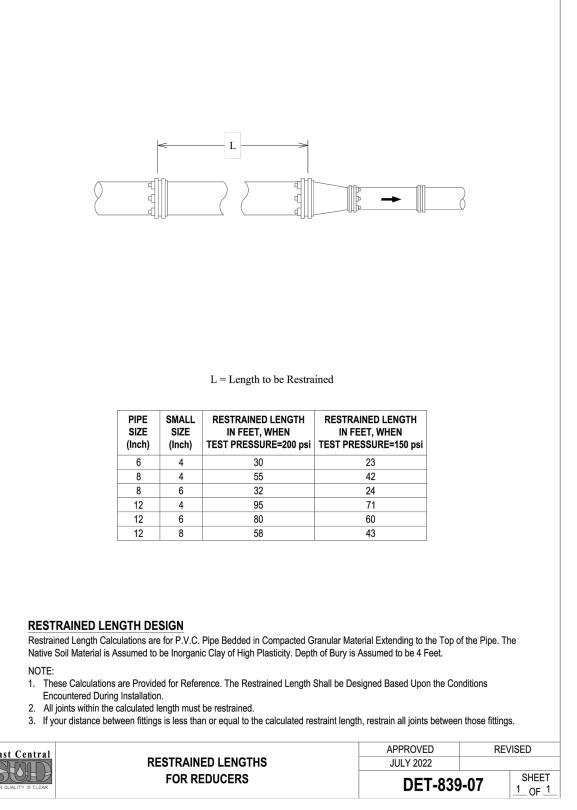


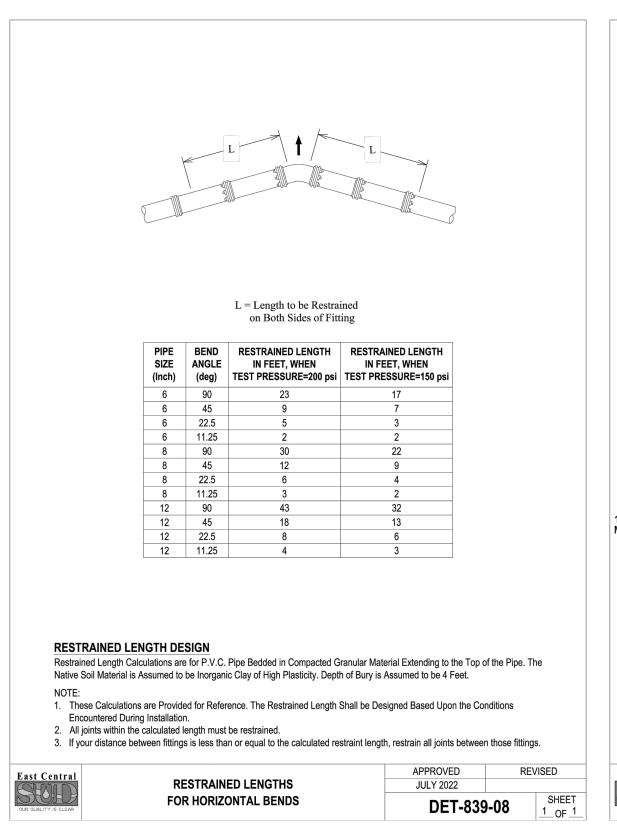


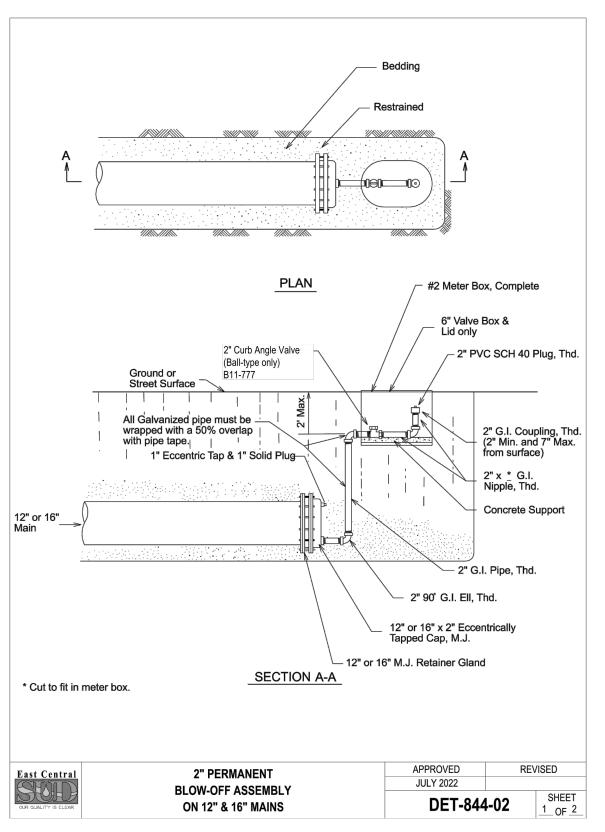


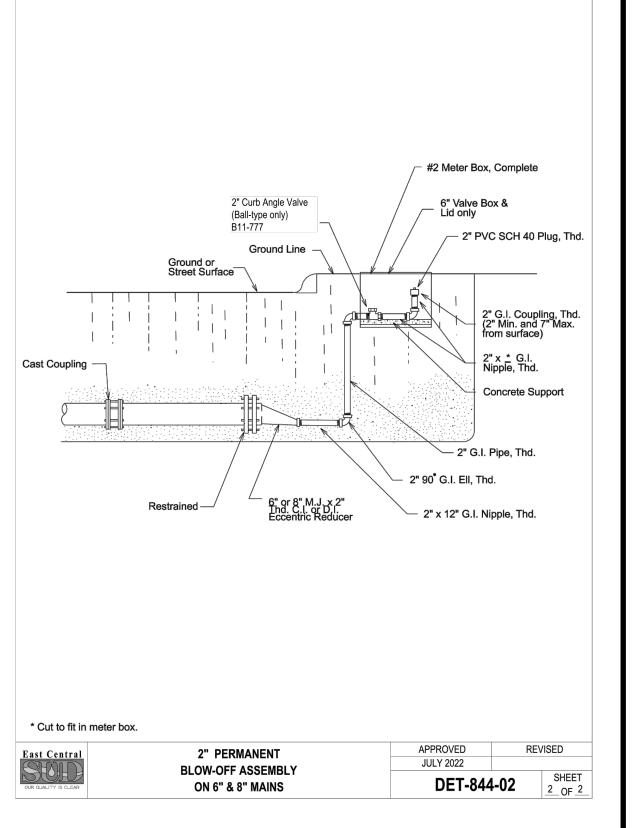
VERTICAL OFFSETS

DET-839-06

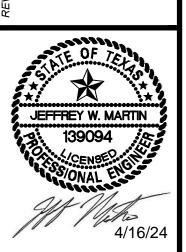








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DETA

DISTRIBUTION

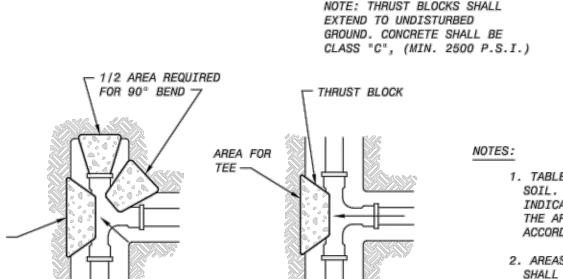
WATER

PLAT NO. 22-11800457 JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: T

SHEET NUMBER:

FIRE HYDRANT INSTALLATION N.T.S.

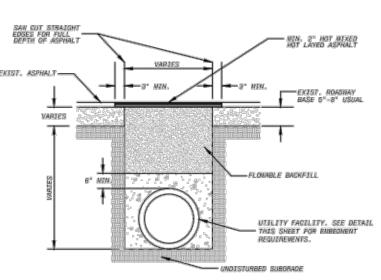
GATE VALVE W/ VALVE BOX N.T.S.

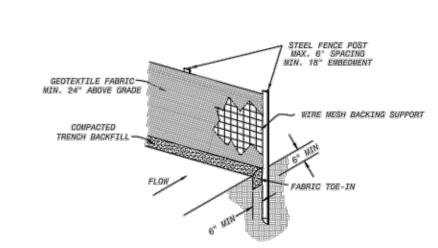


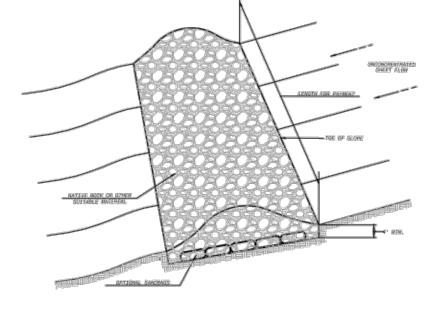
2. AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.

MINIMUM THRUST BLOCK AREA REQUIRED (Y AND W)						
PIPE \$IZE	WATER PIPE					
	TEE, DEAD END 90° BEND	45° AND 22 1/2° BENDS				
4° & LESS	3 SQ. FEET	3 SQ. FEET				
6"	4 SQ. FEET	3 SQ. FEET				
8"	6 SQ. FEET	3 SQ. FEET				
10"	9 SQ. FEET	5 SQ. FEET				
12"	13 SQ. FEET	7 SQ. FEET				
16"	23 SQ. FEET	12 SQ. FEET				
18"	29 SQ. FEET	15 SQ. FEET				

→ 1/4 PIPE DIAMETER → 8" MINIMUM



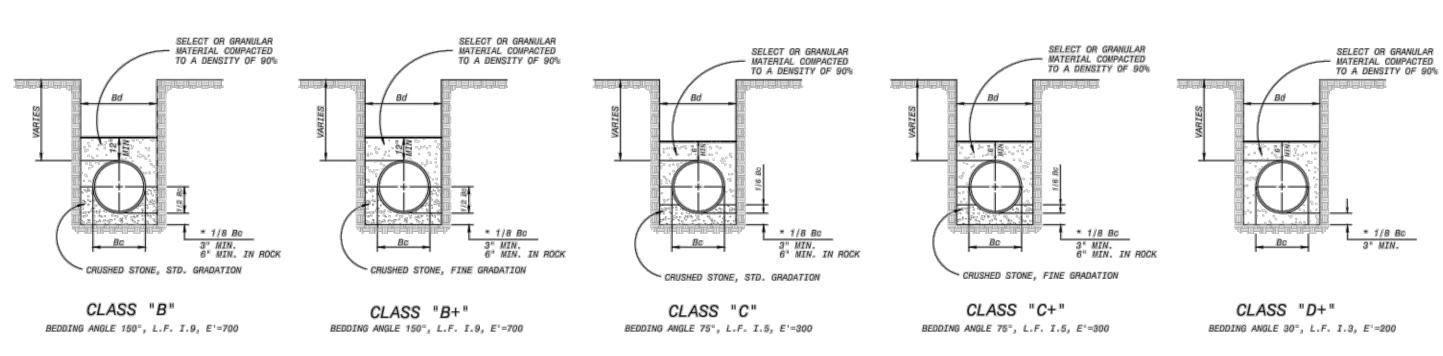




BACKFILL AND PATCH PAVEMENT N.T.S. TEMPORARY SILT FENCE N.T.S.



TEMPORARY ROCK BERM N.T.S.



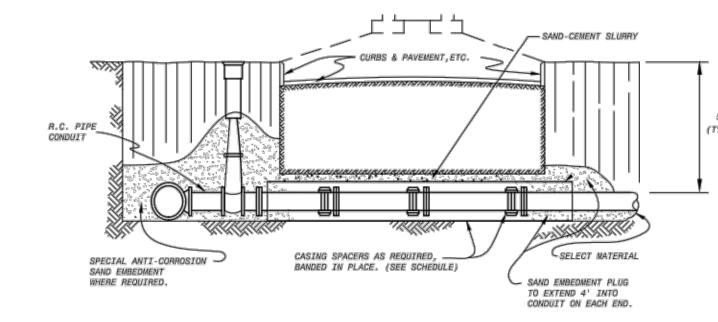
EMBEDMENT FOR	WATER	CONDU	TTS			
		IN EARTH			IN ROCK	
TYPE OF PIPE	0'-8'	8'-16'	>16'	0'-8'	8'-16'	>16
ALL PVC WATER PIPE	C+	B+	B+	C+	B+	B+
16" AND SMALLER DUCTILE IRON WATER PIPE	D+	С	В	С	С	В
18" AND LARGER DUCTILE IRON WATER PIPE	В	В	В	В	В	В

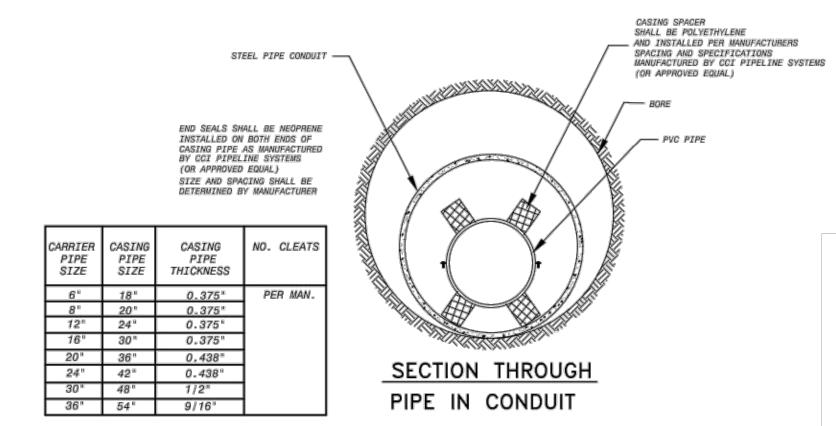
EMBEDMENT DETAILS N.T.S.

EMBEDMENT DIMENSIONS EXTERNAL DIAMETER Bc (INCHES) WIDTH Bd (INCHES) PIPE (INCHES) PVC 6.90 DI 6.90 10" 11.10 19.50

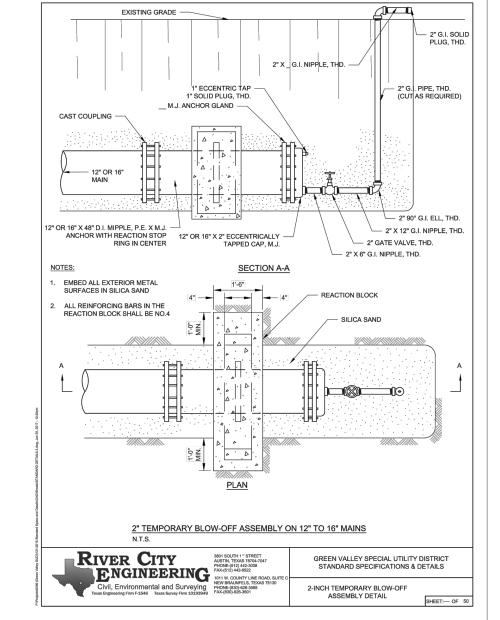


THRUST BLOCK DETAILS N.T.S.





INSTALLATION OF PIPE IN CONDUIT N.T.S.



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DETAIL DISTRIBUTION

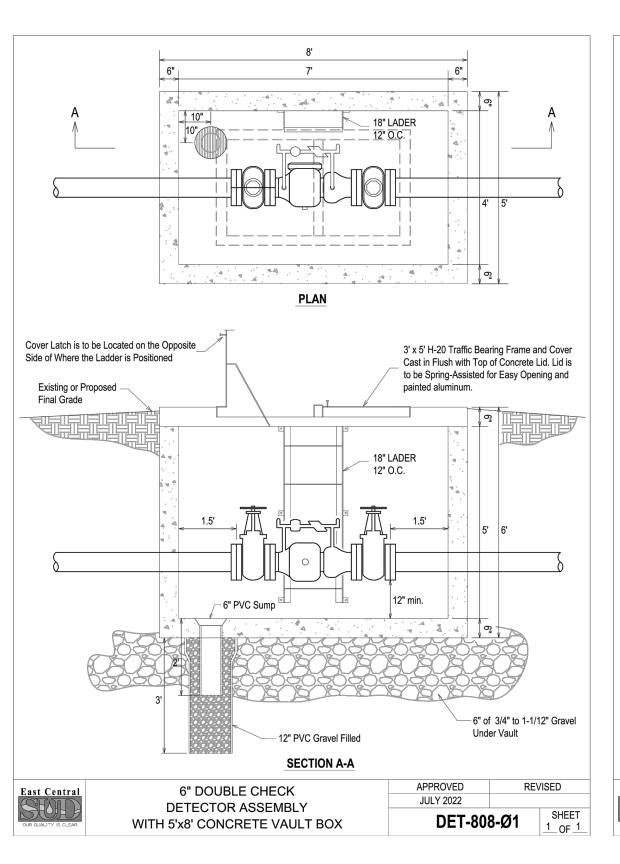
PLAT NO. 22-11800457

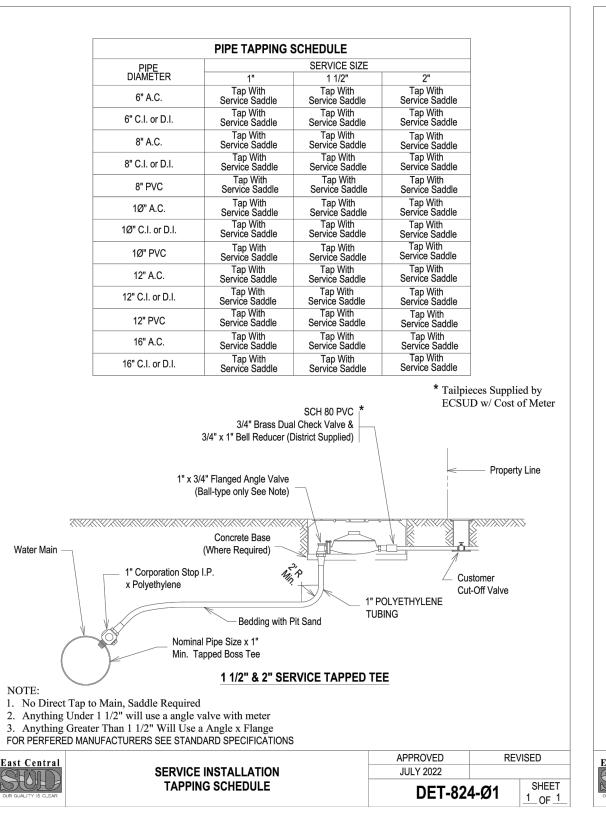
JOB NO. 314-39-12 DATE: MAY 2022 DRAWN: SJ CHECKED: T SHEET NUMBER:

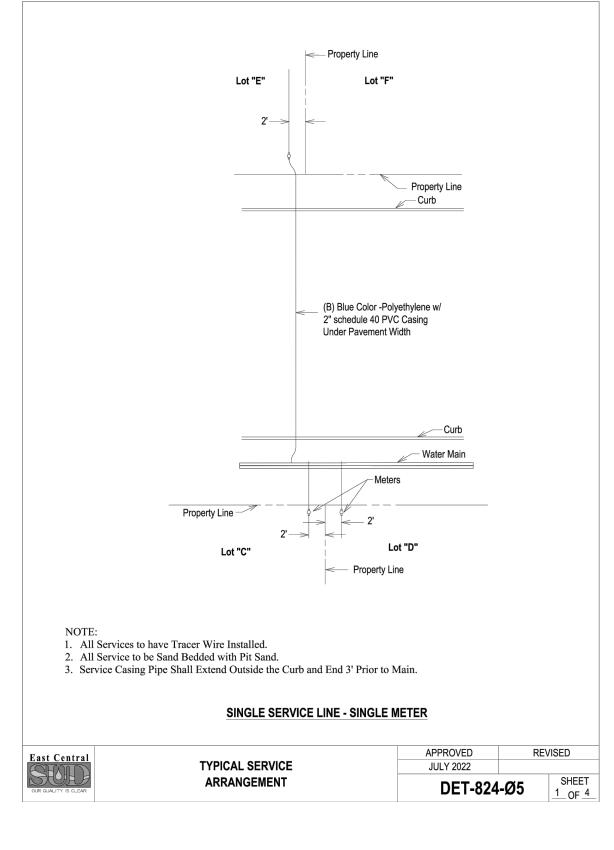
7.3

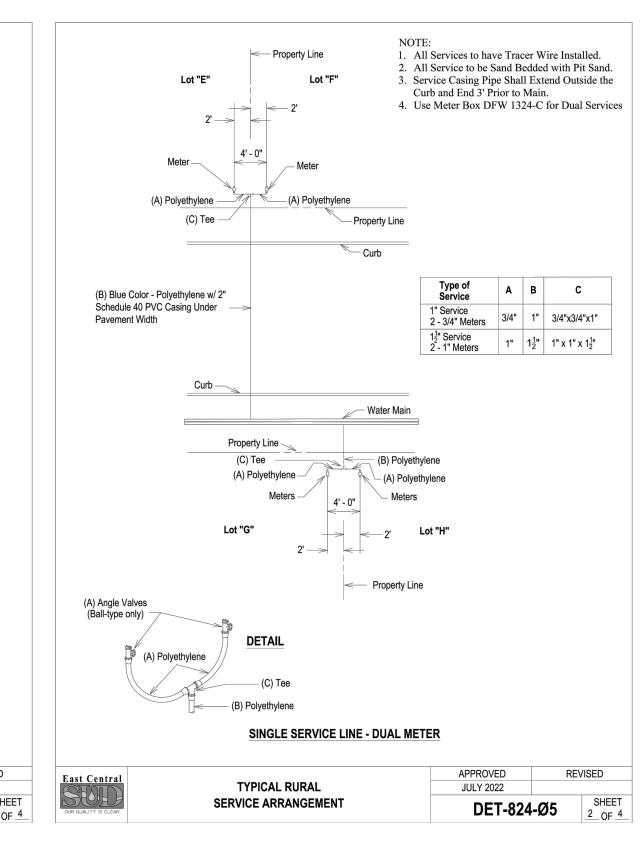
PIPELINES

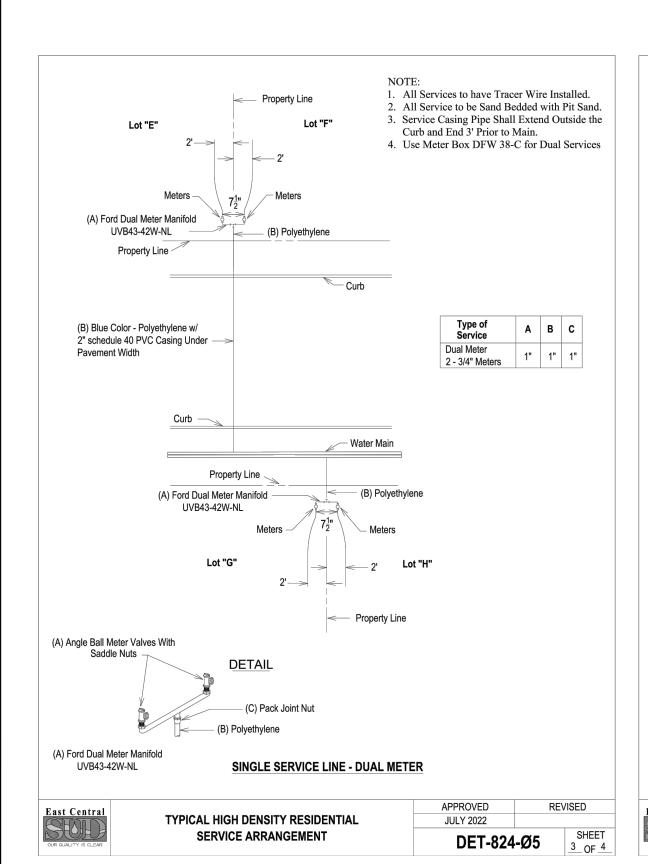
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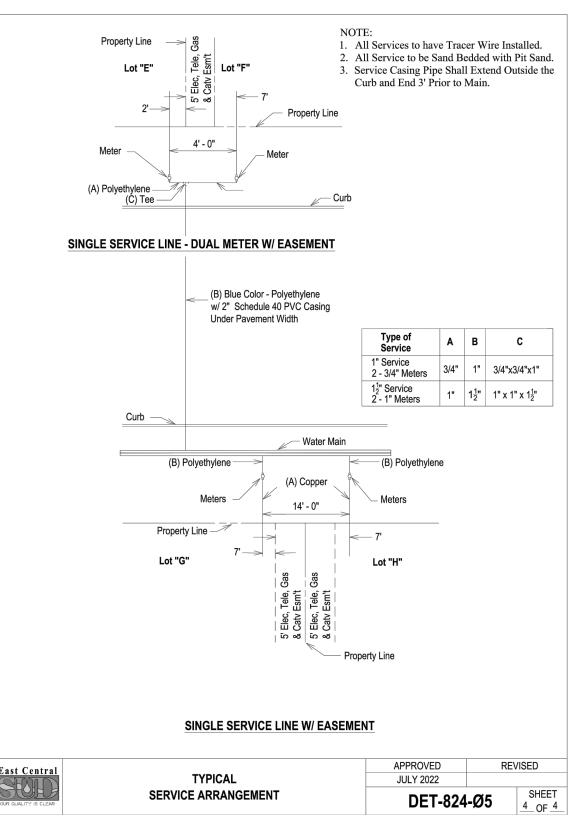


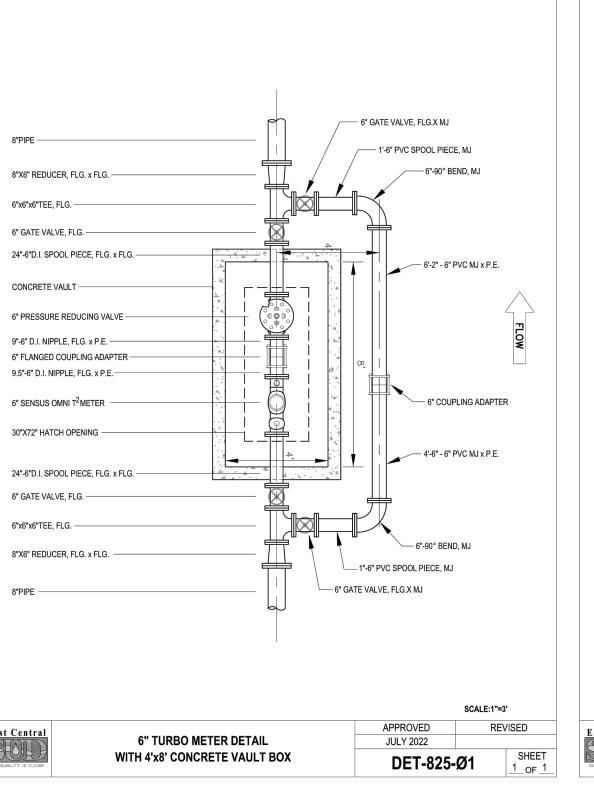


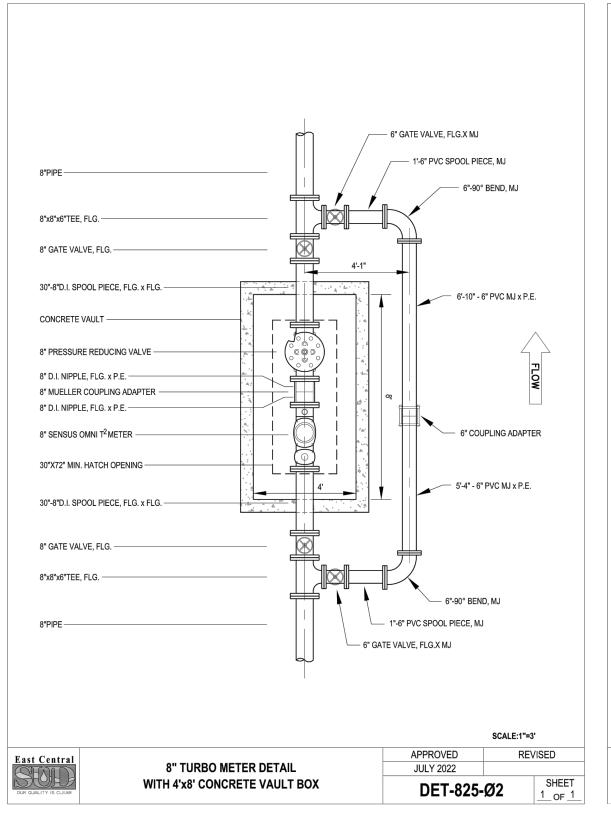


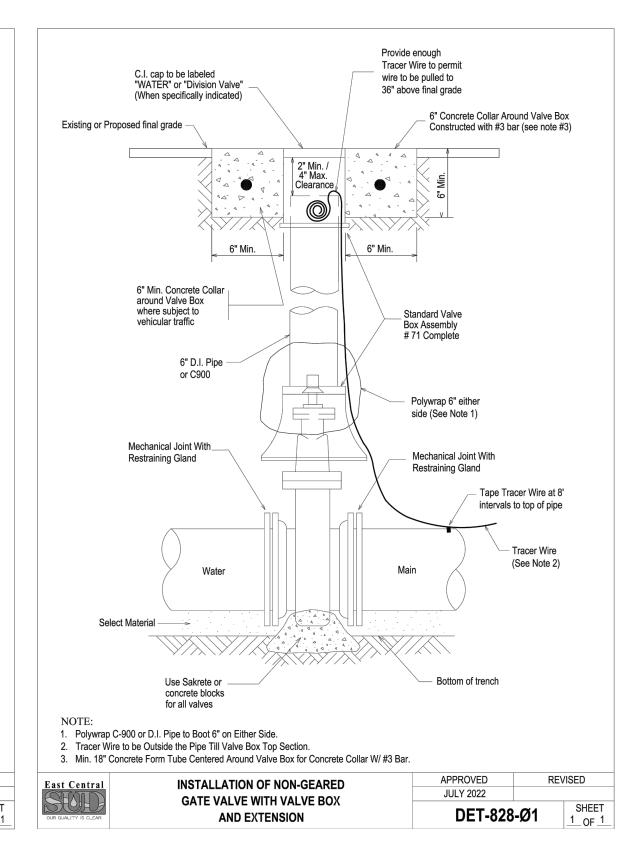












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JEFFREY W. MARTIN

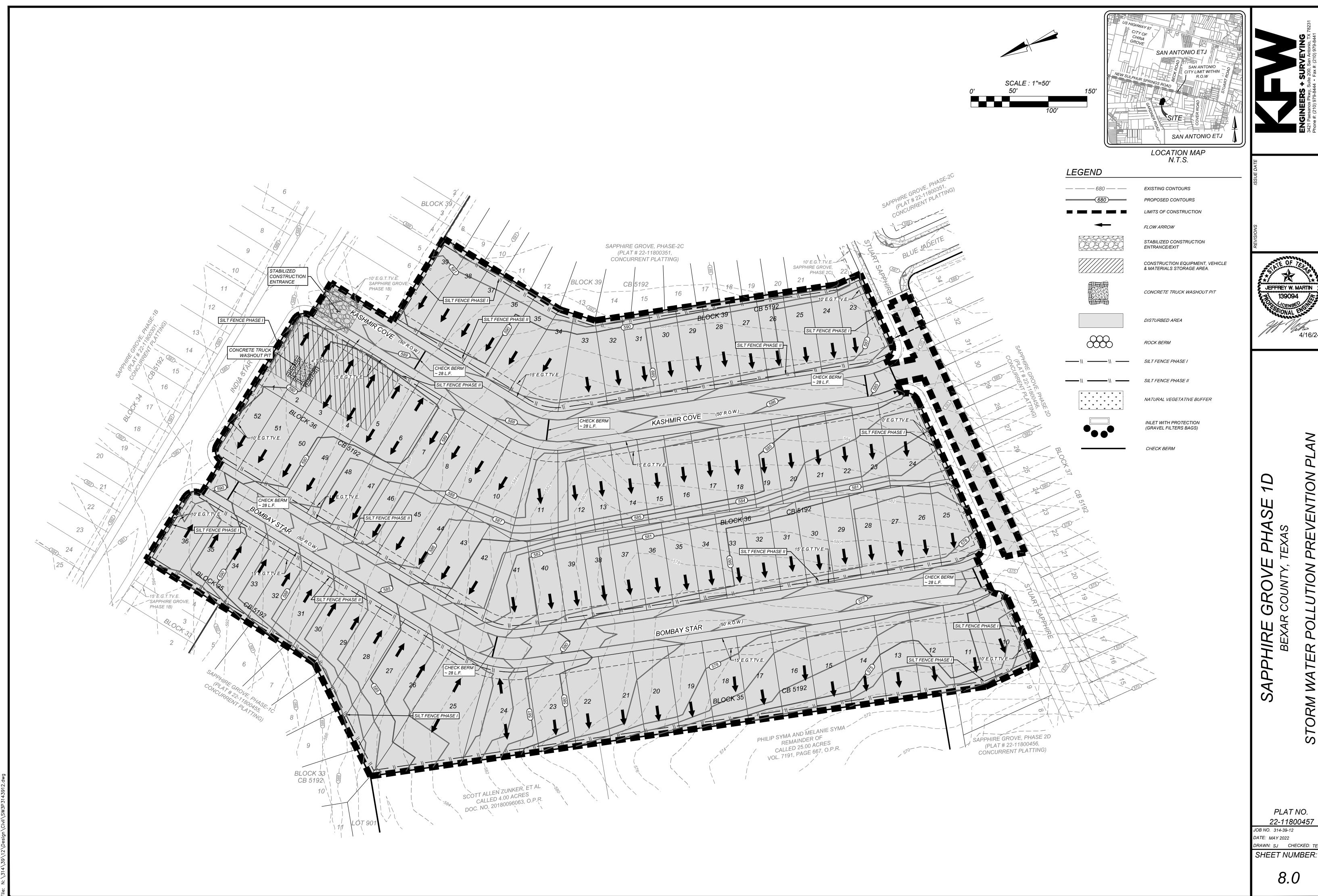
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DISTRIBUTION

PLAT NO. 22-11800457 JOB NO. 314-39-12

DATE: MAY 2022 DRAWN: SJ CHECKED: 1 SHEET NUMBER:



JEFFREY W. MARTIN

GROVE R COUNTY, 1

PLAT NO. 22-11800457

SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 100 GPM / FT SQUARED. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL

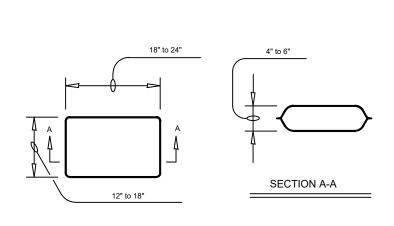
EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES. **GENERAL NOTES**

1. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED

TEMPORARY SEDIMENT CONTROL FENCE

CONSTRUCTION EQUIPMENT & VEHICLE STORAGE AND MAINTENANCE AREA CONSTRUCTION AND WASTE MATERIAL STORAGE AREA **FIELD** OFFICE /EXIT FLOW ARROWS

TYPICAL CONSTRUCTION STAGING AREA



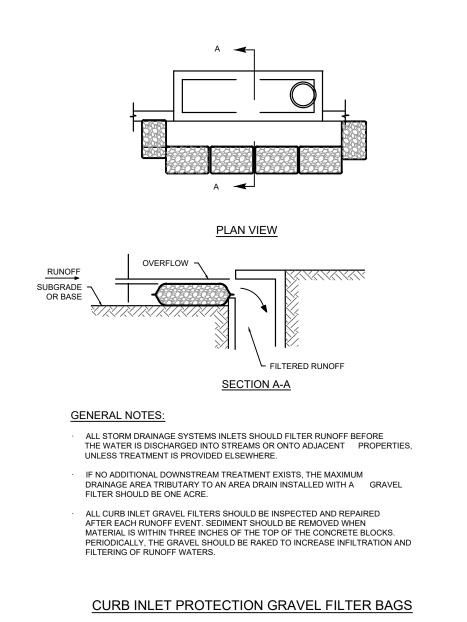
GENERAL NOTES:

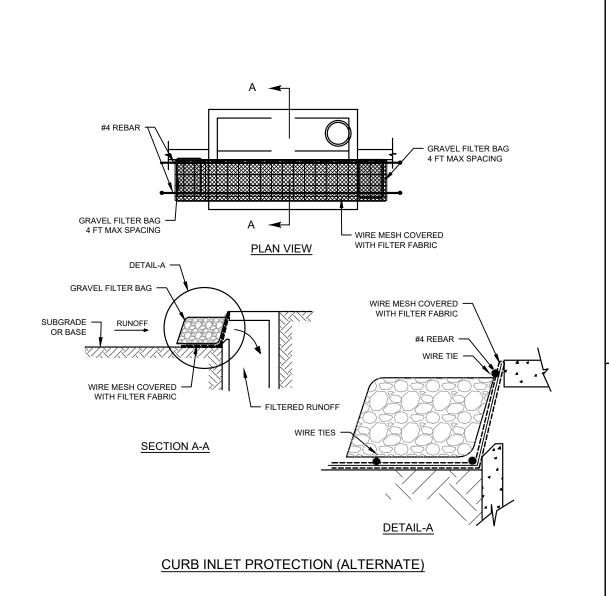
TO 0.75 INCH DIAMETER).

BY THE ENGINEER.

THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE,
POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN UNIT WEIGHT OF 4
OUNCES/SY, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM TO COARSE GRAVEL (0.31

GRAVEL FILTER BAG DETAIL





FABRIC CROSS-SECTION OF A CONSTRUCTION ENTRANCE/EXIT

AGGREGATE

GEOTEXTILE FABRIC

CONSTRUCTION ENTRANCE/EXIT

TO STABILIZE FOUNDATION

(1) The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan. PUBLIC ROAD (2) The aggregate should be placed with a minimum thickness of 8 inches. (3) The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd2, a mullen burst rating of 140 lb/in2, and an equivalent opening size greater than a number (4) If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rack should be included in the plans. Divert wastewater to a sediment trap or basin.

area. Grade crown foundation for positive drainage.

Installation: (North Carolina, 1993) (1) Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation

(2) The minimum width of the entrance/exit should be 12 feet or the full width of exit roadway, whichever is greater. (3) The construction entrance should be at least 50 feet long. (4) If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches high with 3:1 (H:V) side slopes, across the foundation approximately 15 feet from the entrance to divert runoff away from the public road. (5) Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.

(6) Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage. (7) Divert all surface runoff and drainage from the stone pad to a sediment trap or basin. (8) Install pipe under pad as needed to maintain proper public road drainage.

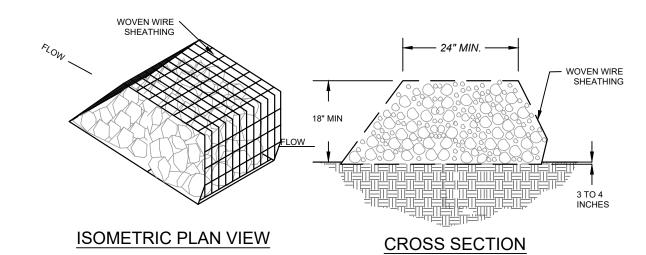
nspection and Maintenance Guidelines:

1) The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair andlor cleanout of any measures used to trap sediment. (2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor. (3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.

(4) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment

trap or sediment basin. (5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

STABILIZED CONSTRUCTION ENTRANCE / EXIT



(1) The berm structure should be. secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings (2) Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

(1) Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings. (2) Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.

(3) Place the rock along the sheathing as shown in the diagram Figure 1-28), to a height not less than (4) Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing

overlap at least 2 inches, airl the berm retains its shape when walked upon. (5) Berm should be built along the contour at zero percent grade or as near as possible. (6) The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

Inspection and Maintenance Guidelines:

(1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.

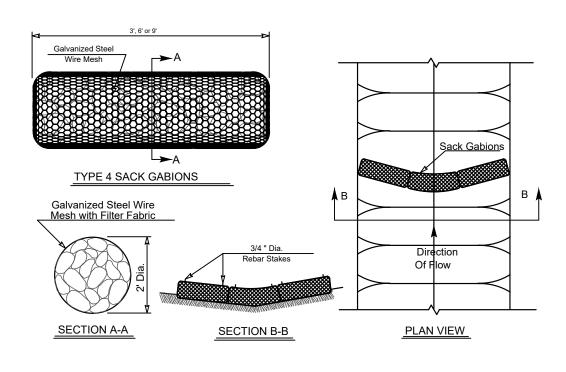
(2) Remove sediment and other debris when buildup reaches 50% and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.

(3) Repair any loose wire sheathing. (4) The berm should be reshaped as needed during inspection.

(5) The berm should be replaced when the structure ceases to function as intended due to silt

accumulation among the rocks, washout, construction traffic damage, etc. (6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt

ROCK BERM



TYPE 4 SACK GABIONS

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THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW. FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE

FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT, FABRIC SHOULD BE NON-WOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 200 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 120 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA.

STONE SIZE: ±4"-8" OPEN GRADED CRUSHED LIMESTONE. INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR

WHEN SILT REACHES A DEPTH OF 50% OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN

APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.

> PLAT NO. 22-11800457

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JOB NO. 314-39-12 **DATE**: MAY 2022 DRAWN: SJ CHECKED: TE

SHEET NUMBER: