

GENERAL INFORMATION

GENERAL NOTES

1.

ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.

2.

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.

3.

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 OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).

4.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE 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 CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, 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.

5.

IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

6.

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.

7.

CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.

8.

CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

9.

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)

233-3010

BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET)

354-6338 / 357-5741

COSA DRAINAGE

207-8048

COSA SIGNAL OPERATIONS

207-7720 / 207-7765

TEXAS STATE WIDE ONE CALL LOCATOR

1-800-344-8377

CITY PUBLIC SERVICE ENERGY - TIME WARNER - AT&T - MCI

10.

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.

11.

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 MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.

12.

THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

13.

THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.

14.

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.

15.

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 THE CITY.

16.

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.

17.

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 CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REMOVE 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

1.

NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.

2.

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).

3.

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.

5.

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.

7.

NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN 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.

8.

SAPPLINGS, 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 INSPECTOR.

9.

NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.

10.

TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY 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 CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.

11.

NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.

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 EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.

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.

3.

PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.

4.

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

SUNSHINE TRAILS UNIT 1A

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

Sheet List Table	
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OVERALL UTILITY PLAN (2 OF 2)	1.1
MASTER DRAINAGE PLAN	2.0
OVERALL GRADING PLAN	3.0
OVERALL GRADING PLAN	3.1
DRAIN "E" PLAN AND PROFILE	4.0
DRAIN "F" PLAN AND PROFILE	4.1
DRAIN "G" PLAN AND PROFILE	4.2
DRAIN "H" PLAN AND PROFILE (1 OF 3)	4.3
DRAIN "H" PLAN AND PROFILE (2 OF 3)	4.4
DRAIN "H" PLAN AND PROFILE (3 OF 3)	4.5
SUNSHINE WAY, STREET PLAN AND PRFILES	5.0
SUNSHINE WAY & JULIUS GROVE, STREET PLAN AND PRFILES	5.1
BERTIER BEND & TREVOR GROVE, STREET PLAN AND PRFILES	5.2
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LINE "A" PLAN AND PROFILE	6.4
LINE "J" PLAN AND PROFILE	6.5
LINE "K", "L", "Q" PLAN AND PROFILE	6.6
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STORM WATER POLLUTION PREVENTION PLAN	8.0
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STORM WATER POLLUTION PREVENTION DETAILS	8.2

Colliers

Engineering & Design

www.colliersengineering.com

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Formerly Known as

811

PROTECT YOURSELF

ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARED TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE.

FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

STATE OF TEXAS

JEFFREY W. MARTIN

139094

PROFESSIONAL ENGINEER

5/1/24

PRELIMINARY

FOR

SUNSHINE TRAILS

UNIT 1A

PLAT# 23-11800536

SAN ANTONIO

BEXAR COUNTY

TEXAS

Colliers

Engineering & Design

SAN ANTONIO (KFW)

3421 Paesanos Parkway

San Antonio, TX 78231

Phone: 210.979.8444

TBPLS Form# 1-14009

TBPLS Form# 10194550

SCALE:

AS SHOWN

DATE:

07/20/2023

DRAWN BY:

SD

CHECKED BY:

SC

PROJECT NUMBER:

314-50-04

DRAWING NAME:

CV3145004

SHEET TITLE:

COVER SHEET

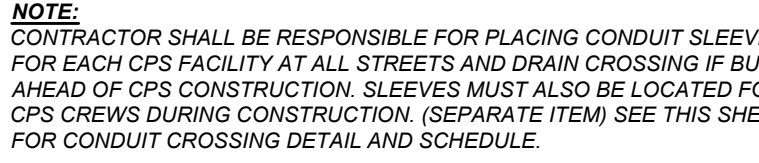
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

By: A2020080202

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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 EXISTING ELECTRICAL SECONDARY ELECTRIC, PRIMARY ELECTRICAL, DUCTBANKS, GAS, IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL TAKE CARE TO PROTECT ALL UTILITIES PRIOR TO ANY EXCAVATION. AT 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.

SCALE DRAWINGS FOR CONSTRUCTION

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNER/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 AND SHIELDING SYSTEMS, PROGRAMS AND/OR PROCEDURES. 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 BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 95% 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.

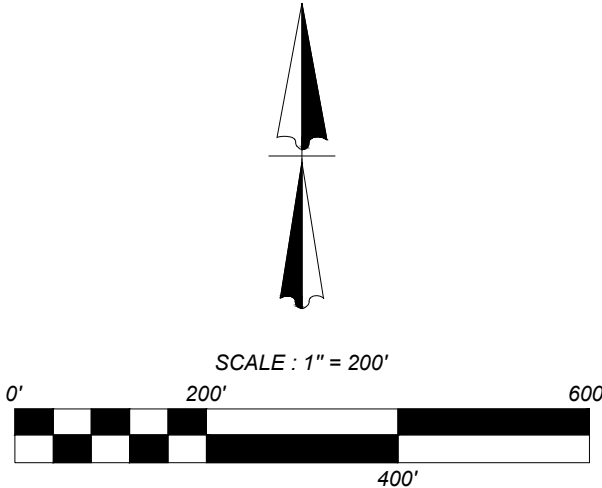
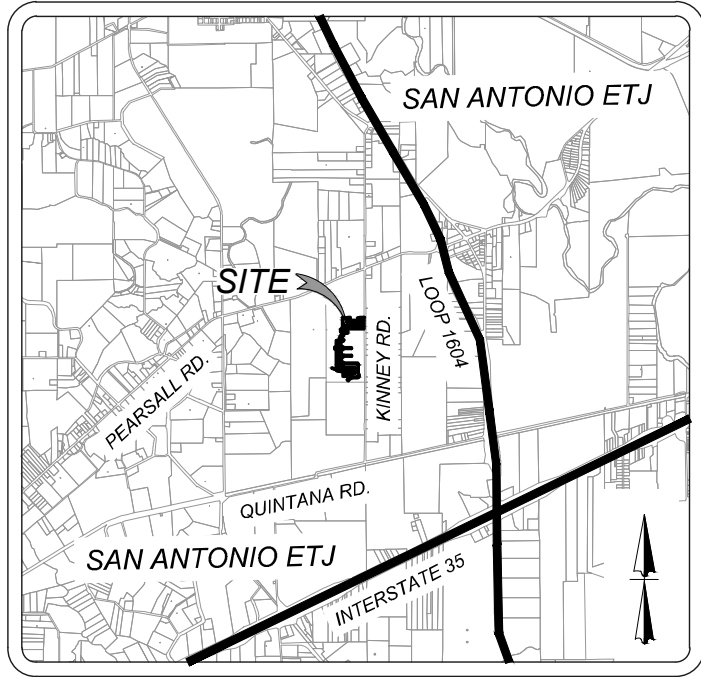
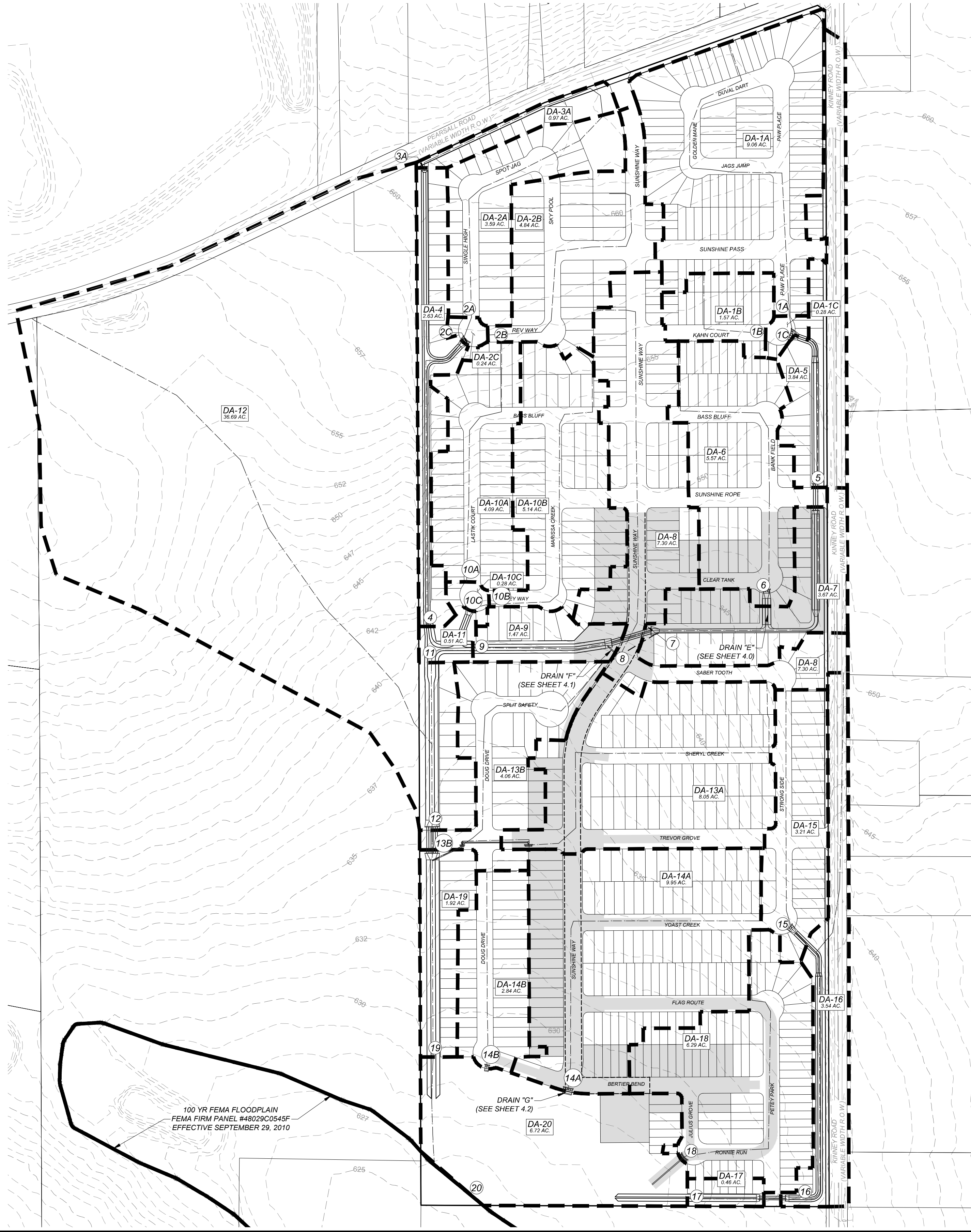
CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.

ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (SAWS) STANDARD SPECIFICATIONS.

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAWS SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



NOTE:
1. THE RESULTING ADVERSE IMPACT ANALYSIS, DRAINAGE PATTERNS, RUNOFF AND VOLUME CALCULATIONS ASSOCIATED WITH THIS PHASE OF DEVELOPMENT IS CONSISTENT WITH THE STORMWATER MANAGEMENT PLAN DEVELOPED FOR THE MASTER DEVELOPMENT PLAN SUBMITTED AND APPROVED ON (MDP) AND ASSOCIATED STORMWATER MANAGEMENT PLAN IS CURRENTLY IN REVIEW.



LEGEND

- ① STUDY POINT
- DRAINAGE AREA BOUNDARY
- - - - - EXISTING CONTOURS
- FLOW ARROW
- PROPOSED UNIT

PROPOSED/ULTIMATE CONDITIONS

HYDROLOGY SUMMARY - RATIONAL METHOD															
Study Point	Drainage Area	(Acres)	C	Tcarryover (min)		Tovrl (min)	Tsc (min)	Tch (min)	Ttot (min)	I5 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q5 (ft3/s)	Q25 (ft3/s)	Q100 (ft3/s)
1A	DA-1A	9.06	0.77			17.14	5.43	1.22	23.79	4.11	5.65	7.04	28.66	39.40	49.14
1B	DA-1B	1.57	0.77			17.14	2.25	0.00	19.39	4.55	6.28	7.84	5.50	7.59	9.48
1C	DA-1A+DA-1B+DA-1C	10.91	0.77	FROM DA-1A	23.791			0.164	23.955	4.09	5.63	7.02	34.39	47.26	58.95
2A	DA-2A	3.59	0.77			17.14	0.99	0.62	22.27	4.25	5.84	7.29	11.76	16.16	20.16
2B	DA-2B	4.84	0.77			17.14	4.51	1.17	21.51	4.33	5.95	7.43	16.13	22.17	27.68
2C	DA-2A+DA-2B+DA-2C	8.67	0.77	FROM DA-2A	22.273			0.217	22.490	4.23	5.82	7.26	28.25	38.83	48.45
3	DA-3	0.97	0.77			17.14	1.50	1.16	19.81	4.50	6.21	7.75	3.36	4.64	5.79
4	DA-2A+DA-2B+DA-2C+DA-3+DA-4	12.27	0.77	FROM DA-2C	22.490			2.639	25.128	4.00	5.50	6.84	37.79	51.92	64.65
5	DA-1A+DA-1B+DA-1C+DA-5	14.75	0.77	FROM DA-1C	23.955			1.403	25.358	3.98	5.47	6.81	45.22	62.13	77.38
6	DA-6	5.57	0.77			17.14	5.17	0.88	23.19	4.16	5.73	7.14	17.86	24.56	30.62
7	DA-1A+DA-1B+DA-1C+DA-5+DA-6+DA-7	23.99	0.77	FROM DA-5	25.358			2.631	27.989	3.79	5.20	6.47	70.02	96.08	119.54
8	DA-8	7.30	0.77			17.14	3.12	1.96	22.22	4.26	5.85	7.30	23.93	32.89	41.05
9	DA-1A+DA-1B+DA-1C+DA-5+DA-6+DA-7+DA-8+DA-9	32.76	0.77	FROM DA-7	27.989			1.536	29.525	3.69	5.06	6.30	93.04	127.71	158.98
10A	DA-10A	4.09	0.77			14.21	2.65	0.70	17.55	4.79	6.62	8.28	15.09	20.85	26.06
10B	DA-10B	5.14	0.77			17.14	3.13	1.33	21.60	4.32	5.94	7.41	17.10	23.49	29.33
10C	DA-10A+DA-10B+DA-10C	9.51	0.77	FROM DA-10B	21.602			0.189	21.791	4.30	5.91	7.38	31.49	43.27	54.02
11	DA-1A+DA-1B+DA-1C+DA-2A+DA-2B+DA-2C+DA-3+DA-4+DA-5+DA-6+DA-7+DA-8+DA-9+DA-10A+DA-10B+DA-10C+DA-11	55.05	0.77	FROM DA-9	29.525			0.428	29.952	3.66	5.02	6.26	155.26	212.97	265.15
12	DA-1A+DA-1B+DA-1C+DA-2A+DA-2B+DA-2C+DA-3+DA-4+DA-5+DA-6+DA-7+DA-8+DA-9+DA-10A+DA-10B+DA-10C+DA-11+DA-12+DA-13A+DA-13B	95.80	0.77	FROM DA-11	29.952			1.431	31.383	3.58	4.91	6.10	263.86	362.14	450.10
13A	DA-13A	8.05	0.77			17.14	4.13	1.76	23.04	4.18	5.75	7.16	25.89	35.61	44.41
13B	DA-13B	4.06	0.77			17.14	3.61	0.99	21.74	4.31	5.92	7.39	13.46	18.49	23.09
13C	DA-13A+DA-13B	12.11	0.77	FROM DA-13A	23.038			0.969	24.007	4.09	5.62	7.01	38.13	52.40	65.36
14A	DA-14A	9.95	0.77			17.14	5.55	1.51	24.20	4.07	5.60	6.98	31.21	42.89	53.48
14B	DA-14B	2.84	0.77			17.14	3.69	0.52	21.35	4.34	5.97	7.46	9.50	13.06	16.31
15	DA-15	3.21	0.77			13.55	3.60	1.06	18.21	4.70	6.49	8.11	11.62	16.04	20.05
16	DA-15+DA-16	6.75	0.77			17.14	5.52	2.41	25.07	4.00	5.50	6.85	20.81	28.60	35.60
17	DA-15+DA-16+DA-17	7.21	0.77	FROM DA-16	25.074			0.814	25.888	3.94	5.41	6.74	21.87	30.05	37.44
18	DA-18	6.29	0.77			14.99	5.12	0.74	20.84	4.40	6.04	7.55	21.29	29.28	36.56
19	DA-1A+DA-1B+DA-1C+DA-2A+DA-2B+DA-2C+DA-3+DA-4+DA-5+DA-6+DA-7+DA-8+DA-9+DA-10A+DA-10B+DA-10C+DA-11+DA-12+DA-13A+DA-13B+DA-13C+DA-14A+DA-14B+DA-15+DA-16+DA-17+DA-18+DA-19+DA-20	109.83	0.77	FROM DA-12	31.383			1.931	33.314	3.46	4.75	5.92	292.97	402.12	500.53
20	DA-1A+DA-1B+DA-1C+DA-2A+DA-2B+DA-2C+DA-3+DA-4+DA-5+DA-6+DA-7+DA-8+DA-9+DA-10A+DA-10B+DA-10C+DA-11+DA-12+DA-13A+DA-13B+DA-13C+DA-14A+DA-14B+DA-15+DA-16+DA-17+DA-18+DA-19+DA-20	142.84	0.77	FROM DA-19	33.314			0.914	34.227	3.42	4.68	5.83	376.00	515.19	641.42

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5/1/24

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FOR

SUNSHINE TRAILS

UNIT 1A

PLAT# 23-11800536

SAN ANTONIO

BEXAR COUNTY

TEXAS

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Engineering & Design

SAN ANTONIO (KFW)

3421 Pacesanos Parkway

San Antonio, TX 78231

Phone: 210.979.8444

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DATE: 07/20/2023

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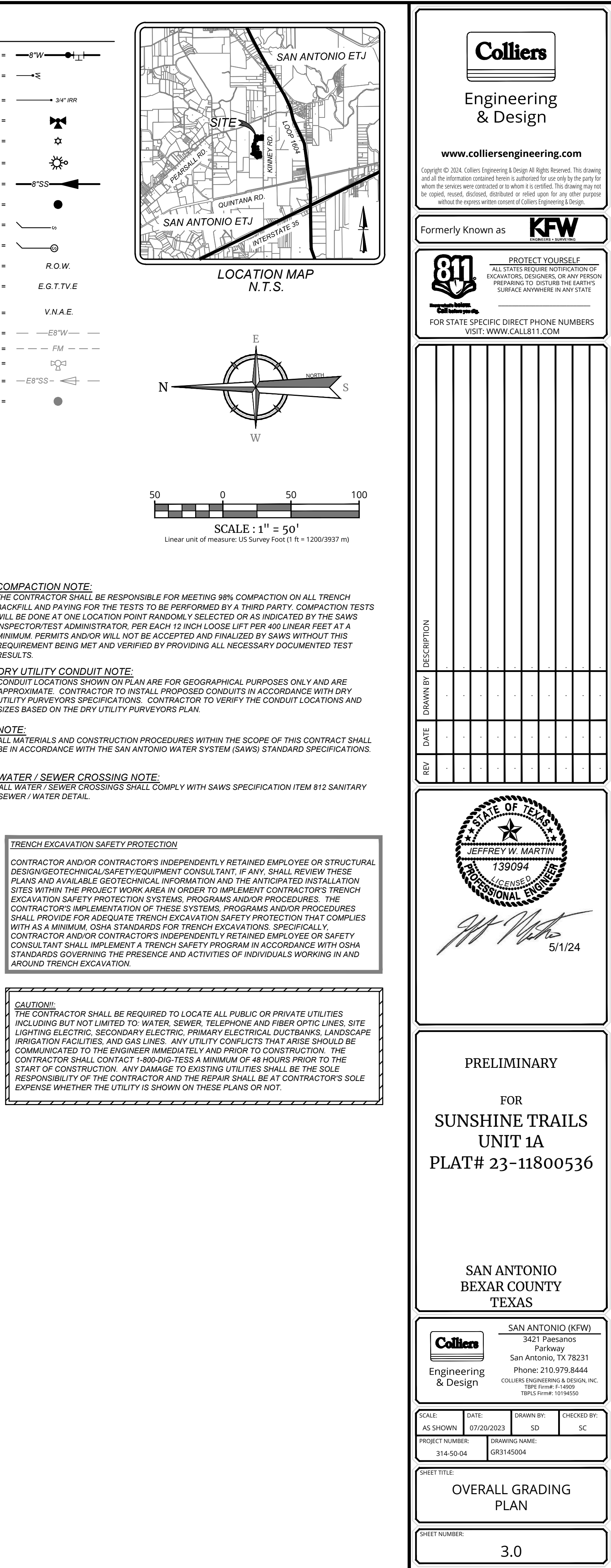
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DRAWING NAME: MD3145004

SHEET TITLE: MASTER DRAINAGE PLAN

SHEET NUMBER: 2.0

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL 1' 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.

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.

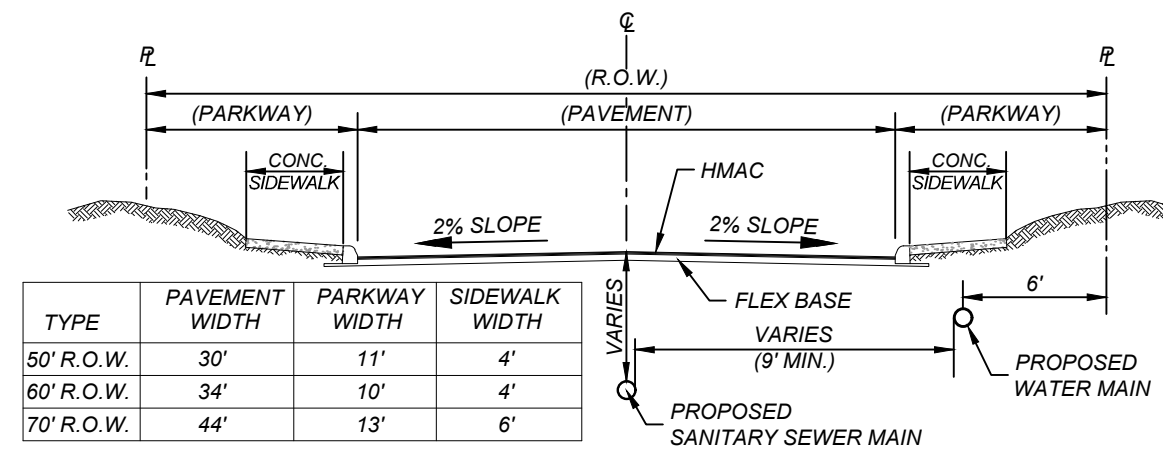
ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (SAWS) STANDARD SPECIFICATIONS.

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SANS SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



SEE PLAN SHEETS FOR SIZE LOCATION AND NUMBER OF CONDUITS

CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONDUIT SLEEVES FOR EACH CPS FACILITY AT ALL STREETS AND DRAIN CROSSING IF BUILT AHEAD OF CPS CONSTRUCTION. SLEEVES MUST ALSO BE LOCATED FOR CPS CREWS DURING CONSTRUCTION. (SEPARATE ITEM) SEE THIS SHEET FOR CONDUIT CROSSING DETAIL AND SCHEDULE.



TYPICAL STREET SECTION
N.T.S.

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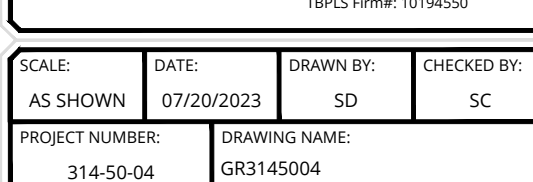
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FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
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OVERALL GRADING PLAN

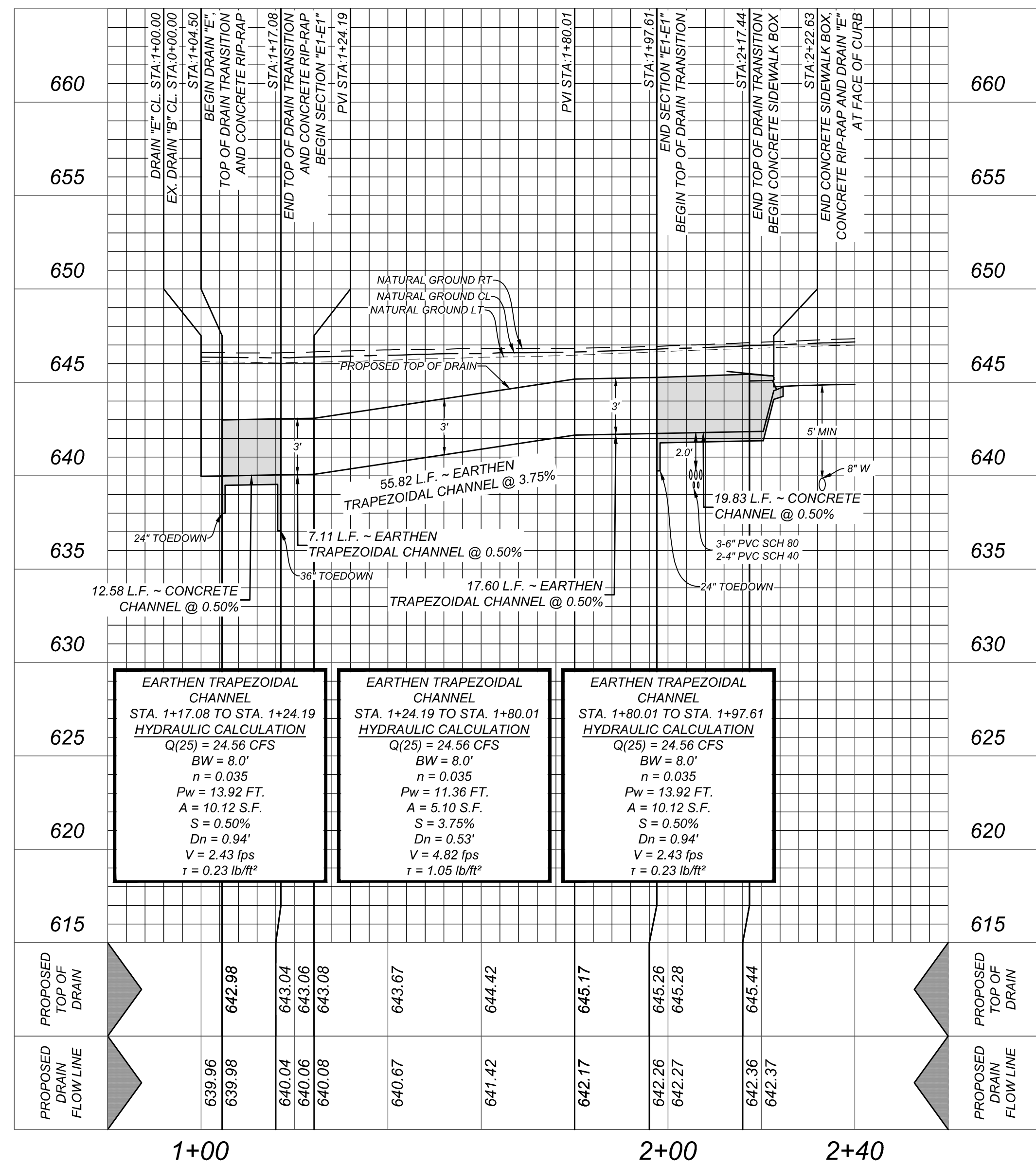
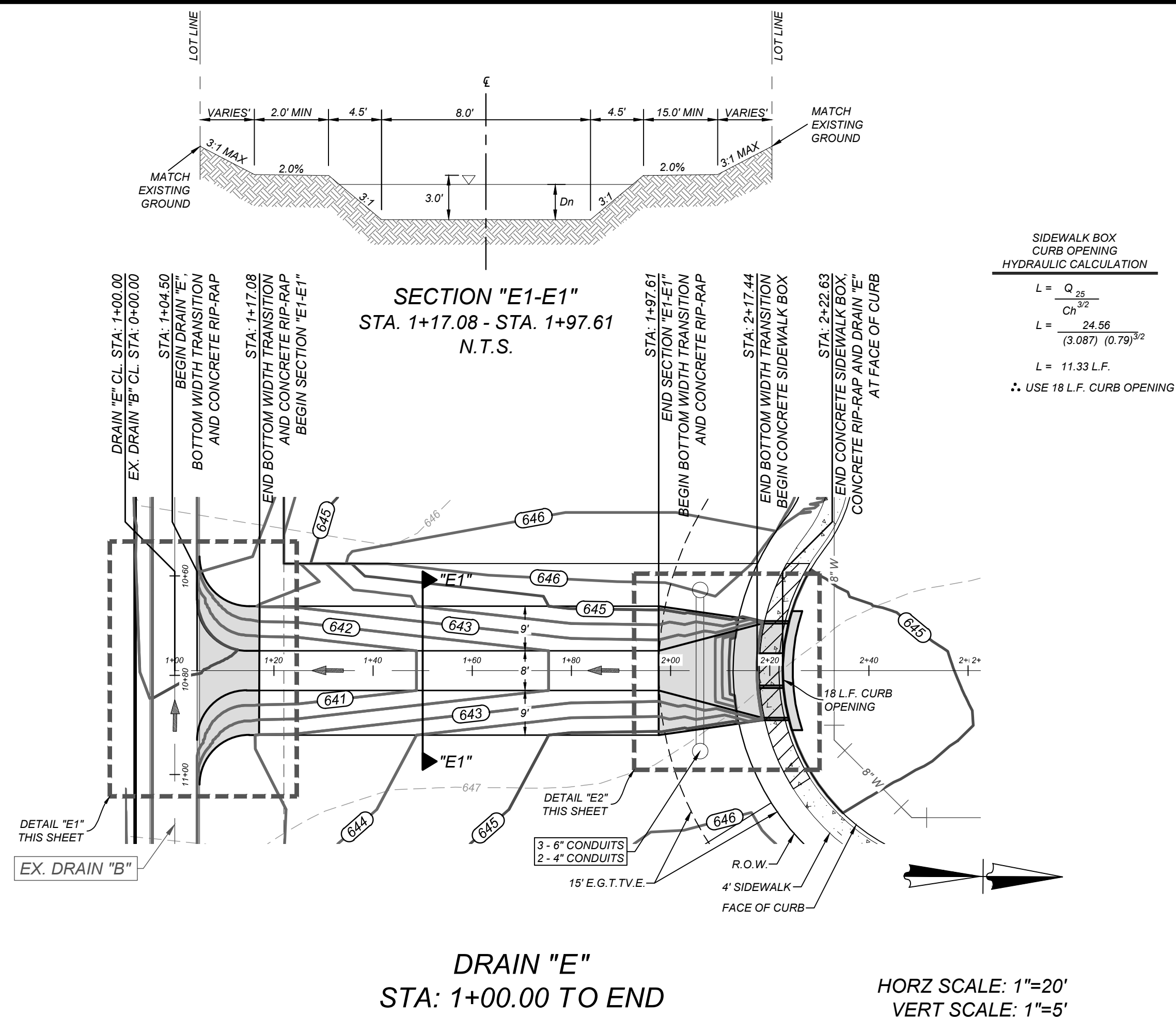
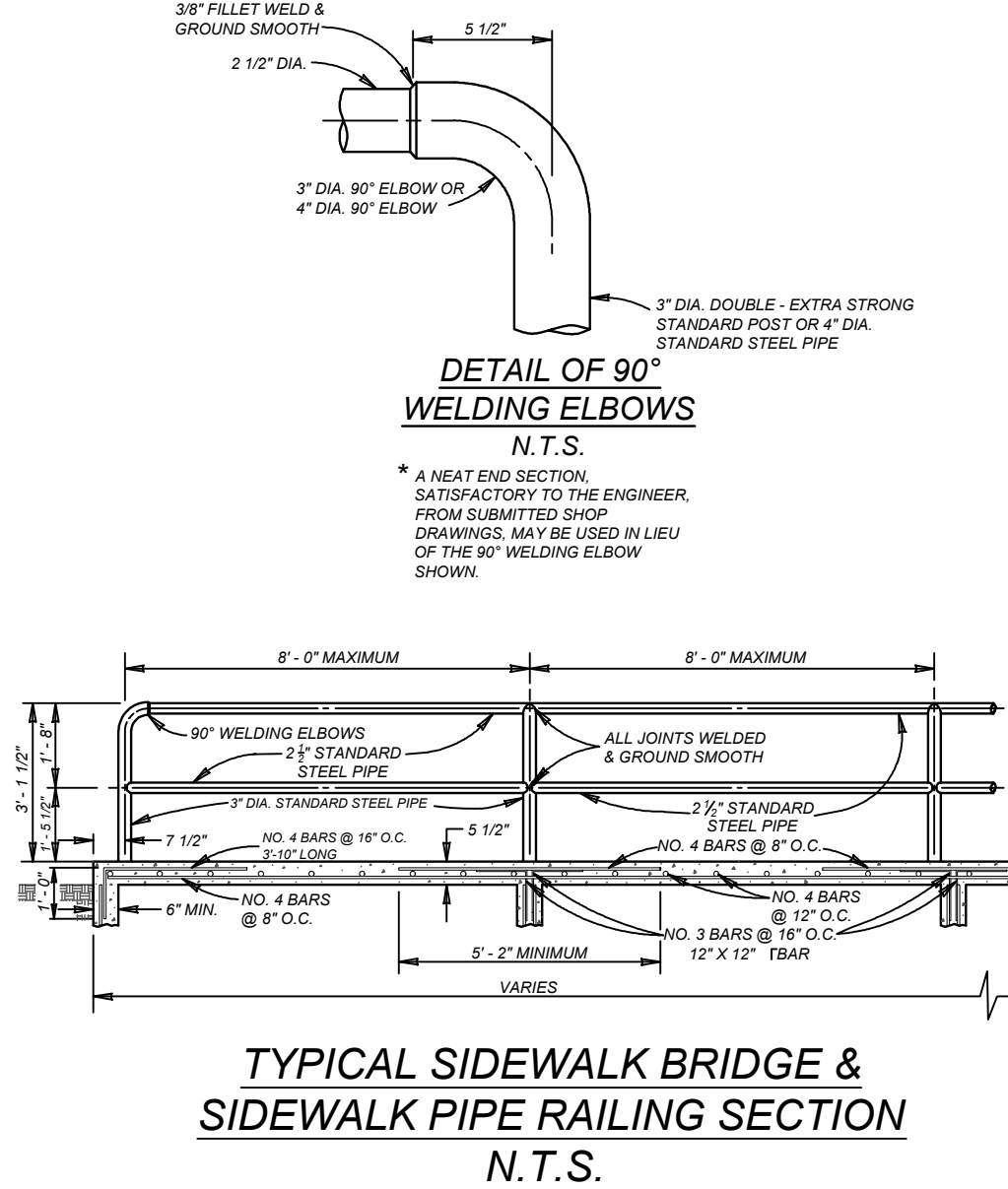
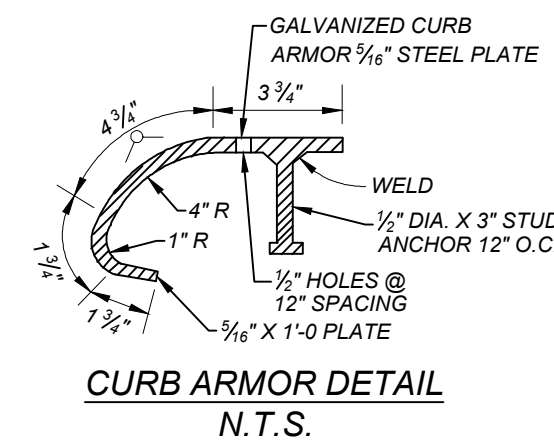
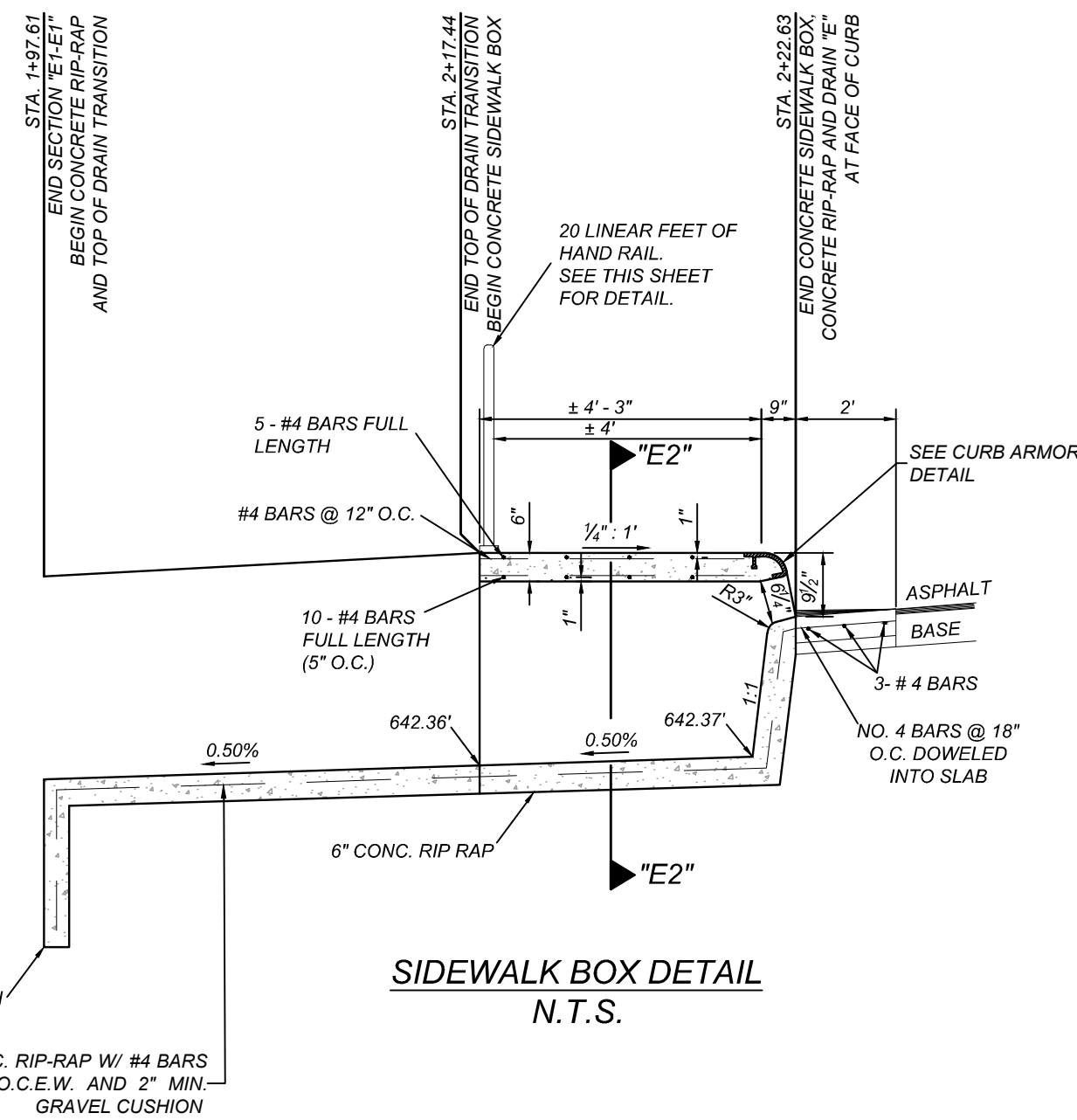
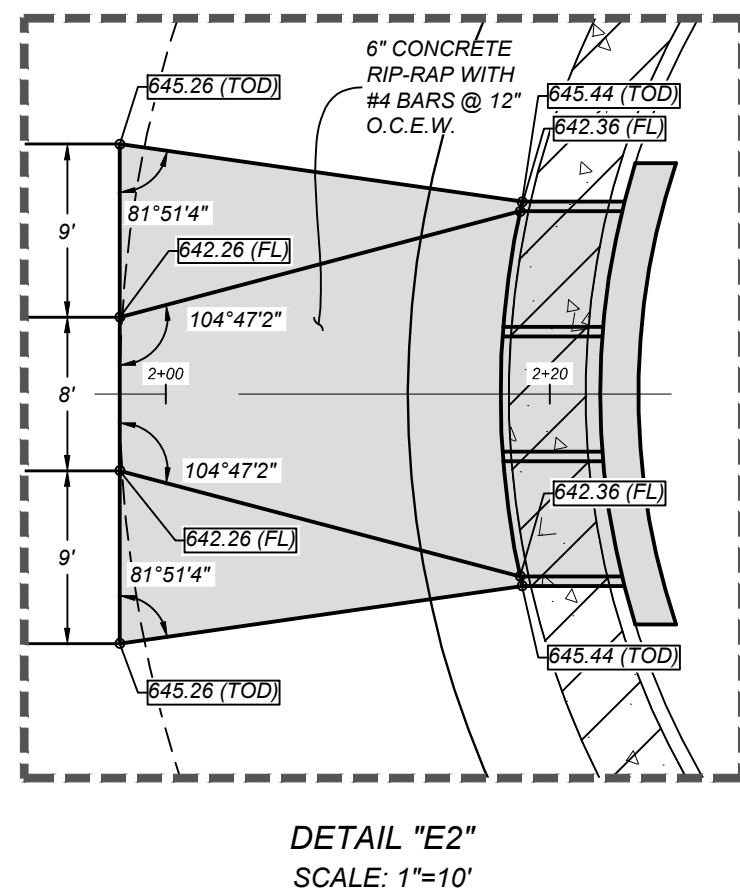
SHEET NUMBER

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FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

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DATE:	DRAWN BY:	CHECKED BY:
07/20/2023	SD	SC
DRAWING NAME:		
SDPP3145004 - E		

ET NUMBER: 4.0

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Re: ARCORIGUEZ

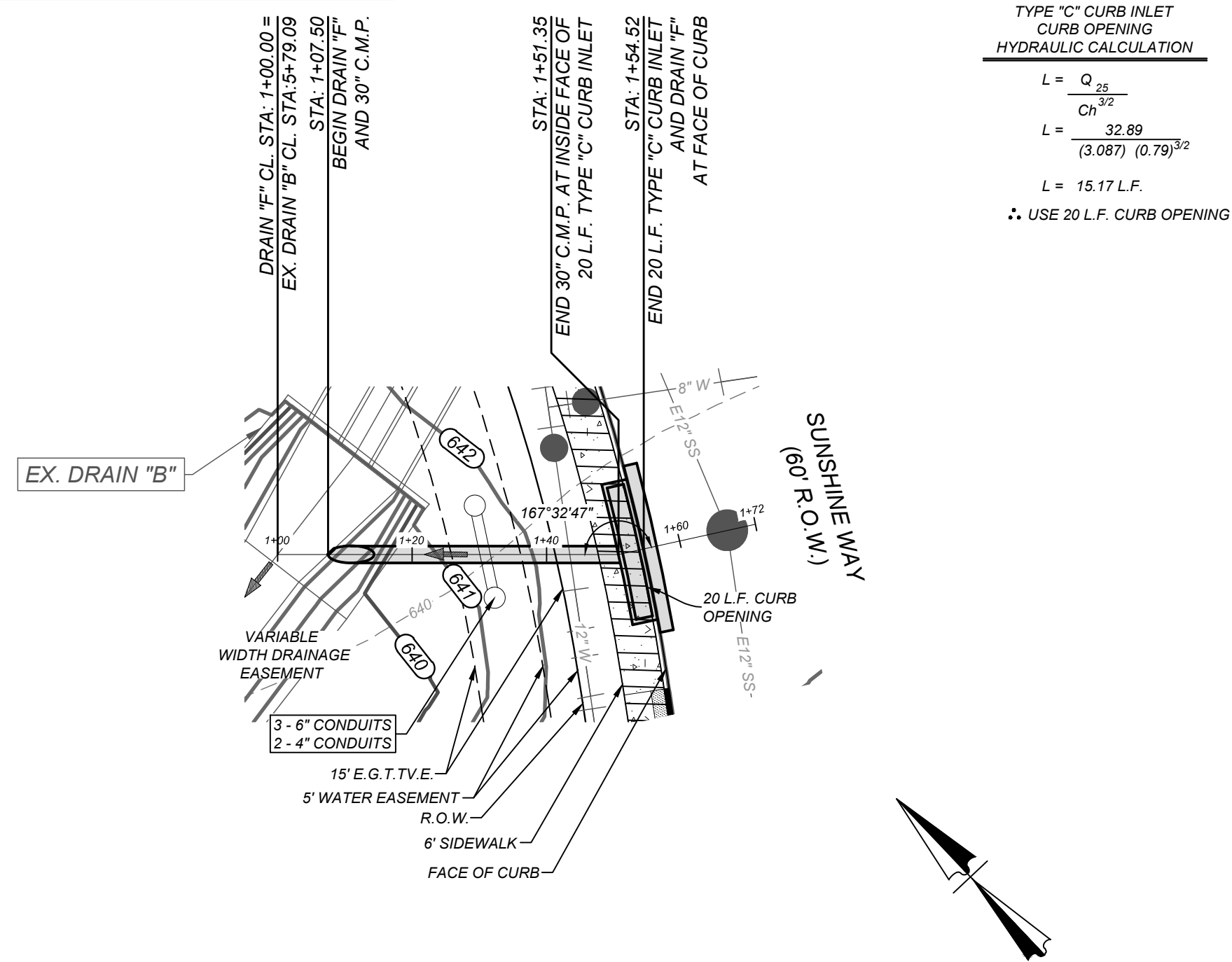
K:\2024\SDPP3145004 - F & G.dwg 1 By: JACOB GUEZ

TRENCH EXCAVATION SAFETY PROTECTION

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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.



TYPE "C" CURB INLET
CURB OPENING
HYDRAULIC CALCULATION

$$L = \frac{Q_{25}}{Ch^{3/2}}$$

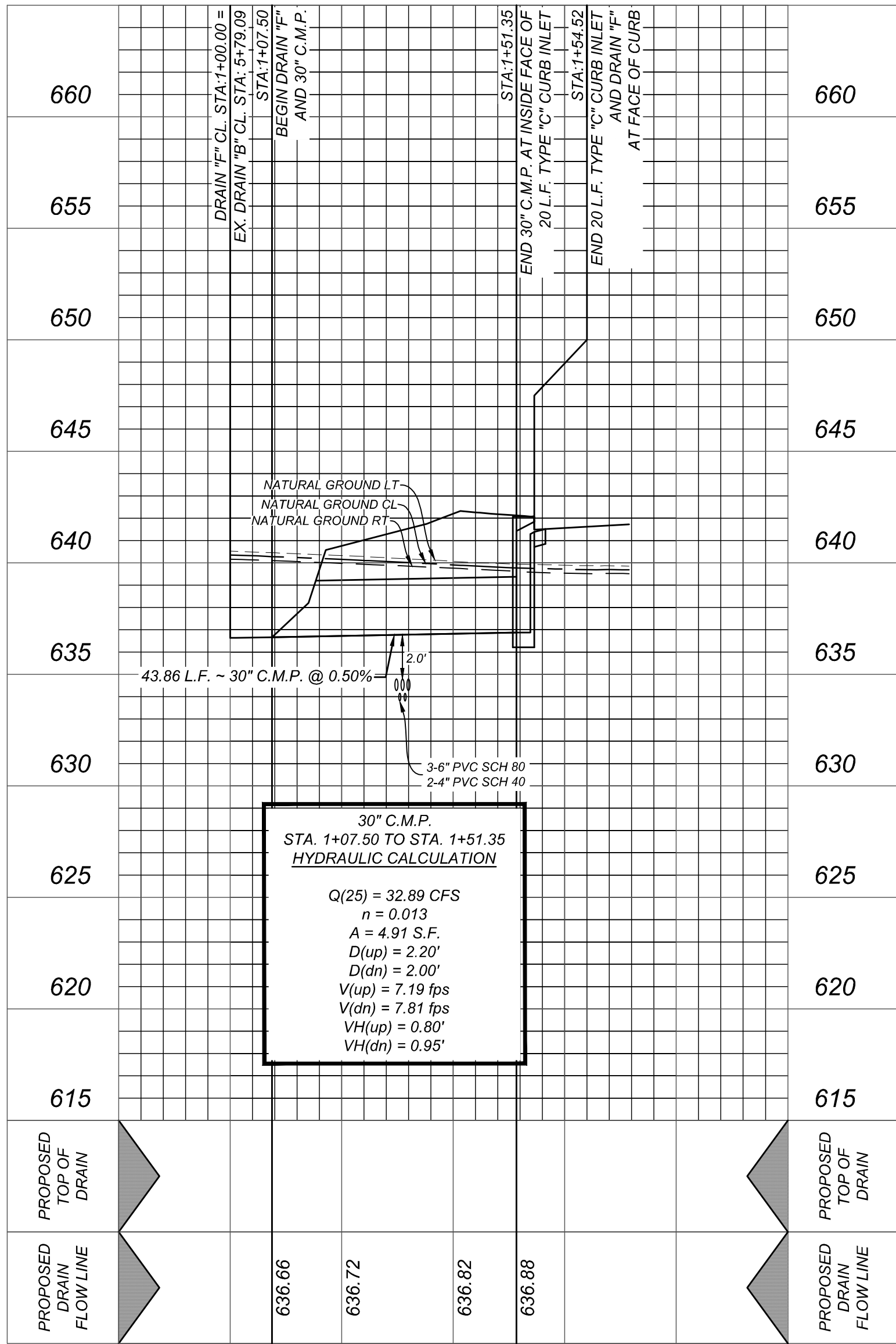
$$L = \frac{32.89}{(3.087)^{3/2} (0.79)^{3/2}}$$

$$L = 15.17 \text{ L.F.}$$

∴ USE 20 L.F. CURB OPENING

DRAIN "F"
STA: 1+00.00 TO END

HORZ SCALE: 1"=20'
VERT SCALE: 1"=5'



1+00

1+80



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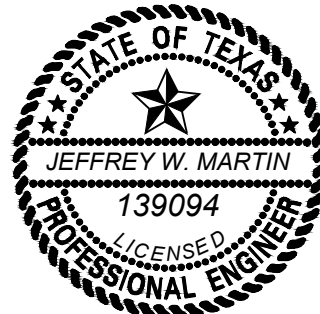
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FOR
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UNIT 1A
PLAT# 23-11800536

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SCALE: AS SHOWN DATE: 07/20/2023 DRAWN BY: SD CHECKED BY: SC
PROJECT NUMBER: 314-50-04 DRAWING NAME: SDPP3145004 - F & G

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PROFILE

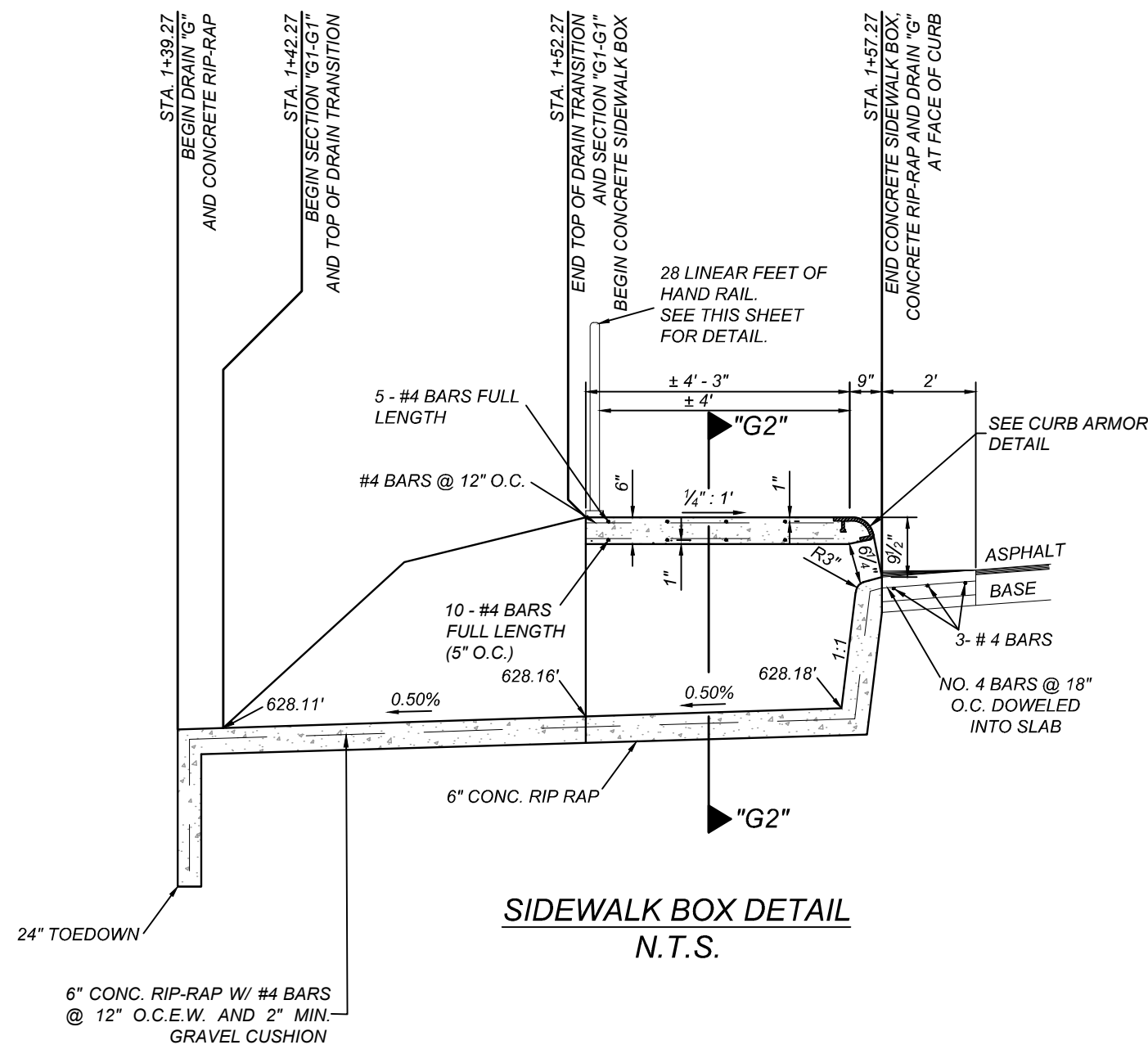
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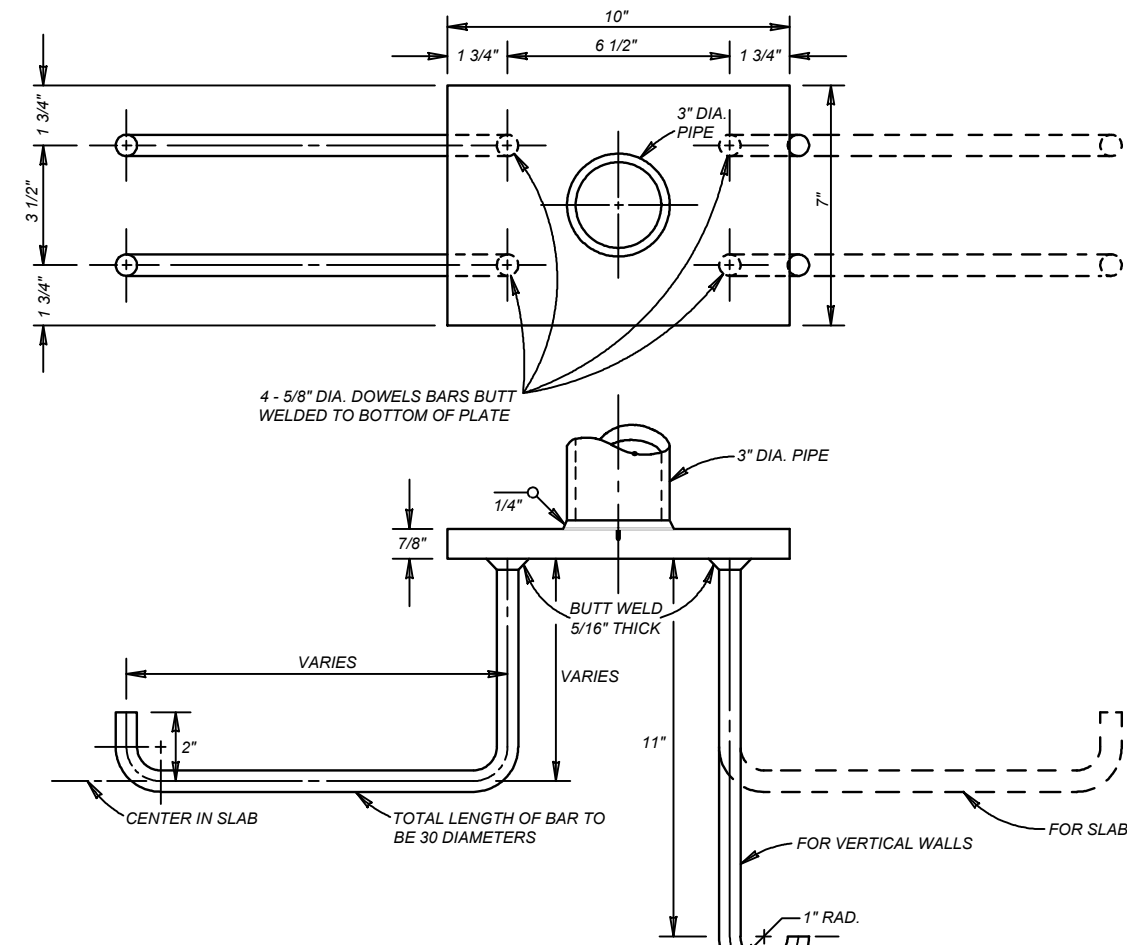
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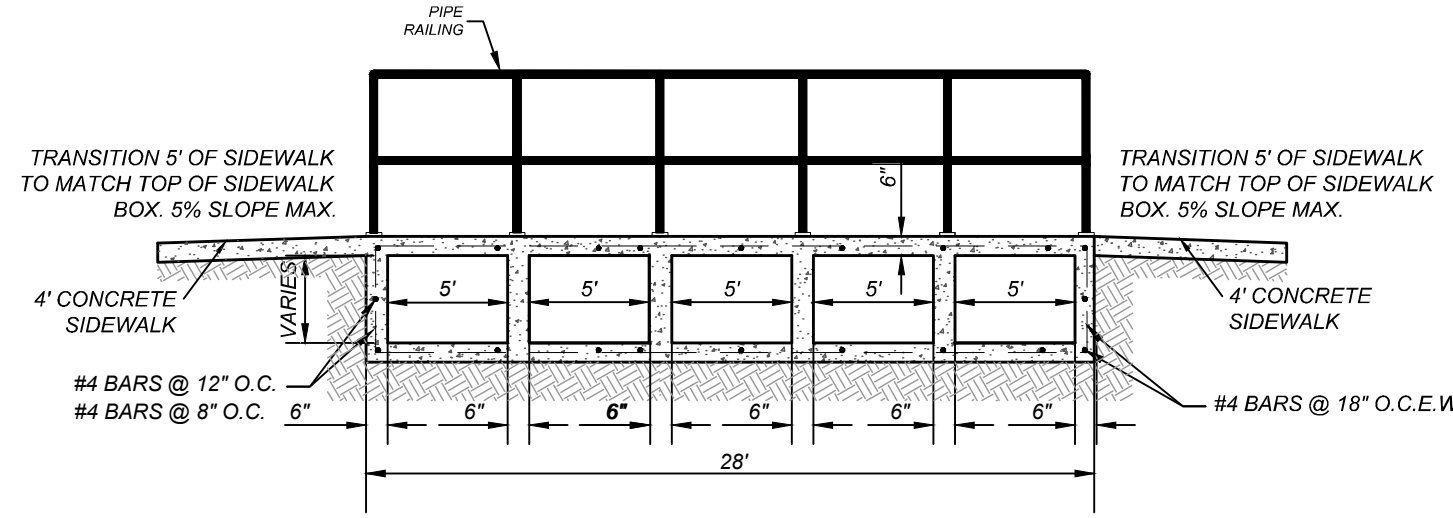
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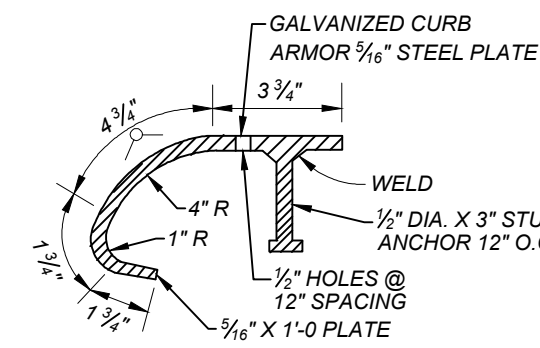
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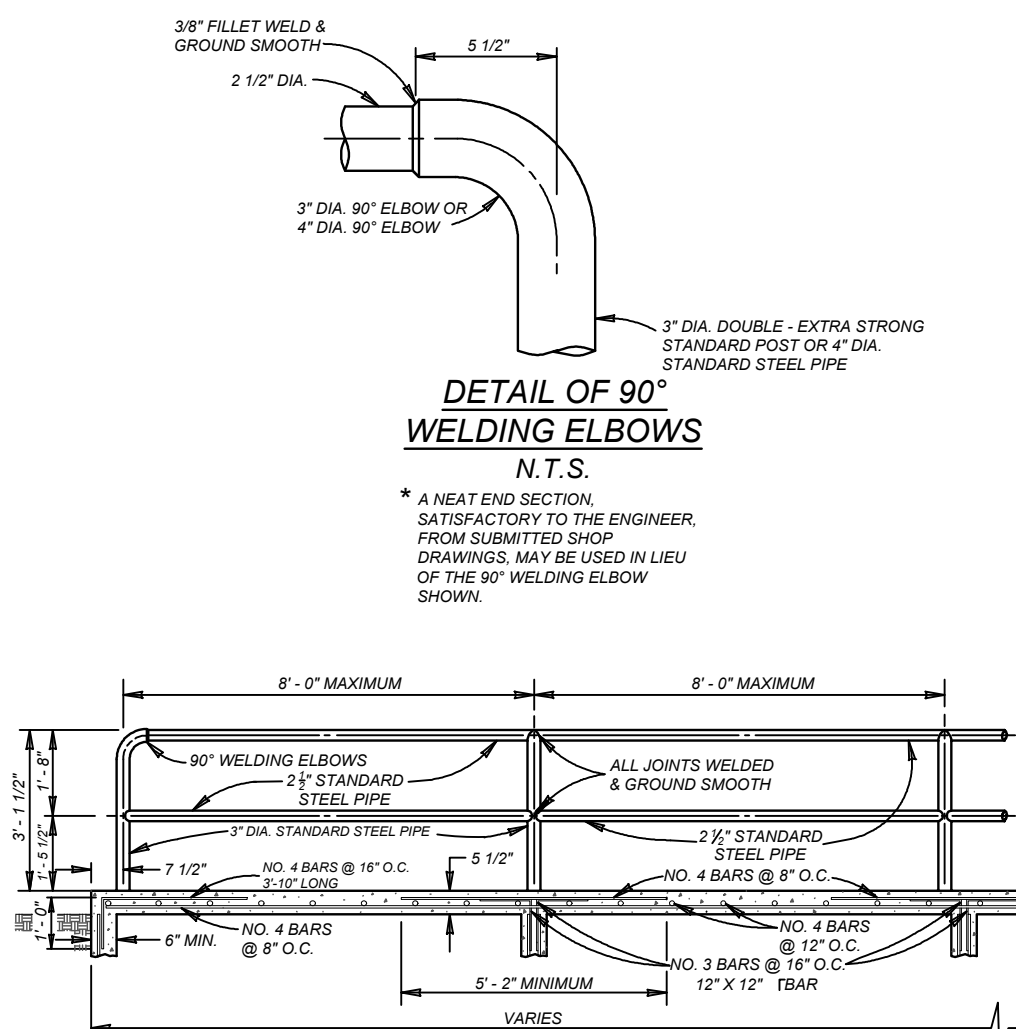
PIPE ANCHORAGE DETAILS
N.T.S.



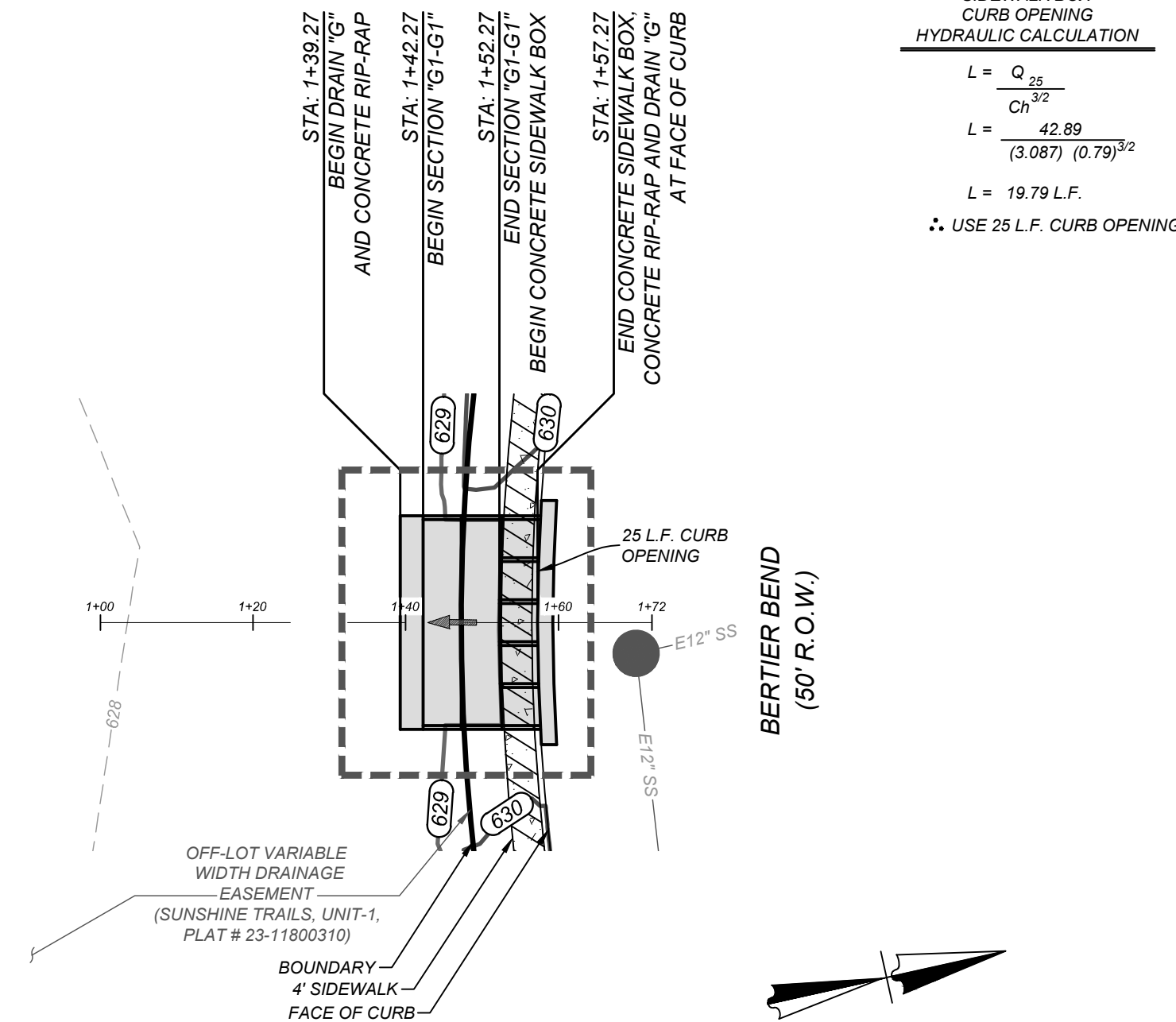
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N.T.S.



CURB ARMOR DETAIL
N.T.S.



TYPICAL SIDEWALK BRIDGE &
SIDEWALK PIPE RAILING SECTION
N.T.S.



DRAIN "G"
STA: 1+00.00 TO END

HORZ SCALE: 1"=20
VERT SCALE: 1"=5

[illegible]

1+00

1+80

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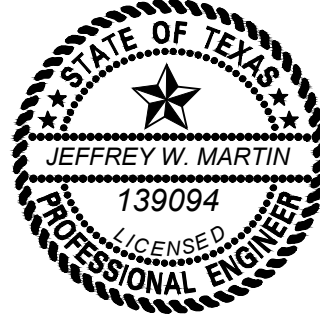
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: SDPP3145004 - F & G	

SHEET TITLE:

DRAIN "G" PLAN AND
PROFILE

SHEET NUMBER

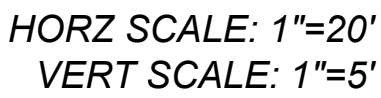
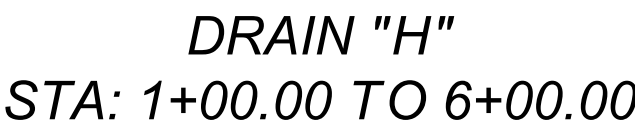
4.2

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20.00
SECTION
14-H11"

OFF-LOT 25'
SANITARY SEWER EASEMENT
(TO EXPIRE UPON
INCORPORATION INTO PLATTED
PUBLIC STREET R.O.W.)



Engineering
& Design

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STATE SPECIFIC DIRECT PHONE NUMB
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PROJECT NUMBER: 314-50-04		DRAWING NAME: SDPP3145004 - H	

DRAIN "H" PLAN AND
PROFILE (1 OF 3)

NUMBER: 4.3

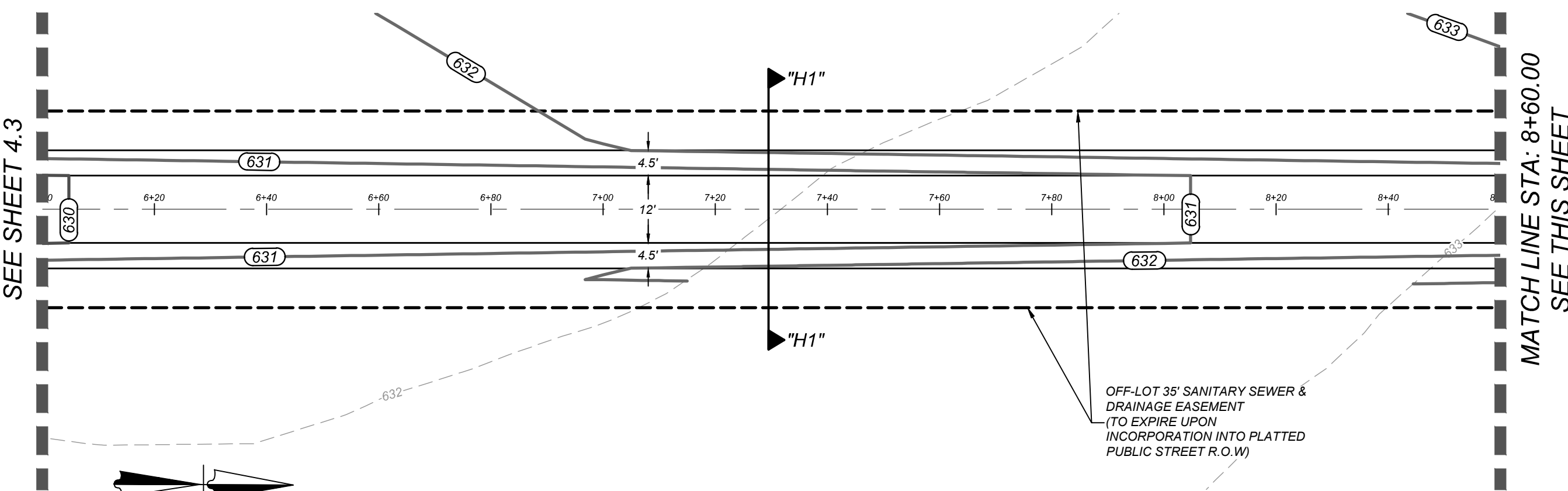
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

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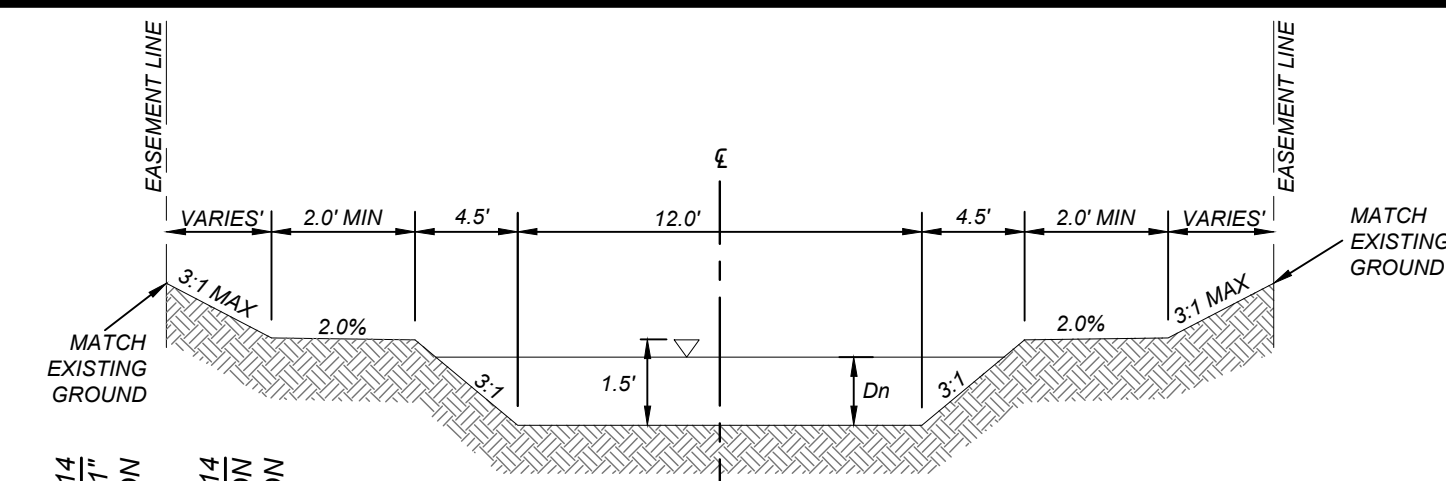
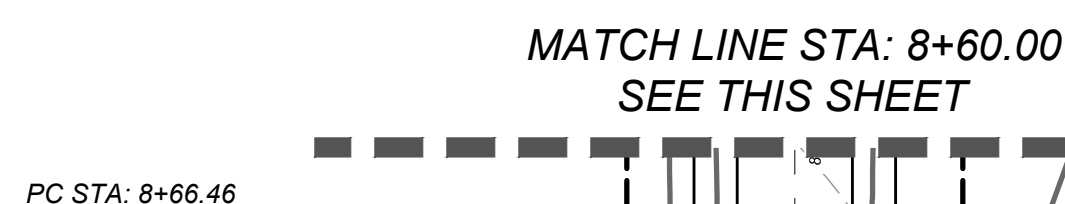
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING, ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT 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.



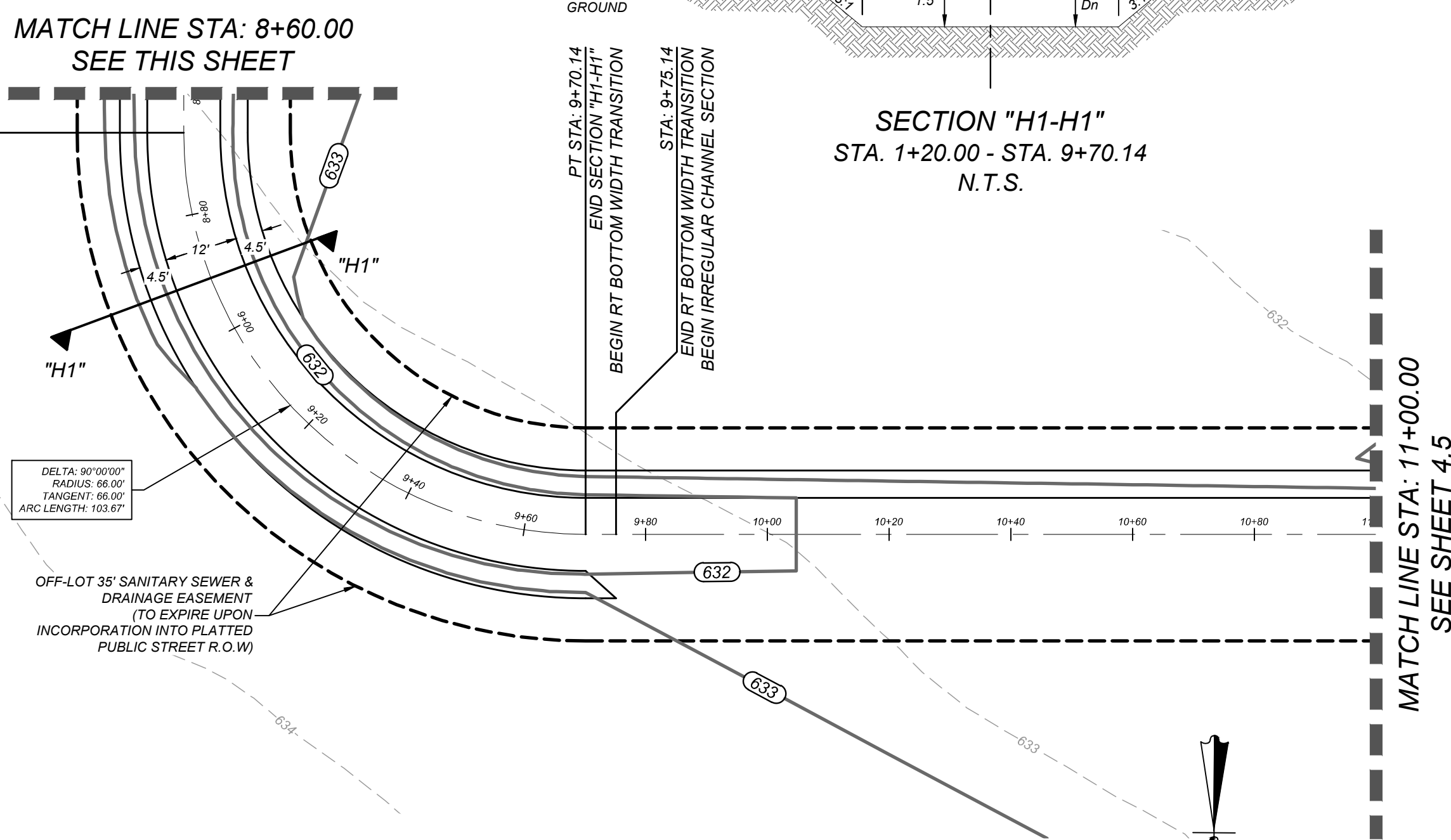
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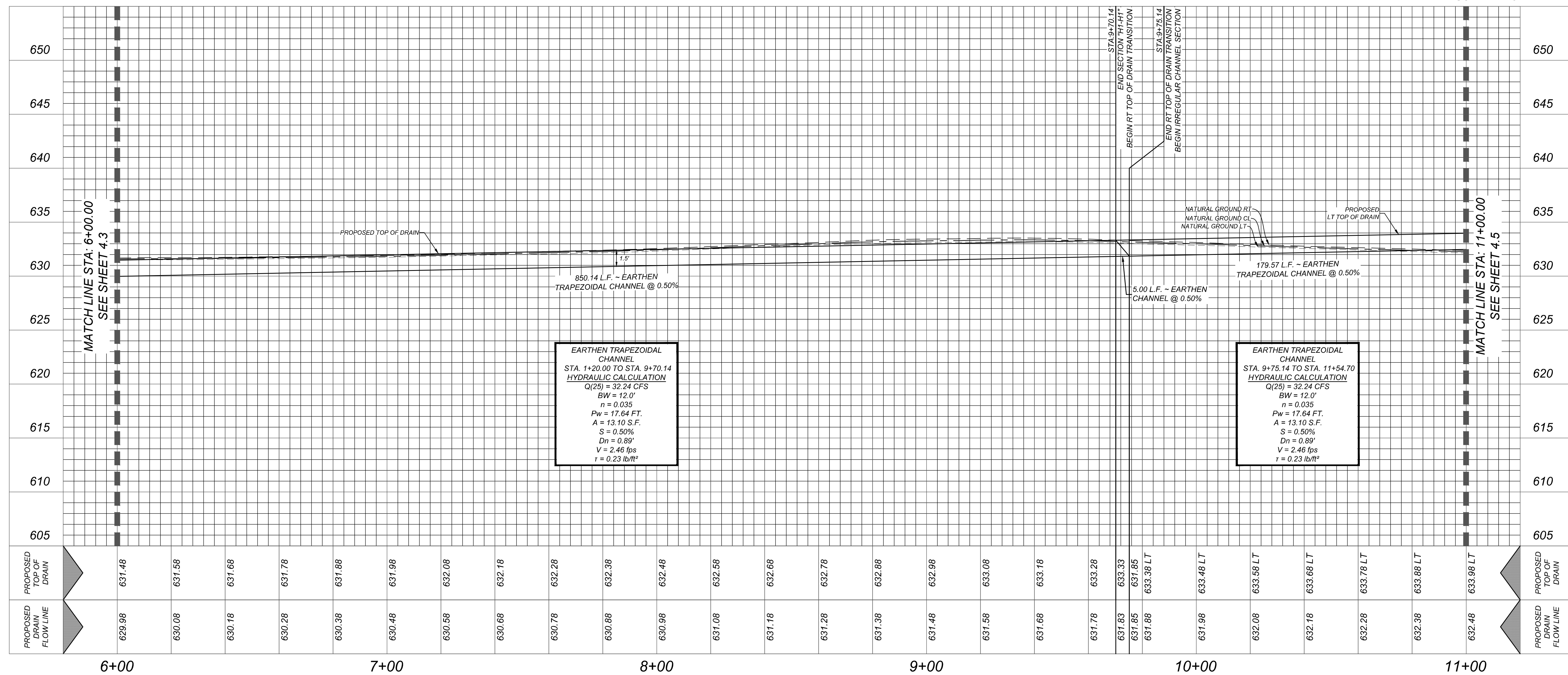
DRAIN "H"
STA: 6+00.00 TO 11+00.00



SECTION "H1-H1"
STA. 1+20.00 - STA. 9+70.14
N.T.S.



HORZ SCALE: 1"=20'
VERT SCALE: 1"=5'



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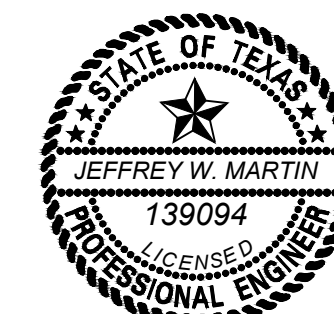


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5/1/24

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS



Engineering
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SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TRBIS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: SDPP3145004 - H	

SHEET TITLE:

DRAIN "H" PLAN AND
PROFILE (2 OF 3)

SHEET NUMBER: 4.4

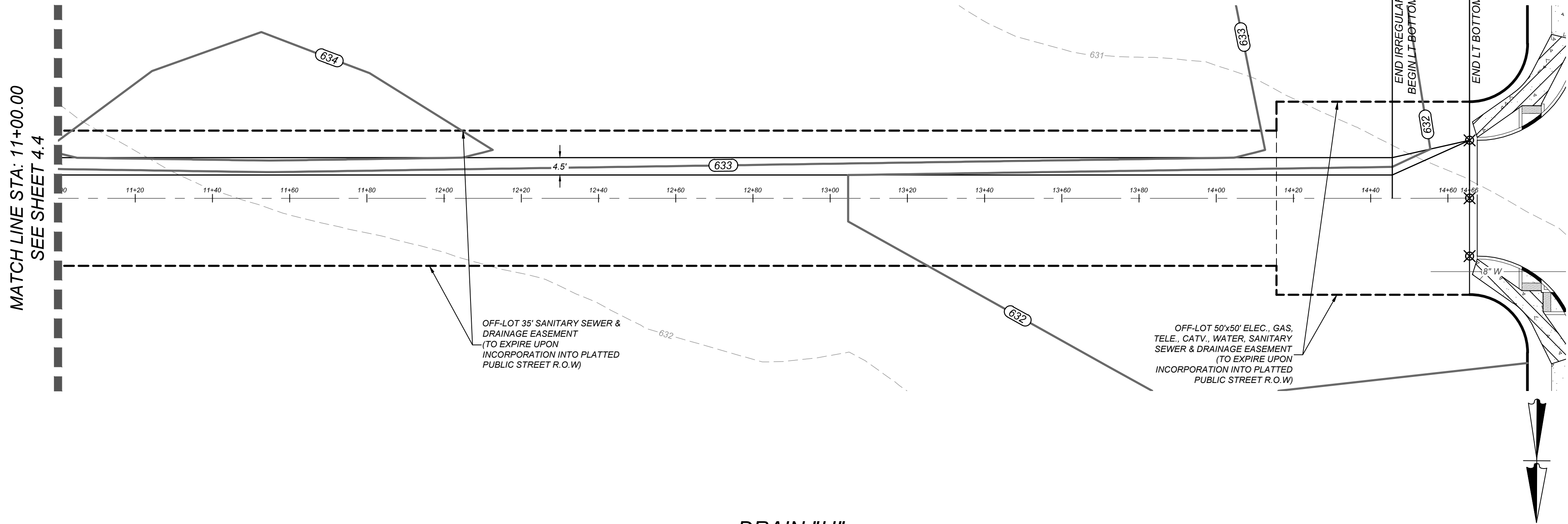
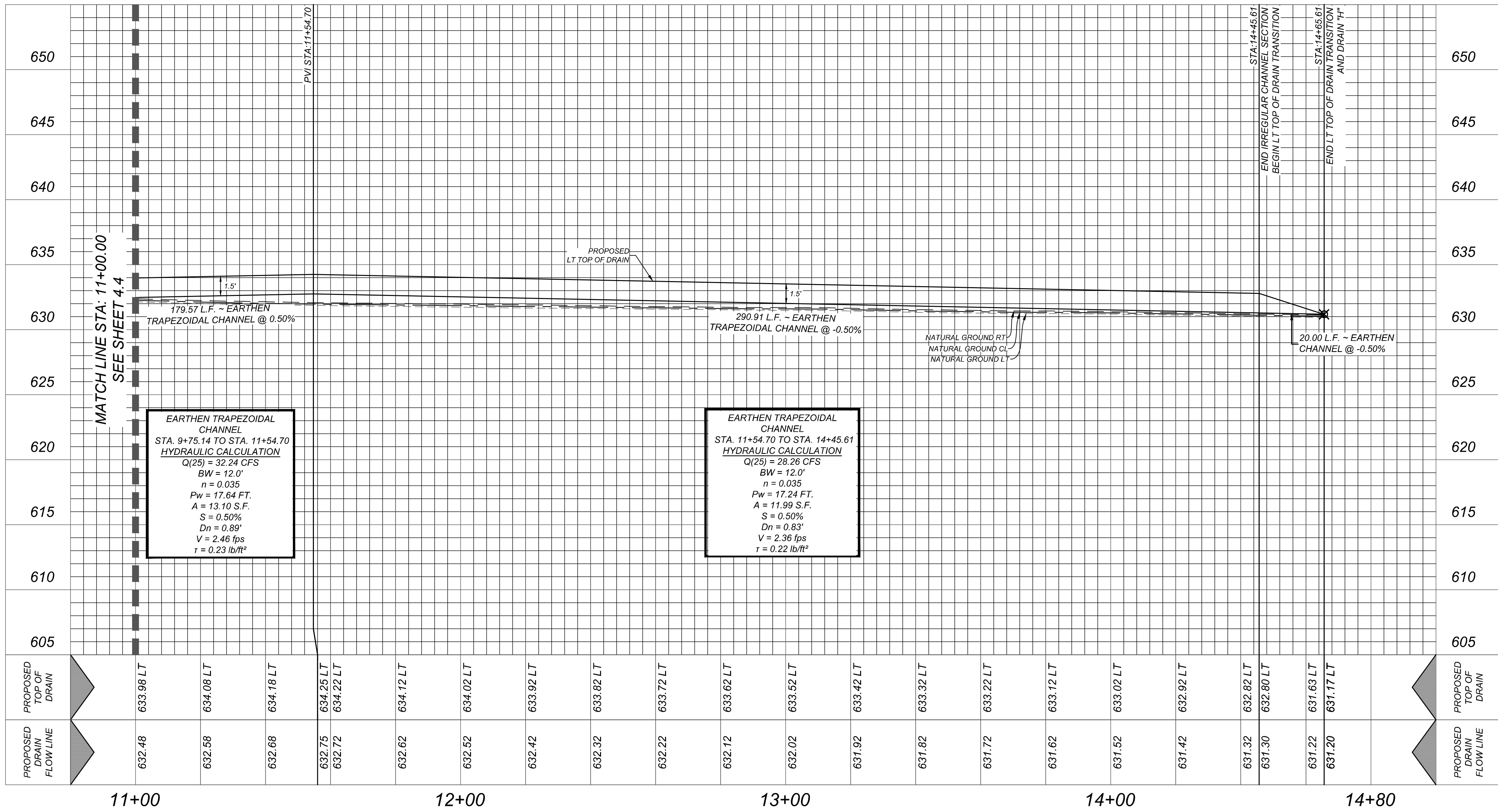
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TRENCH EXCAVATION SAFETY PROTECTION

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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.

MATCH LINE STA: 11+00.00
SEE SHEET 4.4DRAIN "H"
STA: 11+00.00 TO ENDHORZ SCALE: 1"=20'
VERT SCALE: 1"=5'

11+00

12+00

13+00

14+00

14+80

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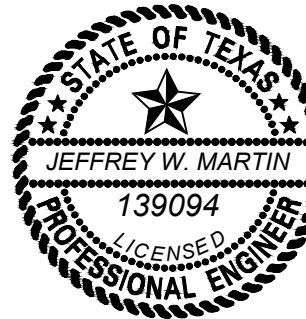
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REV. DATE. DRAWN BY. DESCRIPTION.



5/1/24

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536SAN ANTONIO
BEXAR COUNTY
TEXAS

Colliers

Engineering
& DesignSAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBP'S Form# 1-14000
TBP'S Form# 10194550SCALE: AS SHOWN DATE: 07/20/2023 DRAWN BY: SD CHECKED BY: SC
PROJECT NUMBER: 314-SO-04 DRAWING NAME: SDPP3145004 - HSHEET TITLE
DRAIN "H" PLAN AND
PROFILE (3 OF 3)SHEET NUMBER
4.5

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TRENCH EXCAVATION SAFETY PROTECTION

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CAUTION:

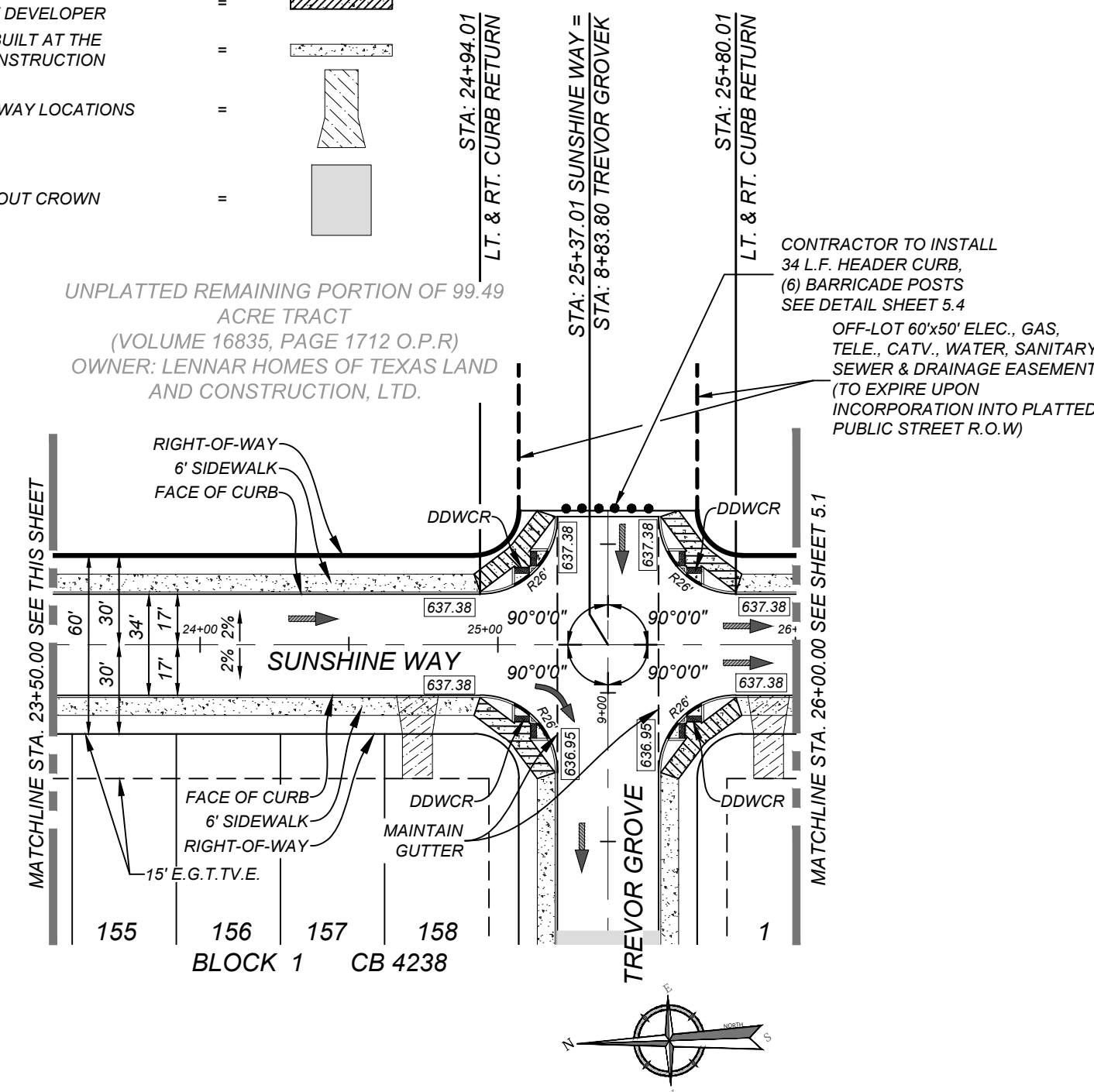
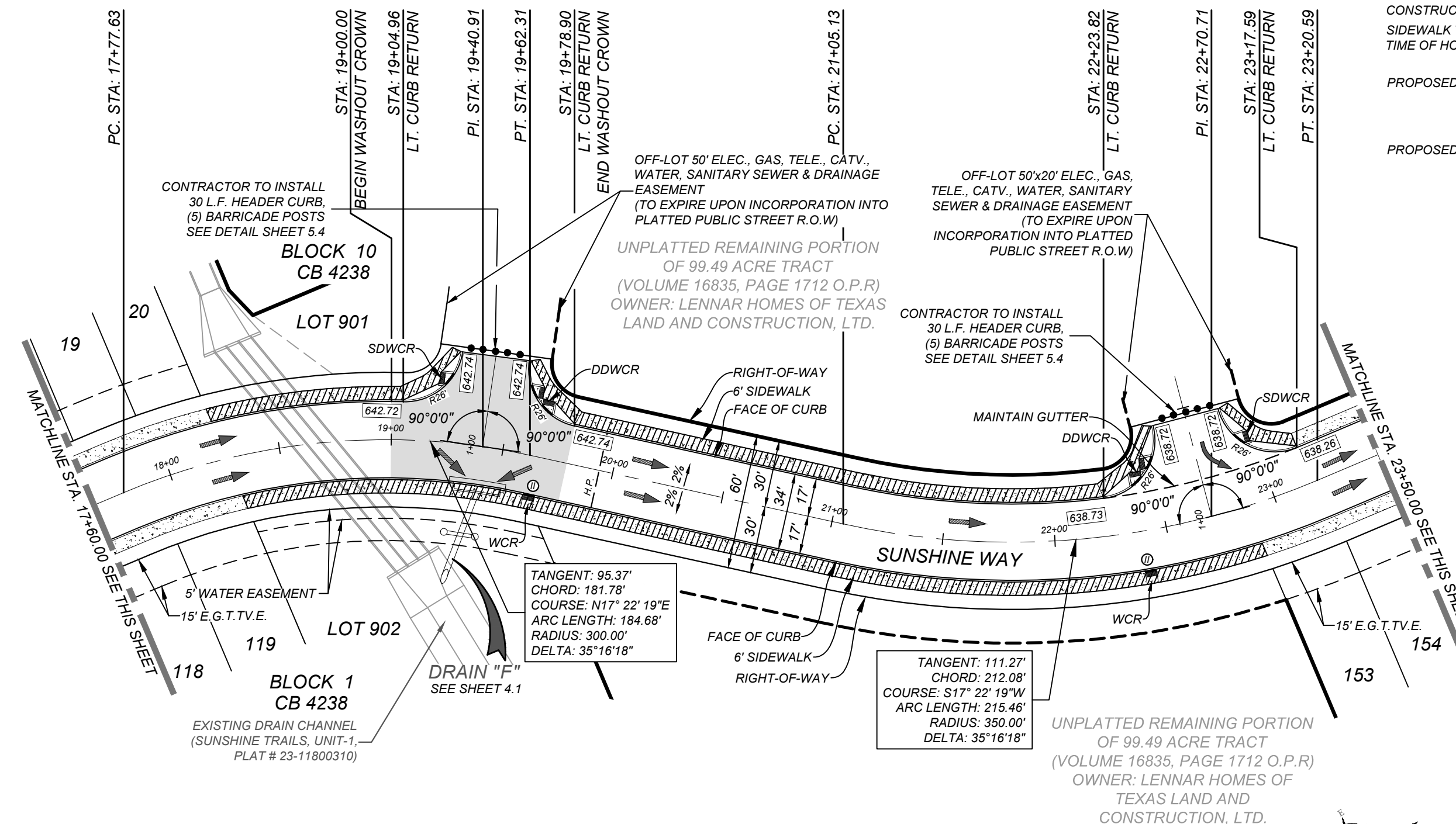
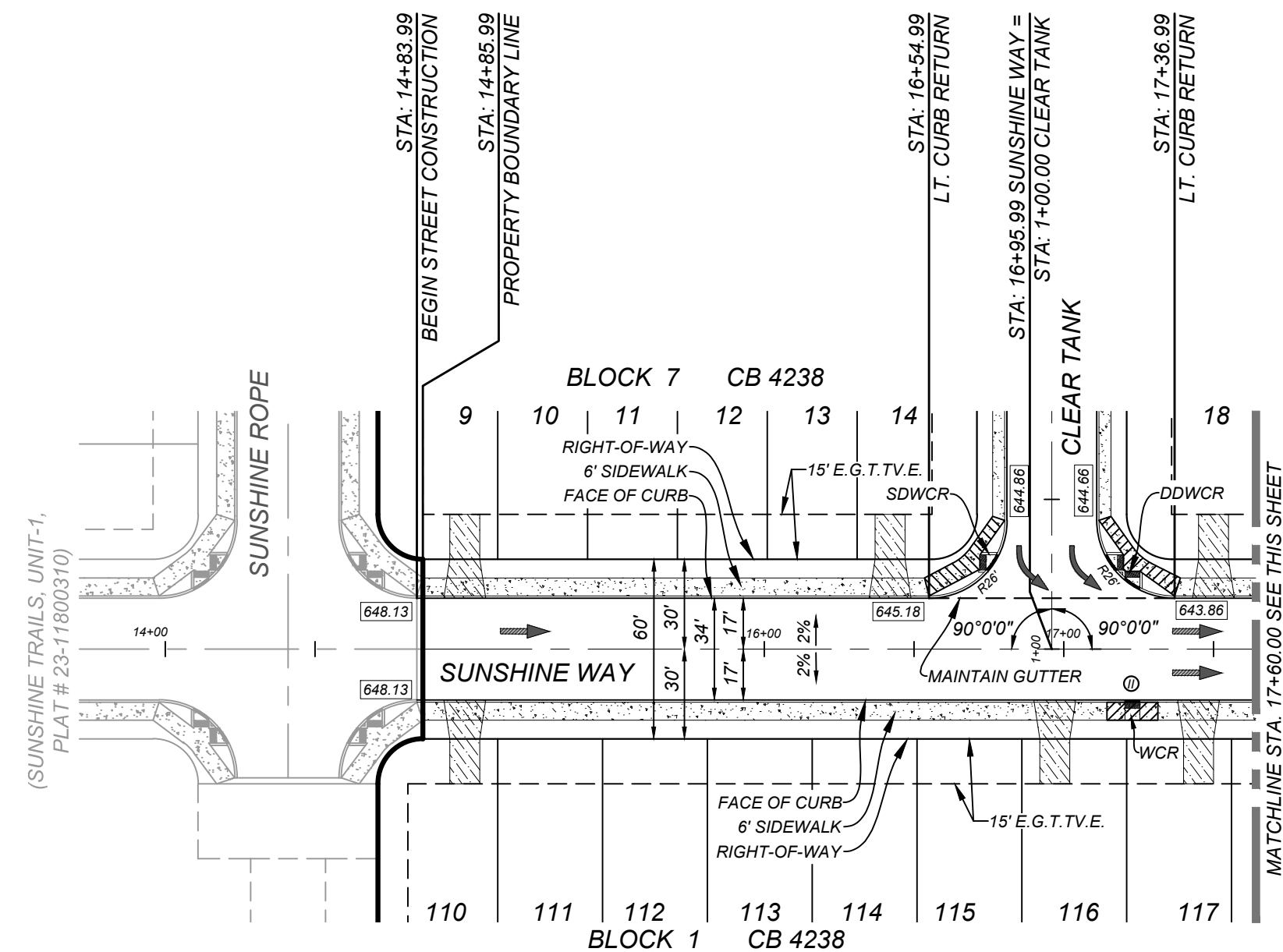
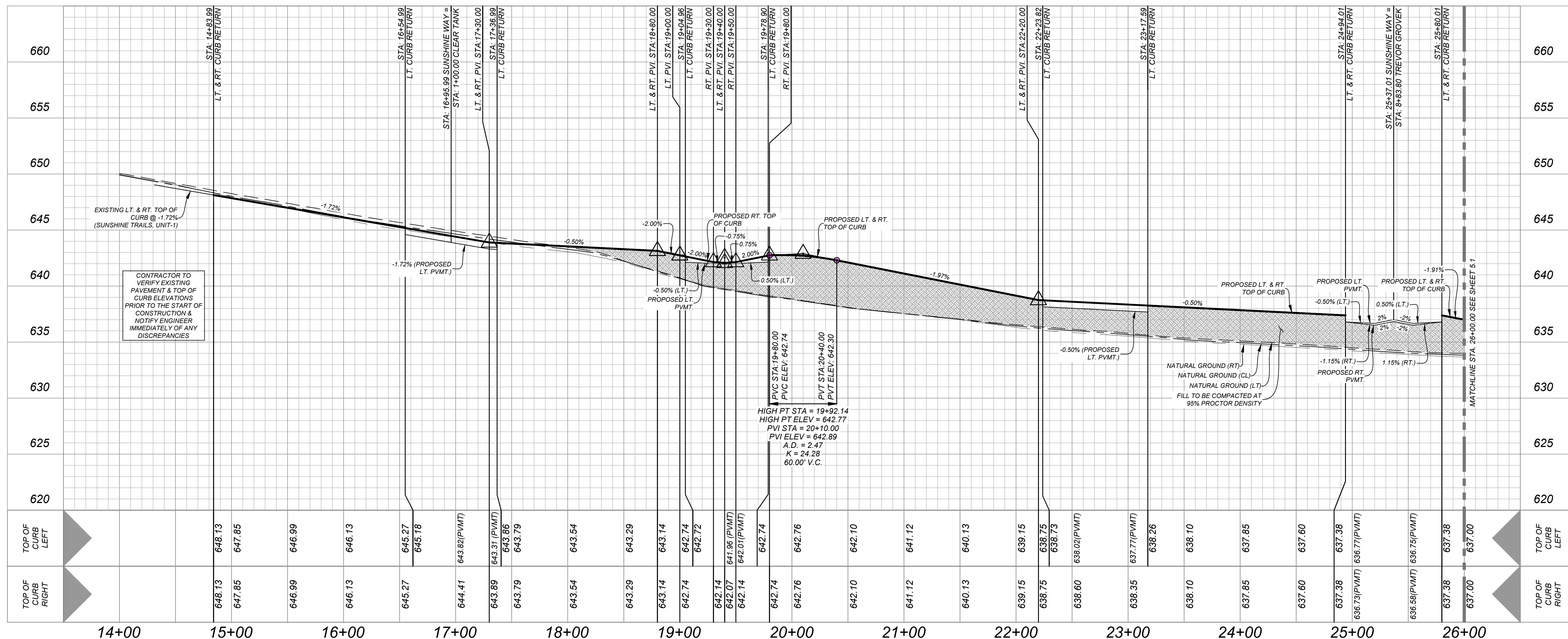
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BEXAR COUNTY R.O.W. NOTE

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

LEGEND

ELECTRIC, GAS, TELEPHONE & CABLE EASEMENT	=	E.G.T.V.E.
WHEEL CHAIR RAMP	=	W.C.R.
SINGLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	SDWCR
DOUBLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	DDWCR
HIGH POINT	=	H.P.
WHEEL CHAIR RAMP TYPE "II" (SEE SHEET 5.6)	=	II
STREET CENTERLINE	=	CL
PROPOSED FLOW ARROW	=	→
TOP OF CURB ELEVATIONS	=	552.00
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	552.00
SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION	=	552.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	

SUNSHINE WAY
STA: 14+83.99 - STA:26+00.00HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'Engineering
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TRENCH EXCAVATION SAFETY PROTECTION

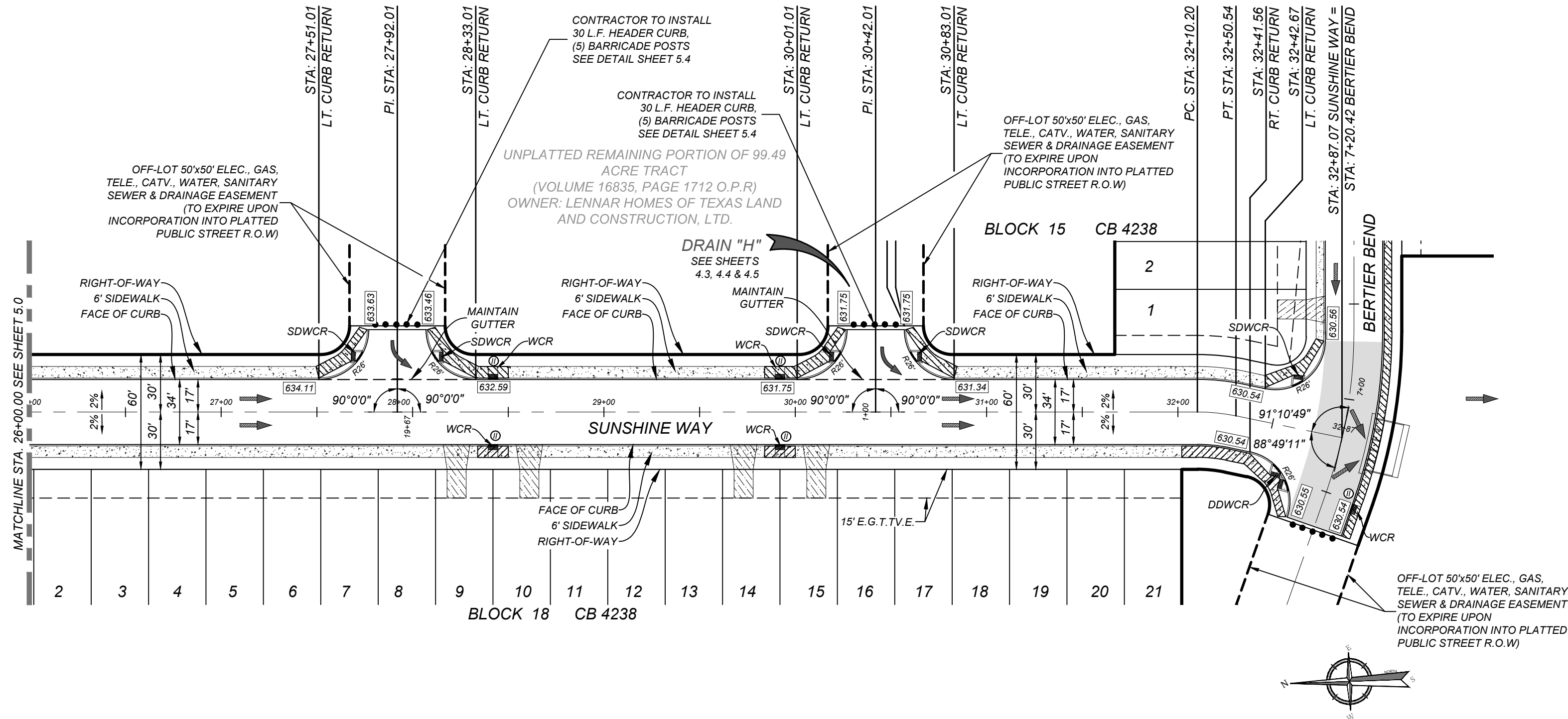
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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 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 RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

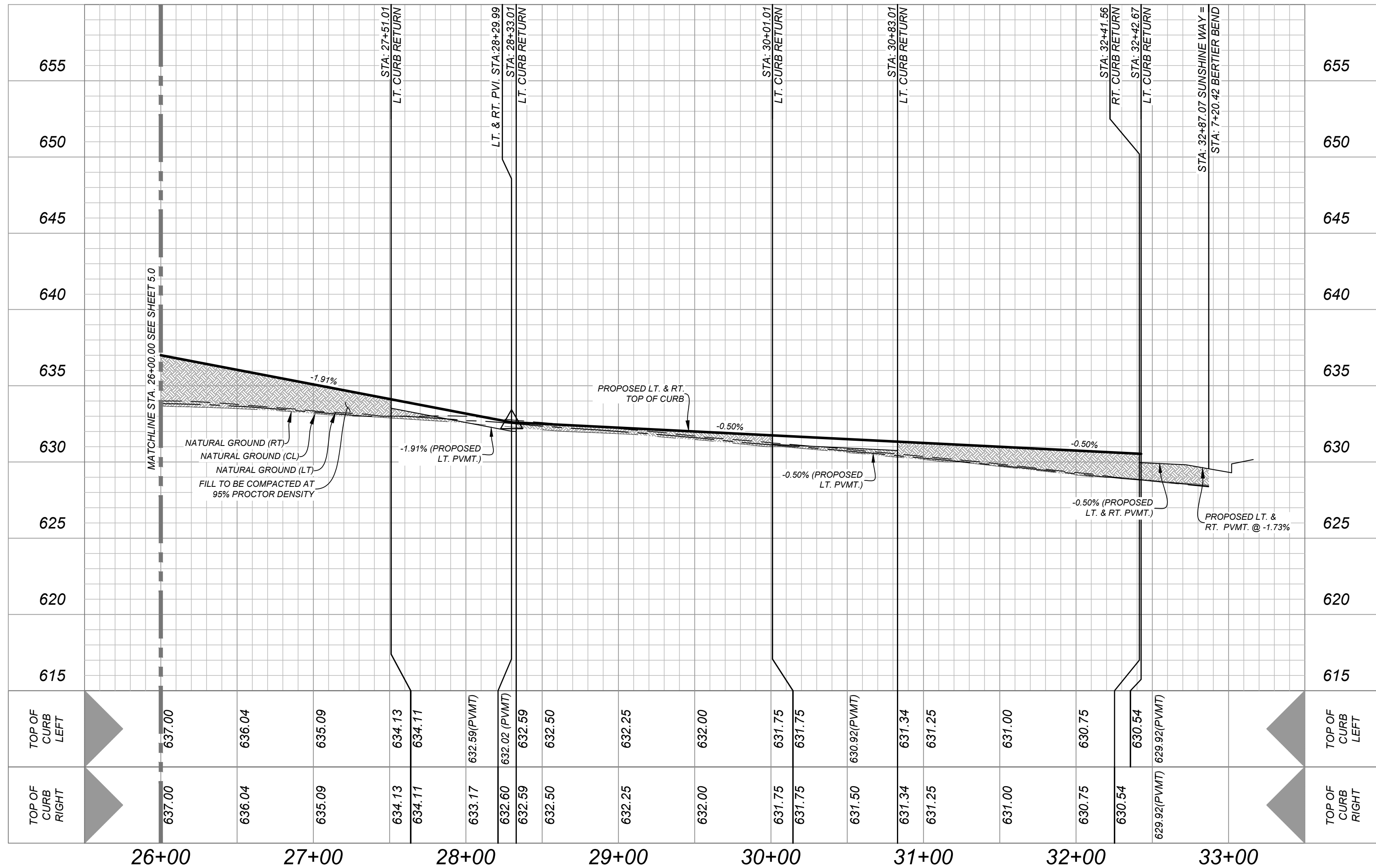
BEXAR COUNTY R.O.W. NOTE

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.



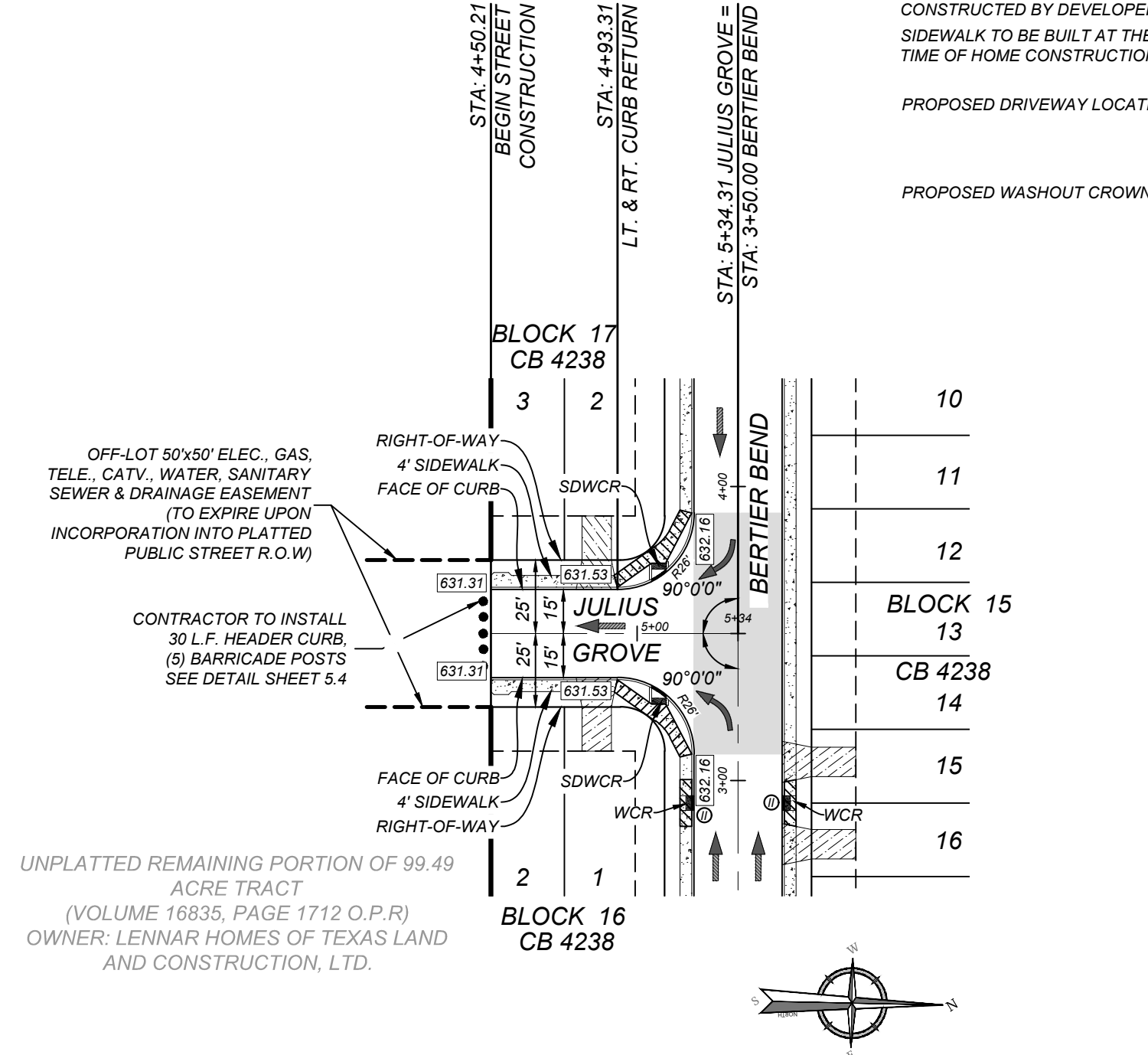
SUNSHINE WAY
STA: 26+00.00 - END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



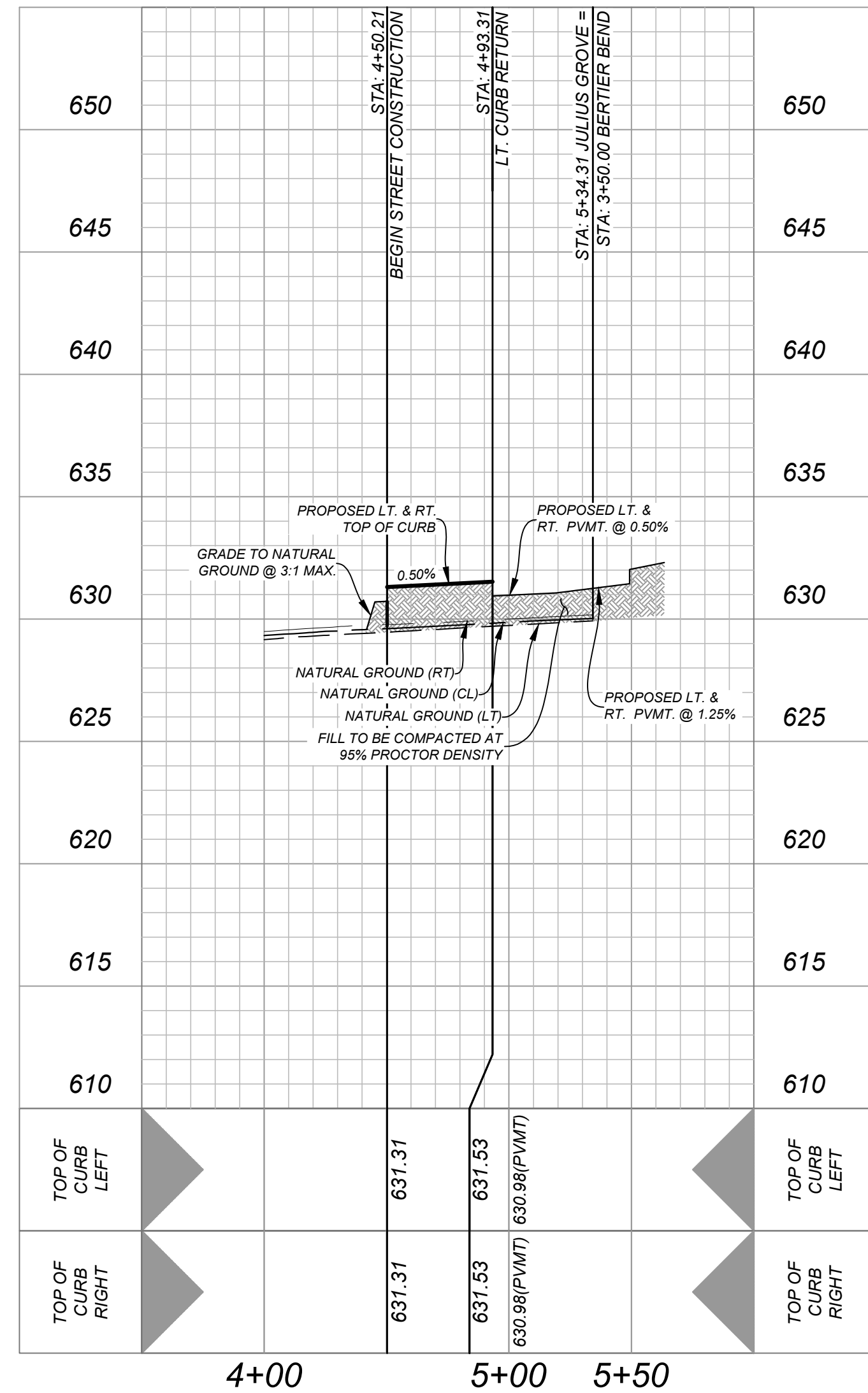
LEGEND

ELECTRIC, GAS, TELEPHONE & CABLE EASEMENT	=	E.G.T.T.V.E.
WHEELCHAIR RAMP	=	W.C.R.
SINGLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	SDWCR
DOUBLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	DDWCR
HIGH POINT	=	H.P.
WHEELCHAIR RAMP TYPE "II" (SEE SHEET 5.6)	=	Ⓢ
STREET CENTERLINE	=	⌄
PROPOSED FLOW ARROW	=	➔
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	=	▨



JULIUS GROVE
STA: 4+50.21 - END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



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STATE OF TEXAS

JEFFREY W. MARTIN

139094

PROFESSIONAL ENGINEER

5/1/24

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS

Colliers
Engineering
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SA 3421 Paisanos Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TDRS Form 1-14009
TDRS Form 1-10194550

SCALE: AS SHOWN
DATE: 07/20/2023
PROJECT NUMBER: 314-50-04
DRAWING NUMBER: STPP3145004
DRAWN BY: SD
CHECKED BY: SC

SHEET TITLE:
SUNSHINE WAY & JULIUS
GROVE, STREET PLAN AND
PROFILES

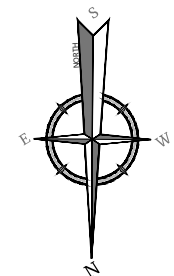
SHEET NUMBER:
5.1

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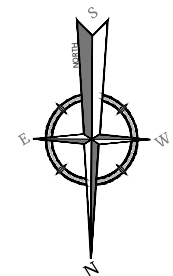
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INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED 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.

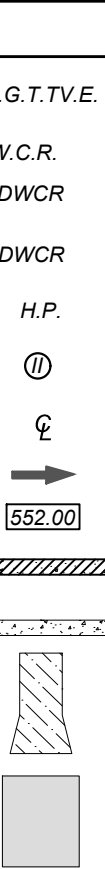
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




HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



ELECTRIC, GAS, TELEPHONE & CABLE EASEMENT	=	E.G.T.V.E
WHEELCHAIR RAMP	=	W.C.R.
SINGLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	SDWC
DOUBLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	DDWC
HIGH POINT	=	H.P.
WHEELCHAIR RAMP TYPE "II" SEE SHEET 5.6	=	②
STREET CENTERLINE	=	℄
PROPOSED FLOW ARROW	=	→
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	=	

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5/1/24

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Parkway
San Antonio, TX 78231
Phone: 210.979.8444
LIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SHEET TITLE:
BERTIER BEND & TREVOR
GROVE, STREET PLAN AND
PROFILES

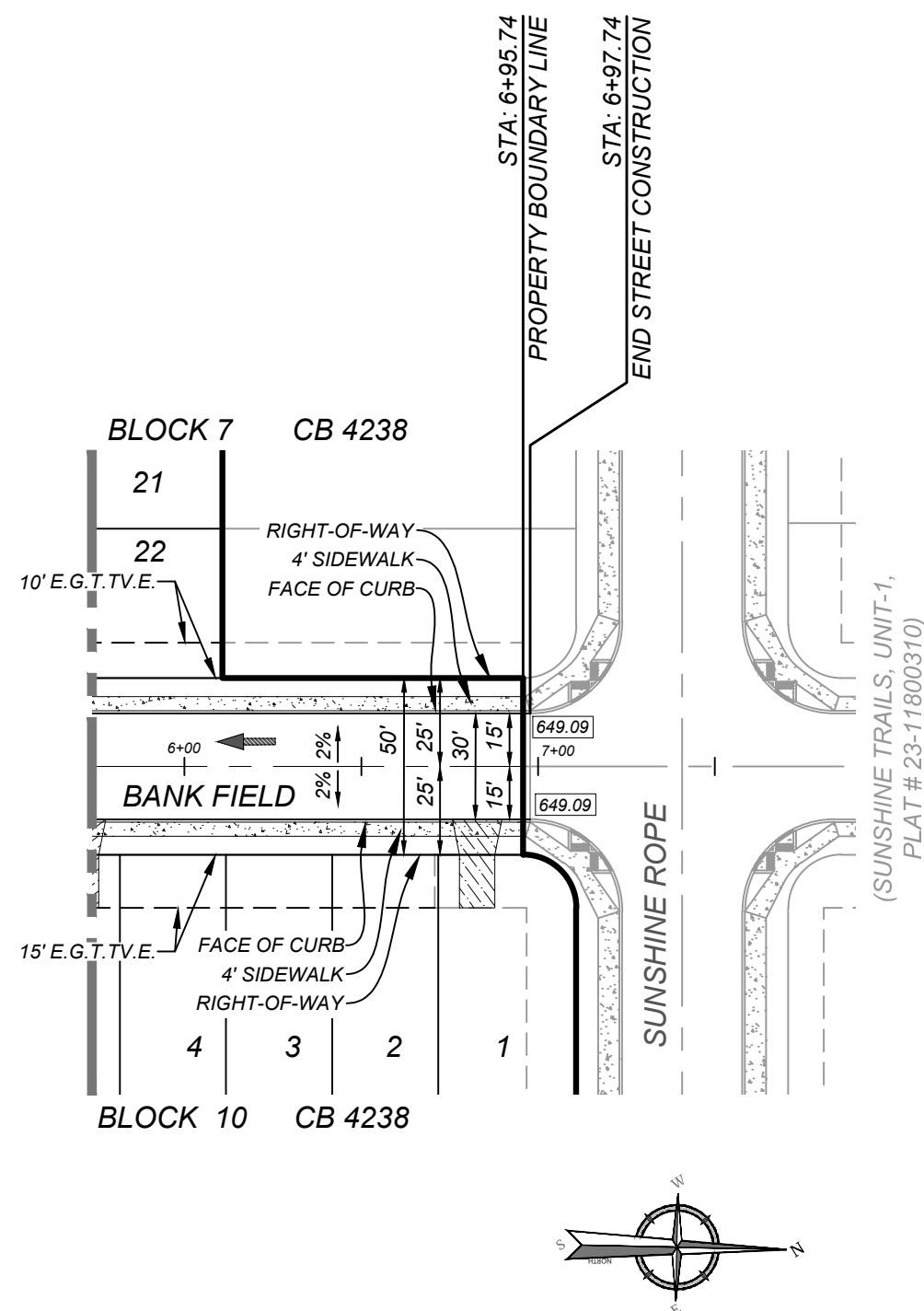
SHEET NUMBER: 5.2

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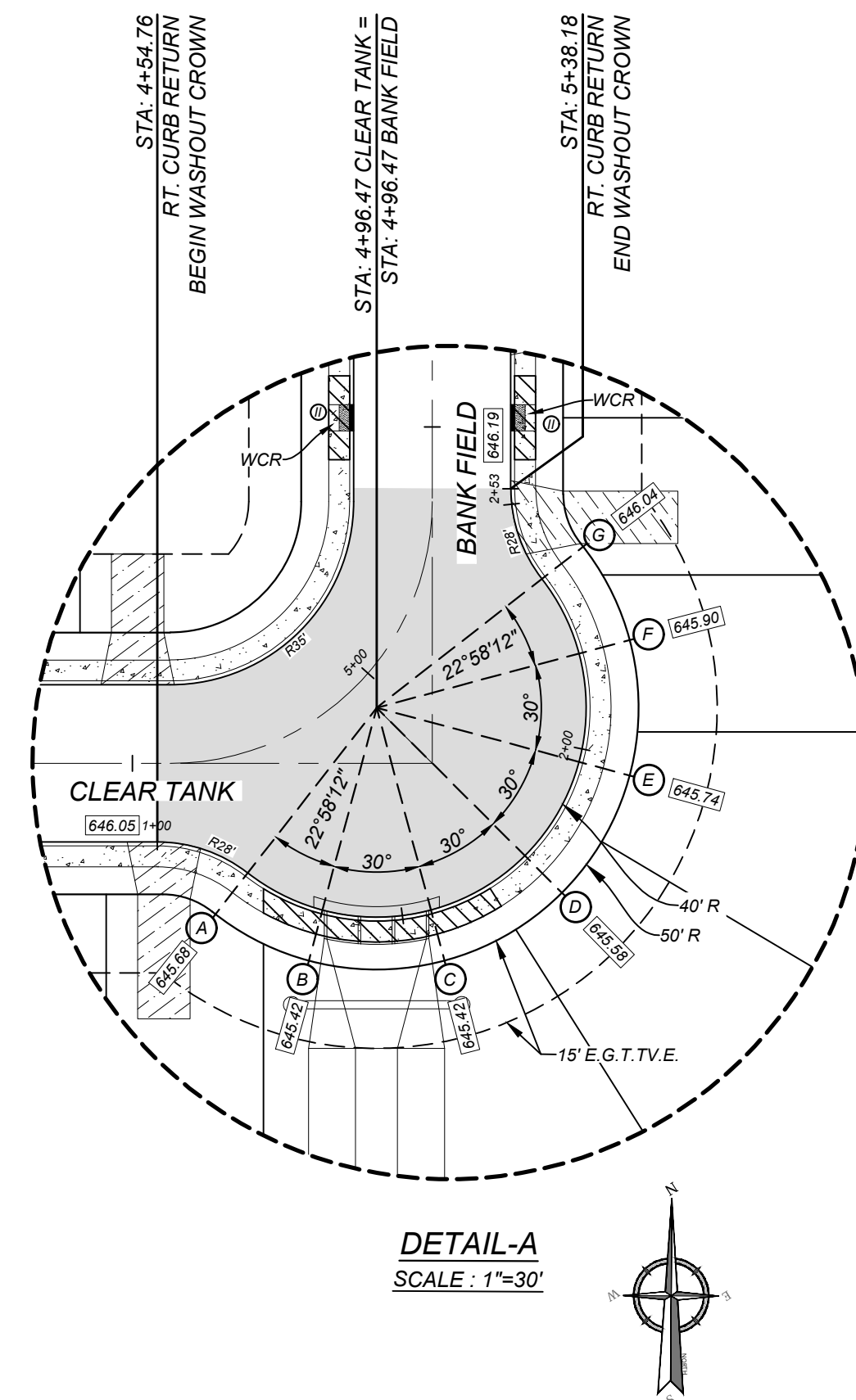
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


INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITING 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.

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R.O.W.



BANK FIELD HORZ SCALE: 1"=50'
STA: 4+96.47 - END VERT SCALE: 1"=5'



ELECTRIC, GAS, TELEPHONE & CABLE EASEMENT	=	E.G.T.T.V.E.
WHEELCHAIR RAMP	=	W.C.R.
SINGLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	SDWCR
DOUBLE DIRECTIONAL WHEEL CHAIR RAMP (SEE SHEET 5.4)	=	DDWCR
HIGH POINT	=	H.P.
WHEELCHAIR RAMP TYPE "II" SEE SHEET 5.6	=	⑦
STREET CENTERLINE	=	⌒
PROPOSED FLOW ARROW	=	→
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	=	

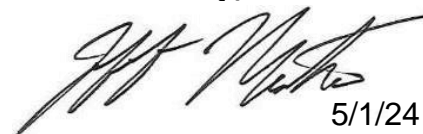
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FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
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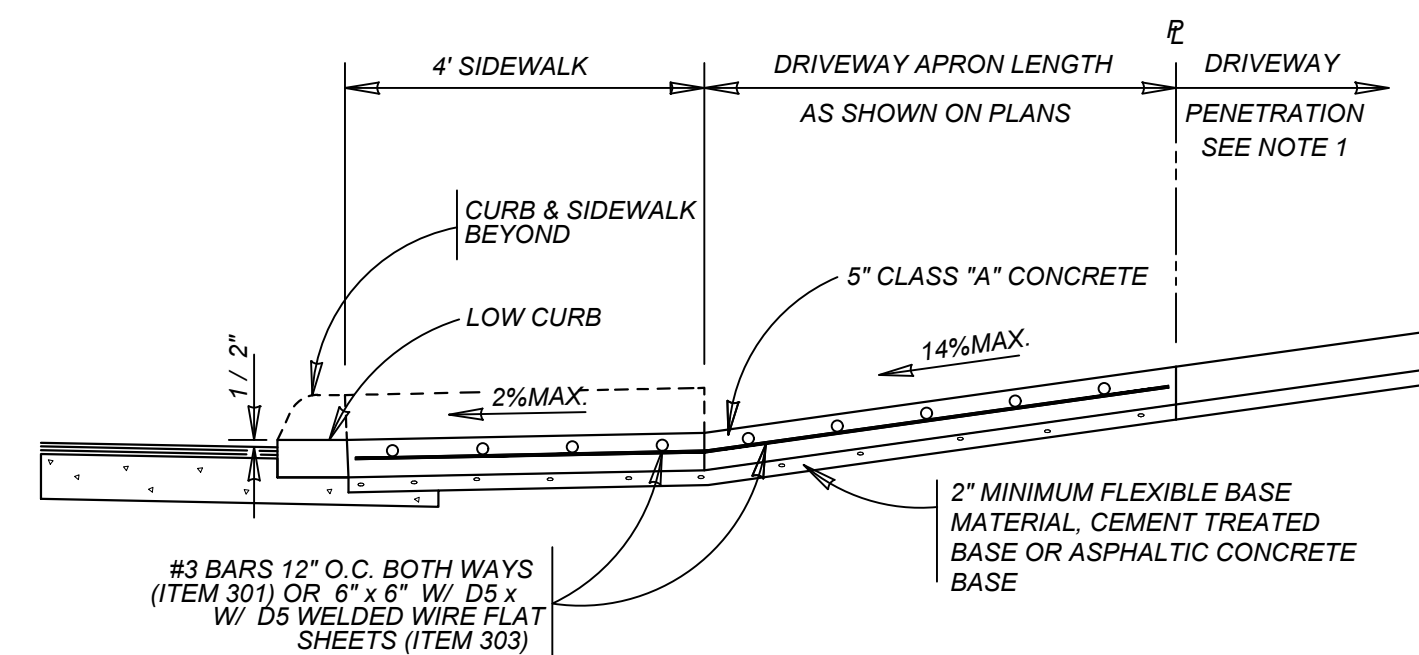
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PROJECT NUMBER: 314-50-04		DRAWING NAME: STPP3145004	

CLEAR TANK & BANK FIELD,
STREET PLAN AND PRFILES

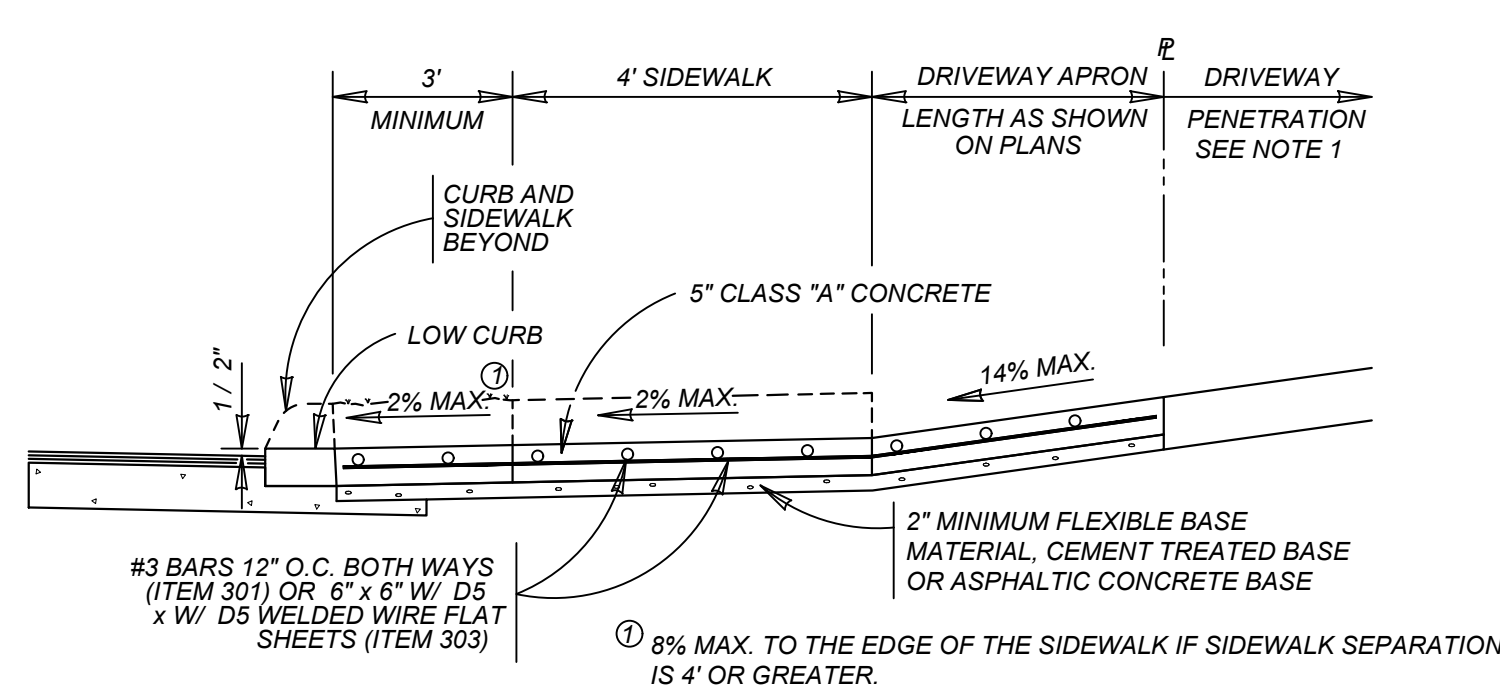
SHEET NUMBER

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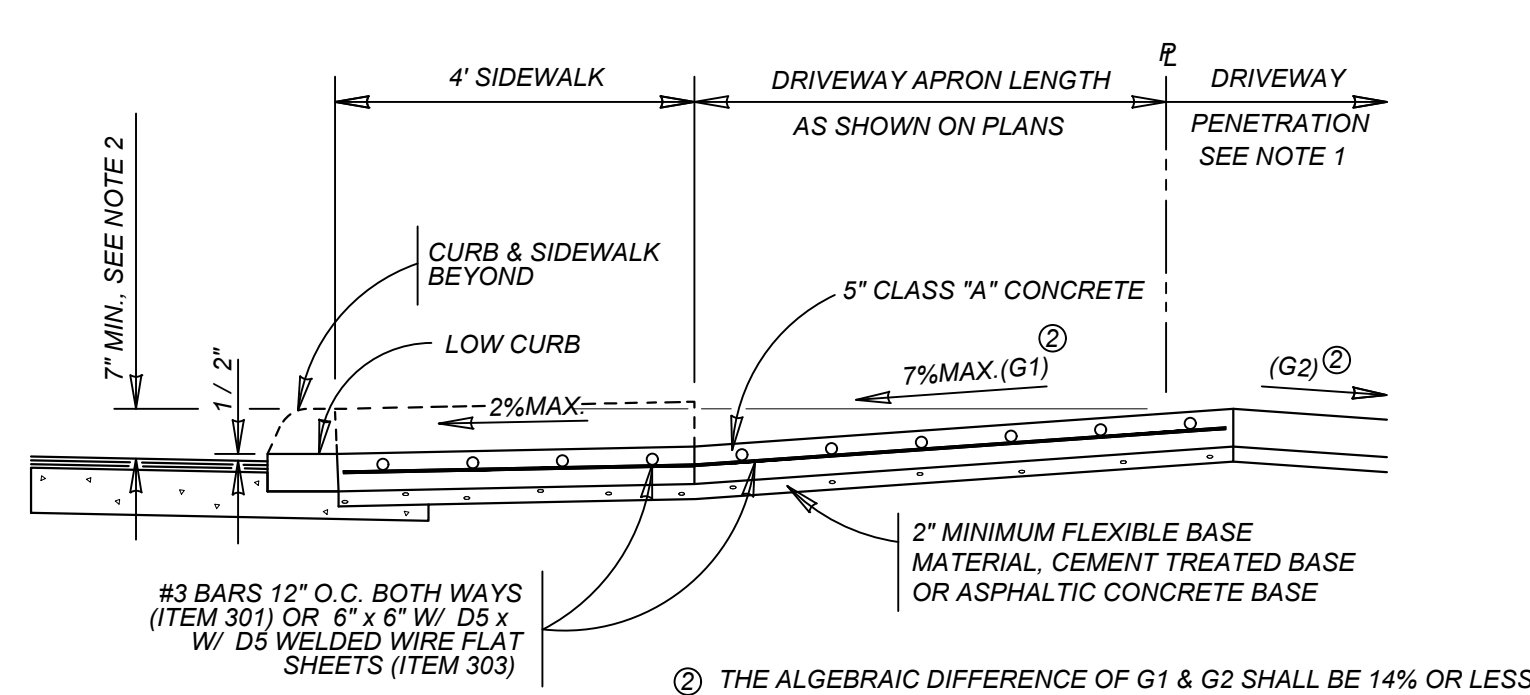
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

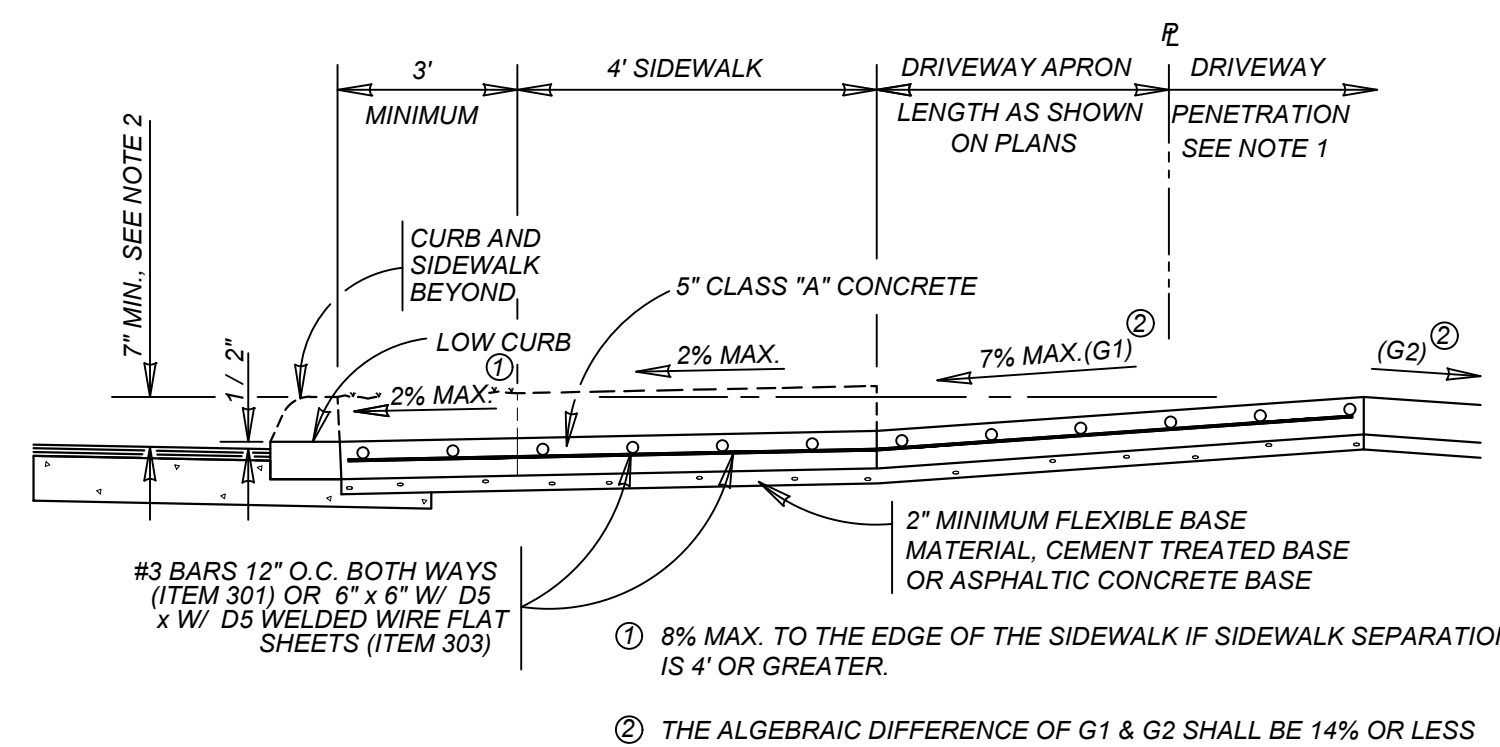
WITH SIDEWALK ABUTTING CURB
ITEM 503.1

**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

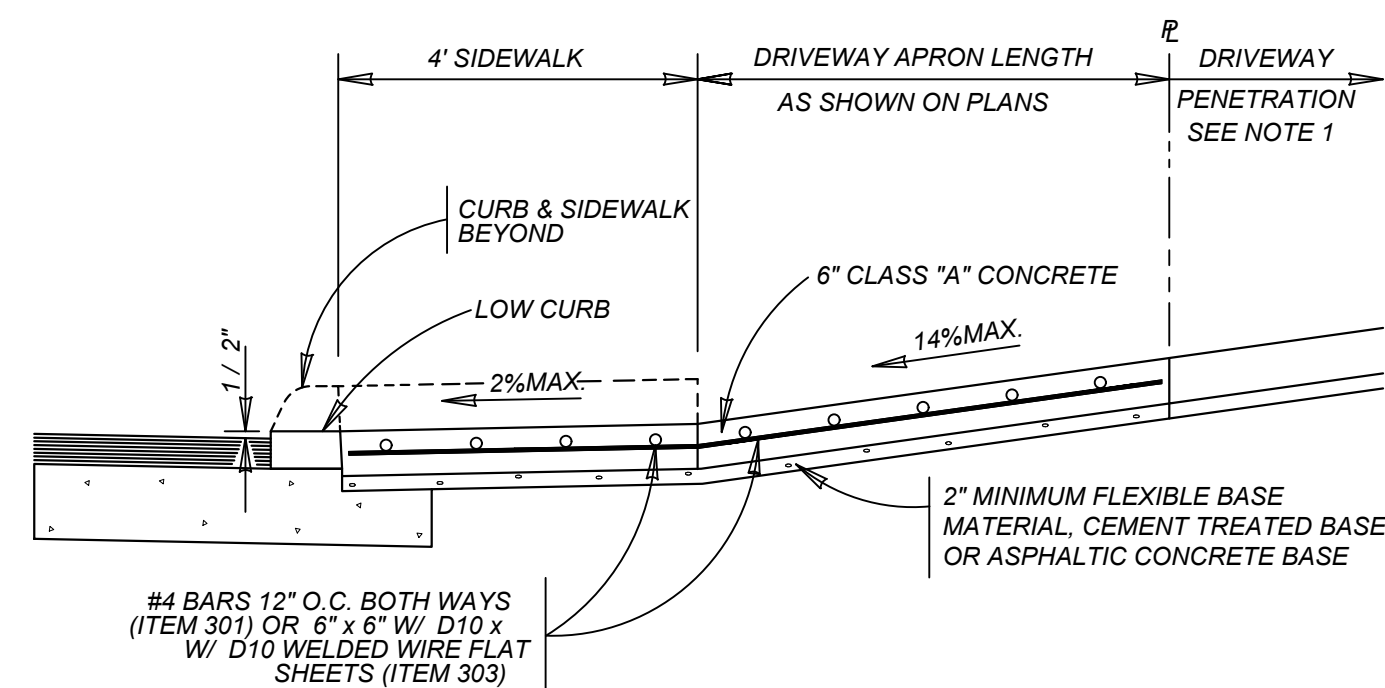
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1

**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

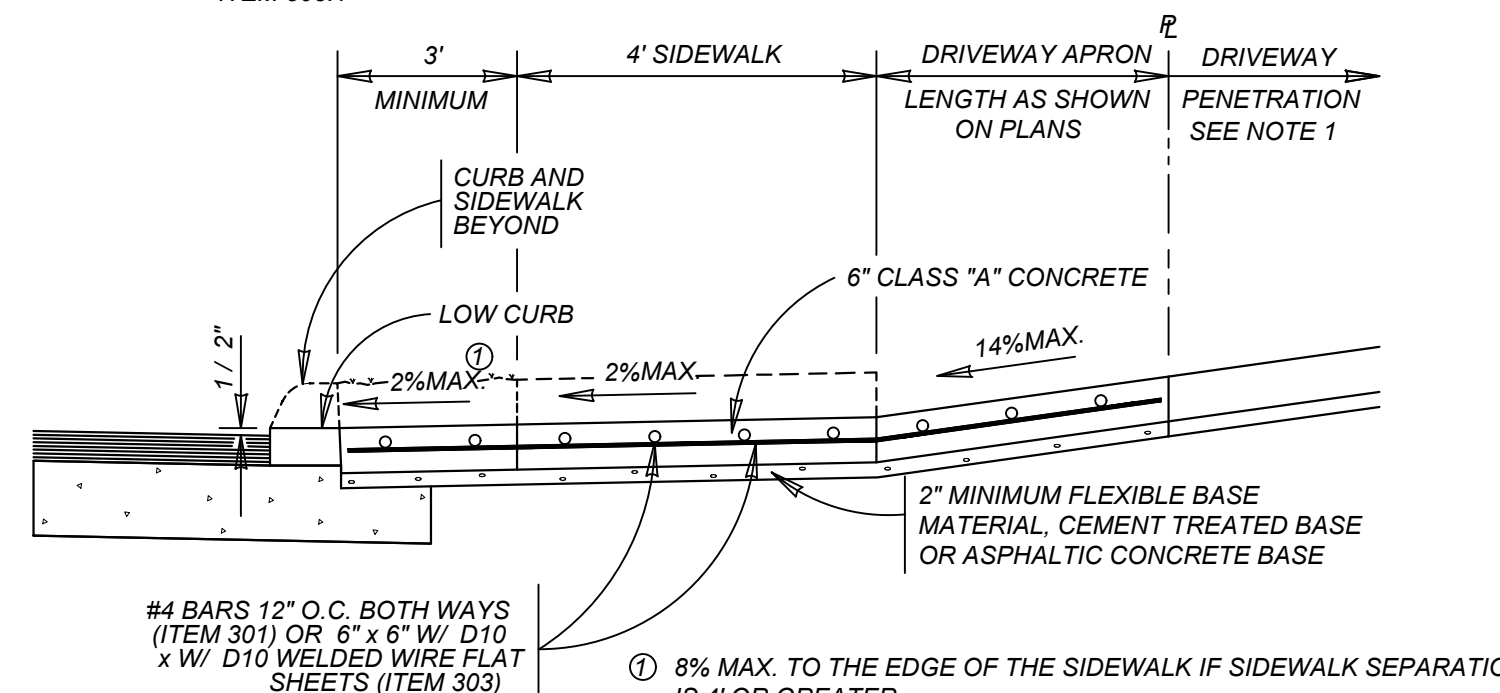
WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1

**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
ITEM 503.1

**TYPICAL COMMERCIAL DRIVEWAY SECTION**

WITH SIDEWALK ABUTTING CURB
ITEM 503.2

**TYPICAL COMMERCIAL DRIVEWAY SECTION**

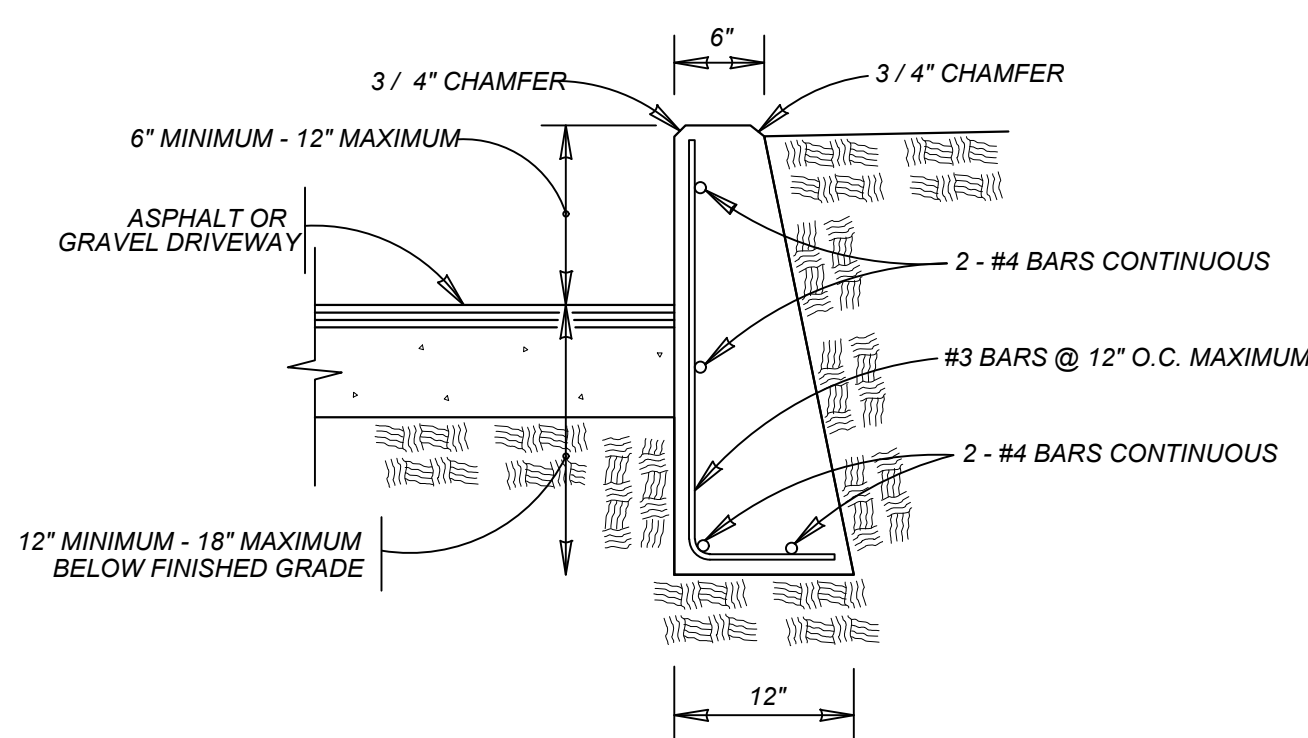
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2

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	MAXIMUM
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 3' 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 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.
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.

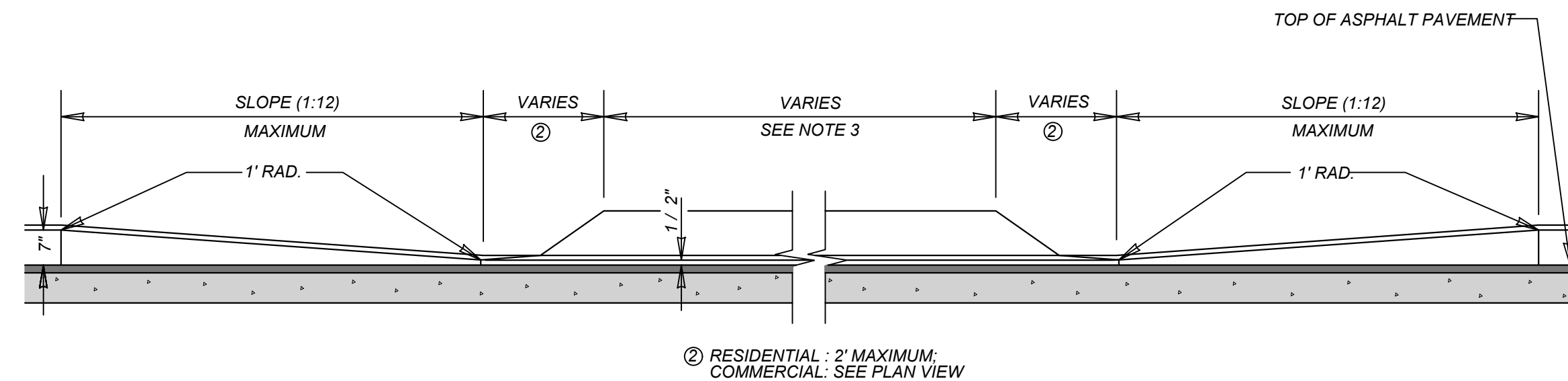


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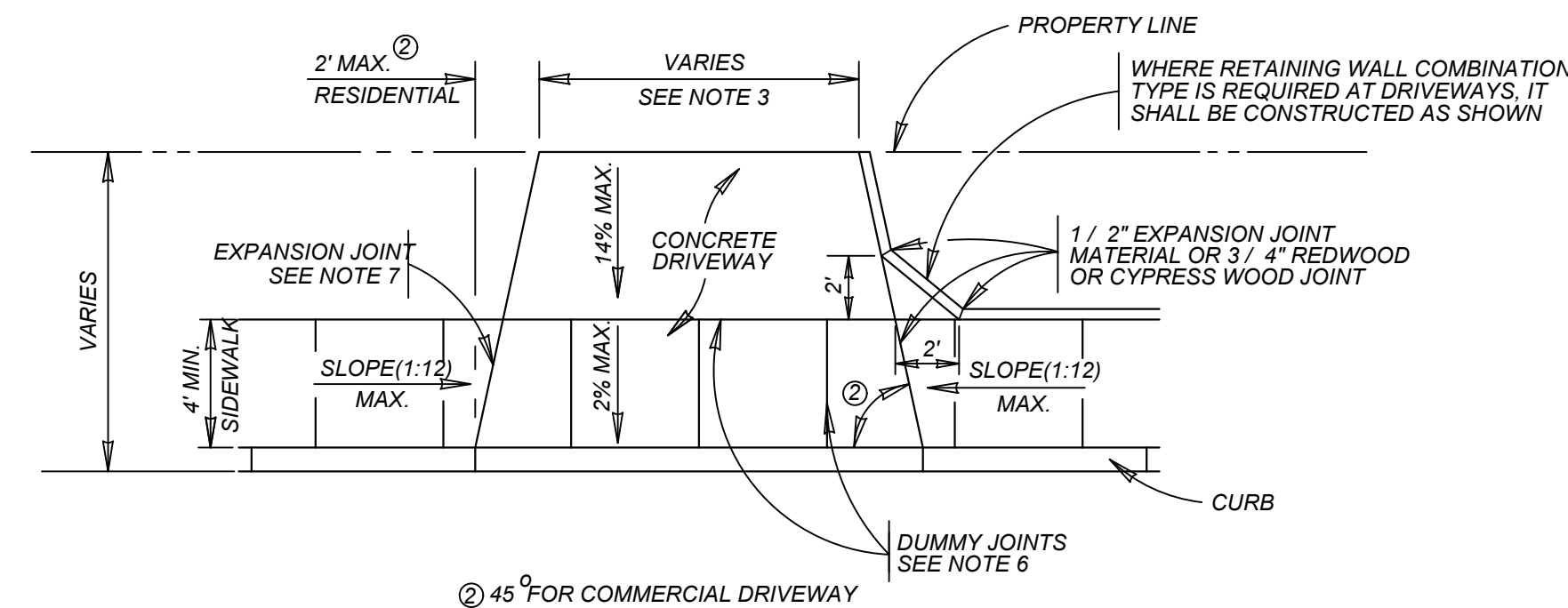
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY - CONCRETE RETAINING WALL

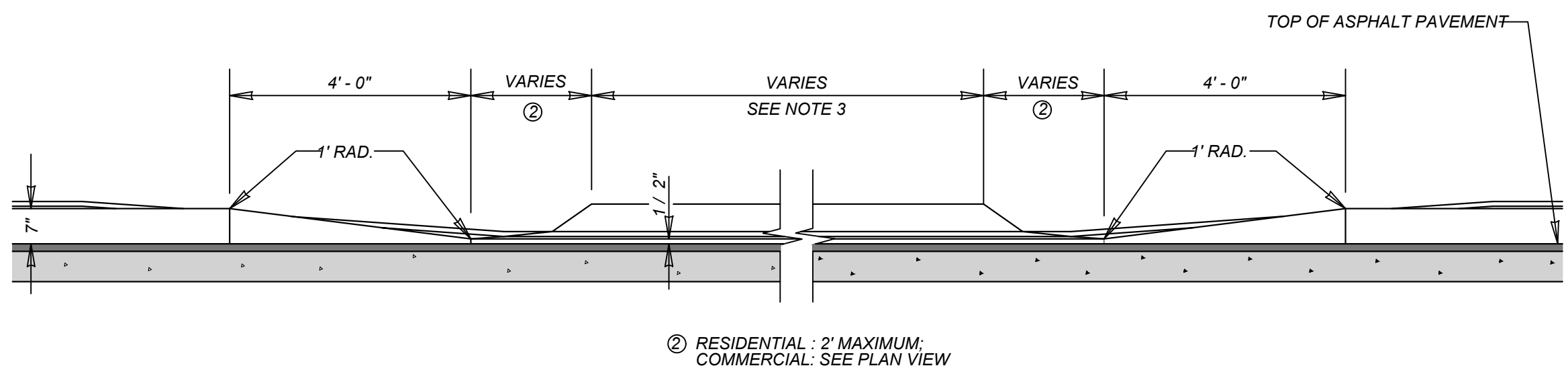
ON COMPACTED SUBGRADE
ITEM 307.1

**CURB PROFILE AT DRIVEWAY**

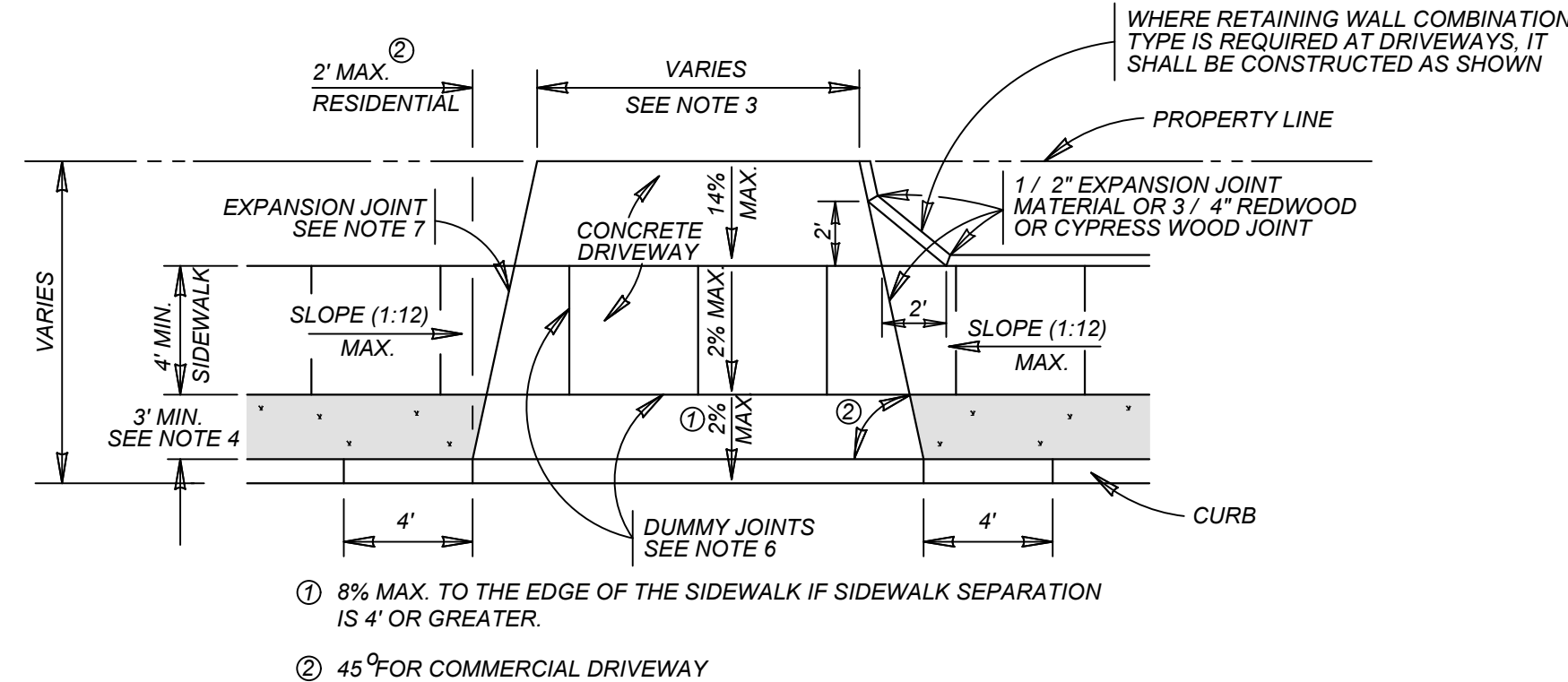
WITH SIDEWALK ABUTTING CURB

**TYPICAL DRIVEWAY PLAN VIEW**

WITH SIDEWALK ABUTTING CURB

**CURB PROFILE AT DRIVEWAY**

WITH SIDEWALK SEPARATED FROM CURB

**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:
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS

Colliers

Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBD Form 11-14009
TBD Form 10194550




SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	07/20/2023	SD	SC
PROJECT NUMBER:	DRAWING NAME:		
314-50-04	STD13145004		

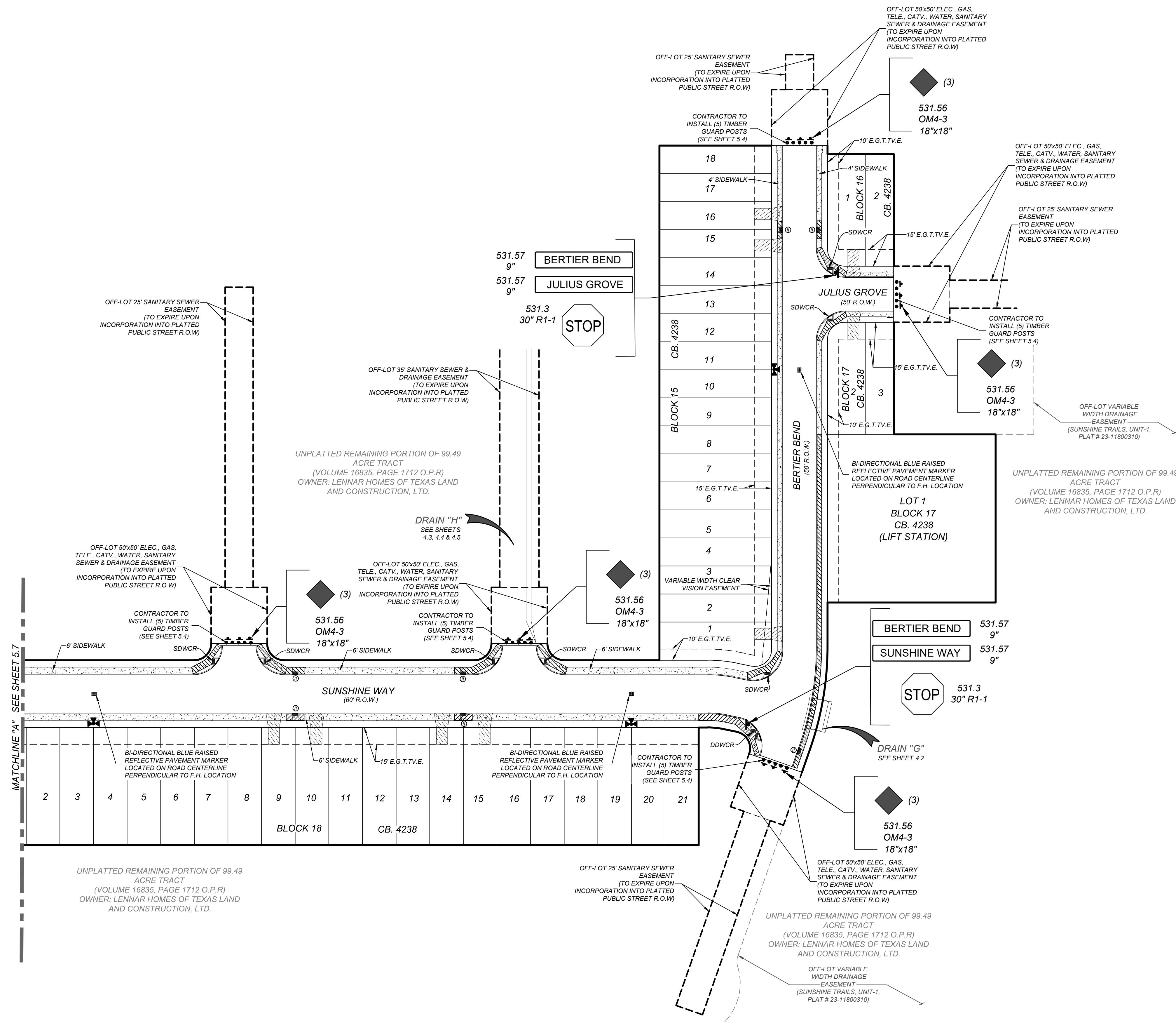
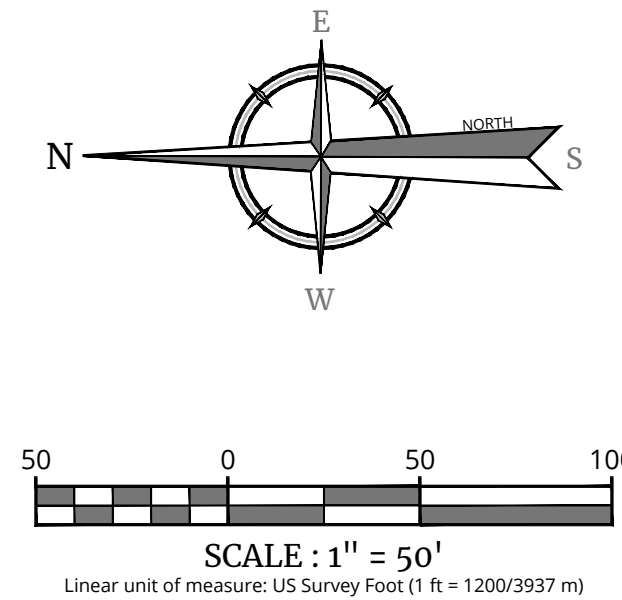
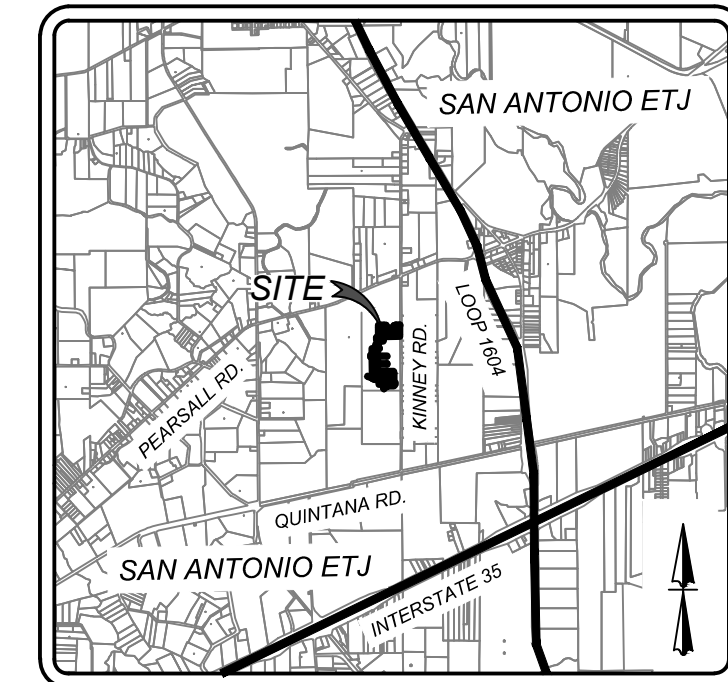
SHEET TITLE
CONCRETE DRIVEWAY
DETAIL SHEET

SHEET NUMBER
5.5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



- E.G. T.V.E. = ELECTRIC, GAS, TELEPHONE & CABLE EASEMENT
- V.N.A.E. = VEHICULAR NON-ACCESS EASEMENT
- SDWCR = SINGLE DIRECTIONAL WHEEL CHAIR RAMP SEE SHEET
- DDWCR = DOUBLE DIRECTIONAL WHEEL CHAIR RAMP SEE SHEET 5.4
- ⑪ = WHEEL CHAIR RAMP TYPE II SEE SHEET 5.6
-  = SIDEWALK TO BE CONSTRUCTED BY DEVELOPER.
-  = SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
-  = PROPOSED DRIVEWAY LOCATIONS



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 STAYS WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH SAFETY PROTECTION PROGRAMS, PROCEDURES AND PROCEDURES TO PROTECT THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH 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. HOWEVER, 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 LIGHTS, ETC. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANY 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.

BEXAR COUNTY R.O.W. NOTE

A BEXAR COUNTY PERMIT MUST BE
OBTAINED BEFORE WORKING IN
BEXAR COUNTY R.O.W.



Engineering & Design

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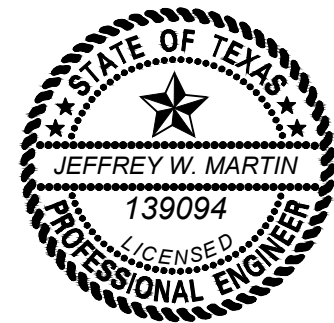
Formerly Known as



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ALL STATES REQUIRE NOTIFICATION OF
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SURFACE ANYWHERE IN ANY STATE

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5/1/24

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS



Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: TS3145004	

SHEET TITLE:
TRAFFIC SIGNAGE AND
PEDESTRIAN
ACCESSIBILITY PLAN

SHEET NUMBER: 5.8

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL INFORMATION

GENERAL NOTES

1.

ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.

2.

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.

3.

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 OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).

4.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE 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 CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS, IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, 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.

5.

IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

6.

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.

7.

CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.

8.

CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

9.

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)

233-3010

BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET)

354-6538 / 357-5741

COSA DRAINAGE

207-5048

COSA SIGNAL OPERATIONS

207-7720 / 207-7765

TEXAS STATE WIDE ONE CALL LOCATOR

1-800-344-8377

CITY PUBLIC SERVICE ENERGY - TIME WARNER - AT&T - MCI

10.

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.

11.

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 MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.

12.

THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

13.

THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.

14.

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.

15.

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 THE CITY.

16.

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.

17.

CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STORM 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 CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REBUILD OR 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

1.

NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.

2.

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).

3.

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.

5.

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.

7.

NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN 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.

8.

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 INSPECTOR.

9.

NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.

10.

TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI-A300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.

11.

NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.

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 EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.

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.

3.

PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.

4.

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

SUNSHINE TRAILS UNIT 1A

BEXAR COUNTY, TEXAS

SANITARY SEWER 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

Sheet List Table	
SHEET TITLE	SHEET NUMBER
SANITARY SEWER COVER SHEET	6.0
OVERALL SANITARY SEWER PLAN (1 OF 2)	6.1
OVERALL SANITARY SEWER PLAN (2 OF 2)	6.2
LINE "A" PLAN AND PROFILE	6.3
LINE "A" PLAN AND PROFILE	6.4
LINE "J" PLAN AND PROFILE	6.5
LINE 'K', 'L', 'Q' PLAN AND PROFILE	6.6
LINE 'M', 'N' PLAN AND PROFILE	6.7
LINE 'O', 'P' PLAN AND PROFILE	6.8

SEWER: UPPER MEDINA WATERSHED-DOS RIOS W.R.C

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD.	
DEVELOPER'S ADDRESS: 100 NE Loop 410, SUITE 1125	
CITY: SAN ANTONIO	STATE: TEXAS
PHONE#: (210) 403-6282	FAX#: TOTAL ACREAGE: 15.03 AC.
SAWS BLOCK MAP#: 100530, 100532	
TOTAL EDU'S: 93	
TOTAL LINEAR FOOTAGE OF PIPE: 2,701 L.F. - 8" SDR 26 PIPE	
20 L.F. - 8" SDR 26 PIPE (160 PSI)	
NUMBER OF LOTS: 93	SAWS JOB#: XX-XXXX PLAT NO.: 23-11800536

GENERAL CONSTRUCTION
PERMIT S.A.W.S. JOB# XX-XXX

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DESCRIPTION

DRAWN BY

DATE

REV

STATE OF TEXAS

JEFFREY W. MARTIN

139094

PROFESSIONAL ENGINEER

5/1/24

PRELIMINARY

FOR

SUNSHINE TRAILS

UNIT 1A

PLAT# 23-11800536

SAN ANTONIO

BEXAR COUNTY

TEXAS

Colliers

Engineering & Design

SAN ANTONIO (KFW)

3421 Paesanos Parkway

San Antonio, TX 78231

Phone: 210.979.8444

COLLIERS ENGINEERING & DESIGN, INC.

TBPLS Form# 1-14009

TBPLS Form# 10194550

SCALE:

AS SHOWN

DATE:

07/20/2023

DRAWN BY:

SD

CHECKED BY:

SC

PROJECT NUMBER:

314-50-04

DRAWING NAME:

CV053145004

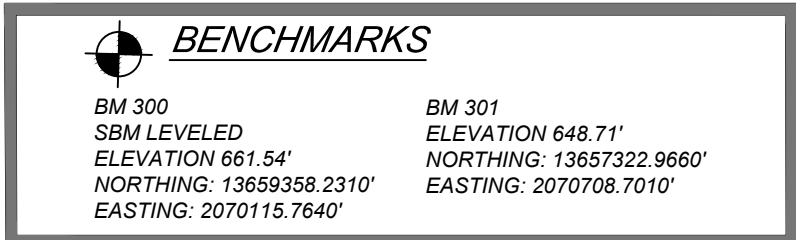
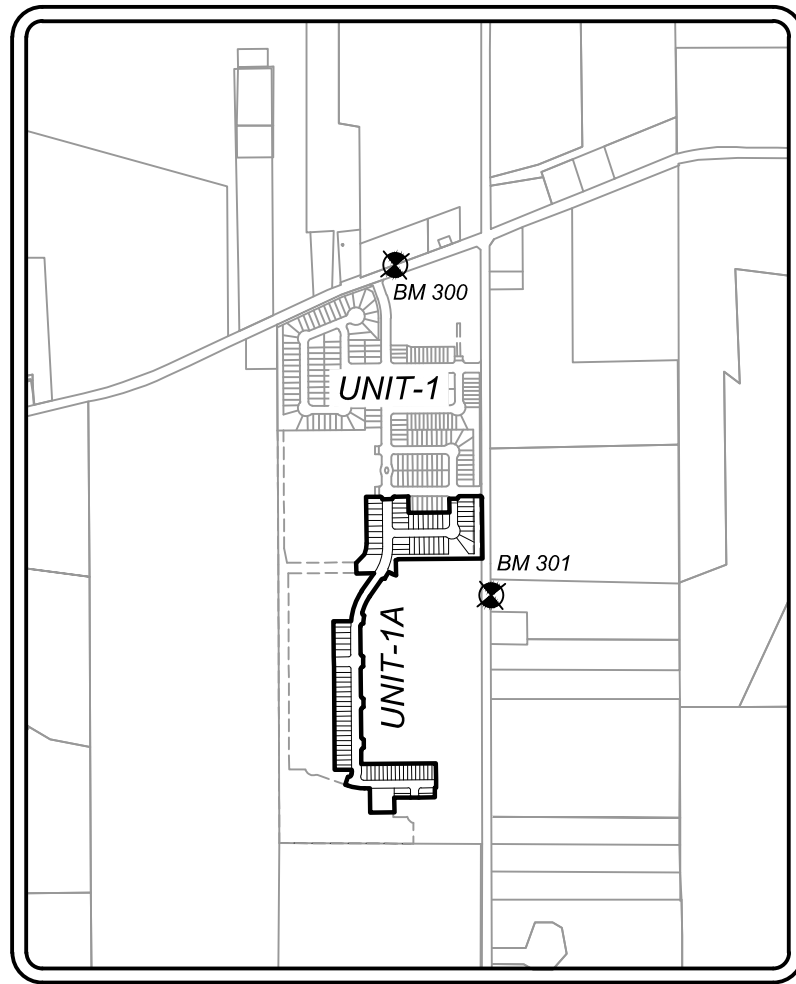
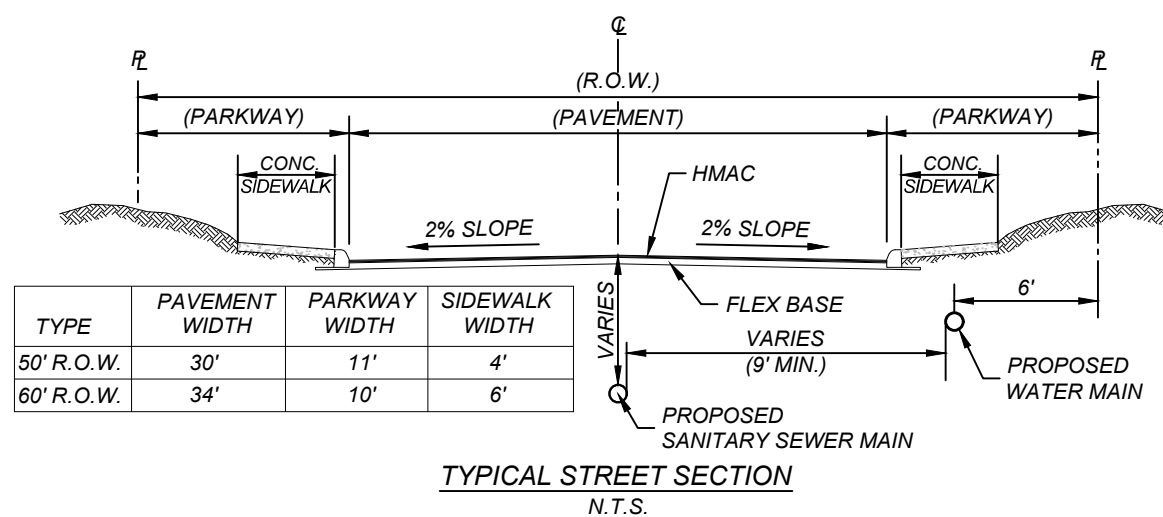
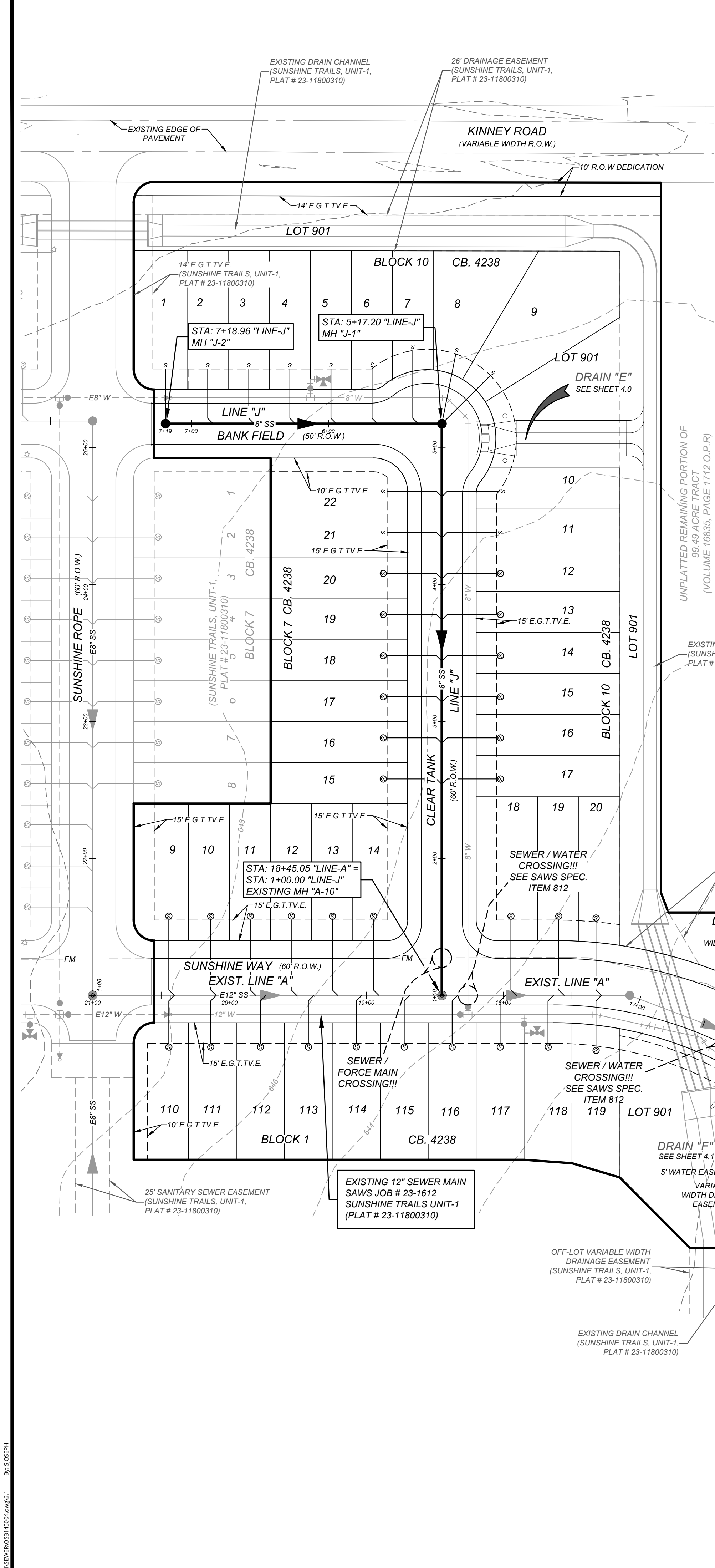
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SANITARY SEWER COVER SHEET

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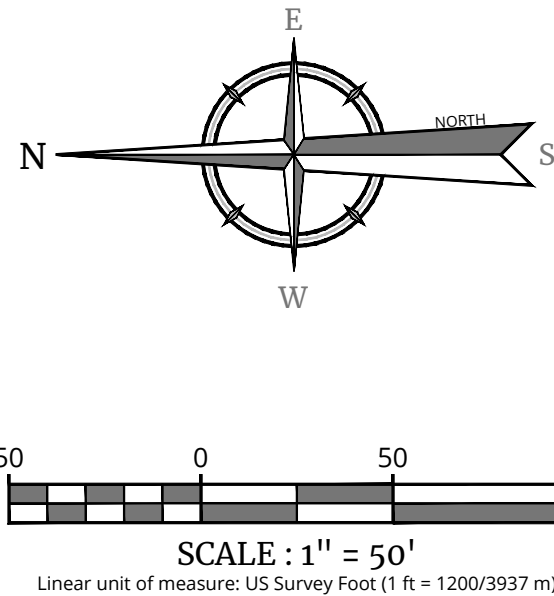
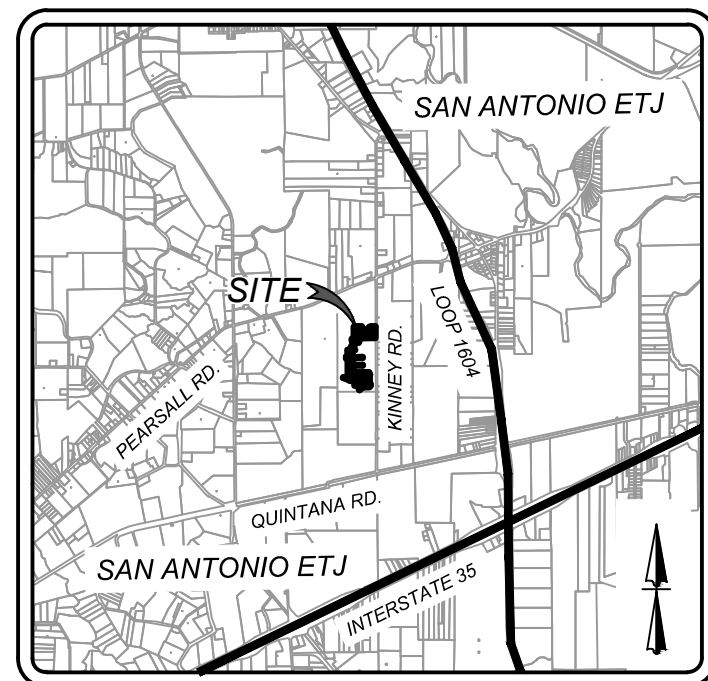
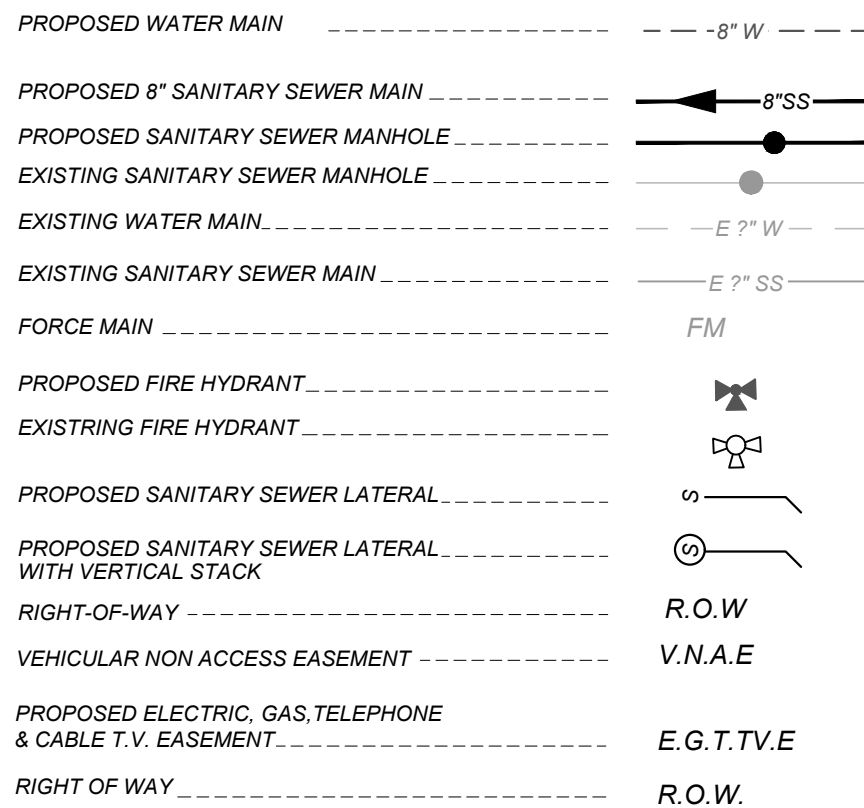
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



NOTE:
CONTRACTOR TO RUN LEVEL LOOP THROUGH BMS PROVIDED TO CONFIRM BEFORE CONSTRUCTION. CONTACT ENGINEER/SURVEYOR IMMEDIATELY IF ELEVATIONS DO NOT MATCH THOSE SHOWN.

LEGEND



SEWER: UPPER MEDINA WATERSHED-DOS RIOS W.R.C

DEVELOPER'S NAME:	LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD.		
DEVELOPER'S ADDRESS:	100 NE Loop 410, SUITE 1155		
CITY:	SAN ANTONIO	STATE:	TEXAS
PHONE:	(210) 403-6282	FAX:	
SAWS BLOCK MAP:	100530, 100532	TOTAL ACREAGE:	15.03 Ac.
TOTAL LINEAR FOOTAGE OF PIPE:	2,701 L.F. ~ 8" SDR 26 PIPE	TOTAL EDU'S:	93
20 L.F. ~ 8" SDR 26 PIPE (160 PSI)			
NUMBER OF LOTS:	93	SAWS JOB#:	XX-XXXX
		PLAT NO.:	23-11800536

GENERAL CONSTRUCTION PERMIT S.A.W.S. JOB# XX-XXX

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTORS 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 CONTRACTORS 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 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:

ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (SAWS) STANDARD SPECIFICATIONS.

WATER / SEWER CROSSING NOTE:

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAWS SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.

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, REFERENCE SHEETS 6.0, SANITARY SEWER GENERAL NOTES.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 26.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASMENT AND A WATER TIGHT RING AND COVER. SEE SAWS STANDARD SPECIFICATIONS.



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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

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5/1/24

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS



Engineering & Design

SAN ANTONIO (KFW)
3421 Paerosos Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBL'S Firm# 1-1409
TBL'S Firm# 10194550

SCALE: AS SHOWN DATE: 07/20/2023 DRAWN BY: SD CHECKED BY: SC

PROJECT NUMBER: 314-50-04 DRAWING NAME: 053145004

SHEET TITLE: OVERALL SANITARY SEWER PLAN (1 OF 2)

SHEET NUMBER: 6.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNER/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 PROTECTION AND SAFETY SYSTEMS, PROGRAMS AND/OR PROCEDURES. 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 BE RESPONSIBLE FOR IDENTIFYING AND IMPLEMENTING ALL OF THE 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 PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN 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.

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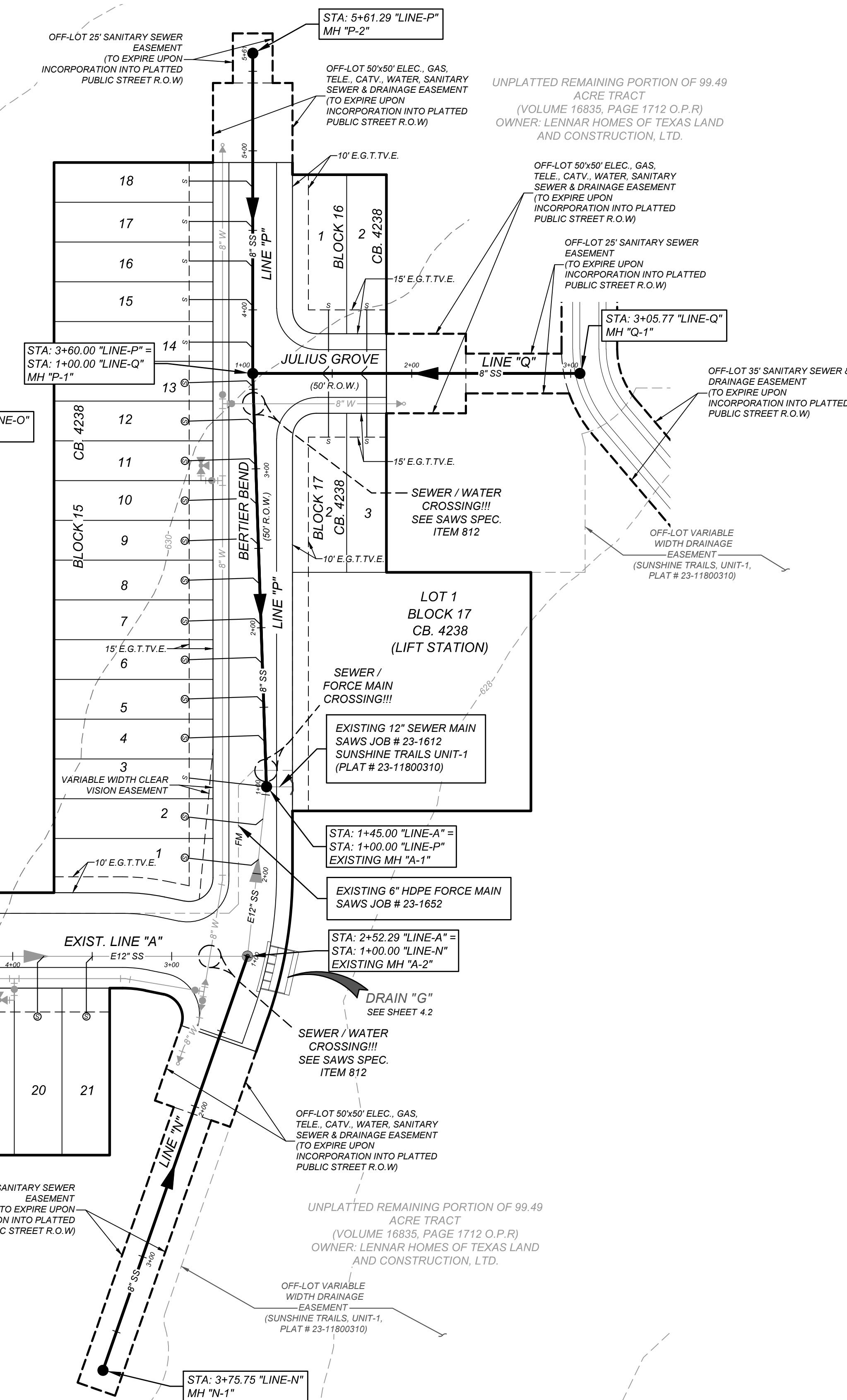
CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYORS SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYORS PLAN.

NOTE:
ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (SAWS) STANDARD SPECIFICATIONS.

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAWS SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.

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). REFERENCE SHEETS 6.0, SANITARY SEWER GENERAL NOTES.
2. SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SAWS STANDARD SPECIFICATIONS.

TYPICAL STREET SECTION
N.T.S.



PROPOSED WATER MAIN	-----	----- 8" W
PROPOSED 8" SANITARY SEWER MAIN	-----	----- 8" SS
PROPOSED SANITARY SEWER MANHOLE	-----	-----
EXISTING SANITARY SEWER MANHOLE	-----	-----
EXISTING WATER MAIN	-----	----- E 7" W
EXISTING SANITARY SEWER MAIN	-----	----- E 7" SS
FORCE MAIN	-----	FM
PROPOSED FIRE HYDRANT	-----	-----
EXISTING FIRE HYDRANT	-----	-----
PROPOSED SANITARY SEWER LATERAL	-----	-----
PROPOSED SANITARY SEWER LATERAL WITH VERTICAL STACK	-----	-----
RIGHT-OF-WAY	-----	R.O.W
VEHICULAR NON ACCESS EASEMENT	-----	V.N.A.E
PROPOSED ELECTRIC, GAS, TELEPHONE & CABLE T.V. EASEMENT	-----	E.G.T.T.V.E
RIGHT OF WAY	-----	R.O.W



DEVELOPER'S ADDRESS: 100 NE Loop 410, SUITE 1155

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216

PHONE#: (210) 403-6282 FAX#: _____ TOTAL ACRES: 15.03

SAWS BLOCK MAP#: 100530 100532 TOTAL EDU'S: 93

TOTAL LINEAR FOOTAGE OF PIPE: 2.701 LF. ~ 8" SDR 26 PIPE
20 LF. ~ 8" SDR 26 PIPE (160 PSI)

NUMBER OF LOTS: 93 SAWS JOB#: XX-XXXX PLAT NO.: 23-11800536

GENERAL CONSTRUCTION
PERMIT S.A.W.S. JOB# XX-XXX

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PRELIMINARY
FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS



SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPUS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: OS3145004	

SHEET TITLE:

OVERALL SANITARY SEWER
PLAN (2 OF 2)

SHEET NUMBER: 6.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

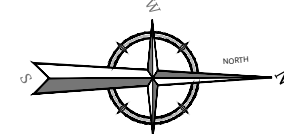
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2. SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS.

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAWS
SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



EXISTING LINE "A"
STA: 1+45.00 - 13+00.00



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FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536



Colliers
Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	07/20/2023	SD	SC

LINE "A" PLAN AND PROFILE

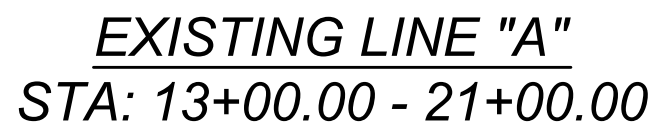
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CONTRACTOR AND/OR CONTRACTORS' INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNER/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE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

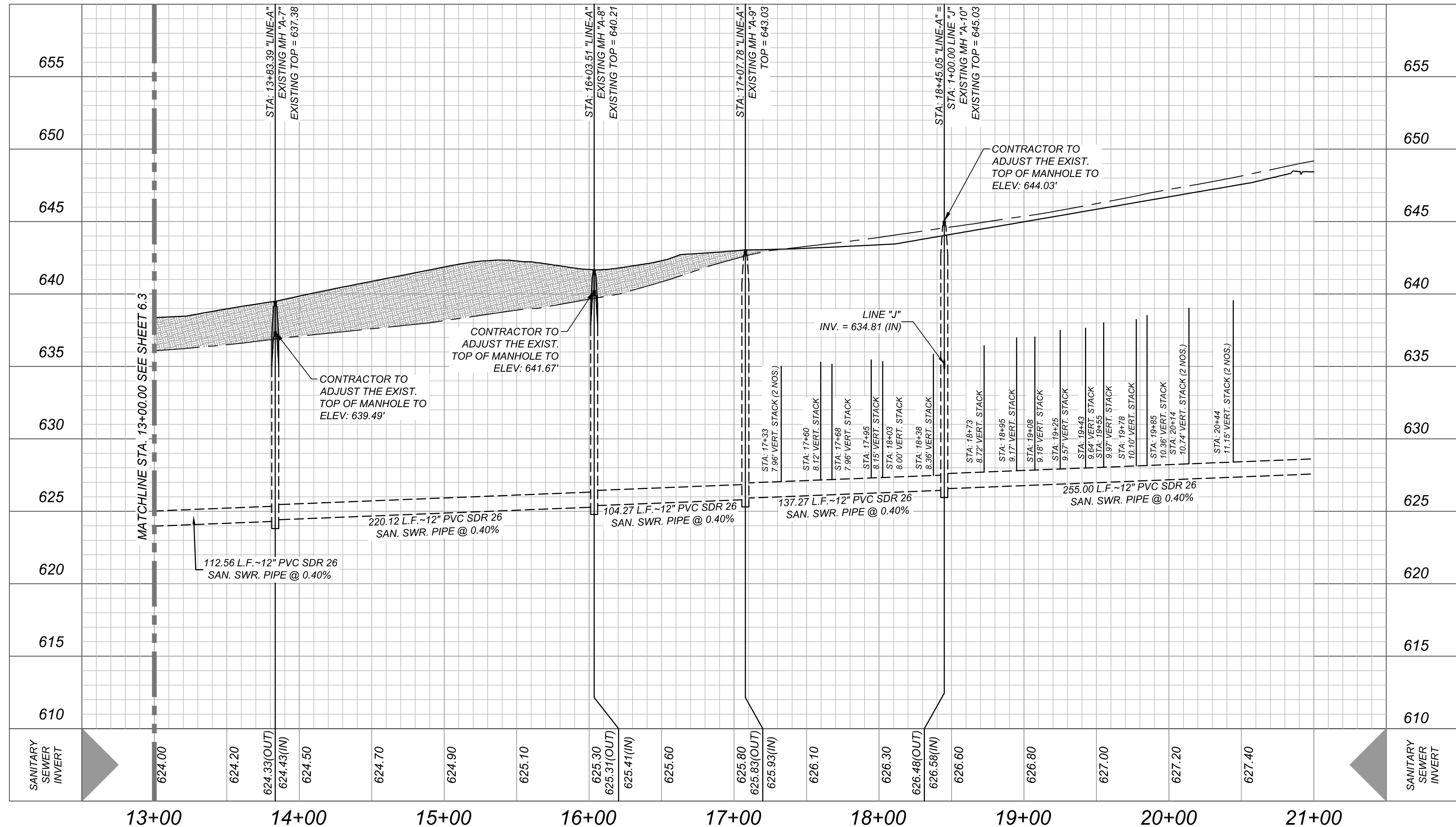
CAUTION!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES (ELECTRIC, BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SUT LIGHTING, ELECTRIC SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION SYSTEMS, AND GAS LINES. ANY UTILITY CONFLICTS 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 COMMENCEMENT OF ANY EXCAVATION OR DRAINAGE WORK. THE CONTRACTOR 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.

1. SEWER PIPE WHERE WATER LINE CROSSES SHALL 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). REFERENCE SHEETS 6.0, SANITARY SEWER GENERAL NOTES.
2. SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS.

WATER / SEWER CROSSING NOTE:
ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SANS
SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



HORZ SCALE: 1" = 50'
VERT SCALE: 1" = 5'



NUMBER OF LOTS: 93 SAWS JOB#: XX-XXXX PLAT NO.: 23-11800536

PERMIT S.A.W.S. JOB# XX-XXX

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
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[illegible]

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

Engineering

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

AS SHOWN	07/20/2023	SD	SC
PROJECT NUMBER:		DRAWING NAME:	

314-50-04	SSPP3145004
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SHEET TITLE:

LINE "A" PLAN AND PROFILE

SHEET NUMBER:

64

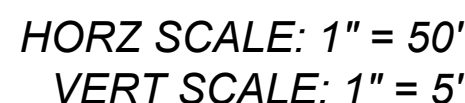
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

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, PROCEDURES, AND/OR CONTRACTOR'S EXCAVATION OF TRENCH 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 FOR TRENCH EXCAVATIONS 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 CONDUCT TESTS TO LOCATE UTILITIES 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.

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). REFERENCE SHEETS 6.0. SANITARY SEWER GENERAL NOTES.
2. SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS.

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAWS
SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



DEVELOPER'S ADDRESS: 100 NE Loop 410, SUITE 1155

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216

PHONE#: (210) 403-6282 FAX#: _____ TOTAL ACRES: 15.03

SAWS BLOCK MAP#: 100530 100532 TOTAL DEED: 93

TOTAL LINEAR FOOTAGE OF PIPE: 2,701 L.F. - 8" SDR 26 PIPE
20 L.F. - 8" SDR 26 PIPE (160 PSI)

NUMBER OF LOTS: 93 SAWS JOB#: XX-XXXX PLAT NO.: 23-118000536

PERMIT S.A.W.S. JOB# XX-XXX

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTORS 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 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:
- 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). REFERENCE SHEETS 6.0, SANITARY SEWER GENERAL NOTES.
 - SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
 - PIPE TYPE DESIGNATIONS ARE SDR 26.
 - ALL MANHOLES SHALL HAVE CONCRETE RING ENCASMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS.

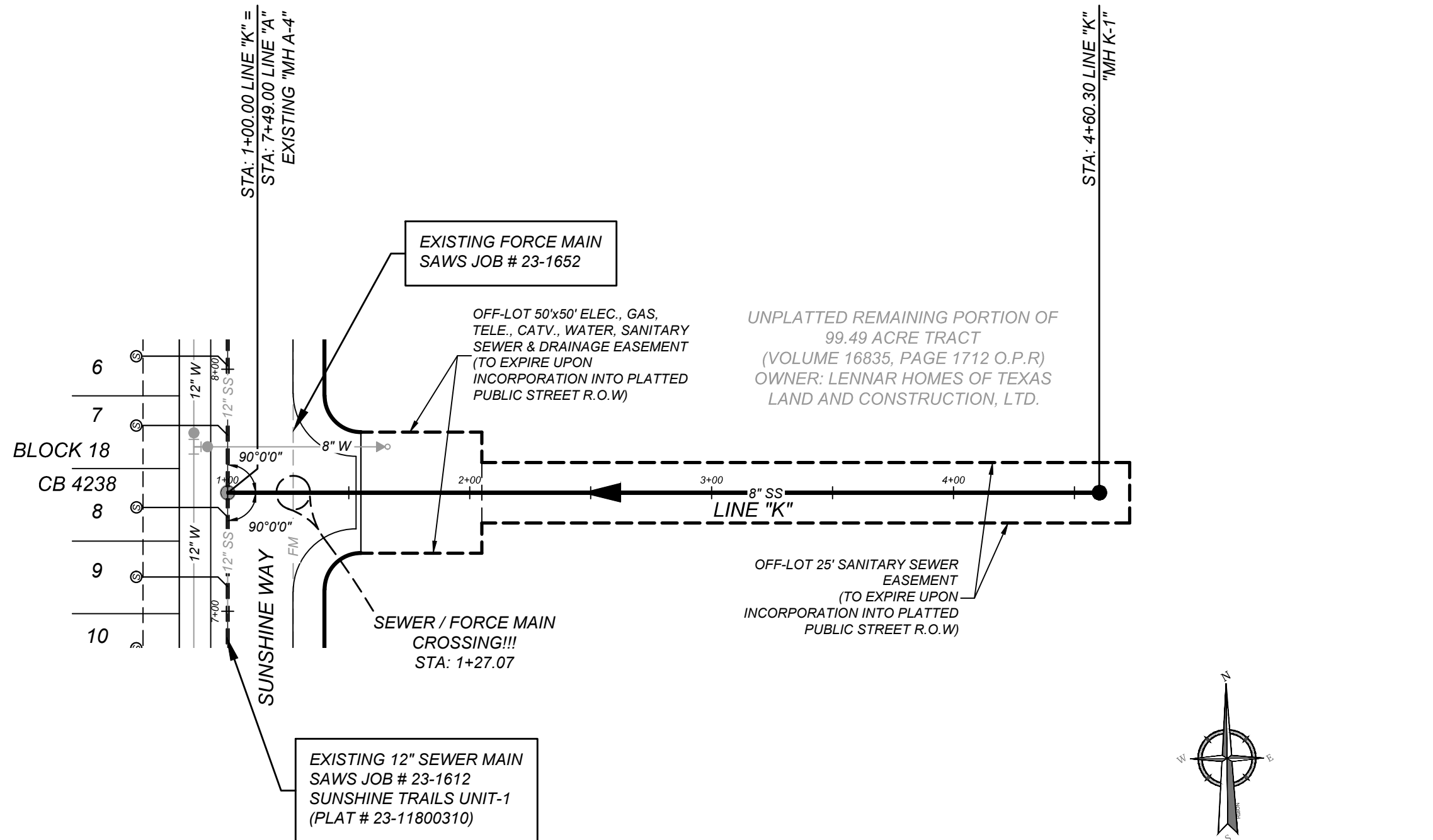
WATER / SEWER CROSSING NOTE:

ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAWS SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.

SEWER: UPPER MEDINA WATERSHED-DOS RIOS W.R.C

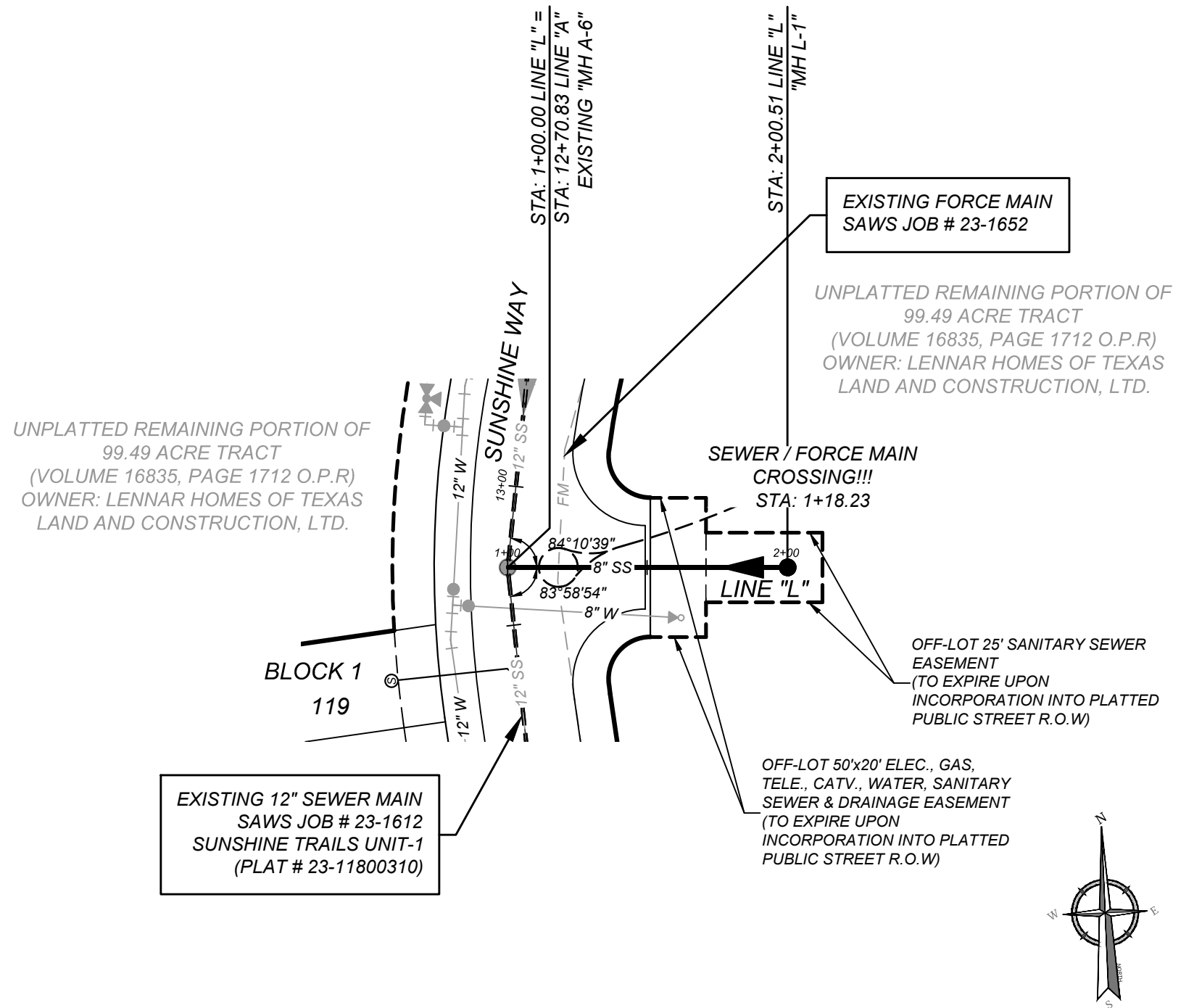
DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD.
DEVELOPER'S ADDRESS: 100 NE Loop 410, SUITE 1155
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216
PHONE#: (210) 403-6282 FAX#: TOTAL ACREAGE: 15.03 AC.
SAWS BLOCK MAP#: 100530, 100532 TOTAL EDU'S: 93
TOTAL LINEAR FOOTAGE OF PIPE: 2,701 L.F. ~ 8" SDR 26 PIPE
20 L.F. ~ 8" SDR 26 PIPE (160 PSI)
NUMBER OF LOTS: 93 SAWS JOB#: XX-XXXX PLAT NO.: 23-11800536

GENERAL CONSTRUCTION
PERMIT S.A.W.S. JOB# XX-XXX



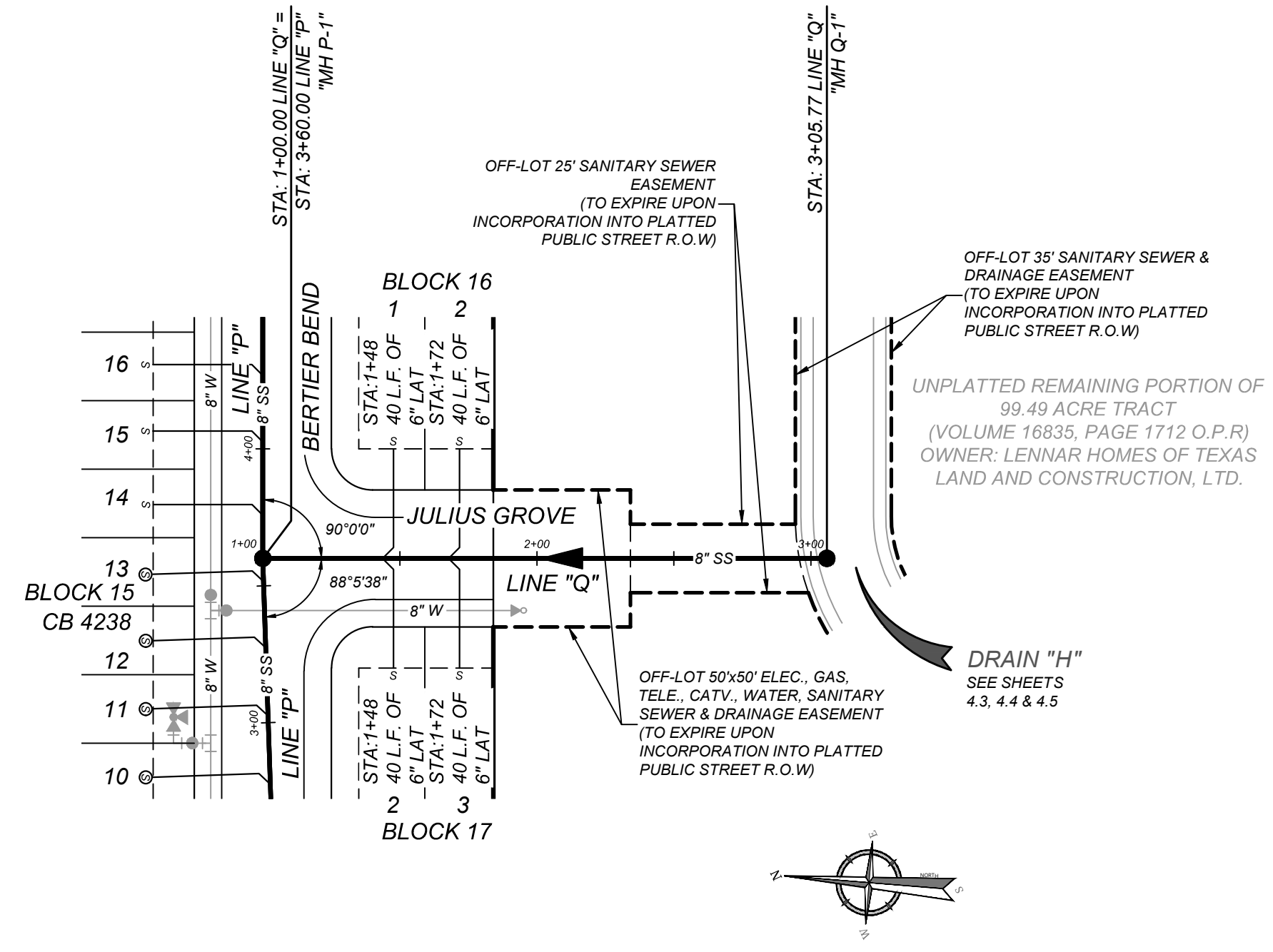
LINE "K"
STA: 1+00.00 - END

HORZ SCALE: 1" = 50'
VERT SCALE: 1" = 5'



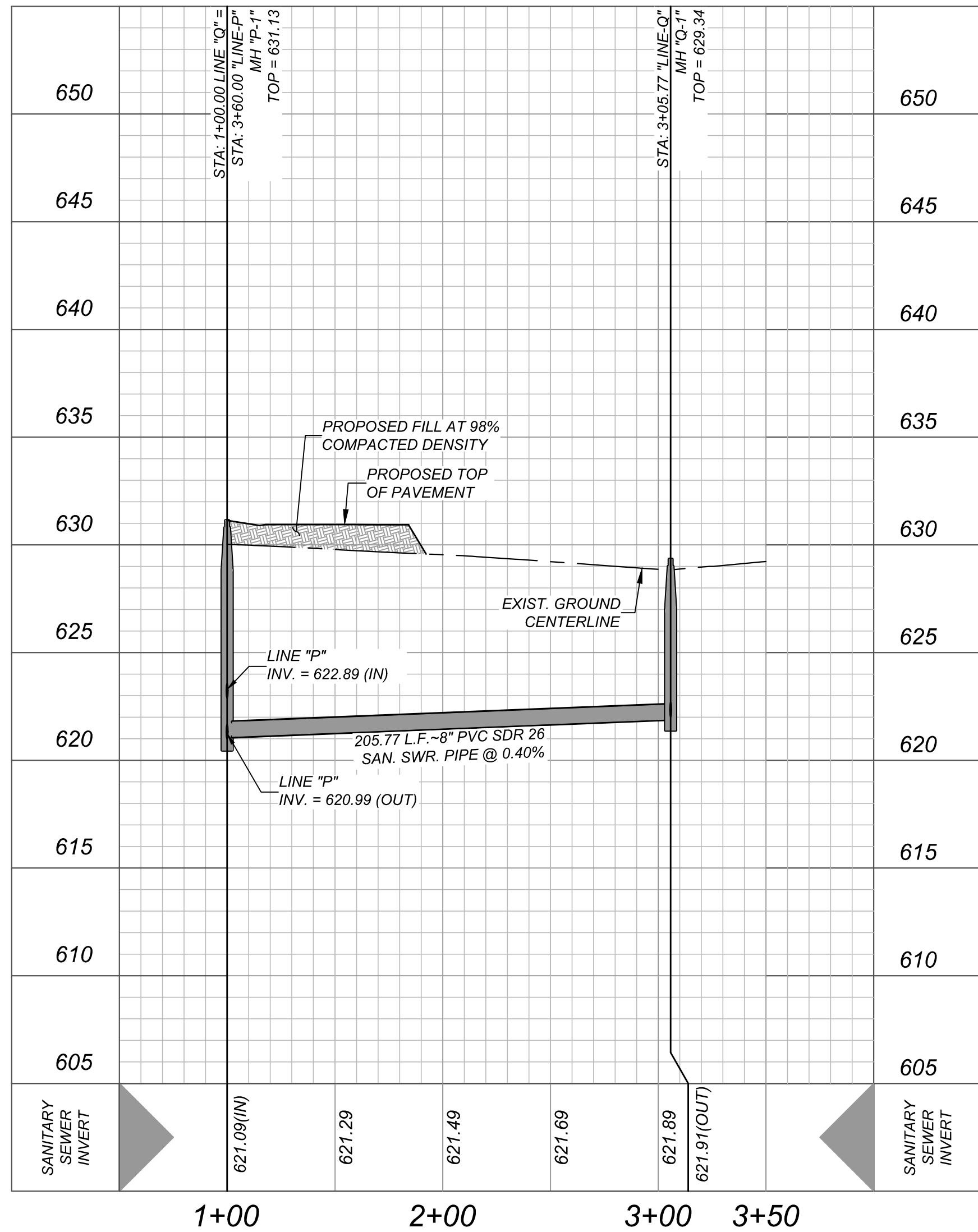
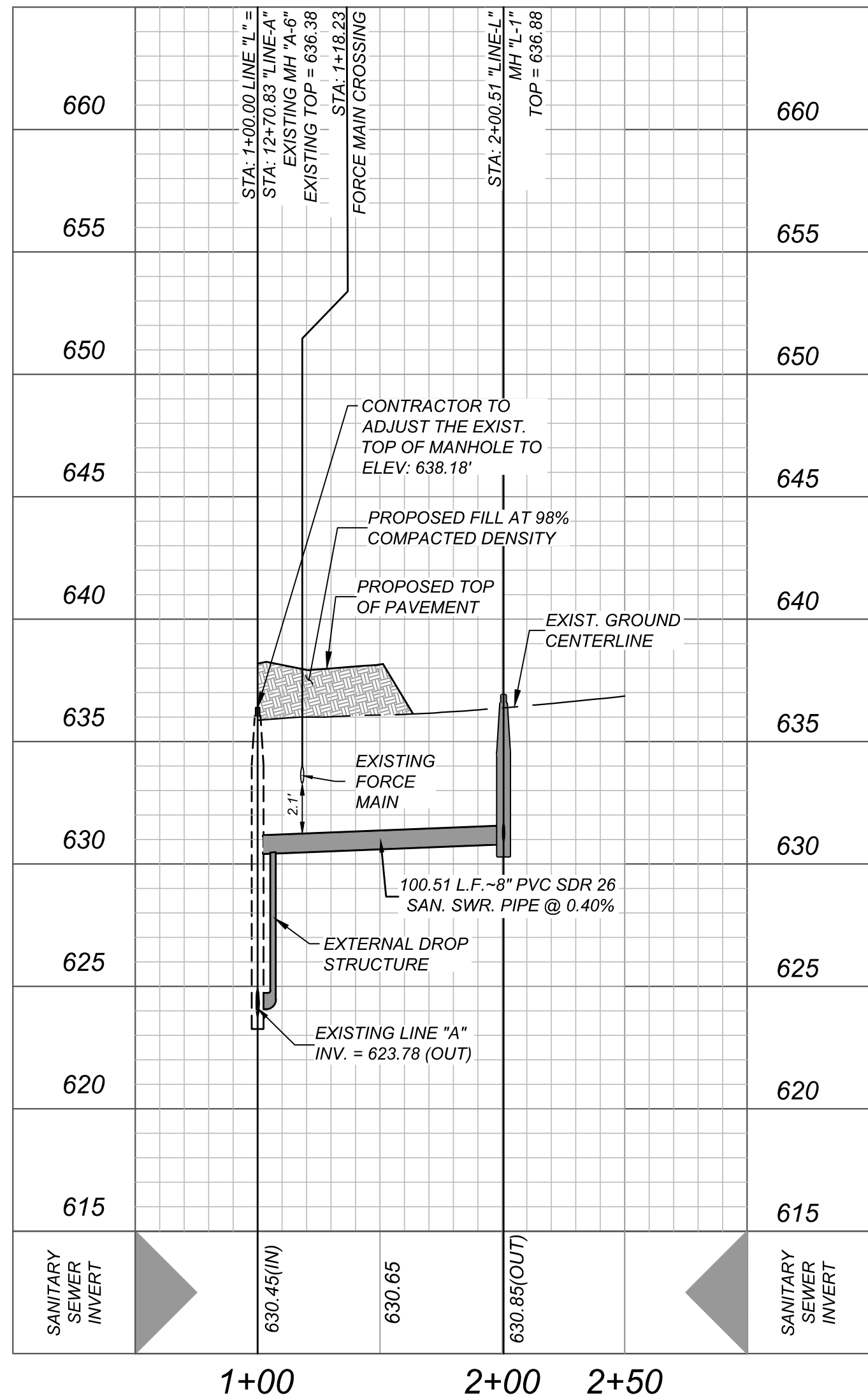
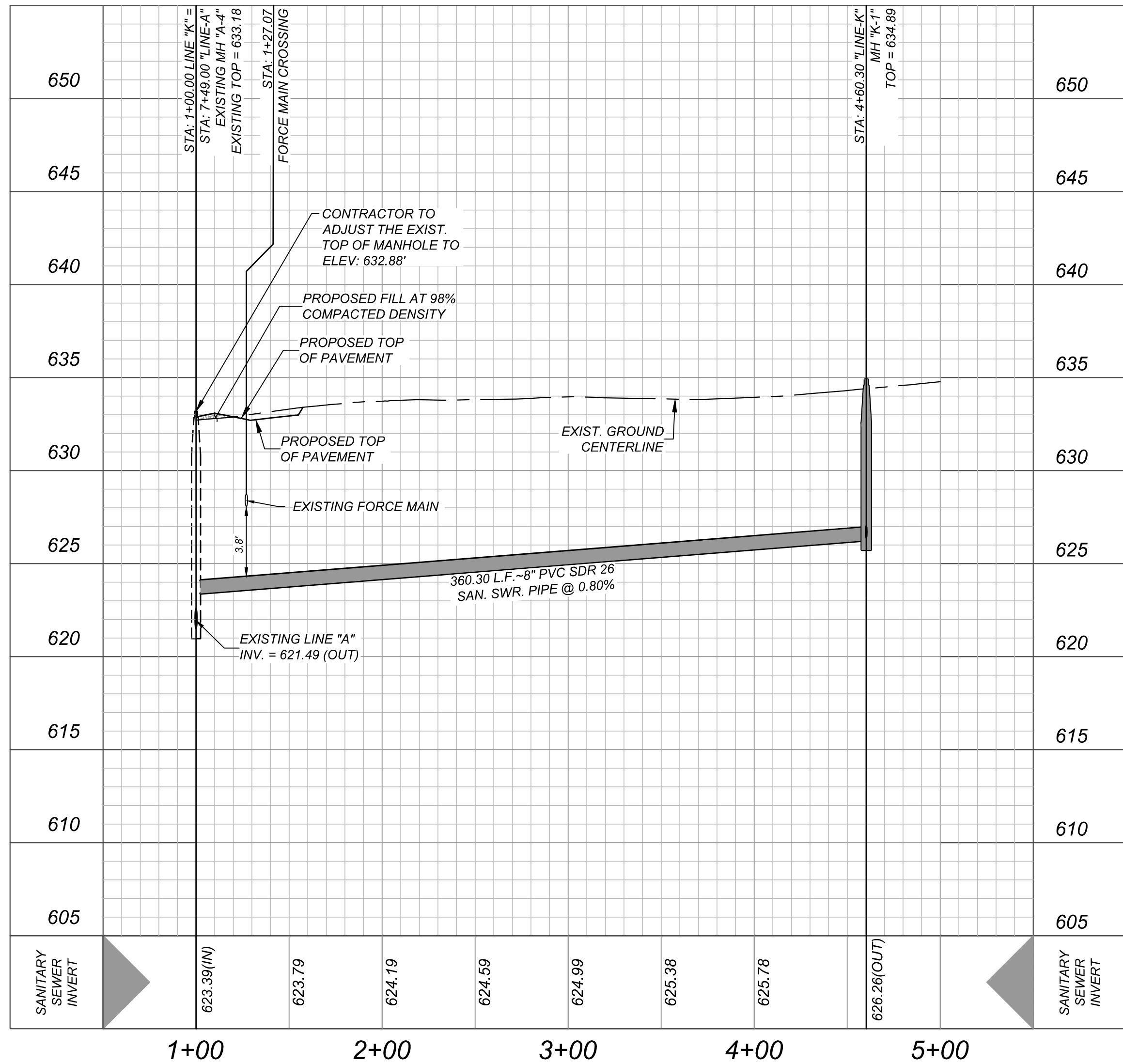
LINE "L"
STA: 1+00.00 - END

HORZ SCALE: 1" = 50'
VERT SCALE: 1" = 5'



LINE "Q"
STA: 1+00.00 - END

HORZ SCALE: 1" = 50'
VERT SCALE: 1" = 5'



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STATE OF TEXAS

JEFFREY W. MARTIN

139094

5/1/24

PRELIMINARY

FOR

SUNSHINE TRAILS UNIT 1A

PLAT# 23-11800536

SAN ANTONIO BEXAR COUNTY TEXAS

Colliers

Engineering & Design

SAN ANTONIO (KFW)
3421 Paesanos Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TDR'S Firm# 1-1409
TDR'S Firm# 10194550

SCALE: AS SHOWN DATE: 07/20/2023 DRAWN BY: SD CHECKED BY: SC
PROJECT NUMBER: 3114-50-04 DRAWING NAME: SSP3145004

SHEET TITLE: LINE 'K', 'L', 'Q' PLAN AND PROFILE

SHEET NUMBER: 6.6

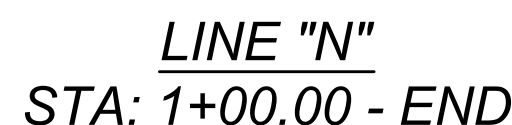
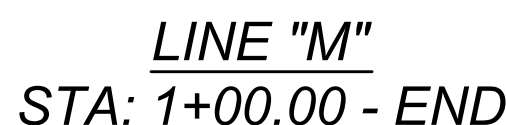
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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, PROCEDURES, AND/OR CONTRACTOR'S EXCAVATION OF TRENCH 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 FOR TRENCH EXCAVATIONS 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 EXISTING ELECTRICAL SYSTEMS, CABLES, TELEVISION, 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-IT (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 WHEN THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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). REFERENCE SHEETS 6.0, SANITARY SEWER GENERAL NOTES.
2. SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS.

WATER / SEWER CROSSING NOTE:
ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SANS
SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION LTD.
DEVELOPER'S ADDRESS: 100 IE Loop 410, SUITE 1155
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216
PHONE#: (210) 403-6282 FAX#: _____ TOTAL ACREAGE: 15.03
SAWS BLOCK MAP#: 100530 100532 TOTAL EDUS: 93
TOTAL LINEAR FOOTAGE OF PIPE: 3,701 L.F. - 8" SDR 36 PIPE
2,160 L.F. - 8" SDR 26 PIPE (160 PSI)
NUMBER OF LOTS: 93 SAWS JOB#: XX-XXXX PLAT NO.: 23-118003636

GENERAL CONSTRUCTION
PERMIT S.A.W.S. JOB# XX-XXX

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FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536



Colliers
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SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: SSPP3145004	

SHEET TITLE:

LINE 'M', 'N' PLAN AND
PROFILE

SHEET NUMBER

65

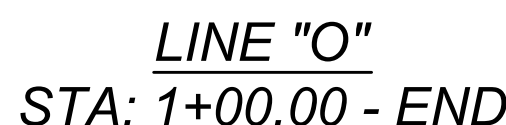
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

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 PROTECTION PROGRAM. CONTRACTOR'S TRENCH PROTECTION PROGRAM SHALL PRECLUDE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEM PROGRAM AND ALL OTHER 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 FOR THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

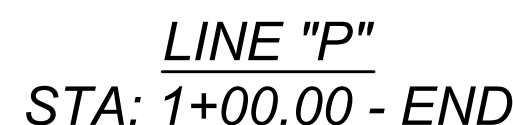
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITI LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO STOP WORK IMMEDIATELY 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.

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). REFERENCE SHEETS 6.0, SANITARY SEWER GENERAL NOTES.
2. SEE SHEET 6.1 FOR BENCHMARK INFORMATION.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE STANDARD SPECIFICATIONS.

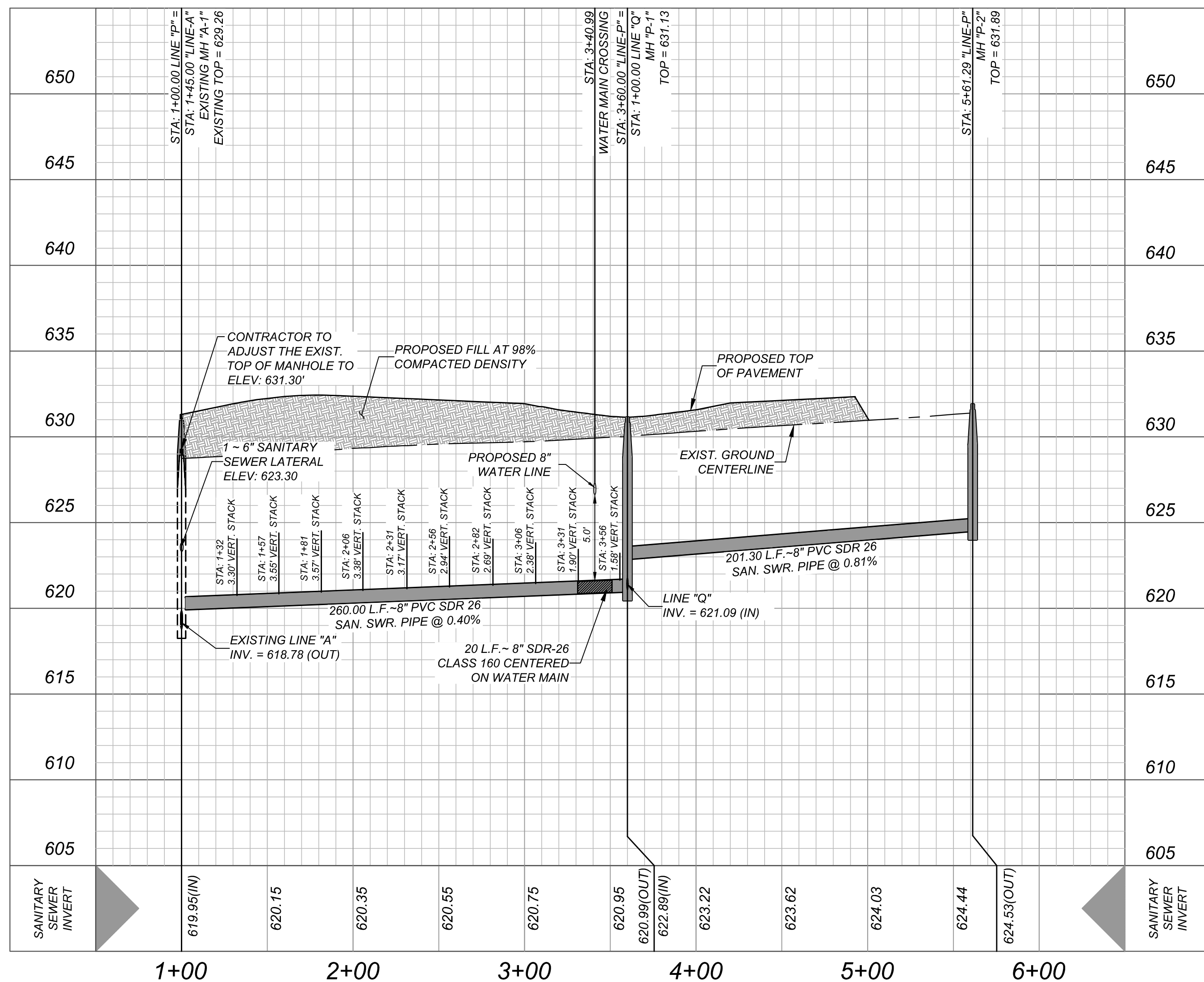
ALL WATER / SEWER CROSSINGS SHALL COMPLY WITH SAW SPECIFICATION ITEM 812 SANITARY SEWER / WATER DETAIL.



HORZ SCALE: 1" = 50'
VERT SCALE: 1" = 5'



HORZ SCALE: 1" = 50'
VERT SCALE: 1" = 5'



NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

Engineering
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PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: SSPP3145004	

SHEET TITLE:

LINE 'O', 'P' PLAN AND
PROFILE

SHEET NUMBER:

6.8

GENERAL INFORMATION

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.

2. 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.

3. 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 OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS (NO SEPARATE PAY ITEM).

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE 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 CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, 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.

5. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

6. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192-111 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.

7. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.

8. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

9. 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)
BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET)
COSA DRAINAGE
COSA SIGNAL OPERATIONS
THE CITY STATE WIDE ONE CALL LOCATION
CITY PUBLIC SERVICE ENERGY - TIME WARNER - AT&T - MCI

333-2010
354-6538 /357-5741
207-8048
207-7720 /207-7765
1-800-344-8377

10. 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 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 SUFFERING APPROXIMATELY 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.

11. 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 MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER DRAINAGE STANDARDS OR BE INCORRECTLY PLACED OR BE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC.

12. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

13. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.

14. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP CONSTRUCTION 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 TO INVESTIGATE AND REMOVE THE DEPOSITS 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 CITY REQUESTS INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.

15. 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 THE CITY.

16. CONTRACTOR IS TO INCLUDE A MAILBOX STOP 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.

17. THE CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN (14) DAYS BEFORE THE START OF WORK OR OF ANY CLOSURES 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) 362-2098). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REMOVE ANY FLATWARE REMOVED OR DAMAGED IN THE COURSE OF CUTTING OR CUTTING THE CONTRACTOR 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

1. NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.

2. 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).

3. 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.

5. 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.

7. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. THE ROOT PROTECTION ZONE IS A FOOT OF RADII PER INCH OF TREE DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADII 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.

8. 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 INSPECTOR.

9. NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.

10. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI-A300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.

11. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.

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 EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

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

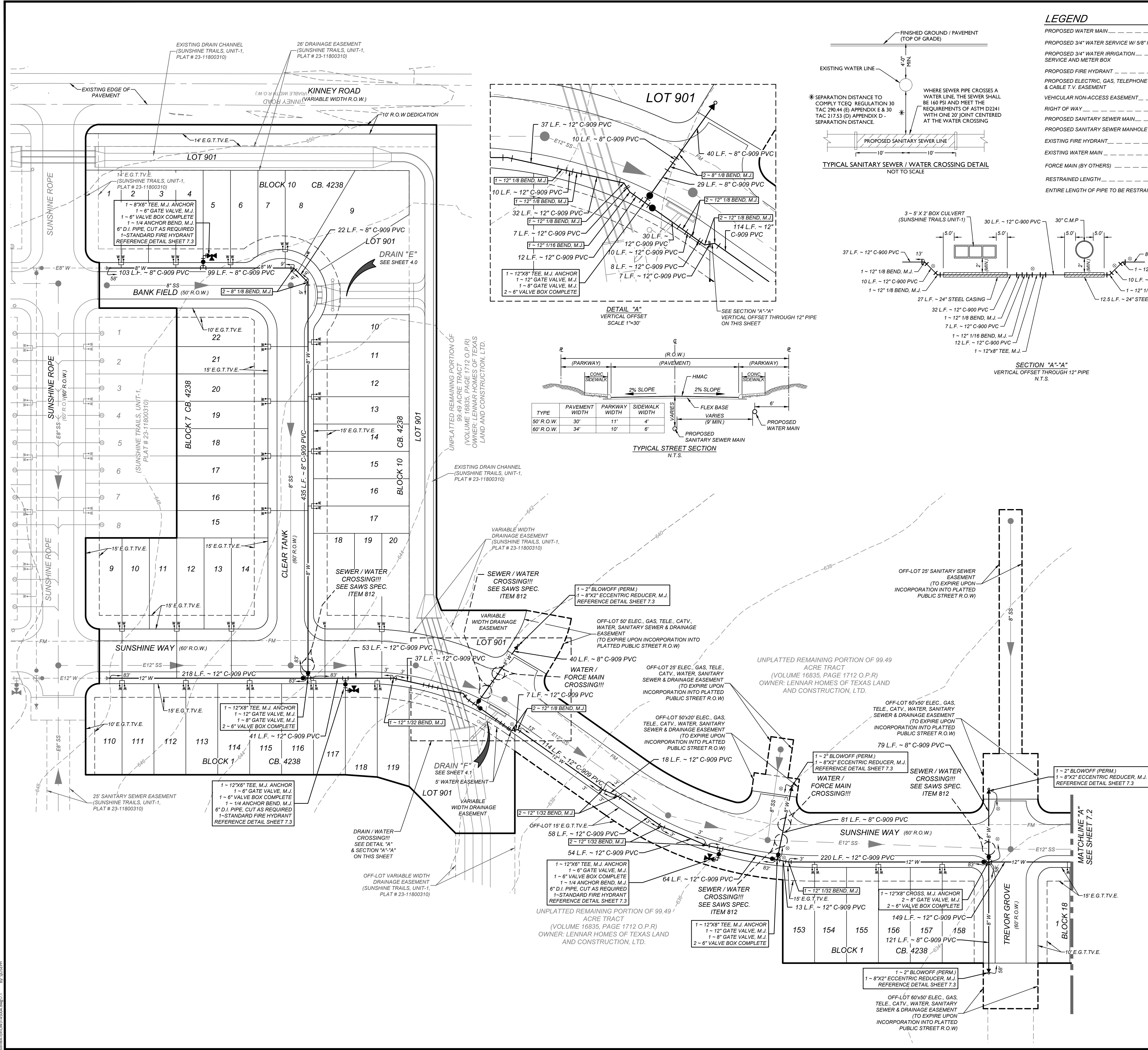
2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES. TEMPORARY ALL-WEATHER DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.

3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.

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

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811

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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 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 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:
PRESSURE REDUCING VALVES TO BE THE RESPONSIBILITY OF THE HOME BUYER WHERE REQUIRED

NOTE:
CONTRACTOR SHALL COORDINATE WITH ATASCOSA RURAL WATER SERVICE COMPANY TO VERIFY THE LOCATION OF ISOLATION VALVES. OPERATION OF ISOLATION VALVES SHALL ONLY BE MADE WITH THE APPROVAL AND PRESENCE OF ATASCOSA RURAL WATER SERVICE COMPANY PERSONNEL

WATER PLAN NOTES:

- ALL VALVES SHALL READ "OPEN RIGHT"
- ALL PVC PIPES 1" THROUGH 4" DIAMETER SHALL BE CLASS 235 (DR 18).
- ALL PVC PIPES 6" AND ABOVE DIAMETER SHALL BE CLASS 335 (DR 18) C-909.
- LONG WATER SERVICES REQUIRE 2" PVC CASING

FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1,000 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN ON THE WATER DETAIL SHEET 7.3. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT. OF PIPE WITH JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

PRELIMINARY

FOR
SUNSHINE TRAILS UNIT 1A
PLAT# 23-11800536

SAN ANTONIO BEXAR COUNTY TEXAS

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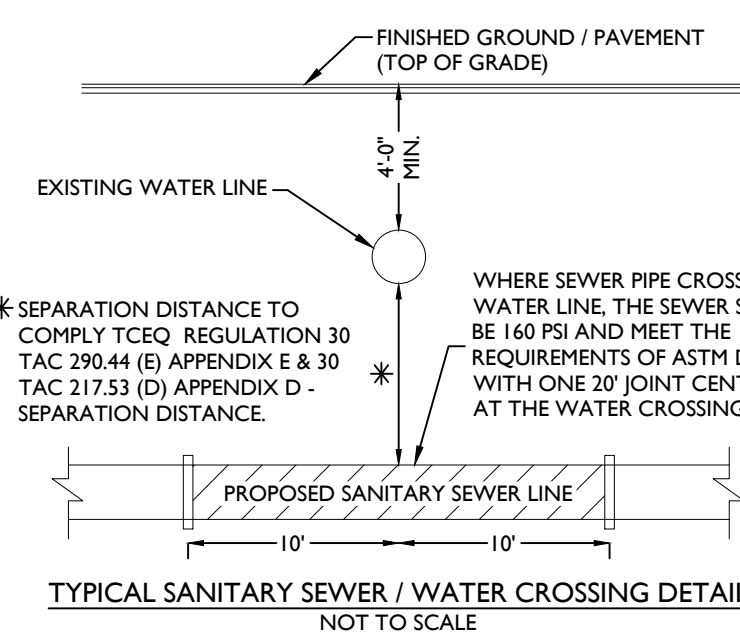
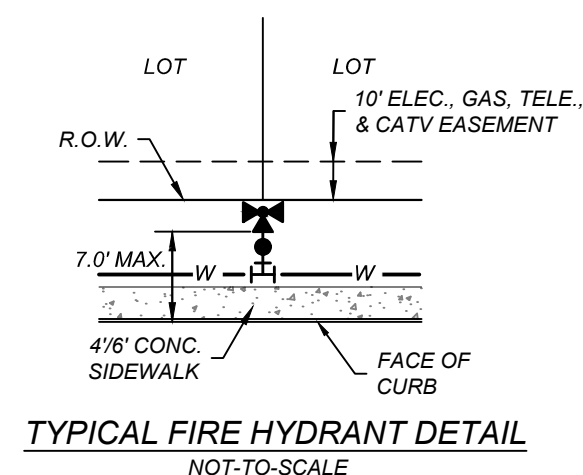
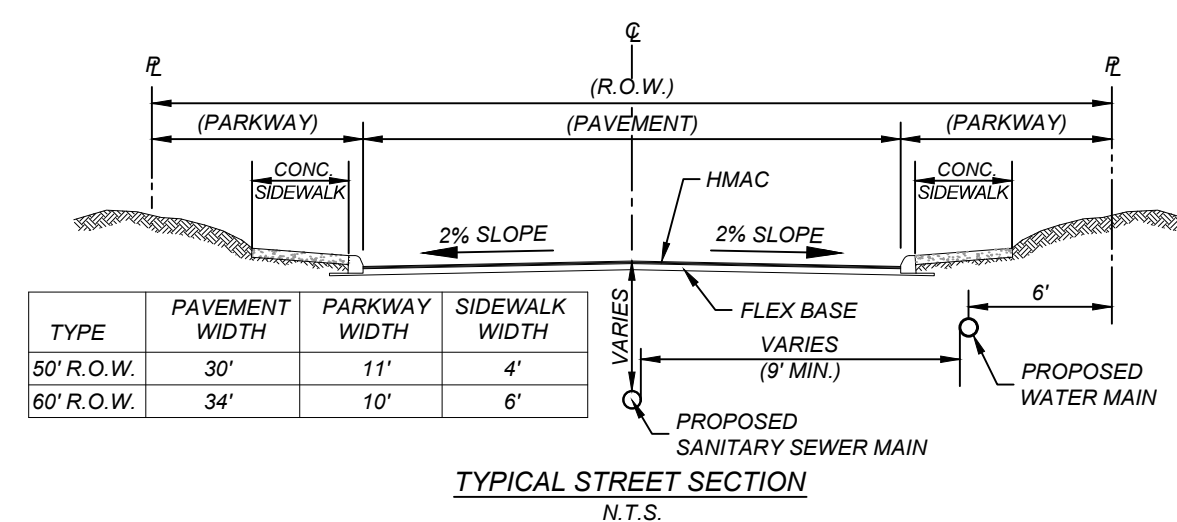
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3421 Paessanos Parkway
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Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TDRS Form # 1-1909
TDRS Form # 10194550

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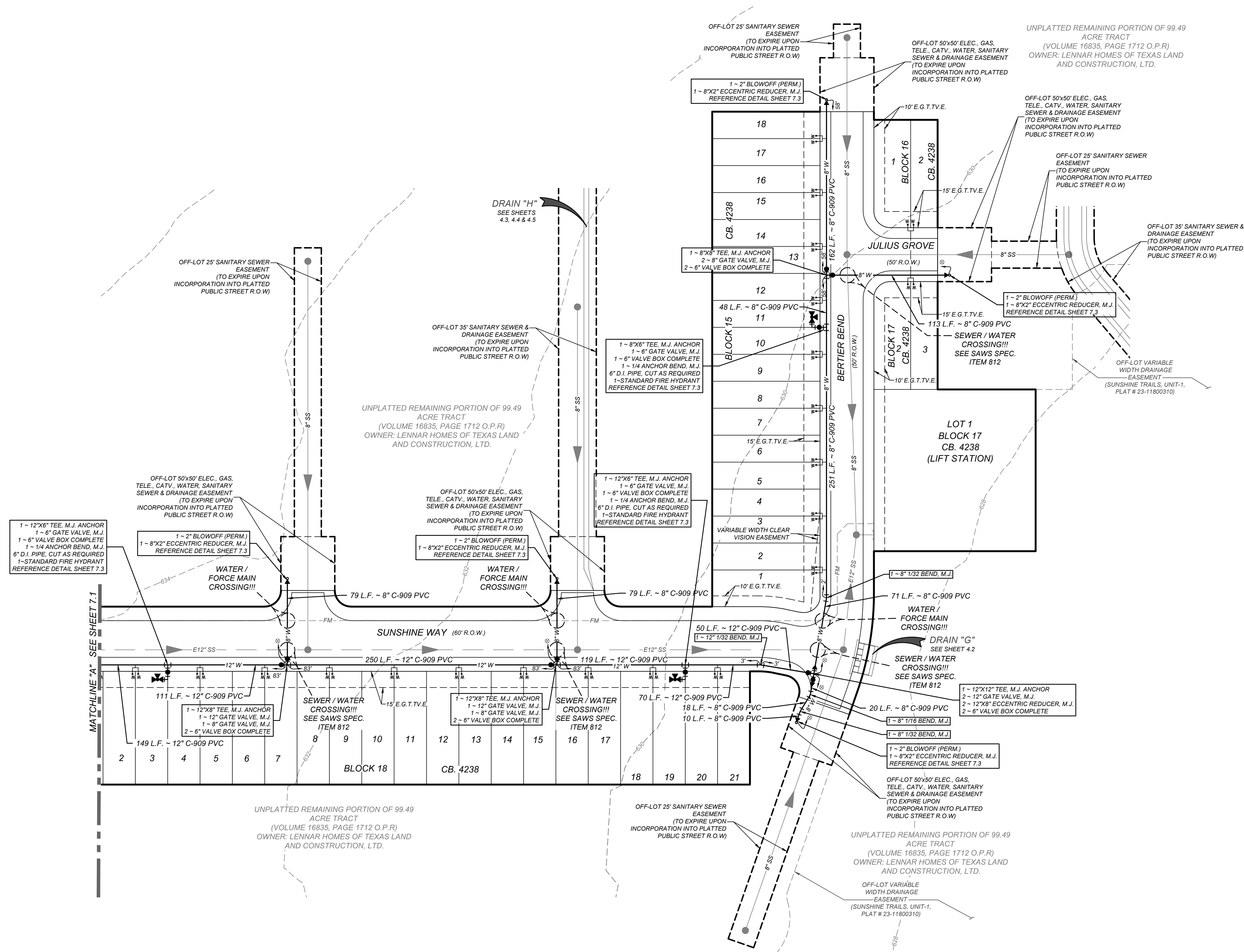
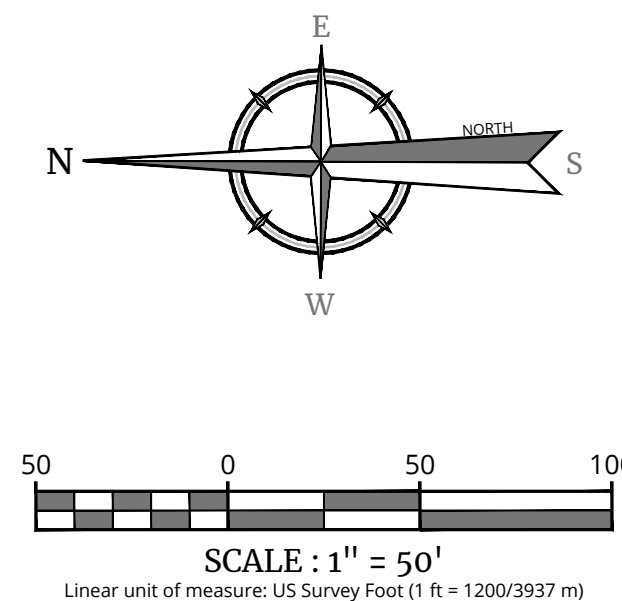
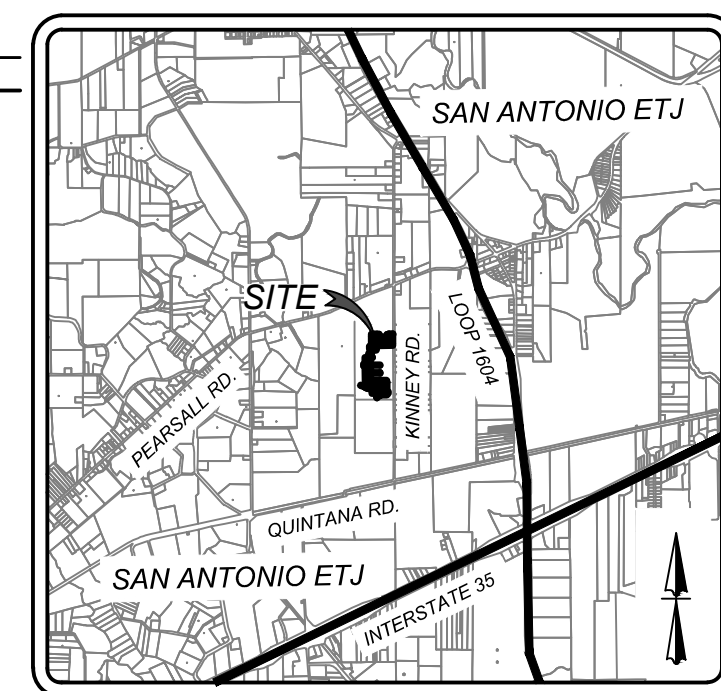
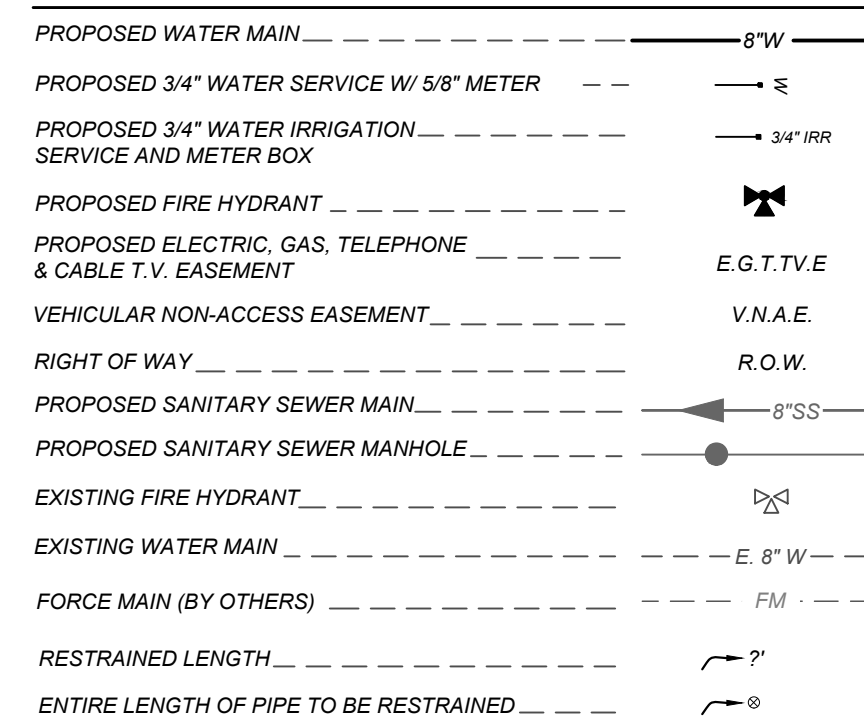
PROJECT NUMBER: 314-50-04
DRAWING NAME: DW31-45004

SHEET TITLE:
WATER DISTRIBUTION PLAN

SHEET NUMBER:
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LEGEND



TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, ANY SHIELD, 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 SHALL PROVIDE ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH 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 REGARDING 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, FERTILIZER, GAS, AND ANY OTHER UTILITY CONDUITS. THE CONTRACTOR MUST BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT 1-800-DIG-TELE 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:
PRESSURE REDUCING VALVES TO BE
THE RESPONSIBILITY OF THE HOME
BUILDER WHERE REQUIRED

NOTE:
CONTRACTOR SHALL COORDINATE WITH ATASCOSA RURAL WATER SERVICE COMPANY TO VERIFY THE LOCATION OF ISOLATION VALVES. OPERATION OF ISOLATION VALVES SHALL ONLY BE MADE WITH THE APPROVAL AND PRESENCE OF ATASCOSA RURAL WATER SERVICE COMPANY PERSONNEL

WATER PLAN NOTES:

1. ALL VALVES SHALL READ "OPEN RIGHT"
2. ALL PVC PIPES 1" THROUGH 4" DIAMETER SHALL BE CLASS 235 (DR 18).
3. ALL PVC PIPES 6" AND ABOVE DIAMETER SHALL BE CLASS 235 (DR 18) C-909.
4. LONG WATER SERVICES REQUIRE 2" PVC CASING

FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1,000 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO. DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

JOINT RESTRAINT NO.

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN ON THE WATER DETAIL SHEET 7.3. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SUBSTITUTION OF RETAINER GLANDS AND OTHER JOINT RESTRAINTS. HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

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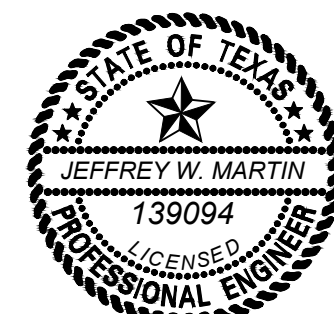
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5/1/24

PRELIMINARY

FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

SAN ANTONIO
BEXAR COUNTY
TEXAS



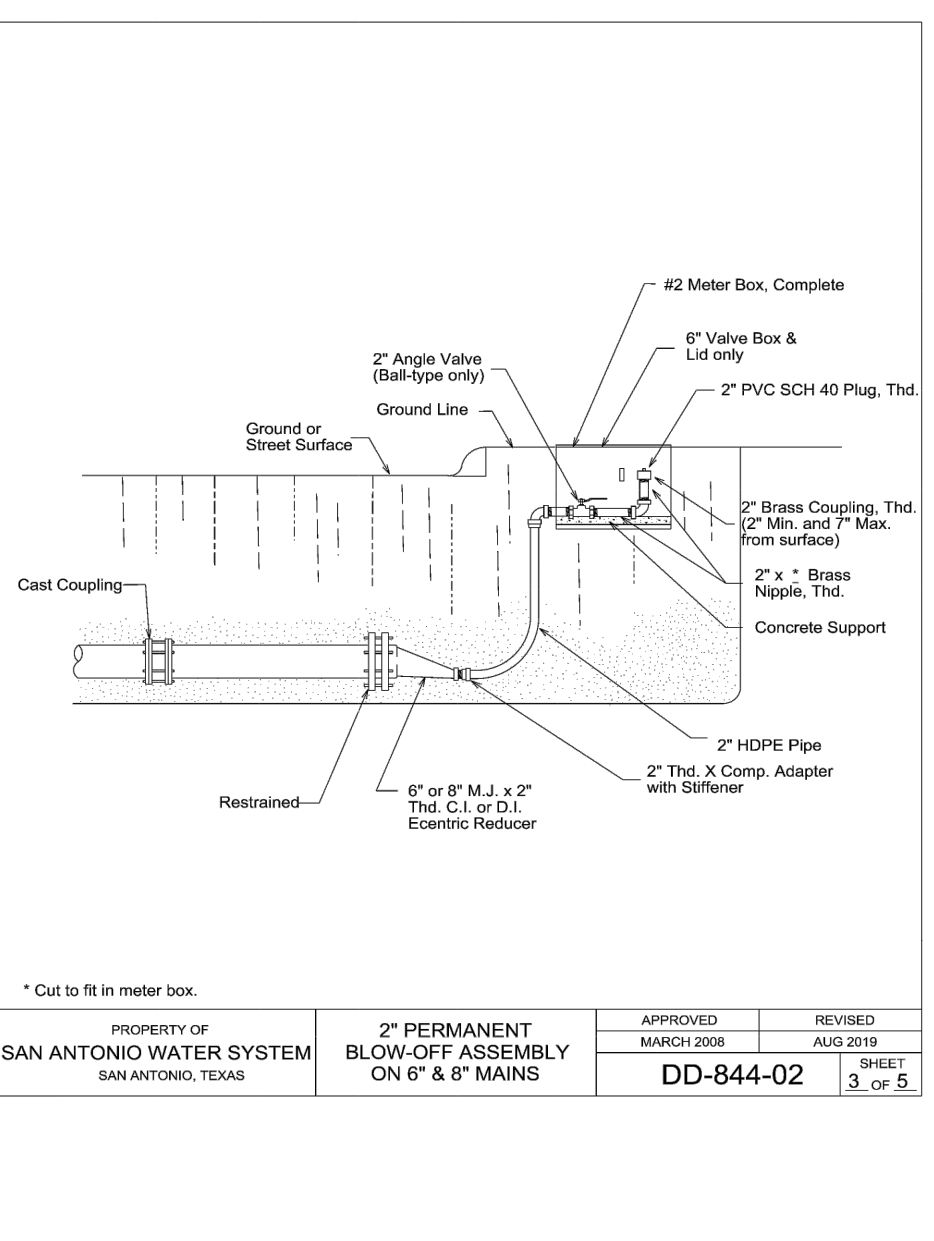
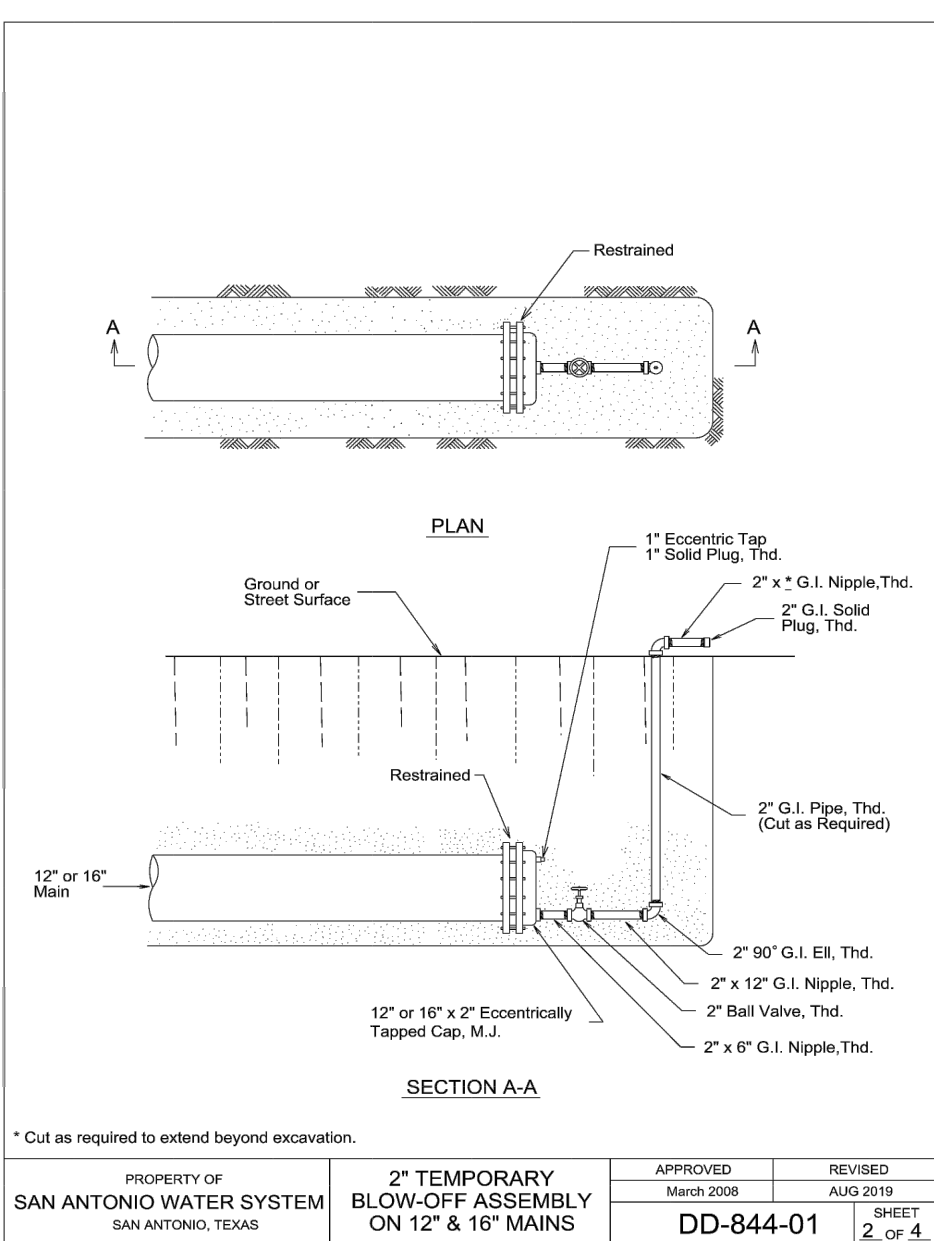
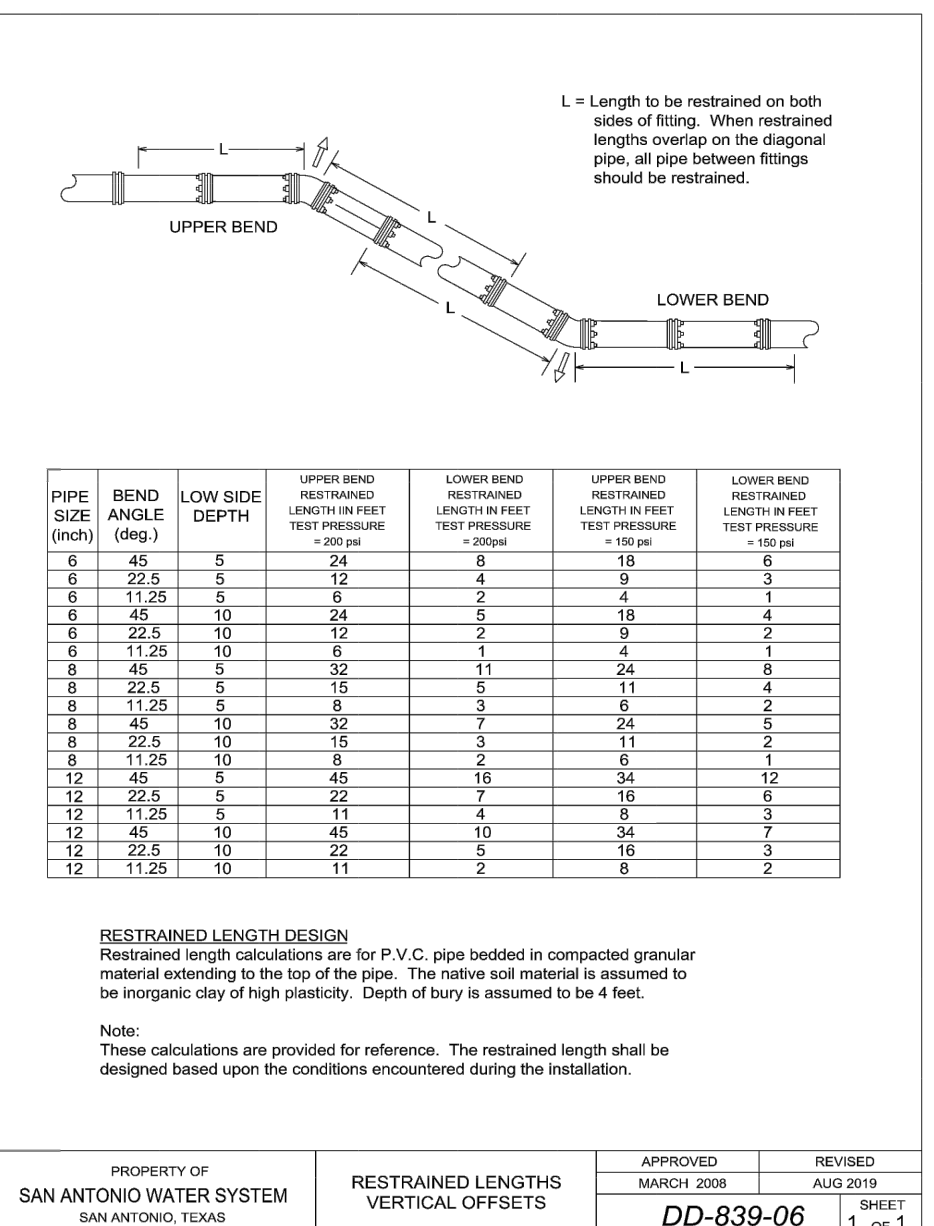
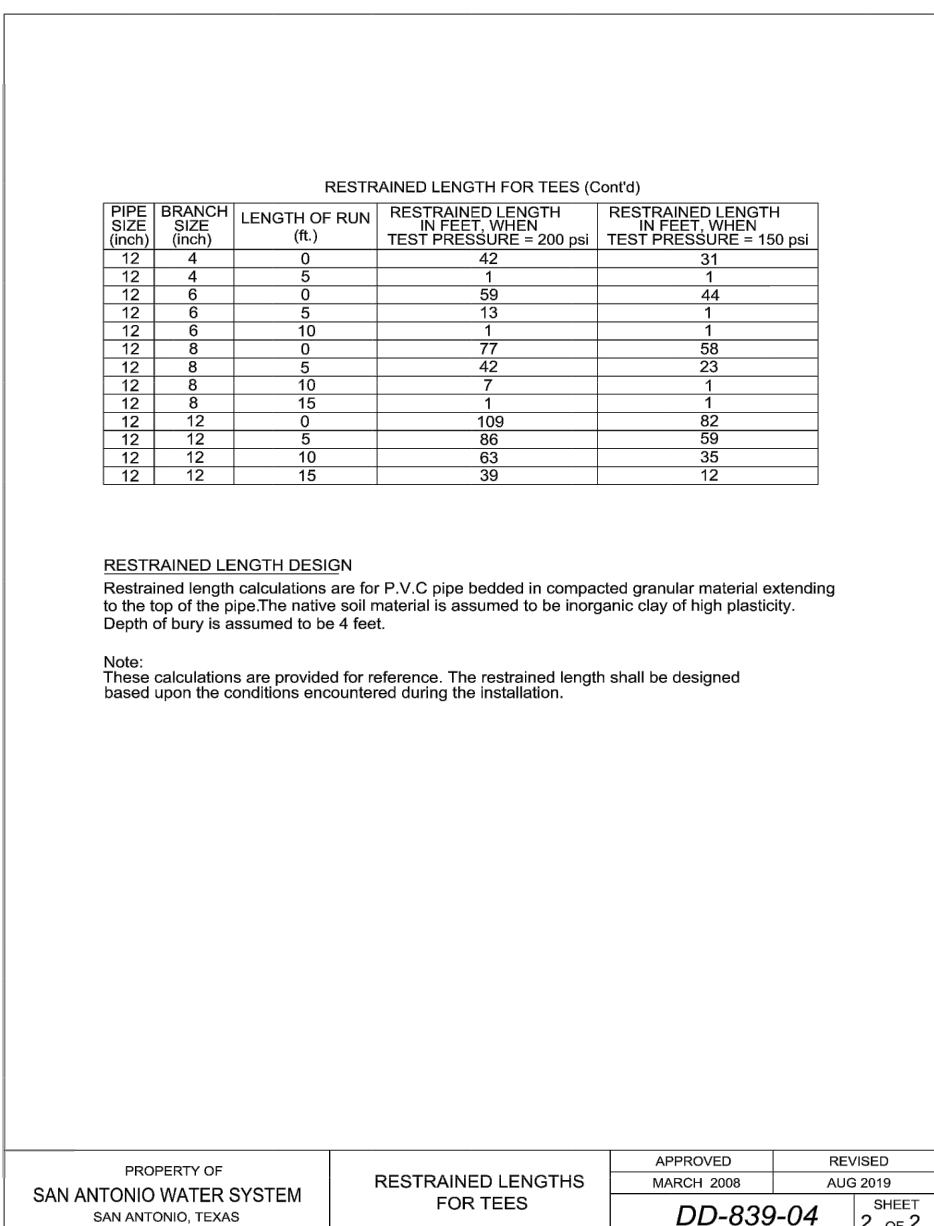
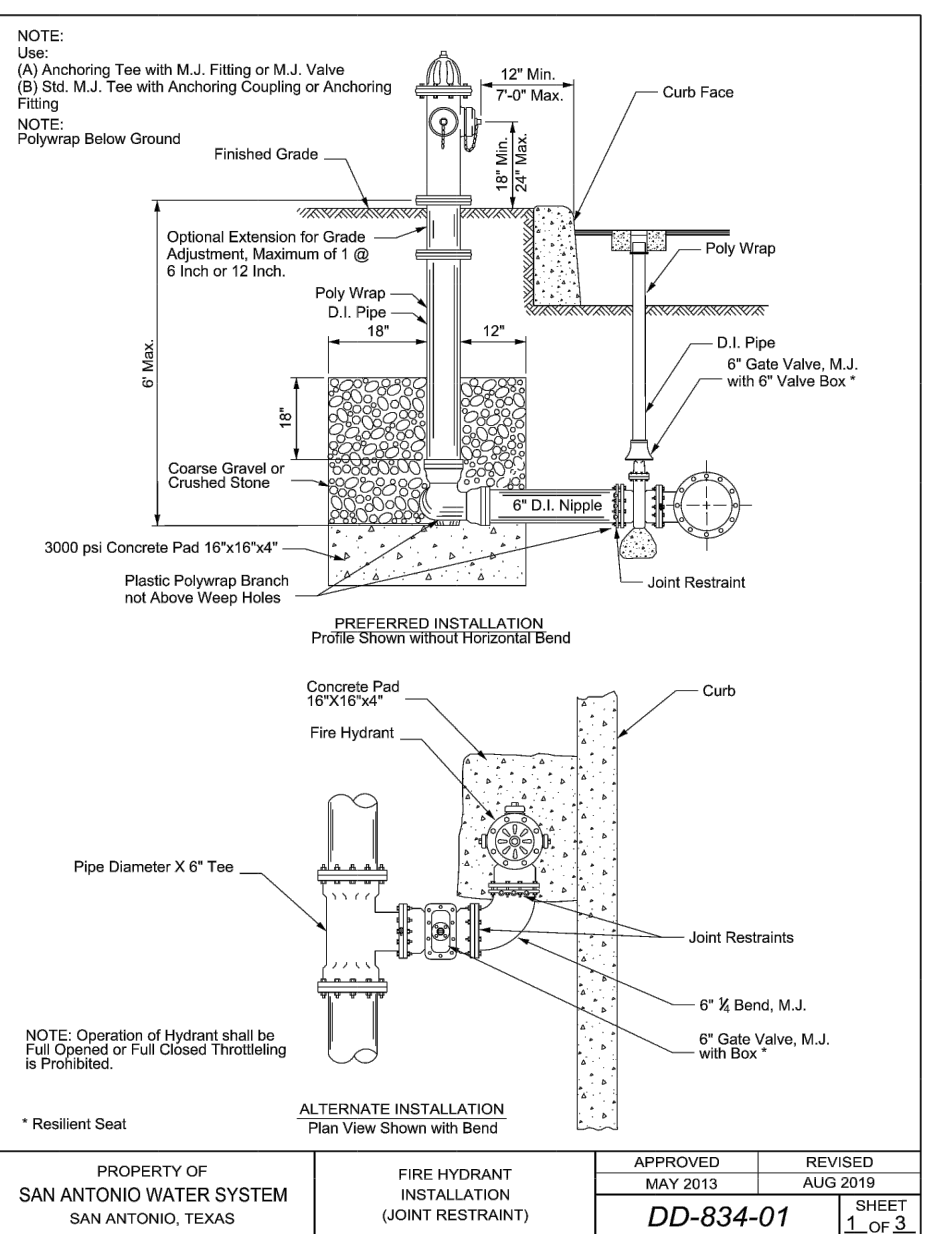
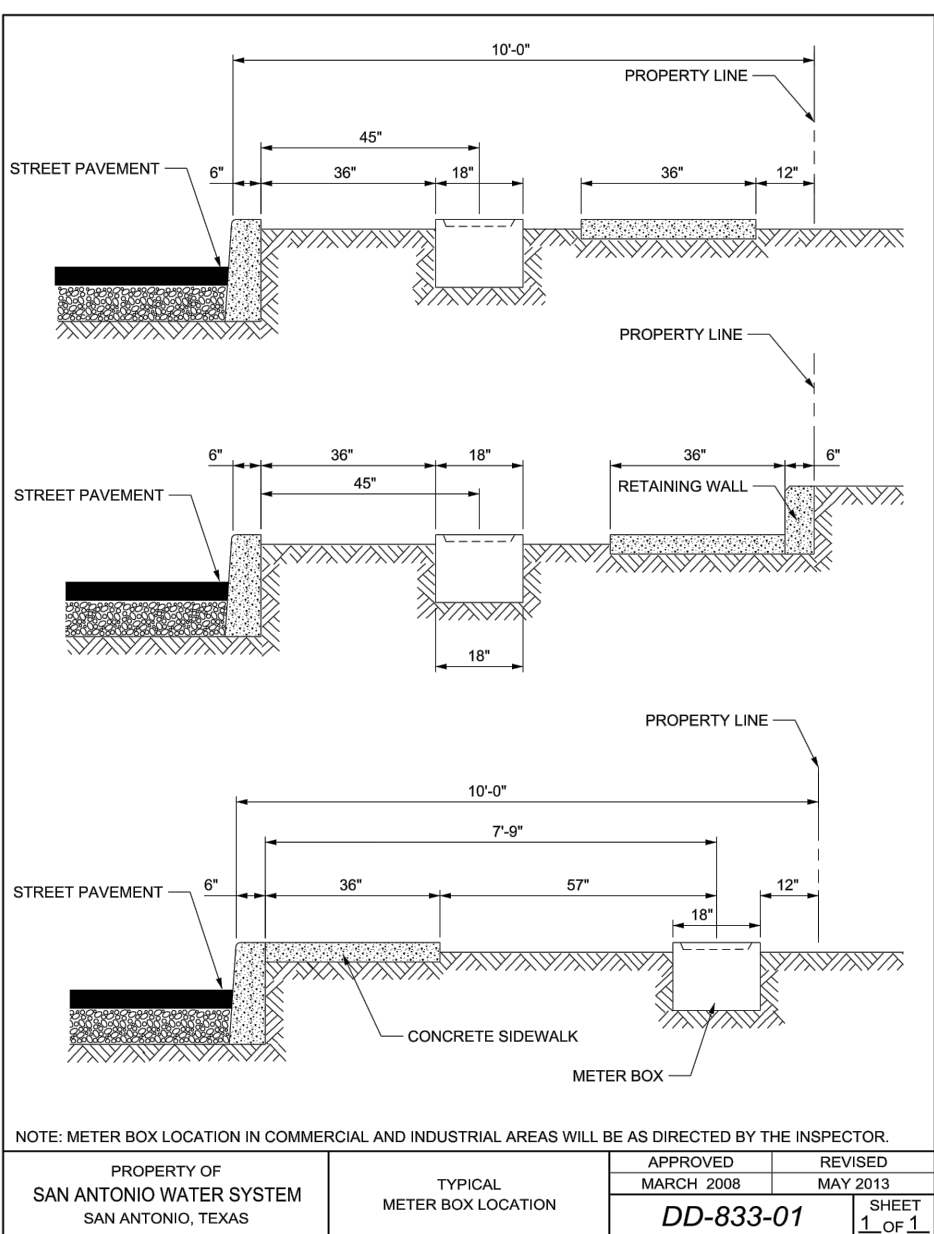
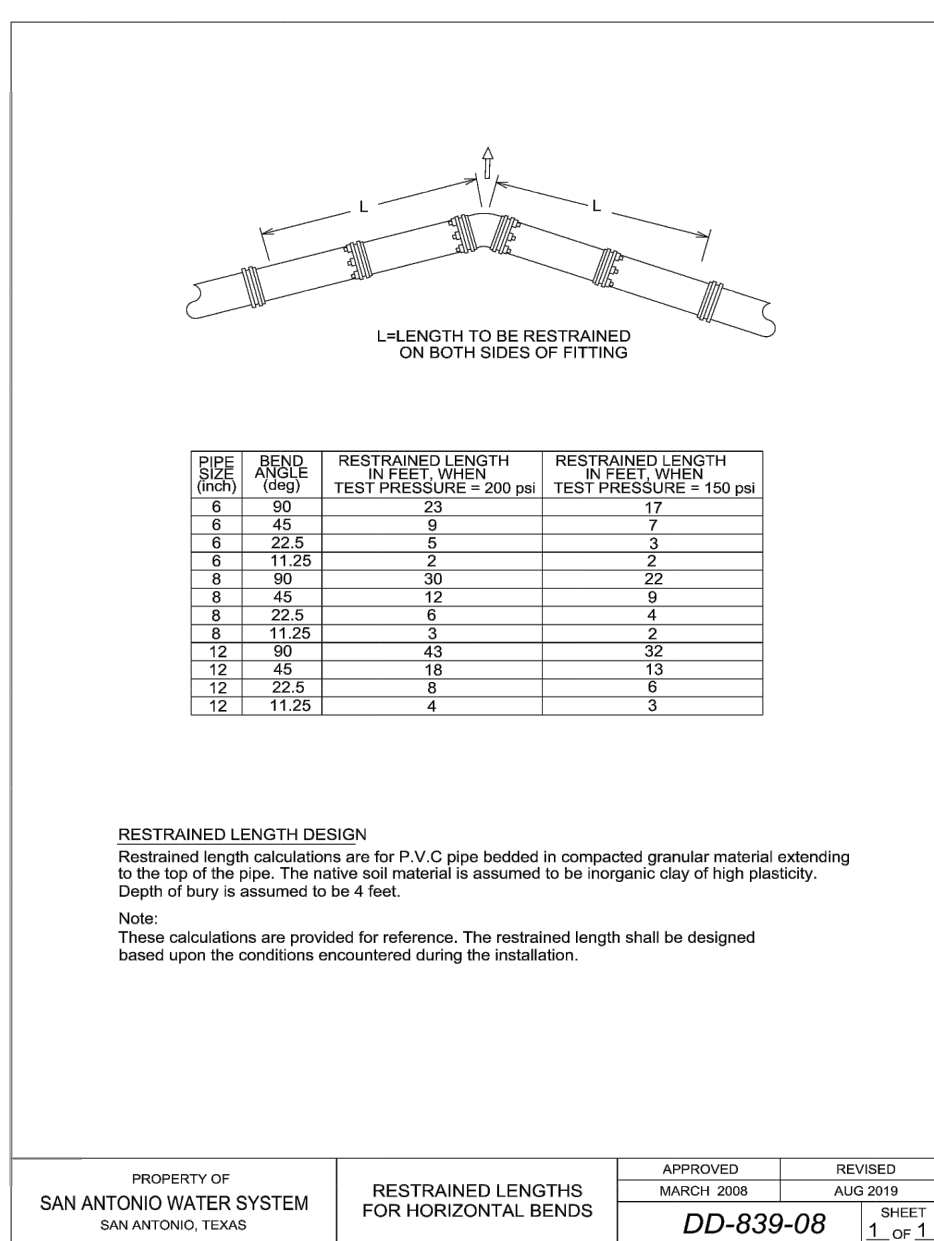
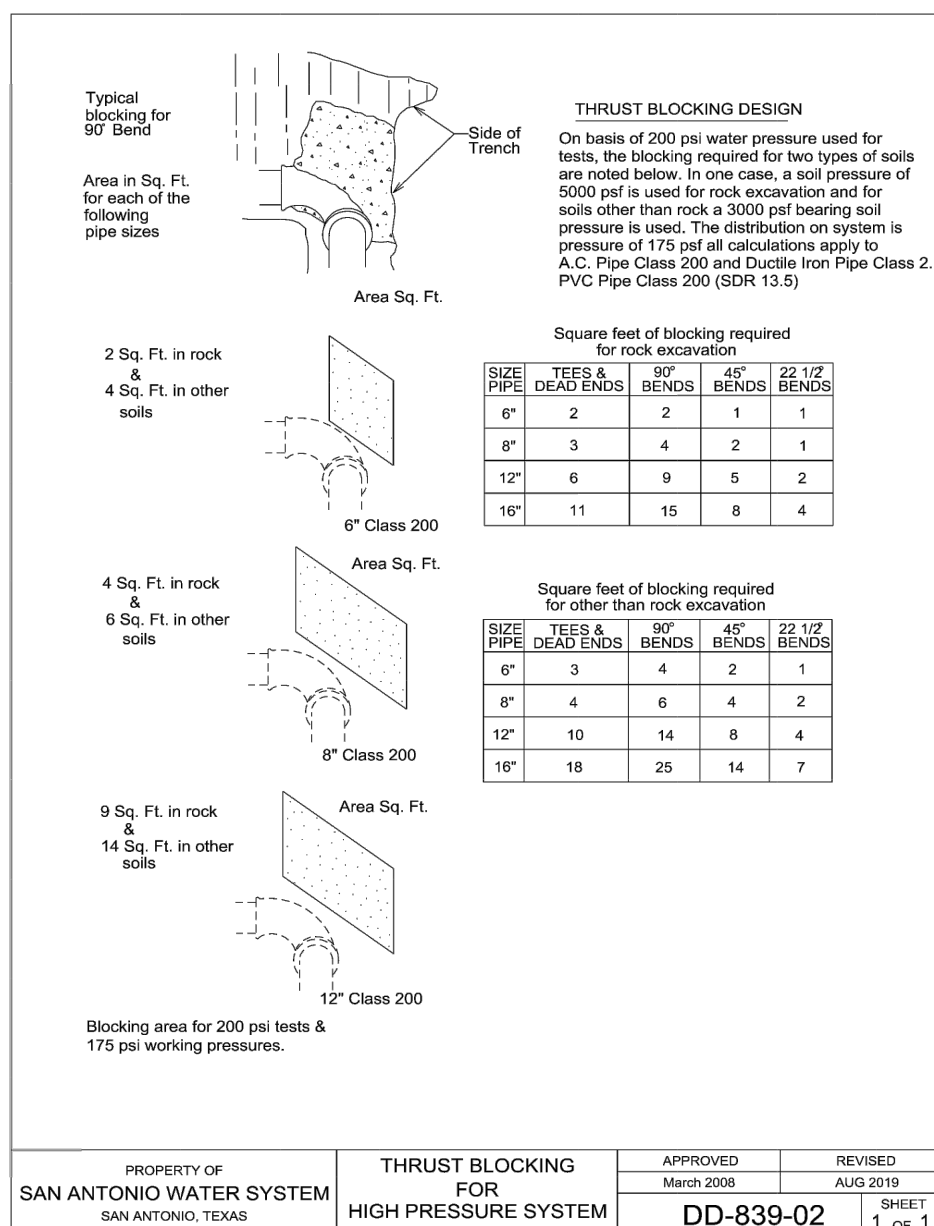
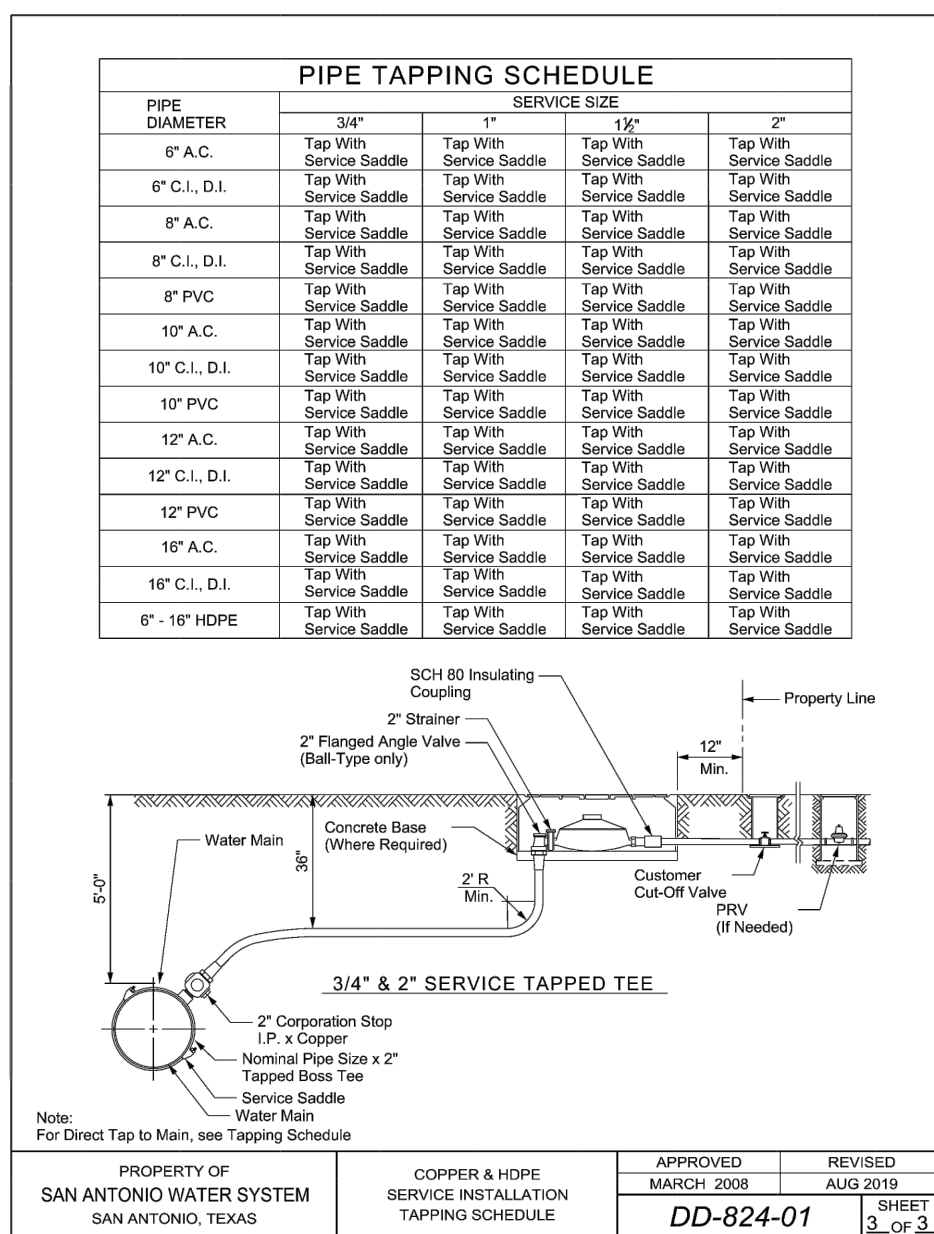
Engineering
& Design

SAN ANTONIO (KF)
3421 Paesanos
Parkway
San Antonio, TX 782
Phone: 210.979.844
COLLIERS ENGINEERING & DESIGN
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE: AS SHOWN	DATE: 07/20/2023	DRAWN BY: SD	CHECKED BY: SC
PROJECT NUMBER: 314-50-04		DRAWING NAME: OW3145004	

SHEET TITLE:

SHEET NUMBER:

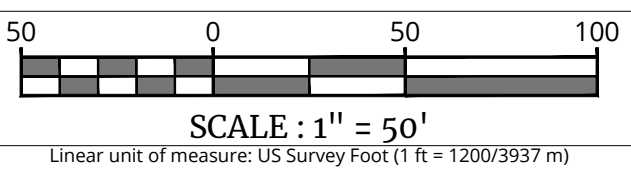



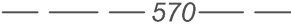


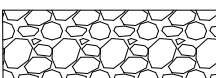





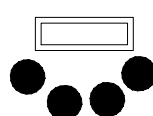
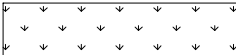
1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COMPLY 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 HOW TO RE-VEGETATE WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

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. ALL AREAS HAVE BEEN STABILIZED ACCORDING TO 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 CONDITIONS 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.

1. ALL DISTURBED AREAS ARE 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 UPGRADENT AREAS HAVE BEEN STABILIZED PER SPEC 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).

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 CONFORMANCE WITH THE TDES 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.
4. CPE IS A SECONDARY OPERATOR IN THIS PROJECT. THEY WILL BE INSTALLING THE GAS AND ELECTRIC UTILITIES.

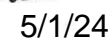


	<i>LIMITS OF CONSTRUCTION</i>
	<i>EXISTING CONTOURS</i>
	<i>PROPOSED CONTOURS</i>
	<i>FLOW ARROW</i>
	<i>STABILIZED CONSTRUCTION ENTRANCE/EXIT</i>
	<i>CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA</i>
	<i>CONCRETE TRUCK WASHOUT PIT</i>
	<i>DISTURBED AREA</i>
	<i>ROCK BERM</i>
	<i>SILT FENCE</i>
	<i>INLET WITH PROTECTION (GRAVEL FILTERS BAGS)</i>
	<i>NATURAL VEGETATIVE BUFFER</i>

[illegible]

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

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FOR
SUNSHINE TRAILS
UNIT 1A
PLAT# 23-11800536

8.1

\\slv3p3145004.dwg\8.1 By: ARODRIGUEZ

