

STREET AND DRAINAGE CONSTRUCTION PLANS

- COVER SHEET
- C1 - CONSTRUCTION GENERAL NOTES
- C2 - OVERALL DRAINAGE MASTER PLAN
- C3 - STREET PLAN & PROFILE - EARP BLVD
- C4 - STREET PLAN & PROFILE - HIGHLAND PASS
- C5 - STREET PLAN & PROFILE - DRYLANDER WAY
- C6 - STREET PLAN & PROFILE - BROKEN HOLLOW
- C7 - STREET PLAN & PROFILE - FRONTIER WAY & CLANTON PASS
- C8 - TRAFFIC SIGNAGE PLAN
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- C10 - SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS
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- C37 - STORM WATER POLLUTION PREVENTION PLAN

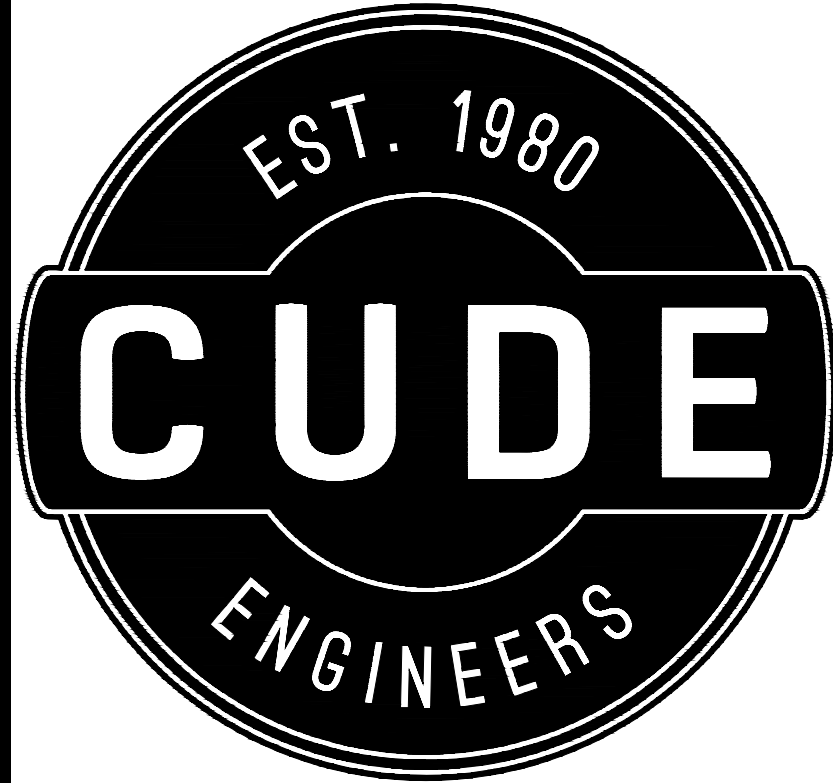
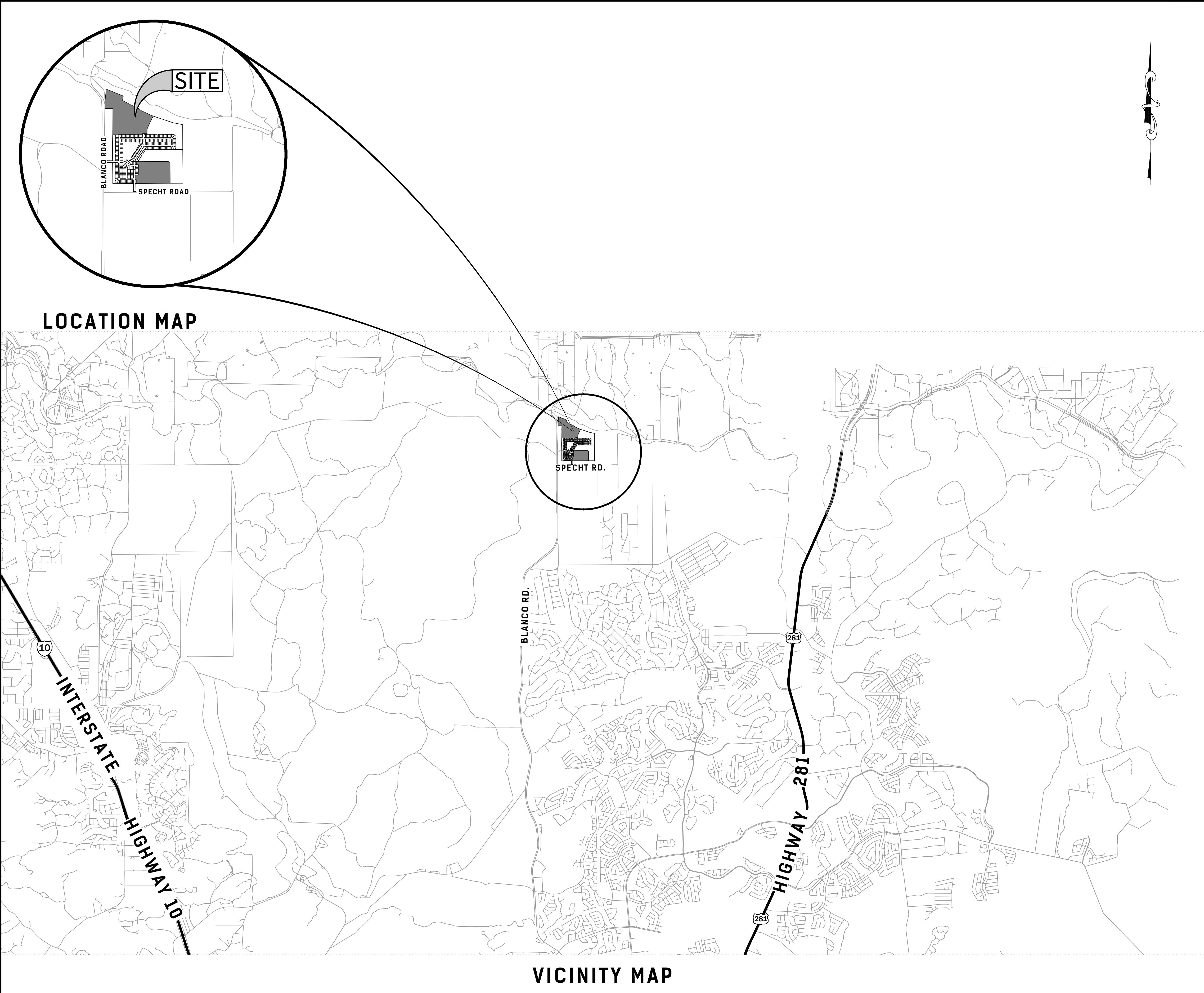
★ STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.

UPPER - EAST SEWERSHED - DOS RIOS \ LEON CREEK

Developer's Name	MERITAGE HOMES OF TEXAS, L.L.C.				
Developer's Address	2722 WEST BITTERS ROAD, SUITE 200				
City	SAN ANTONIO	State	TEXAS	Zip	78231
Phone #	(210) 298-4294	Fax #			
SAWS Block Map #	156690	Total EDU's	152	Total Acreage	65.64
Total Linear Footage of Pipe	3,899.55 L.F. OF 8" SS - SDR 26	Plat No.	23-11800329		
Number of Lots	152	SAWS Job No.	23-1641		

PRESSURE ZONE 1400 HGL

Developer's Name	MERITAGE HOMES OF TEXAS, L.L.C.				
Developer's Address	2722 WEST BITTERS ROAD, SUITE 200				
City	SAN ANTONIO	State	TEXAS	Zip	78231
Phone #	(210) 298-4294	Fax #			
SAWS Block Map #	084-622	Total EDU's	156	Total Acreage	65.64
Total Linear Footage of Pipe	8" W - 3135 L.F.	Plat No.	23-11800329		
Number of Lots	152	SAWS Job No.	23-1172		



ESTANCIA RANCH
UNIT 3
CONSTRUCTION PLANS



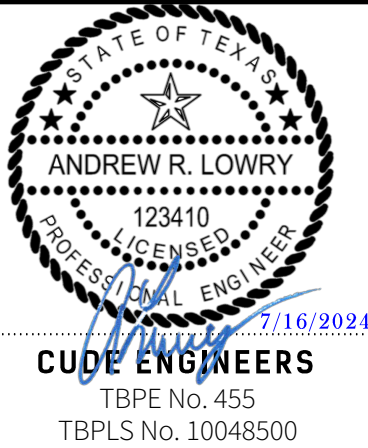
DEVELOPER:
MERITAGE HOMES OF TEXAS, L.L.C.
CONTACT PERSON: TONDA ALEXANDER
2722 W. BITTERS RD, SUITE 200
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TEL: (210) 402-6045
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DRAWN BY
CG/TCD/XV
CHECKED BY
XV/AL

DATE
07/16/2024
PROJECT NO.
03473.010

PLAT NO.
LAND-PLAT- 23-11800329
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500



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GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
- 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).
- 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.
- IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 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)	233-2010
BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET)	354-6538 / 357-5741
CITY OF HELOTES	210-695-8877
BEXAR COUNTY	210-335-6700
TEXAS STATE WIDE ONE CALL LOCATOR	1-800-344-8377
- CITY PUBLIC SERVICE ENERGY	
- TIME WARNER	
- AT&T	
- MCI	
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND /OR TRACKED CONSTRUCTION MATERIALS AND /OR DEBRIS.
- IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
- IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND /OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND /OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL.

THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.
- CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.

- CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

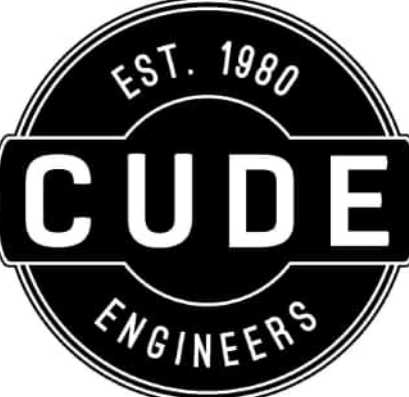
TREE PROTECTION AND PRESERVATION GENERAL NOTES

- NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
- ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
- ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
- NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED 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.
- 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.
- NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.
- 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.

- NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.
- 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).
- 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.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST.
- TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
- 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

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



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

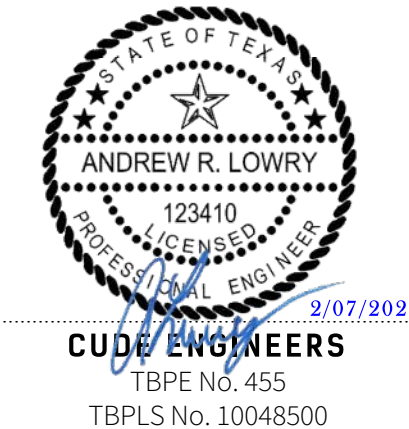
ESTANCIA RANCH SUBDIVISION

UNIT 3

CONSTRUCTION GENERAL NOTES

DATE	02/07/2024
PROJECT NO.	03473.010
DRAWN BY	CG/TCD/XV
CHECKED BY	XV/AL

REVISIONS	
DATE	
1	
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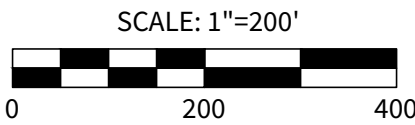
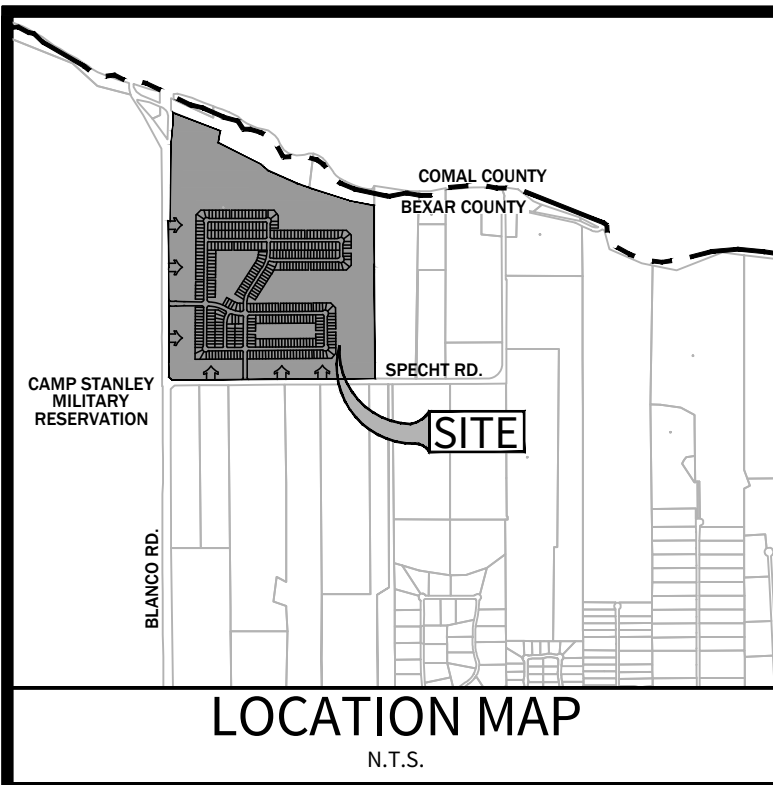


CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
23-11800329

C1

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LEGEND

SUBDIVISION BOUNDARY

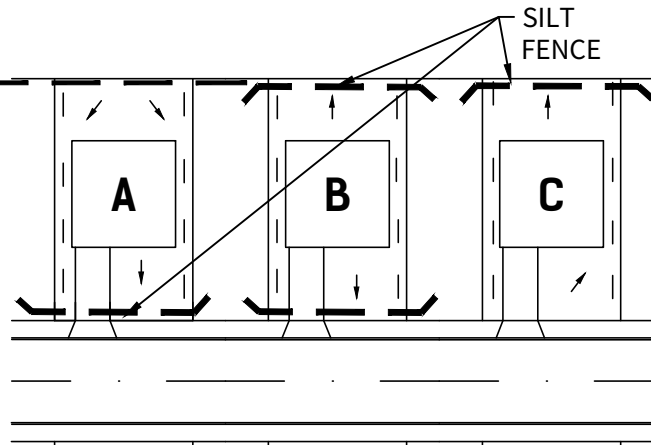
UNIT BOUNDARY

DRAINAGE AREA

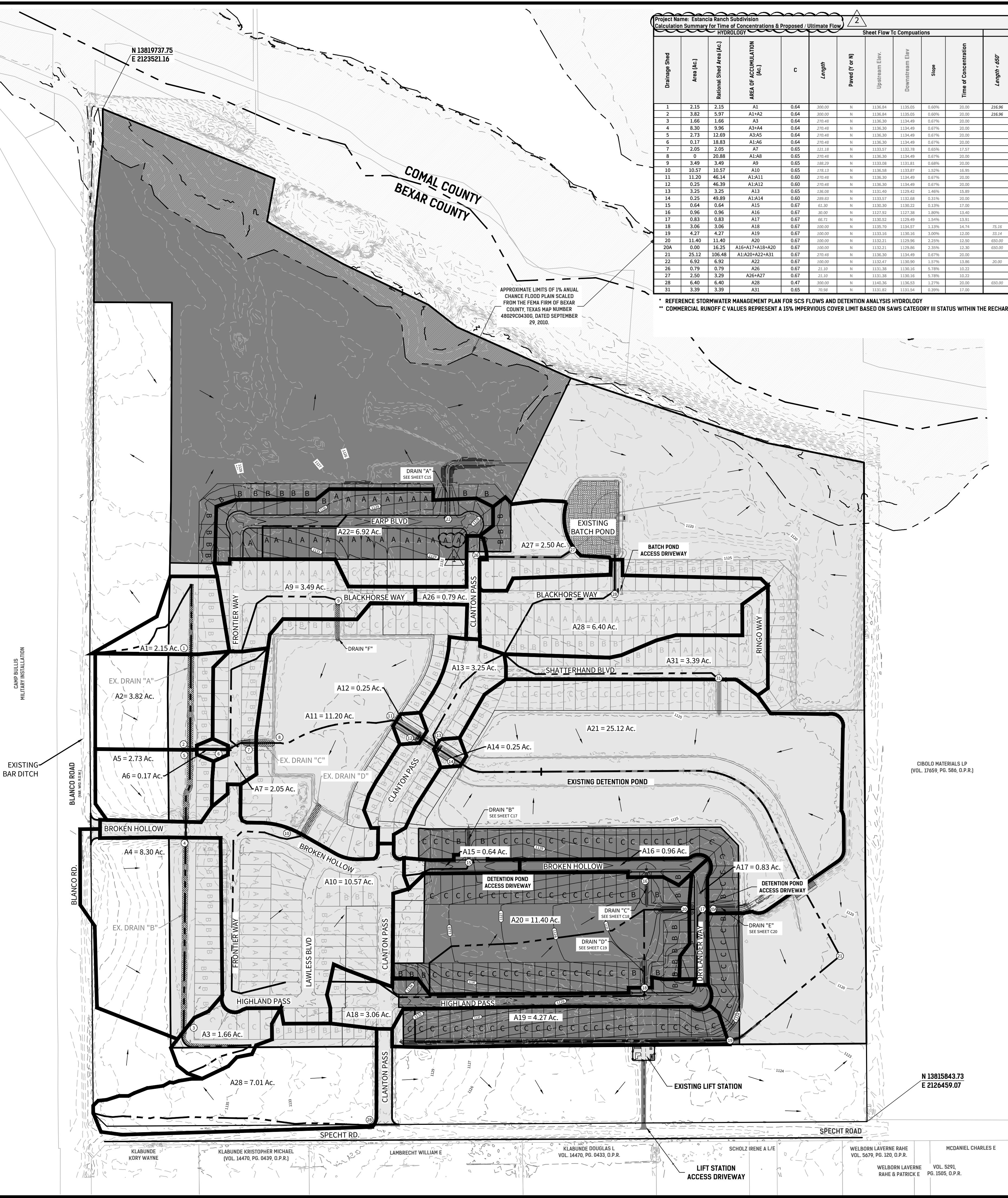
Tc FLOW PATH

ACCUMULATION POINT

1% ANNUAL CHANCE FLOODPLAIN



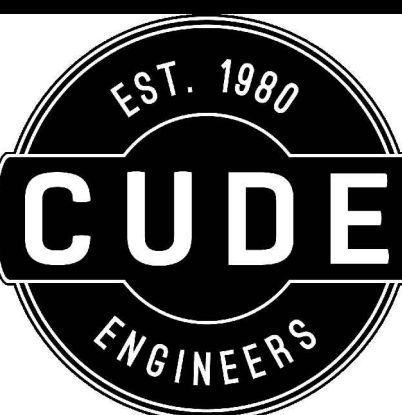
TYPICAL LOT SITE PLAN
N.T.S.



Project Name: Estancia Ranch Subdivision Calculation Summary for Time of Concentrations & Proposed / Ultimate Flow															Precipitation Area Atlas 14 - PA1											
HYDROLOGIC																										
Drainage Shed	Area (Ac.)	Rational Shed Area (Ac.)	AREA OF ACCUMULATION (Ac.)	C	Length	Paved (Y or N)	Sheet Flow Tc Computations				Shallow Conc. Tc Computations				Concentrated Tc Computations				Overall				Q FLOW			
							Upstream Elev.	Downstream Elev	Slope	Time of Concentration	Length - 650'	Paved (Y or N)	Downstream Elev	Slope	Time of Concentration	Length	Velocity (fps)	Time of Concentration	Time of Concentration (min)	I5	I25	I100		Q5	Q25	Q100
1	2.15	2.15	A1	0.64	300.00	N	1136.84	1135.05	0.60%	20.00	216.96	N	1133.62	0.66%	2.76	275.42	6	0.78	23.54	4.23	5.88	7.41	5.82	8.09	10.20	1
2	3.82	5.97	A1+A2	0.64	300.00	N	1136.84	1135.05	0.60%	20.00	216.96	N	1133.62	0.66%	2.76	632.62	6	1.78	24.52	4.14	5.76	7.26	15.82	22.01	27.74	2
3	1.66	1.66	A3	0.64	270.48	N	1136.30	1134.49	0.67%	20.00						280.88	6	1.81	20.81	4.40	6.26	7.90	4.77	6.65	8.39	3
4	8.30	9.96	A3+A4	0.64	270.48	N	1136.30	1134.49	0.67%	20.00						762.25	6	2.12	22.12	4.36	6.07	7.65	27.79	38.69	48.76	4
5	2.73	12.69	A3+A5	0.64	270.48	N	1136.30	1134.49	0.67%	20.00						1187.71	6	3.08	23.08	4.27	5.94	7.49	34.68	48.24	60.83	5
6	0.17	18.83	A1+A6	0.64	270.48	N	1136.30	1134.49	0.67%	20.00						1253.71	6	3.48	23.48	4.23	5.89	7.42	50.98	70.98	89.42	6
7	2.05	2.05	A7	0.65	121.18	N	1133.07	1132.78	0.60%	17.67						266.69	6	0.99	18.56	4.76	6.64	8.40	6.34	8.85	11.19	7
8	0	20.88	A1+A8	0.65	270.48	N	1136.30	1134.49	0.67%	20.00						1253.68	6	3.48	23.48	4.23	5.89	7.42	57.41	79.94	100.70	8
9	3.49	3.49	A9	0.65	188.29	N	1133.08	1131.81	0.68%	20.00						297.82	6	1.11	21.11	4.46	6.21	7.84	10.12	14.09	17.79	9
10	10.57	10.57	A10	0.65	178.12	N	1136.38	1133.87	1.32%	16.95						280.17	6	2.49	19.44	4.65	6.48	8.19	31.95	44.52	56.27	10
11	11.20	46.14	A1+A11	0.60	270.48	N	1136.30	1134.49	0.67%	20.00						2795.62	6	4.89	24.99	4.10	5.70	7.19	113.50	157.80	199.05	11
12	0.25	46.39	A1+A12	0.60	270.48	N	1136.30	1134.49	0.67%	20.00						2813.62	6	5.32	25.32	4.07	5.67	7.14	113.28	157.82	198.73	12
13	3.25	3.25	A13	0.65	180.08	N	1131.40	1129.42	1.06%	15.89						422.81	6	1.17	17.07	4.97	6.94	8.78	10.50	14.66	18.55	13
14	0.25	49.89	A1+A14	0.60	289.63	N	1133.07	1132.08	0.31%	20.00						2117.62	6	3.88	26.88	4.03	5.60	7.06	120.61	167.63	211.31	14
15	0.64	0.64	A15	0.67	61.30	N	1130.30	1130.22	0.13%	17.00						215.63	6	0.69	5.00	7.88	11.13	14.14	3.38	4.77	6.06	15
16	0.96	0.96	A16	0.67	80.00	N	1127.52	1127.38	1.80%	13.40						34.26	6	0.36	5.00	7.88	11.13	14.14	5.07	7.16	9.09	16
17	0.83	0.83	A17	0.67	66.71	N	1130.32	1129.89	1.04%	13.81						111.43	6	0.31	5.00	7.88	11.13	14.14	4.38	6.19	7.86	17
18	3.06	3.06	A18	0.67	100.00	N	1135.70	1134.57	1.13%	14.74						2505.25	6	2.93	18.50	4.77	6.65	8.41	39.78	13.63	17.24	18
19	4.27	4.27	A19	0.67	100.00	N	1133.16	1130.16	3.00%	12.00						1208.19	6	3.36	15.47	5.24	7.32	9.28	14.99	20.94	26.55	19
20	11.40	11.40	A20	0.67	100.00	N	1132.21	1129.36	2.55%	12.90						438.89	6	1.22	21.63	4.41	6.14	7.74	33.68	46.90	59.12	20
20A	0.00	16.25	A16+A17+A18+A20	0.67	100.00	N	1132.21	1129.36	2.35%	12.30						438.89	6	1.22	21.66	4.42	6.15	7.76	46.12	66.96	84.49	20A
21	25.12	106.48	A1+A20+A21+A31	0.67	270.48	N	1136.30	1134.49	0.67%	20.00						2886.28	6	11.07	31.07	3.67	5.11	6.43	251.82	364.56	458.73	21
22	6.92	6.92	A22	0.67	100.00	N	1132.47	1130.50	1.75%	13.86						251.56	6	0.98	14.99	5.32	7.44	9.44	24.67	34.49	43.77	22
26	0.79	0.79	A26	0.67	22.00	N	1131.08	1130.18	0.79%	10.28						489.27	6	1.14	11.35	6.06	8.55	10.86	3.21	4.53	5.75	26
27	2.50	0.29	A26+A27	0.67	22.00	N	1131.08	1130.18	0.79%	10.28						788.45	6	2.19	12.41	5.83	8.22	10.43	12.85	16.12	22.59	27
28	6.40	6.40	A28	0.47	300.00	N	1140.36	1136.53	1.27%	20.00						131.51	6	0.37	29.15	3.80	5.28	6.64	11.43	15.88	19.97	28
31	3.39	3.39	A31	0.65	70.00	N	1131.62	1131.54	0.09%	17.00						788.14	6	2.19	19.19	4.68	6.53	8.25	10.31	14.39	18.18	31

* REFERENCE STORMWATER MANAGEMENT PLAN FOR SCS FLOWS AND DETENTION ANALYSIS HYDROLOGY
** COMMERCIAL RUNOFF C VALUES REPRESENT A 15% IMPERVIOUS COVER LIMIT BASED ON SAWS CATEGORY III STATUS WITHIN THE RECHARGE ZONE

CUDEENGINEERS.COM



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

ESTANCIA RANCH SUBDIVISION

UNIT 3

OVERALL MASTER DRAINAGE PLAN

DATE
06/04/2024
PROJECT NO.
03473.010

DRAWN BY
CG/TCD/XV

CHECKED BY
XV/AL

REVISIONS

DATE

1. 2024-04-29
2. 2024-06-04



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
23-11800329

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LEGEND

PAVEMENT OUTER LINE

DRIVEWAY TO BE BUILT WITH HOMEBUILDING

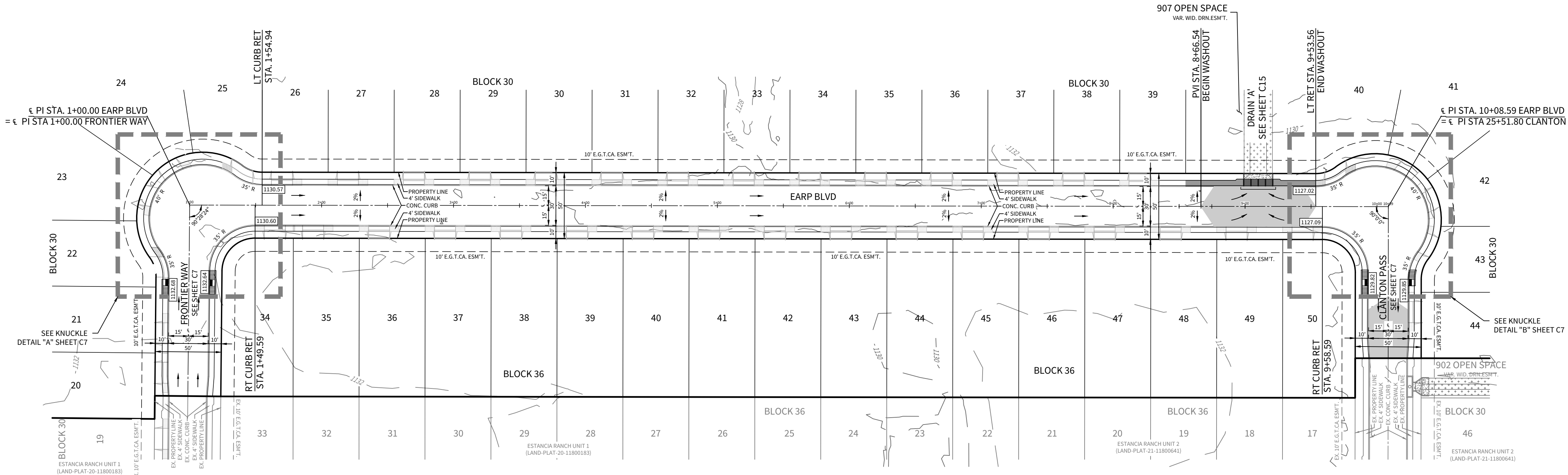
STREET WASHOUT - SEE DETAIL SHEET C9

SIDEWALK TO BE CONSTRUCTED WITH INFRASTRUCTURE

5' x 5' SIDEWALK PASSING LANE TO BE CONSTRUCTED AT TIME OF HOMEBUILDING

ADA SIDEWALK CURB RAMP - SEE DETAIL SHEET C14

ONLY ADA RAMPS WITH A 900 SERIES OPEN SPACE WILL BE BUILT WITH INFRASTRUCTURE

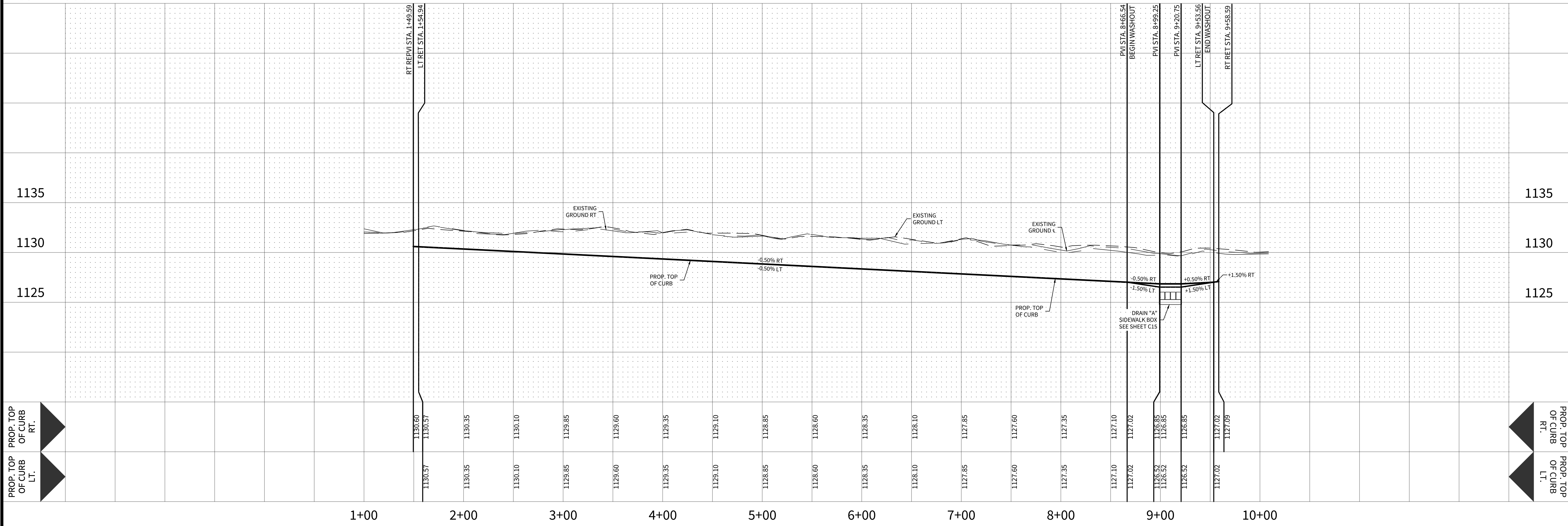


EARP BLVD

STA. 1+00.00 TO STA. 10+08.59

NOTE: A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY.

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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ESTANCIA RANCH SUBDIVISION

UNIT 3

STREET PLAN & PROFILE - EARP BLVD

DATE

02/07/2024

PROJECT NO.

03473.010

DRAWN BY

CG/TCD/XV

CHECKED BY

XV/AL

REVISIONS

DATE

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STATE OF TEXAS

ANDREW R. LOWRY

123410

2/07/2024

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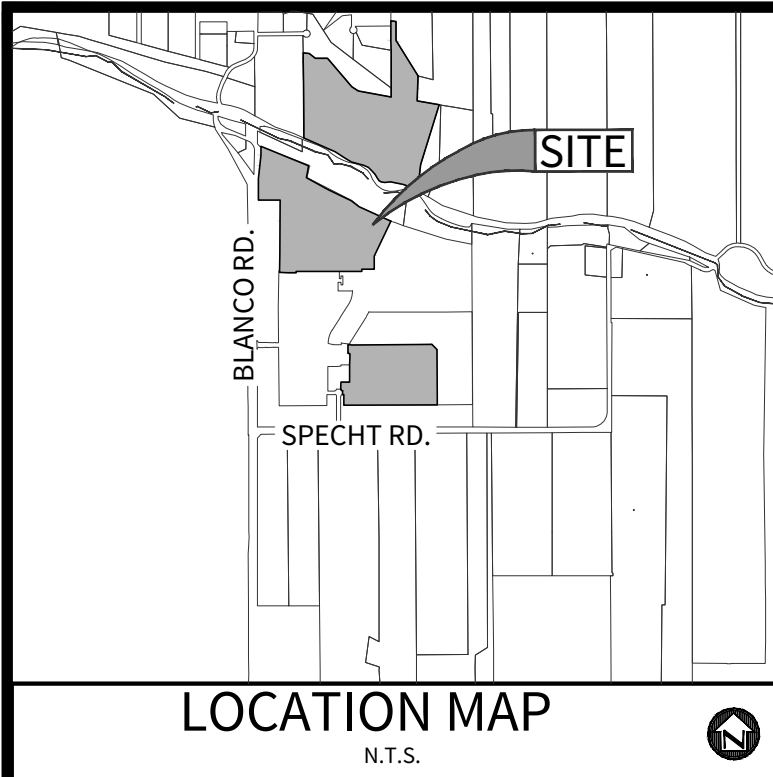
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23-11800329

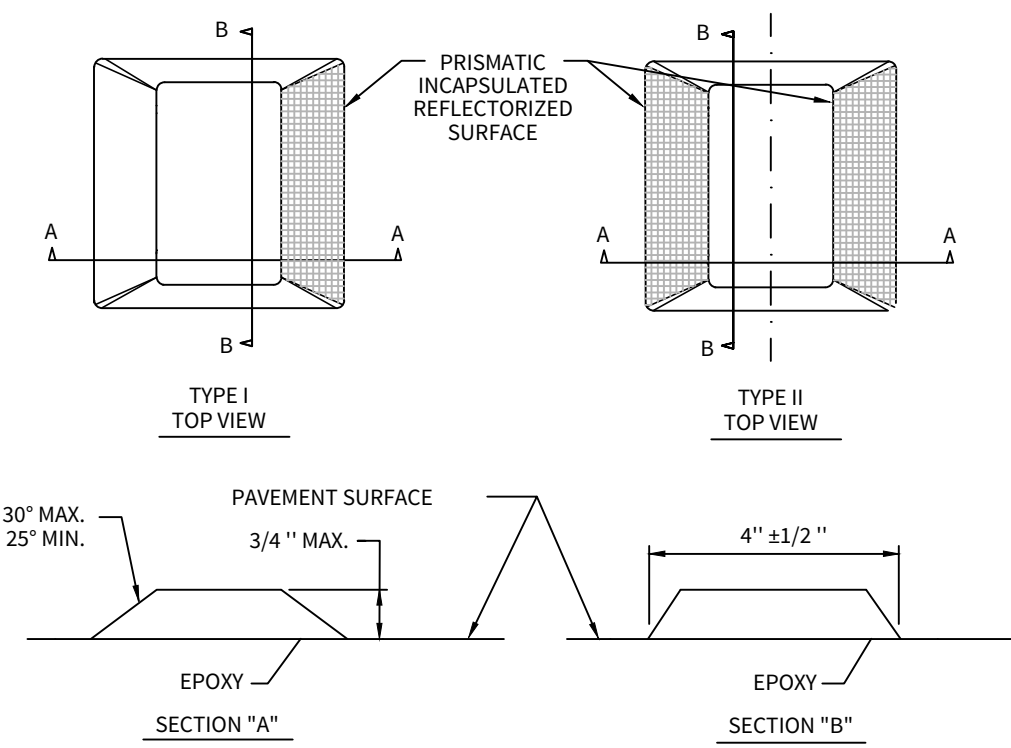
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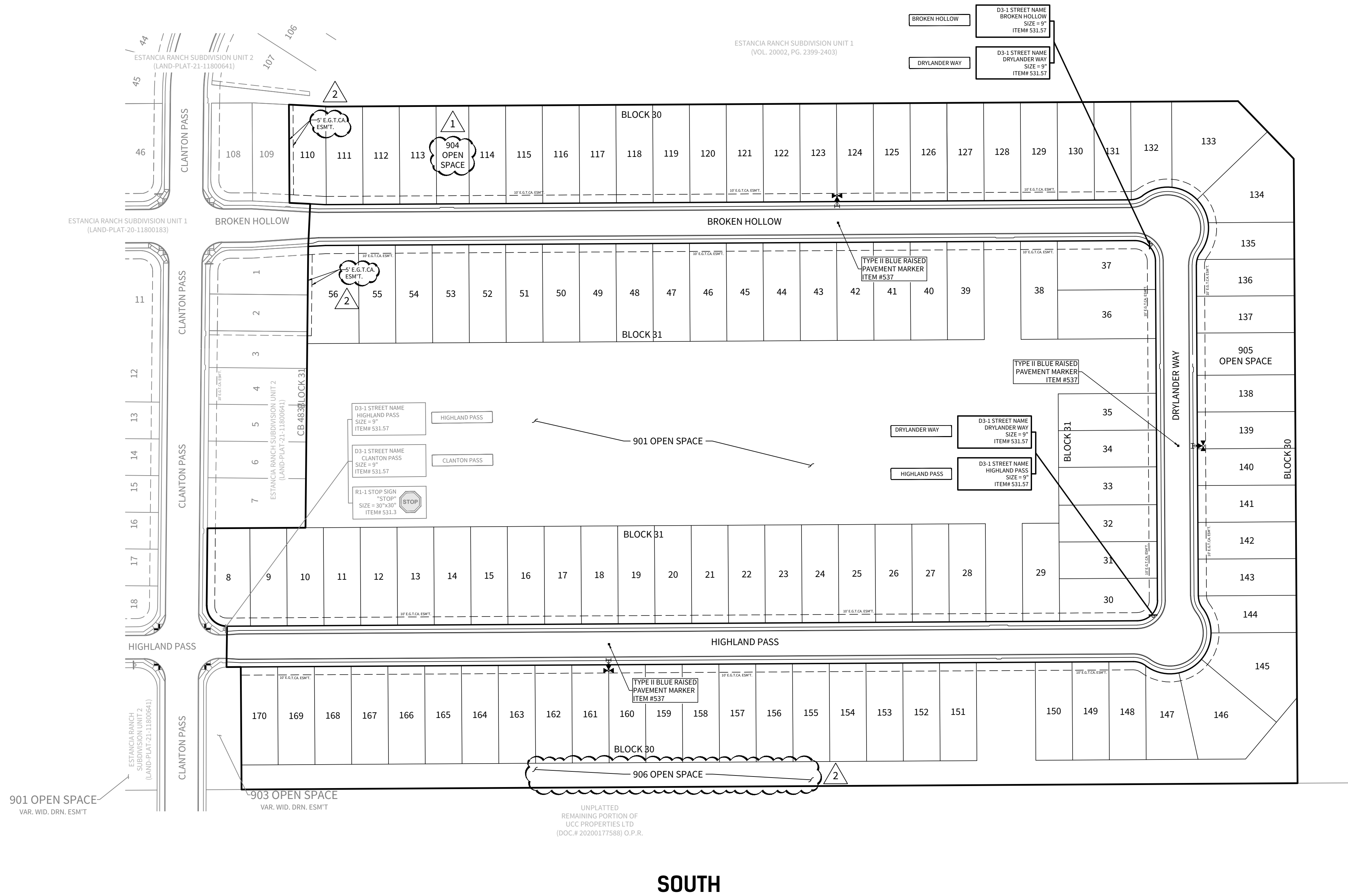
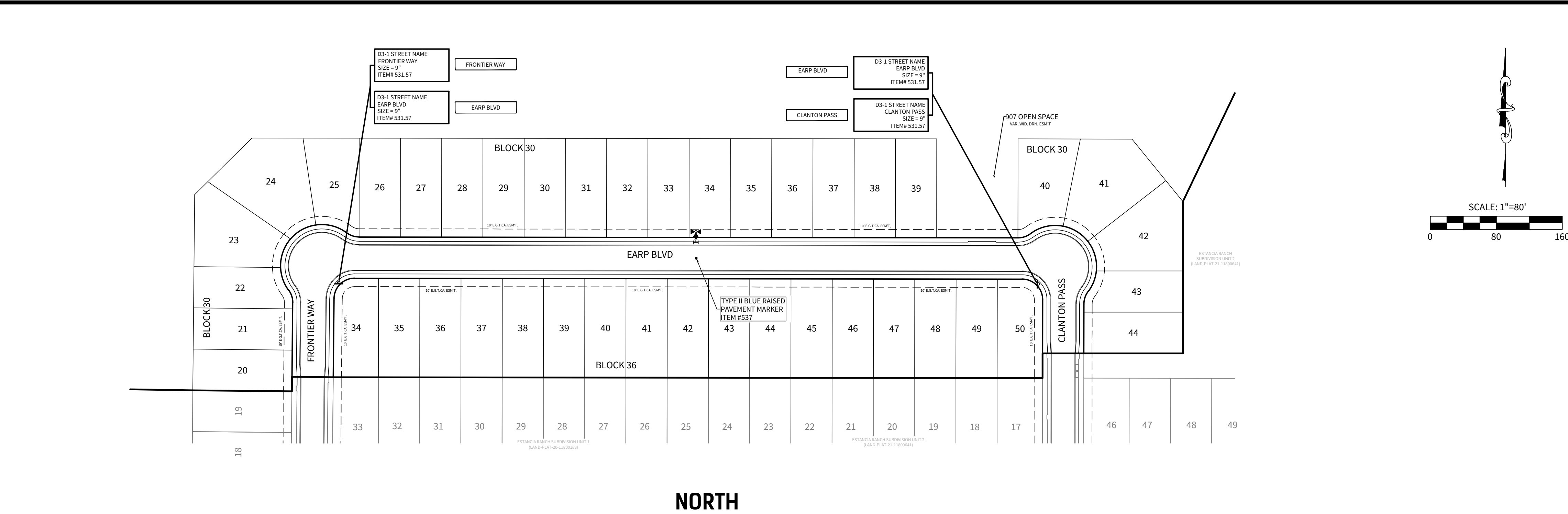
NOTE: A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY



- 1) REFLECTORIZED BLUE - FIRE HYDRANT
- 2) ADHESIVE SHALL BE APPLIED IN SUFFICIENT TO ENSURE THE FOLLOWING:
 - a) 100 PERCENT OF THE BONDING AREA OF RAISED PAVEMENT MARKERS SHALL BE IN CONTACT WITH THE ADHESIVE.
 - b) RAISED PAVEMENT MARKERS SHALL NOT BE IN CONTACT WITH THE PAVEMENT SURFACE, BUT SHALL BE SEATED ON A CONTINUOUS LAYER OF ADHESIVE.
 - c) BITUMINOUS ADHESIVE FOR MARKERS ON BITUMINOUS PAVEMENTS. EPOXY ADHESIVE FOR MARKERS ON PORTLAND CEMENT CONCRETE PAVEMENTS. EPOXY ADHESIVE SHALL BE MACHINE MIXED.
- 3) RAISED PAVEMENT MARKERS SHALL BE FREE OF RUST, SCALE, DIRT, OIL, GREASE, MOISTURE, OR CONTAMINATES WHICH MIGHT ADVERSELY AFFECT THE ADHESIVE BOND. ADHESIVE OR ANY OTHER MATERIAL THAT IMPAIRS THE FUNCTIONAL REFLECTIVITY WILL NOT BE ACCEPTABLE.
- 4) PLACEMENT OF RAISED PAVEMENT MARKERS SHALL BE 4 FEET OFF STREET CENTELINE TOWARD ITEM MARKED.

PAVEMENT REFLECTORS DETAIL

N.T.S.



ESTANCIA RANCH SUBDIVISION UNIT 3

TRAFFIC SIGNAGE PLAN

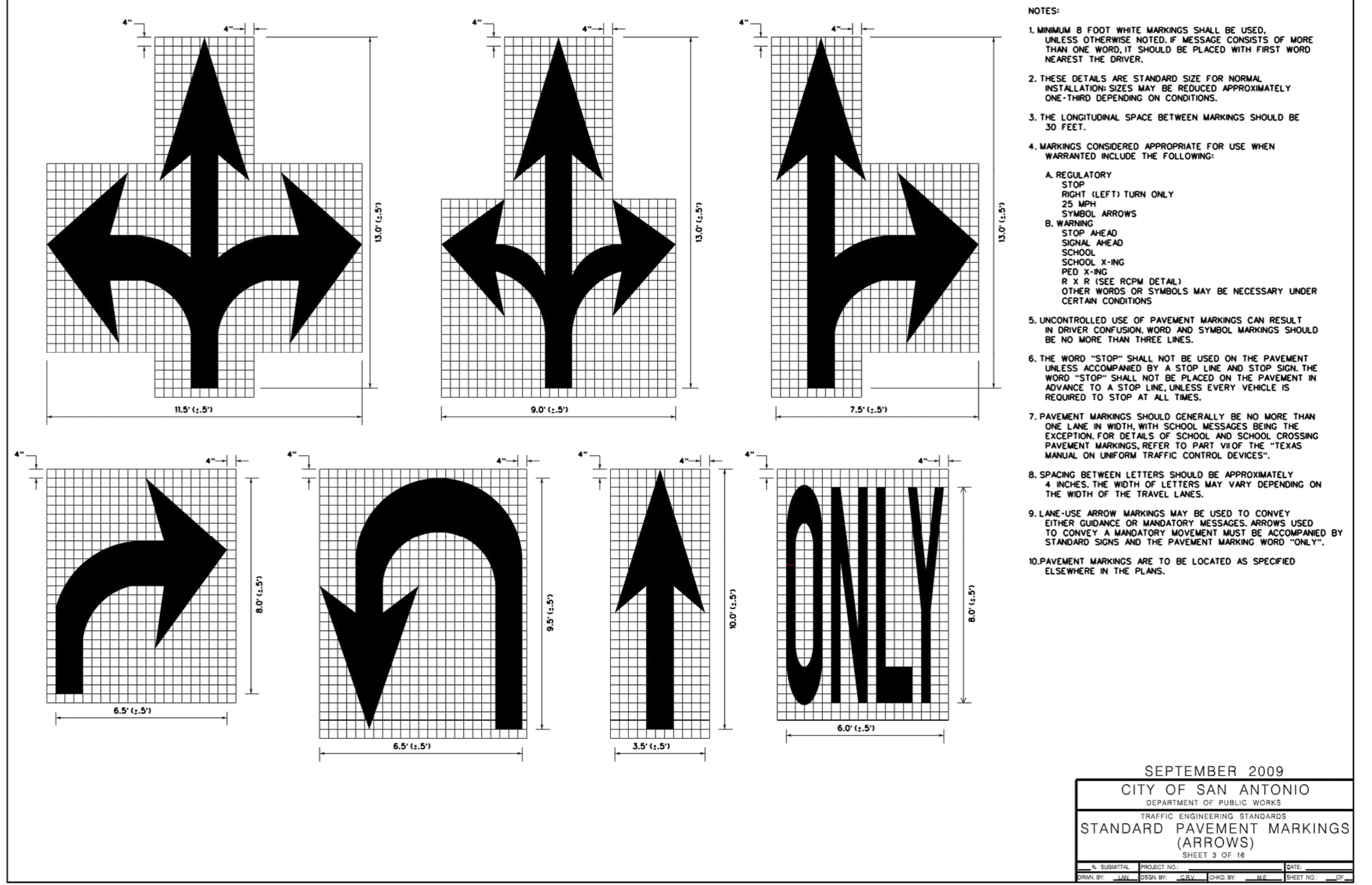
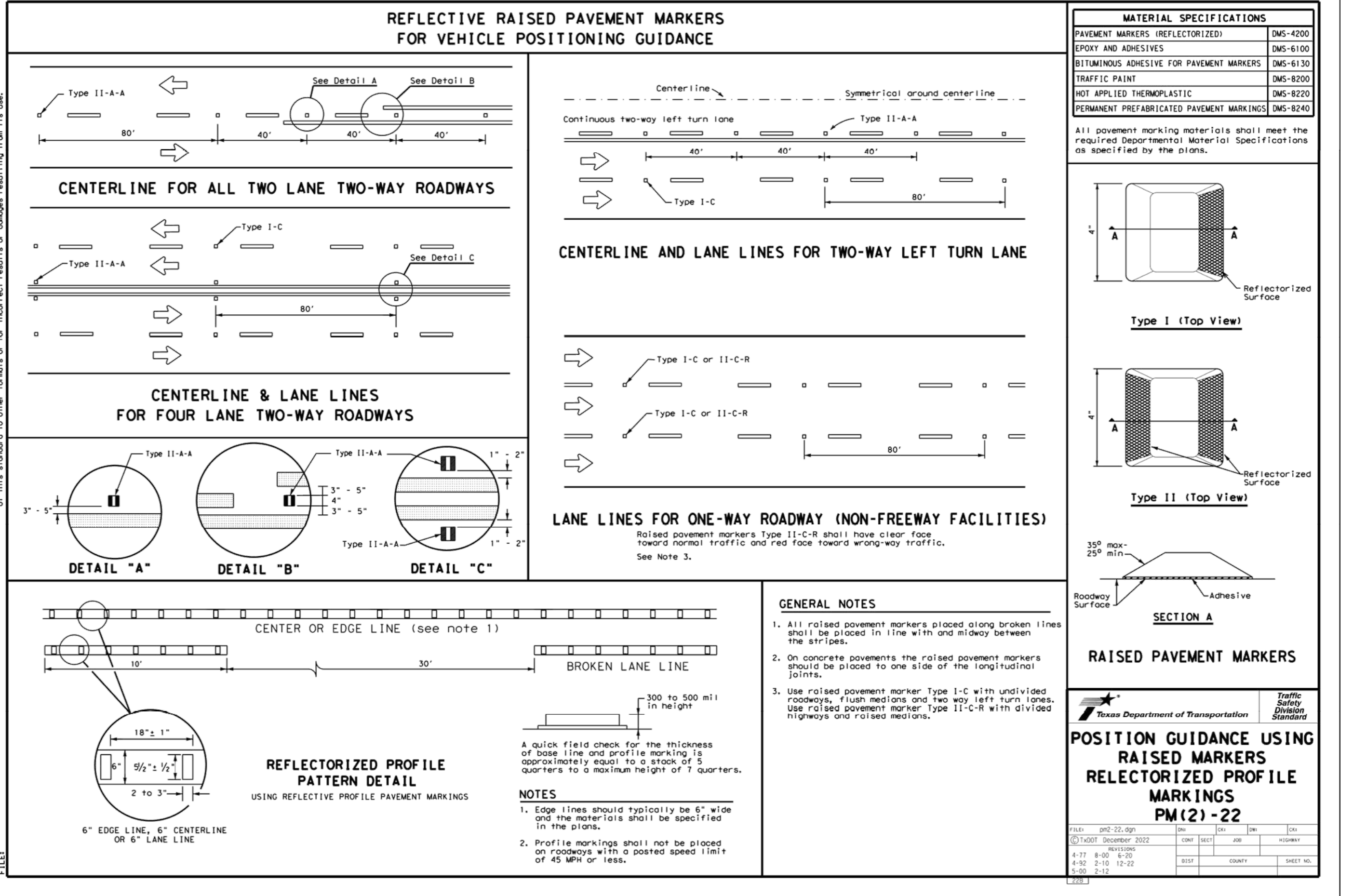
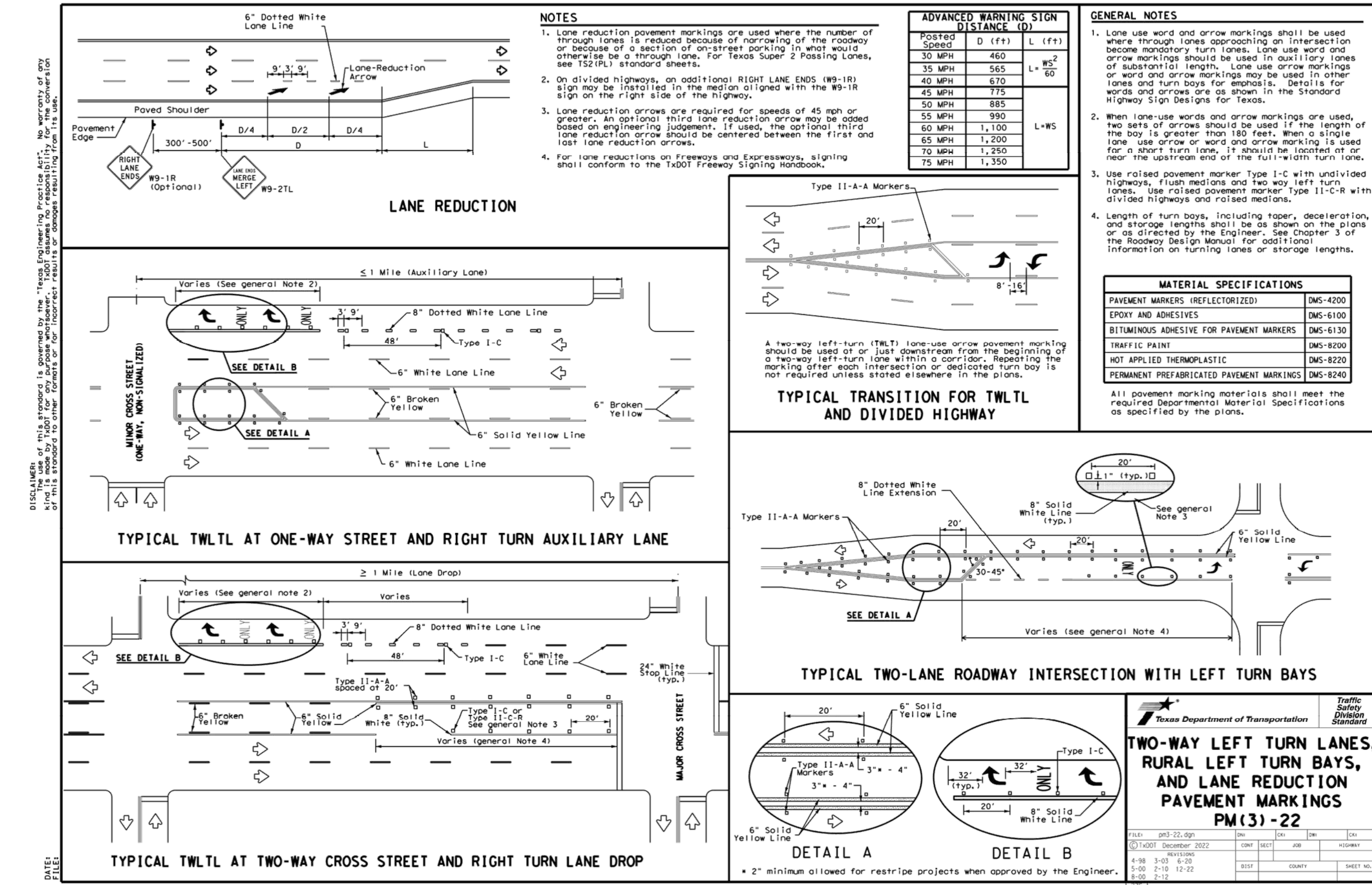
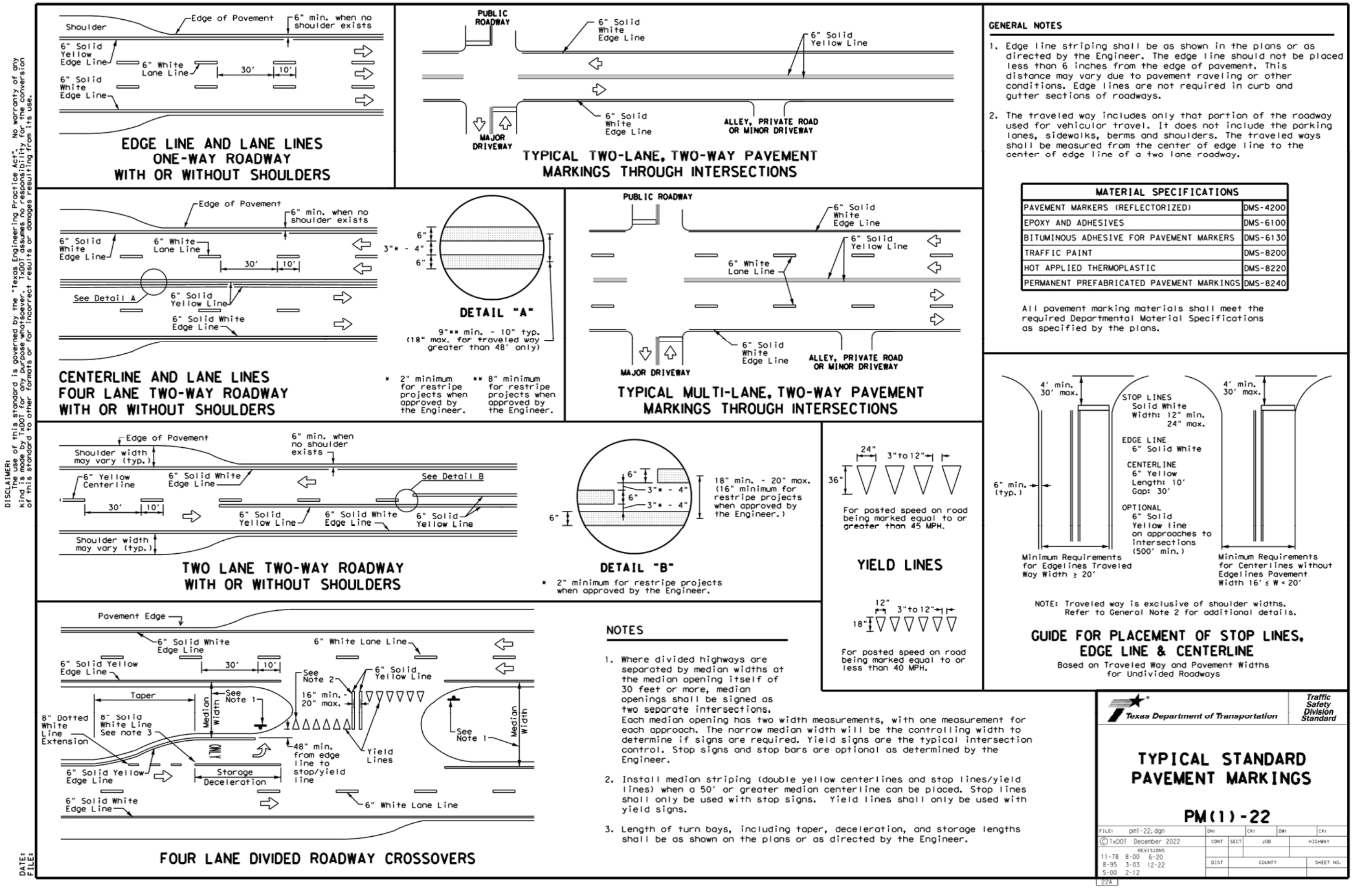
DATE
06/20/2024

PROJECT NO.
03473.010

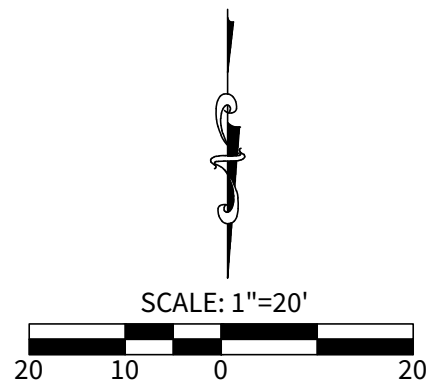
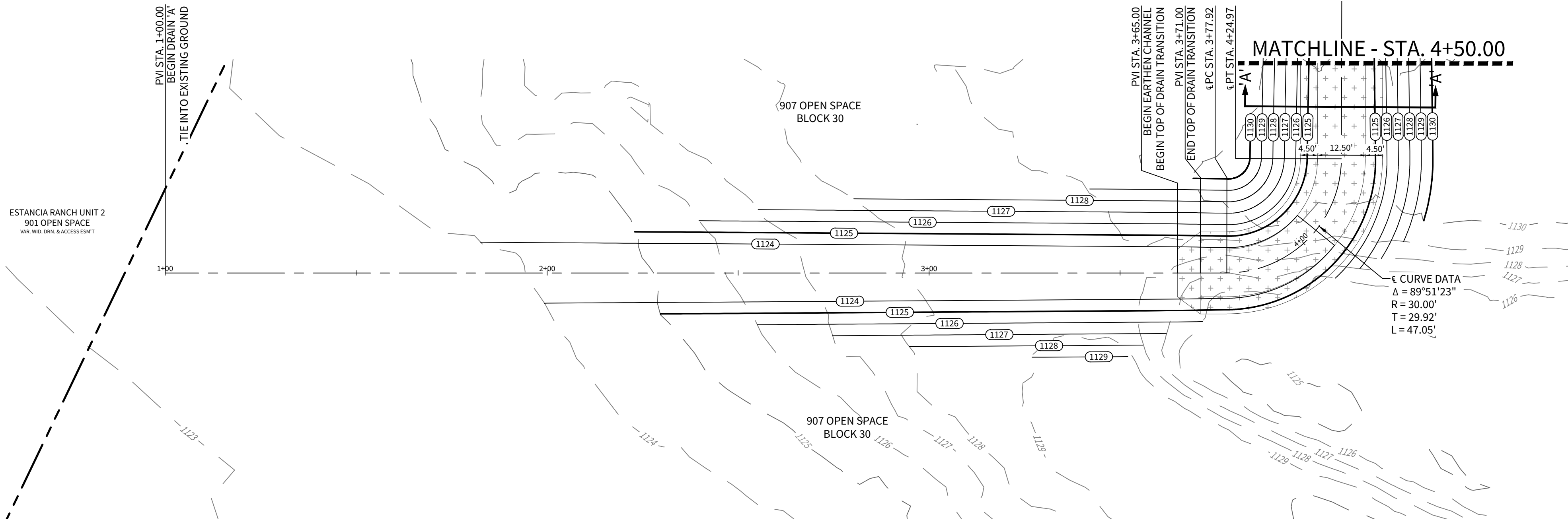
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DATE	REVISIONS
1. 2024-04-29	1. PREPARED LOT 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 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1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 20







LEGEND

- OVERALL UNIT BOUNDARY
- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY
- E.G.T.CA. EASEMENT
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- CONCRETE RIP RAP
- EARTHEN DRAINAGE CHANNEL
- GABION MATTRESS

NOTES

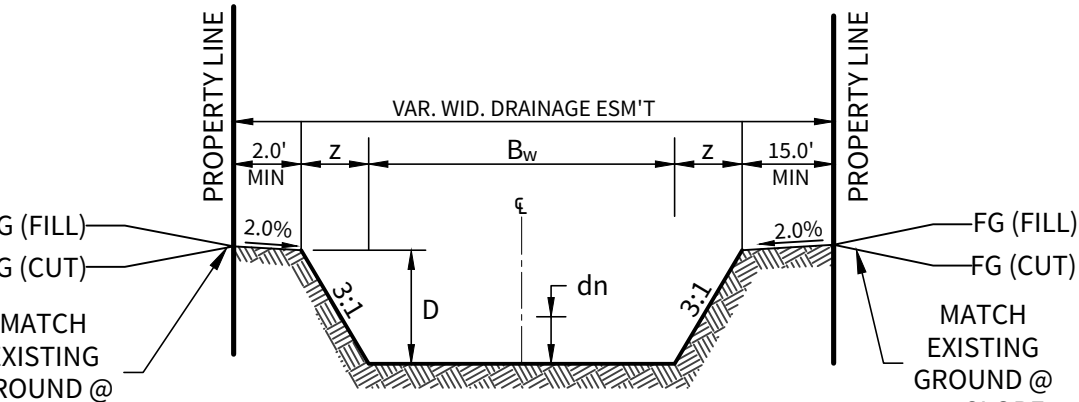
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS
- IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATE BY SEEDING OR SODDING. EIGHT-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

DRAIN 'A'

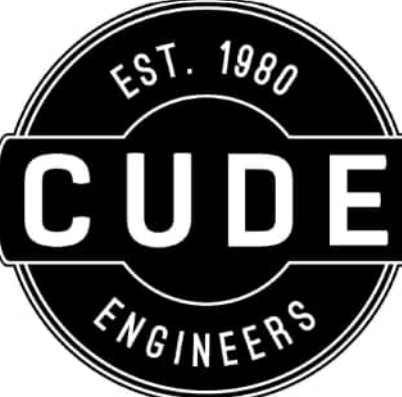
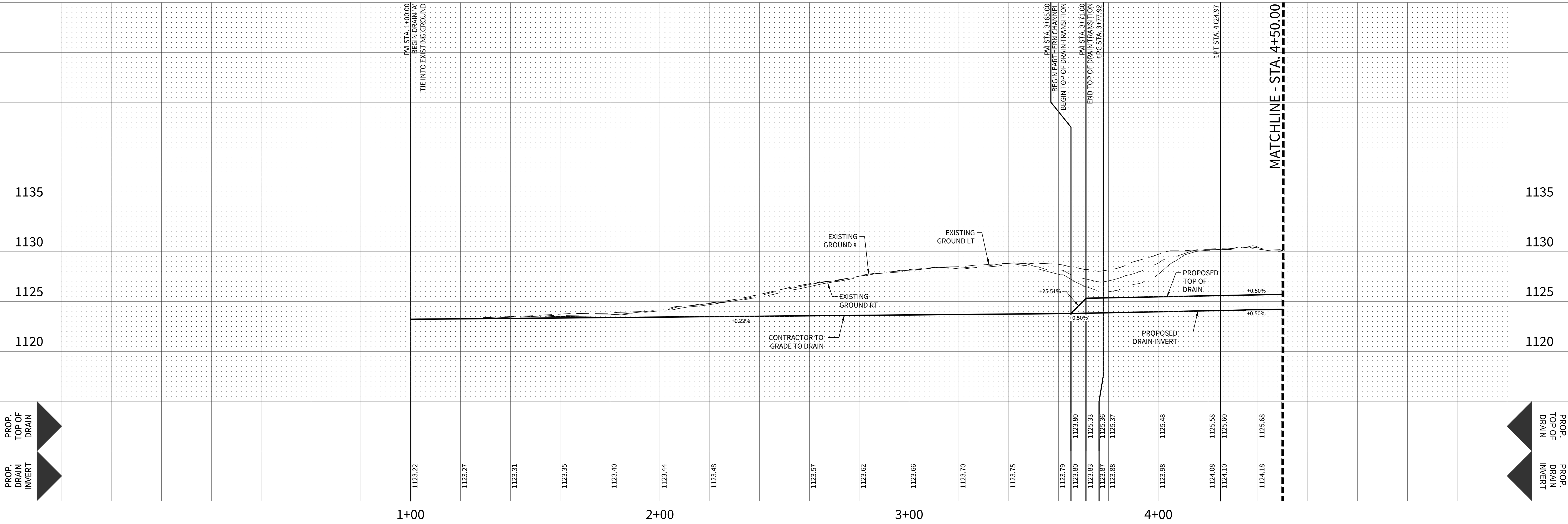
STA. 1+00.00 TO STA. 4+50.00

	"A-A"
Q _{max} (cfs)	33.49
B _{ch} (ft)	12.50'
z (ft)	4.50'
n	0.035
D (ft)	1.50'
S (%)	0.50
d ₅₀ (ft)	0.90
V (fps)	2.45
T (lb/ft ²)	0.23



DRAIN 'A' EARTHEN CHANNEL

'A-A' STA. 3+71.00 TO STA. 4+50.00



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

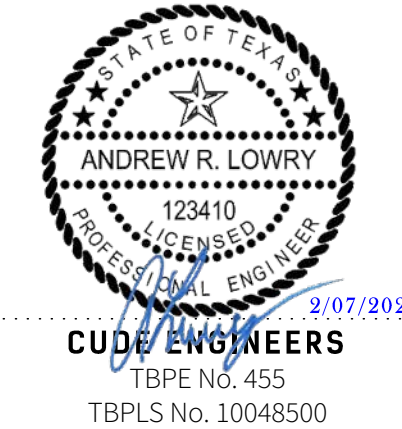
ESTANCIA RANCH SUBDIVISION

UNIT 3

DRAIN PLAN & PROFILE - DRAIN 'A'

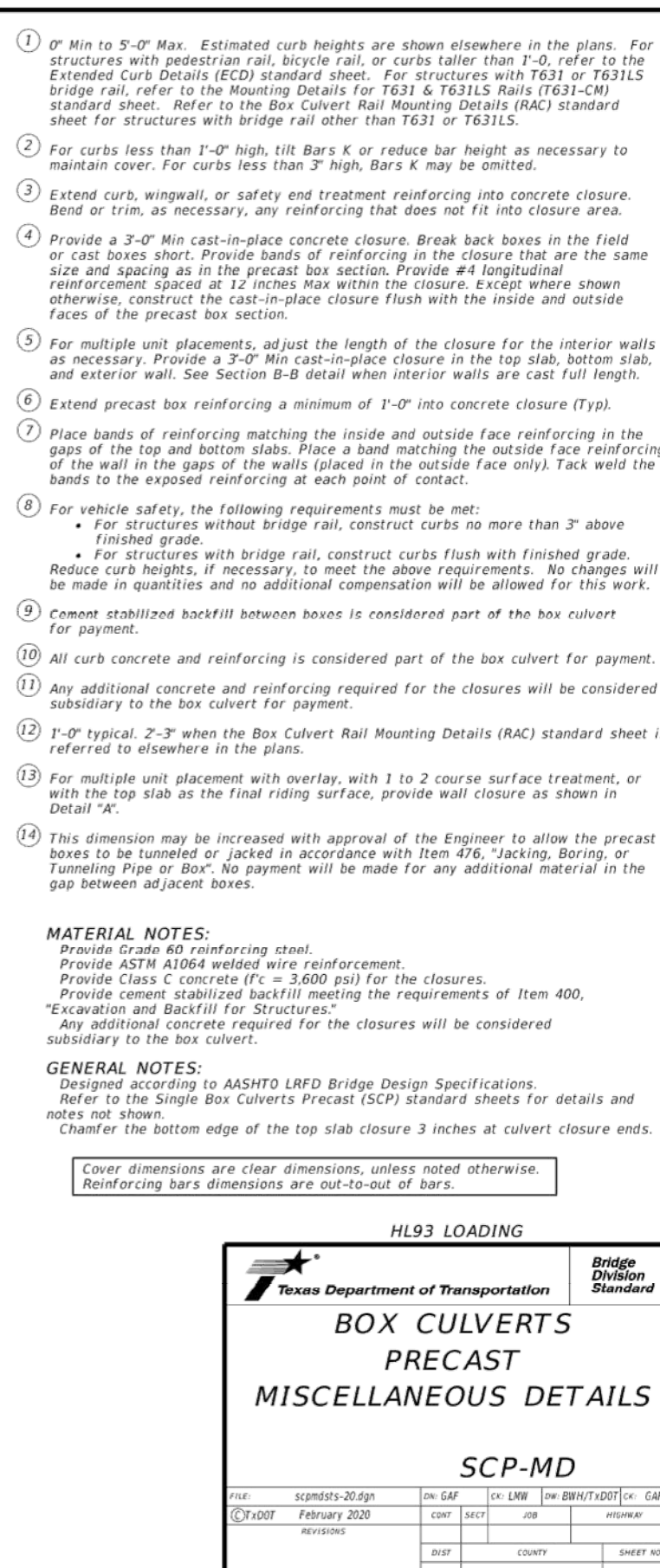
DATE	02/07/2024
PROJECT NO.	03473.010
DRAWN BY	CG/TCD/XV
CHECKED BY	XV/AL

REVISIONS	
DATE	1 2 3 4 5 6 7 8 9



PLAT NO.
23-11800329

C15



CORNER OPTION "A"

CORNER OPTION "B"

CORNER OPTION "A"

CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER

FILL HEIGHT LESS THAN 2 FT

④ Length is equal to spacing of longitudinal reinforcing plus 2" (10" Min) (Typ)

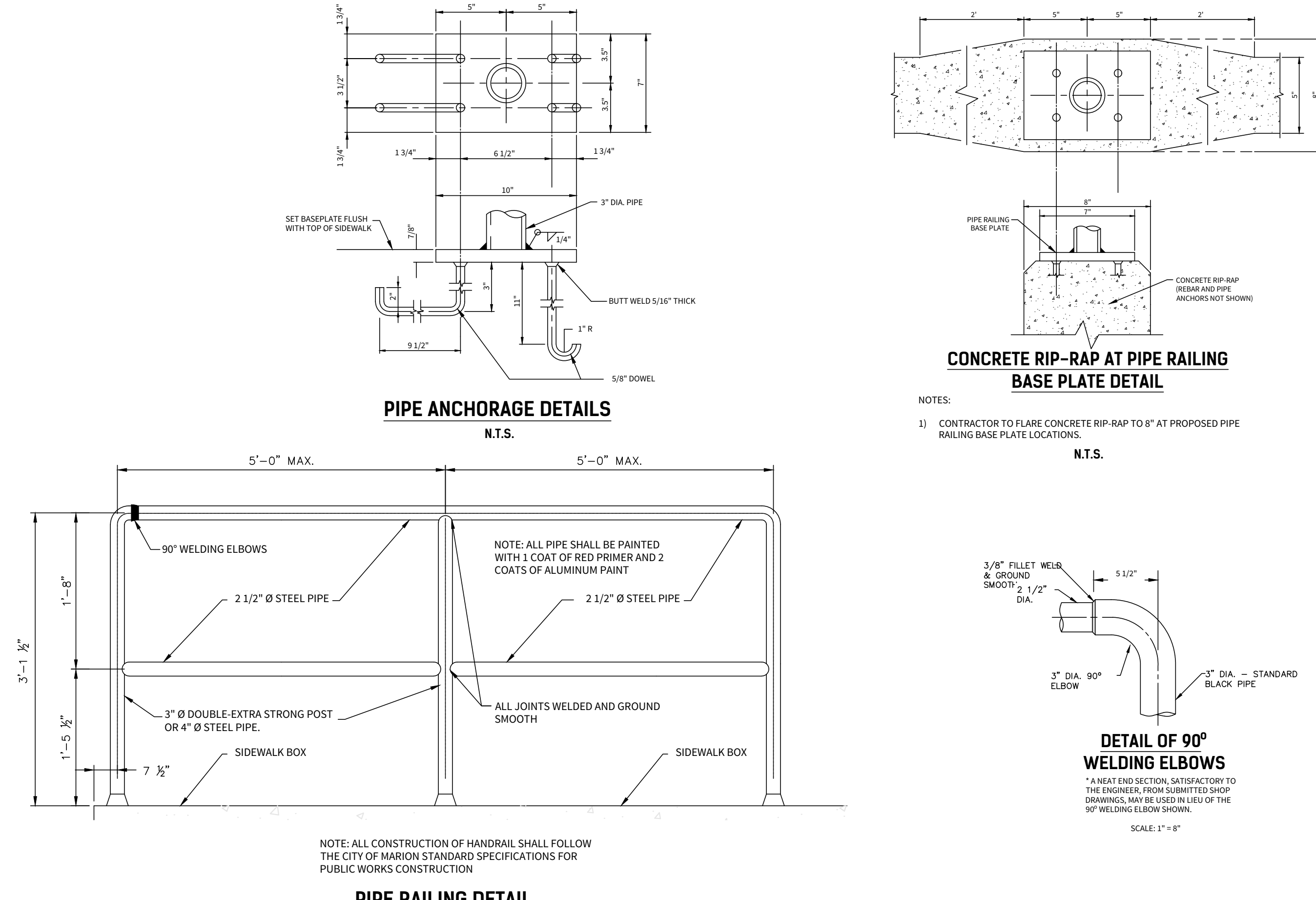
SECTION A-A
(Showing top and bottom)

MATERIAL NOTES:

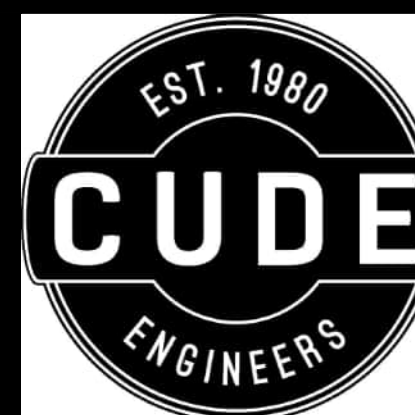
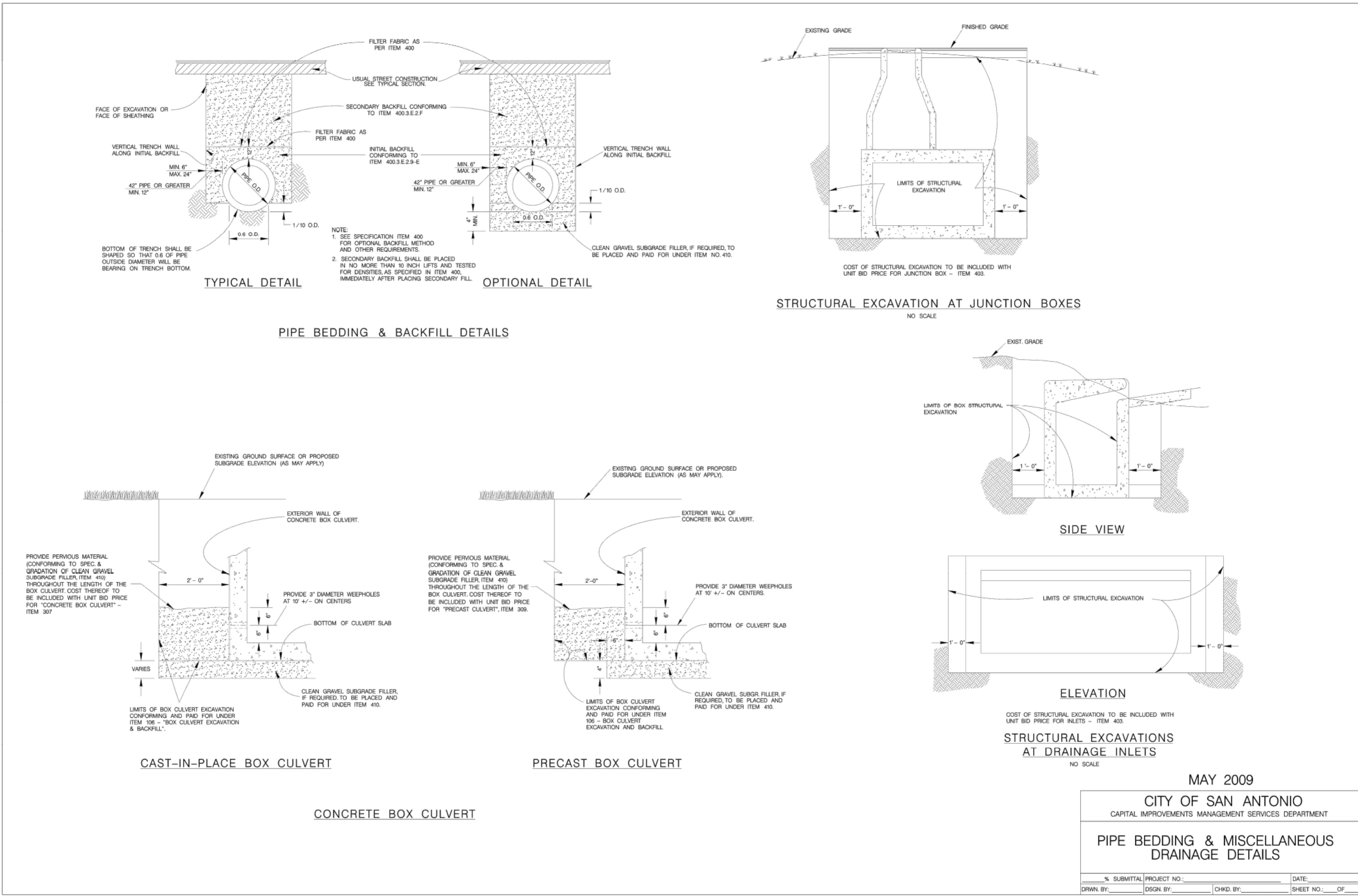
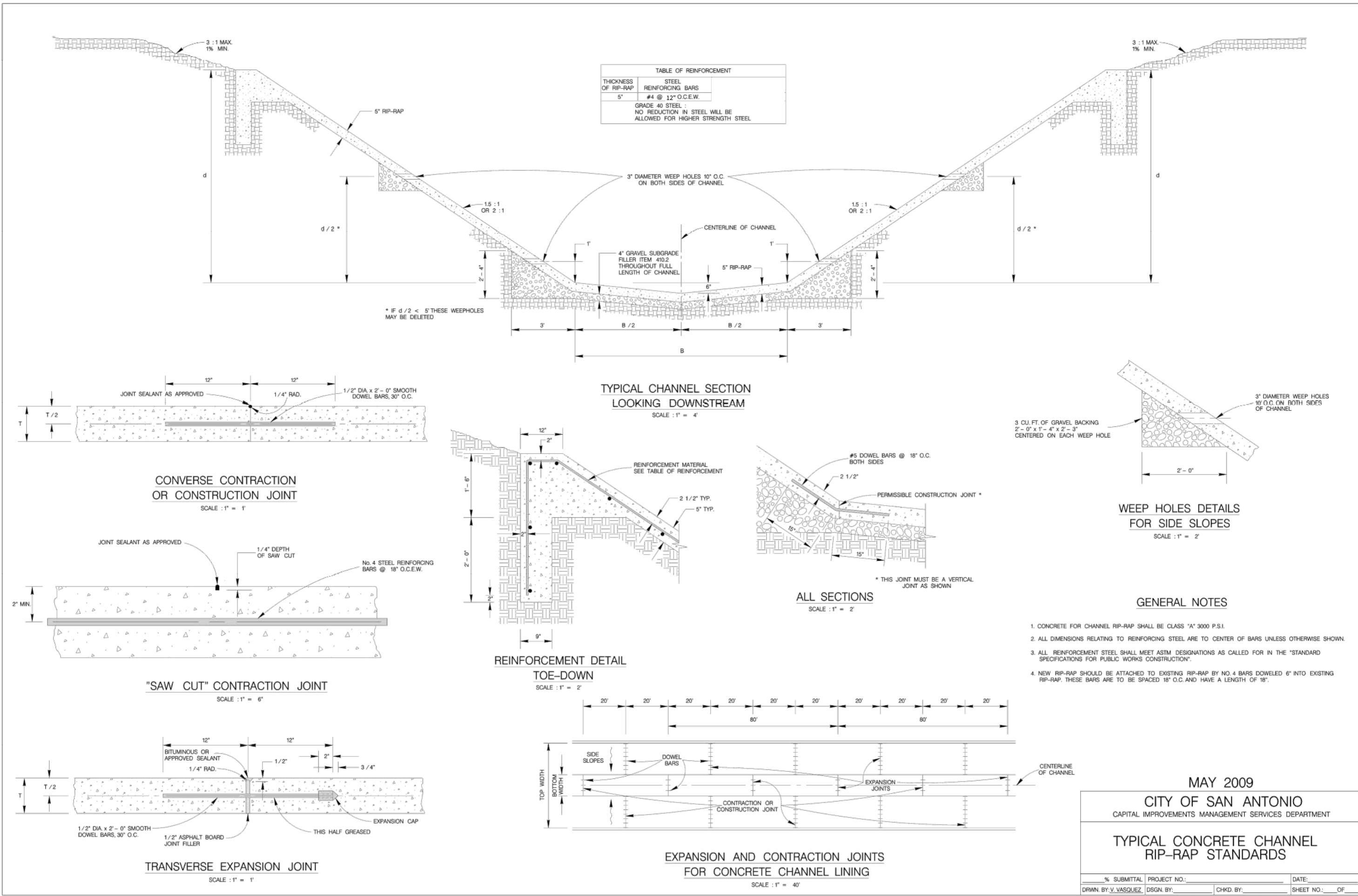
MATERIAL NOTES:
Provide 0.03 sq. in./ft. minimum longitudinal reinforcement at each face in slabs and walls. This minimum requirement may be met by the transverse wires when wire mesh reinforcement is used.
Provide Class B concrete ($f'c = 5,000$ psi).

GENERAL NOTES:
Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
See Box Culverts Precast Miscellaneous Details (SCP-MD) standard sheet for details and notes not shown.
In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Submit shop plans for alternate designs in accordance with Item "Precast Concrete Structural Members (Fabrication)".

GENERAL NOTES:
 Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
 See Box Culverts Precast Miscellaneous Details (SCP-MD) standard sheet for details and notes not shown.
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San Antonio, Texas 78231
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ESTANCIA RANCH SUBDIVISION
UNIT 3
DRAINAGE DETAILS

DATE
02/07/2024
PROJECT NO.
03473.010
DRAWN BY
CG/TCD/XV
CHECKED BY
XV/AL

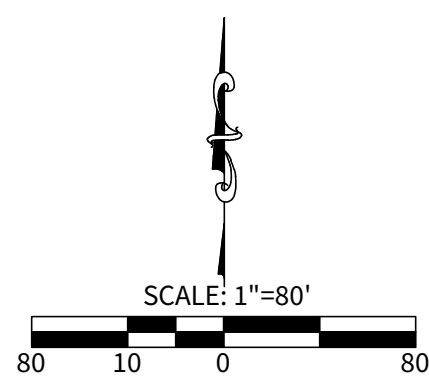
REVISIONS	DATE
1	
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7	
8	
9	



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
23-11800329

C24



BENCHMARK						
CONTROL						
POINT NUMBER	NORTHING	EASTING	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
12	13815929.52	2128312.18	13813674.90	2127964.86	1114.23	CP IRSC
13	13818256.61	2128292.03	13816001.60	2127994.71	1118.30	CP IRSC
17	13816812.91	2124732.22	13814558.14	2124385.49	1129.84	CP PK
18	13815592.94	2124253.96	13813388.37	2123907.31	1130.32	CPL SPIN
19	13815729.39	2123700.66	13813474.80	2123354.10	1132.74	CPL SPIN
20	13813674.89	2127964.86	13811420.64	2127617.60	1114.23	CP IRSC
50	13814674.65	2123839.86	13812425.23	2124393.27	1128.46	BM



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 STEPS) AND SHALL BE RESPONSIBLE FOR THE WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SPECIALTY CONSULTANT SHALL KNOWLEDGE OF THE TRENCH EXCAVATION SAFETY STANDARDS GOVERNING THE PERFORMANCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



UPPER - EAST SEWERHED - DOS RIOS I LEON CREEK			
Developer's Name <u>METRIAGE HOMES OF TEXAS, L.L.C.</u>			
Developer's Address <u>2722 WEST BITTERS ROAD, SUITE 200</u>			
City <u>SAN ANTONIO</u>	State <u>TEXAS</u>	Zip <u>78231</u>	
Phone # <u>(210) 298-4294</u>	Fax # _____		
SAWS Block # <u>156690</u>	Total EDU's <u>152</u>	Total Acreage <u>65.64</u>	
Total Linear Footage of Pipe <u>3,899.55 L.F. of 8" SDR 26</u>	Plat No. <u>23-11800329</u>		
Number of Lots <u>152</u>	SAWS Job No. <u>23-1641</u>		

OVERALL UNIT BOUNDARY

PROPOSED LOT LINE

PROPOSED RIGHT OF WAY

E.G.T.-CA. EASEMENT

SANITARY SEWER ENVELOPE

EXISTING 2' CONTOUR

EXISTING 10' CONTOUR

EXISTING WATER LINE

EXISTING SEWER LINE

EXISTING MANHOLE

PROPOSED WATER LINE

PROPOSED SEWER MAIN

PROPOSED MANHOLE

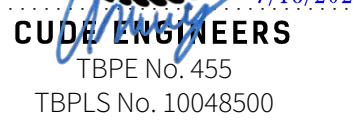
DEMO AND REPLACE EXISTING PAVEMENT

1. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS OR MARKED IN THE FIELD ARE UNDERSTOOD TO BE APPROXIMATE ONLY AND ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE AND DEPTH OF ALL UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL UTILITIES DURING CONSTRUCTION AND SHALL REPAIR ANY DAMAGE TO ANY UTILITY AT THEIR OWN EXPENSE. THE SLEWS UTILITY CODE REQUIRES THE CONTRACTOR TO CONTACT A UTILITY ENGINEER AT LEAST 48 BUSINESS HOURS PRIOR TO DIGGING DEEPER THAN 16 INCHES, WITH LIMITED EXCEPTIONS.
2. 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 TESTING WILL BE DONE BY A QUALIFIED THIRD PARTY AND THE TESTING REPORT IS TO BE PROVIDED TO THE PROJECT ADMINISTRATOR. PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THE PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
3. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY STAKE, MARK, ETC. IS DELETED OR REMOVED BY THE CONTRACTOR OR THEIR EMPLOYEES, THEY WILL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY AND ALL PERMITS NECESSARY FOR THE CONSTRUCTION OF THE PROJECT. SUCH PERMITS MAY INCLUDE PERMITS, UTILITY PERMITS, FLOODPLAIN PERMITS, TRAFFIC CONTROL PLAN PERMITS, ETC.
5. WHENEVER POWER POLES ARE ADJACENT TO THE PROJECT, THE CONTRACTOR SHALL PROVIDE PROPER SHORING OR BRACING DURING CONSTRUCTION OF THE TRENCH ACCORDING TO THE METHODS APPROVED BY THE APPROPRIATE UTILITY COMPANY. ANY DAMAGES INCURRED SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE AND RESTORED TO ITS ORIGINAL OR IMPROVED CONDITION AT THE CONTRACTORS EXPENSE.
6. A WATER TIGHT AND VENTED MANHOLE WILL BE REQUIRED AT A MINIMUM OF EVERY 1,500 LINEAR FEET AND AT THE END OF EVERY LINE FOR PROJECTS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE PROPER CLEARANCE REQUIRED BY THE NATIONAL ELECTRICAL CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), TEXAS STATE LAW VERNON'S ANNOTATED TEXAS STATUTES ARTICLE 1436 (C) PERTAINING TO CLEARANCES DEPENDENT ON THE TYPE OF UTILITY, THE TYPE OF ELECTRICAL LINES AND THE EDWARDS AND TEXAS STATE LAW HEALTH AND SAFETY CODE CHAPTER 752 - HIGH VOLTAGE OVERHEAD LINES.
8. THE CONTRACTOR'S STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL INCLUDE EROSION AND SEDIMENTATION CONTROLS FOR ALL SOIL STAGING AND STORAGE AREAS.
9. THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENTATION CONTROL IN PLACE PRIOR TO THE START OF CONSTRUCTION.
10. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL SWPPP MEASURES AFTER EVERY RAINFALL EVENT EVERY 24 HOURS.
11. FOR ALL WATER MAIN CROSSINGS, THE CONTRACTOR SHALL INSTALL THE SEWER MAIN AND LATERALS IN ACCORDANCE WITH 30 TAC TITLE 30 CHAPTER 27 SUBCHAPTER C.
12. DROP MANHOLES MUST BE INSTALLED PER 30 TAC 217.55 (K)(2)(I/G).
13. ALL MANHOLES DEEPER THAN 20 FEET SHALL BE INSTALLED WITH A 6 FOOT WIDE MANHOLE IN ACCORDANCE WITH SAWS UTILITY SERVICE REGULATIONS.
14. SEWER LATERALS MUST BE A MINIMUM OF SIX INCHES WITH FULL BODY FITTINGS, EXTRUDED OR FACTORY-FABRICATED, WITH A MINIMUM 2.00% SLOPE.
15. CONTRACTOR TO INSTALL CONCRETE SADDLE ON EXISTING SANITARY SEWER LINE AT EVERY 100' MINIMUM PER SAWS SPECIFICATION.
16. WITHIN PAVED (OR FUTURE PAVED) AREAS, MANHOLES MUST BE EITHER FIBERGLASS OR PRE-CAST CONCRETE, PER SAWS STANDARD DETAILS. PRE-CAST MANHOLES MUST CONFORM TO THE LATEST ASTM REQUIREMENTS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT NO OVERFLOWS OR SPILLAGE OF SEWAGE OCCURS. THE PERSONS IDENTIFIED WITH THIS RESPONSIBILITY SHALL BE ON-SCENE WHEN ACTIVITIES THAT COULD RESULT IN A SPILL OR OVERFLOW ARE BEING PERFORMED. THE CONTRACTOR SHALL NOTIFY THE UTILITY PROVIDER. SHOULD AN OVERFLOW OR SPILL OCCUR UPON CALL UP SHALL BE IN CONFORMANCE WITH TCEQ REGULATIONS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN CONTINUOUS SEWER SERVICE FOR ALL EXISTING SEWER SERVICE DURING CONSTRUCTION. WHEN BYPASS PUMPING IS NECESSARY, THE CONTRACTOR SHALL PROVIDE IN ACCORDANCE WITH SAWS ITEM NO. 864.
19. FOR MANHOLES WITHIN THE 5 YEAR FLOODPLAIN, MANHOLES MUST BE SHALLOW PROFILE, MONOLITHIC STRUCTURED AND ANCHORED TO SUBGRADE.
20. ALL MATERIALS AND APPURTENANCES MUST CONFORM TO SAWS' SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION AND SAWS MATERIAL SPECIFICATIONS. PVC WASTEWATER MAINS MUST BE A MINIMUM PER SAWS SPECIFICATION.
21. WHERE A MINIMUM COVER FROM THE TOP OF THE SEWER PIPE TO THE SURFACE OF THE GROUND IS LESS THAN THREE FEET, THE WASTEWATER MAIN MUST BE ENCASED WITH 2000 PSI CONCRETE WITH A MINIMUM THICKNESS OF SIX INCHES.
22. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION STAKING, MANHOLE OR SEWER MAIN TESTING.
23. PRIOR TO ANY CONSTRUCTION, ALL GEOLOGICAL RECORDS FOUND DURING CONSTRUCTION MUST BE REPORTED TO THE ENGINEER WITHIN 24 HOURS AND TEMPORARY BMPs MUST BE INSTALLED IMMEDIATELY AROUND THE FEATURE.
24. THE CONTRACTOR SHALL REFERENCE THE APPROVED TREE PLAN FOR INFORMATION ABOUT THE PRESERVATION AND REMOVAL OF TREES IN THE VICINITY OF THE PROJECT WORKS AREAS. THE CONTRACTOR SHALL BE REQUIRED TO CONDUCT ANY AND ALL PRE-CONSTRUCTION MEETINGS AND INSTALL ALL APPROPRIATE PROTECTION FENCING PRIOR TO THE START OF CONSTRUCTION.
25. THE CONTRACTOR IS REQUIRED TO PROVIDE ACCESS TO ALL ADJACENT HOMEOWNERS AND DRIVWAYS AT ALL TIMES.
26. THE CONTRACTOR IS REQUIRED TO NOTIFY INDIVIDUAL PROPERTY OWNERS A MINIMUM OF 48 HOURS PRIOR TO ACCESSING THEIR PROPERTY WITHIN THE PROJECT EASEMENTS.
27. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING 85% REVEGETATION OF ALL LIMITS OF THE PROJECT EASEMENT OR RIGHT-OF-WAY WITHIN 180 DAYS. PLEASE REFERENCE ITEM 520 HYDROMULCHING FROM THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
28. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DRAINAGE DITCHES, EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, LANDSCAPING, DRIVEWAYS, AND EXISTING HYDRANTS. VARE HYDRANTS SHALL BE REPLACED WITH NEW MONUMENTS, GATES, ETC.
30. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD STANDARDS. THE CONTRACTOR SHALL COORDINATE WITH THE JURISDICTIONAL INSPECTOR TO DETERMINE PROJECT WORK HOURS PRIOR TO THE START OF CONSTRUCTION WITHIN THE NIGHT OF DAY.
31. EDWARDS AQUIFER RECHARGE ZONE AND CONTRIBUTING ZONE BOUNDARIES SHOWN ARE BASED ON GIS DATA PROVIDED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.

SAN ANTONIO WATER SYSTEM	233-2010
COSA DRAINAGE	207-2800
CITY SIDEWALK AND TRENCHING DIVISION	821-3240
COSA TRAFFIC SIGNAL OPERATIONS	207-7765
TEXAS STATE WIDE ONE CALL LOCATOR	1-800-545-6005
CITY PUBLIC SERVICE	"
AT&T	"
TIME WARNER CABLE	"
VALERO ENERGY CO.	"
GREY FOREST UTILITIES	"

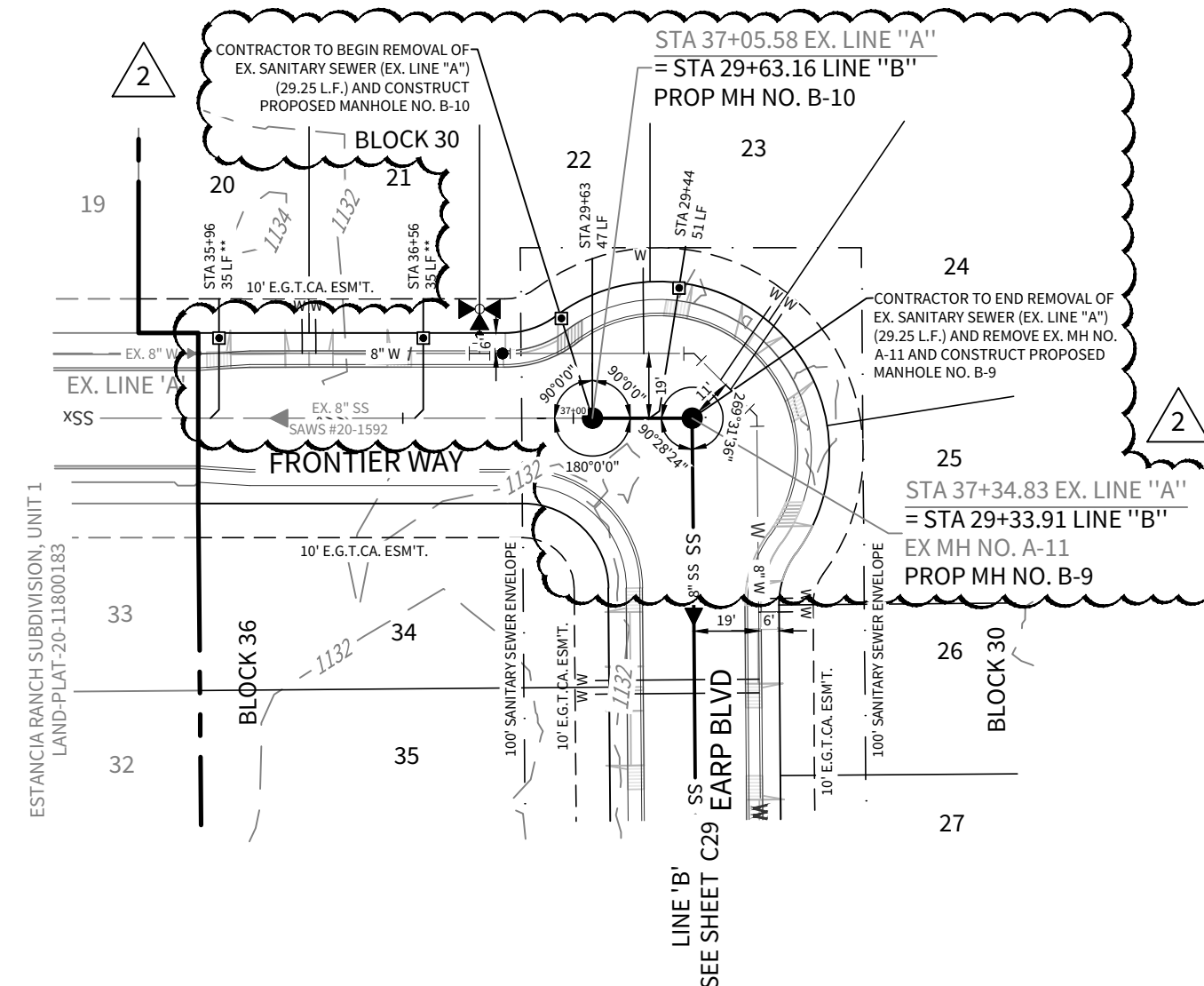
OVERALL SANITARY SEWER PLAN

#	DATE	REVISIONS
1.	2024-04-16	ADDED ADDITIONAL LINE A-ON HIGHLAND PASS
2.	2024-04-30	REV LOT NUMBERS
3.	2024-06-19	LINE B ALIGNMENT REVISED TO ALLOW FOR MIN. WATER SEPARATION FROM SEN. LATERALS
4.	2024-07-16	REVISED LINE "H" STATIONING
5.		
6.		
7.		
8.		
9.		



SAWS JOB NO.
23-1641

C26



TRENCH EXCAVATION PROTECTION

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

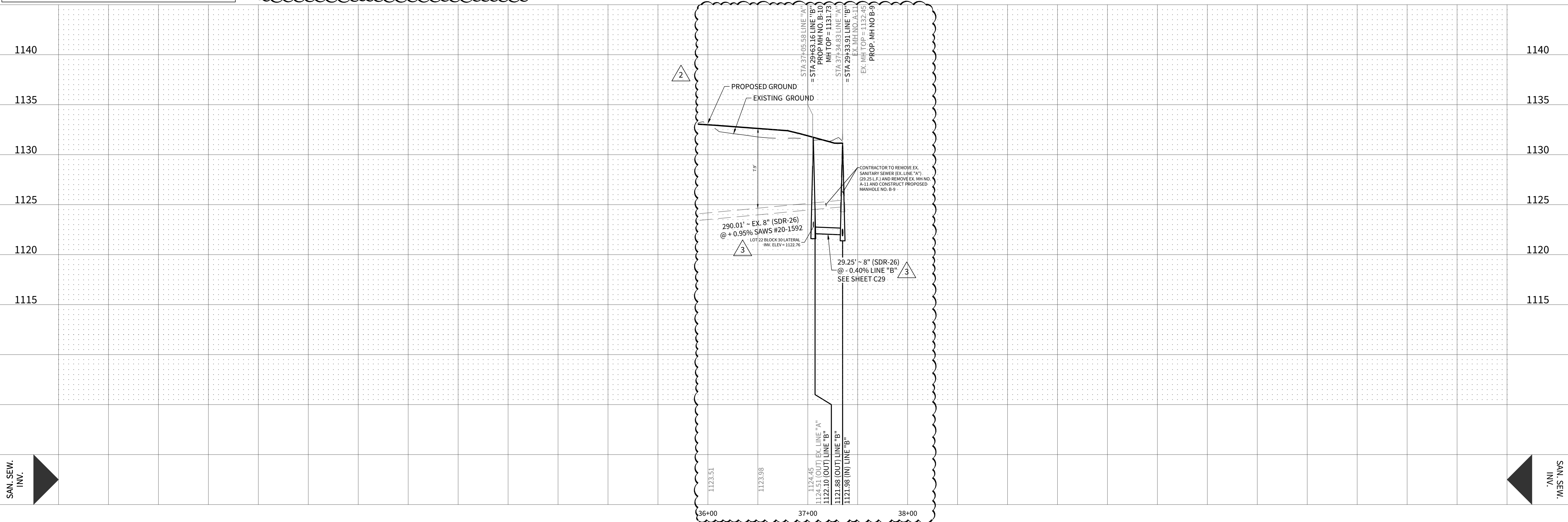
DESIGNER/ENGINEER/CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

Developer's Name		HERITAGE HOMES OF TEXAS, L.L.C.			
Developer's Address		2722 WEST BITTERS ROAD, SUITE 200			
City	SAN ANTONIO	State	TEXAS	Zip	78231
Phone #	(210) 298-4294	Fax #			
SAWS Block Map #	156690	Total EDU's	152	Total Acreage	65.64
Total Linear Footage of Pipe	3,899.55 L.F. OF 8" S.D. -	SDR 26	Plat No.	23-11000329	
Number of Lots	152	SAWS Job No.	23-1641		

EX. LINE "A"

STA. 35+90.03 TO STA. 37+34.83

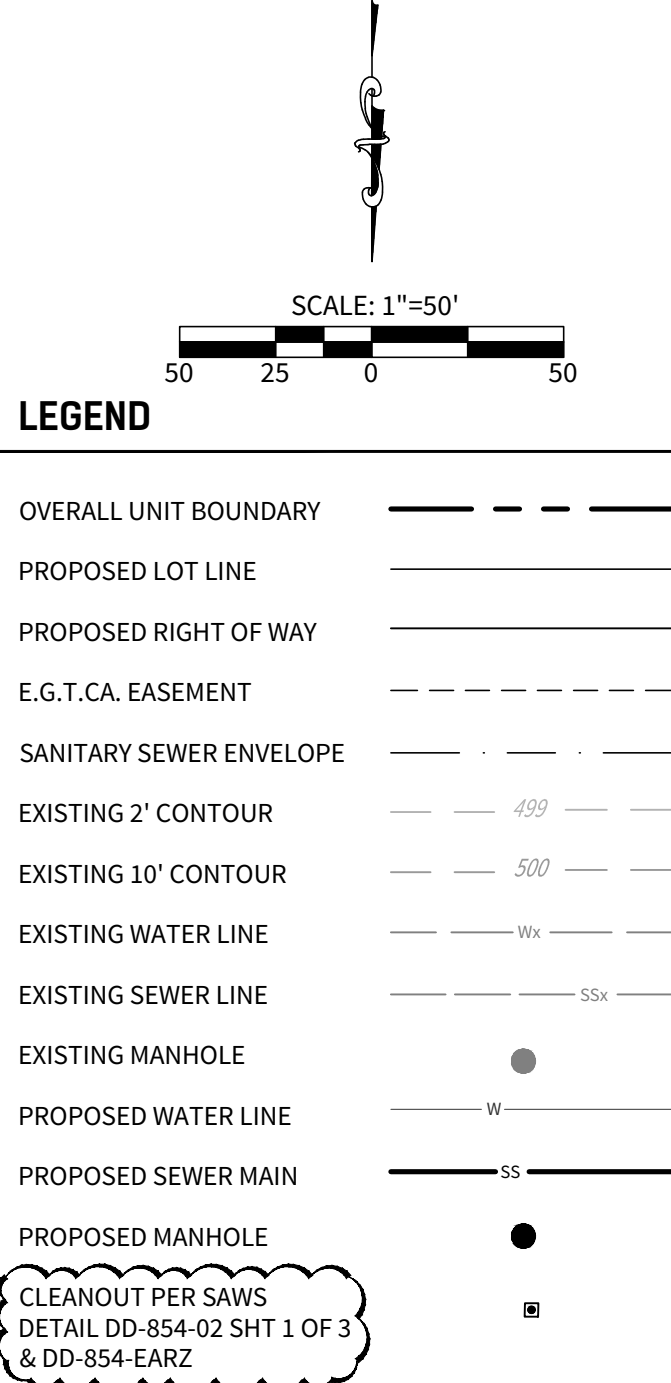
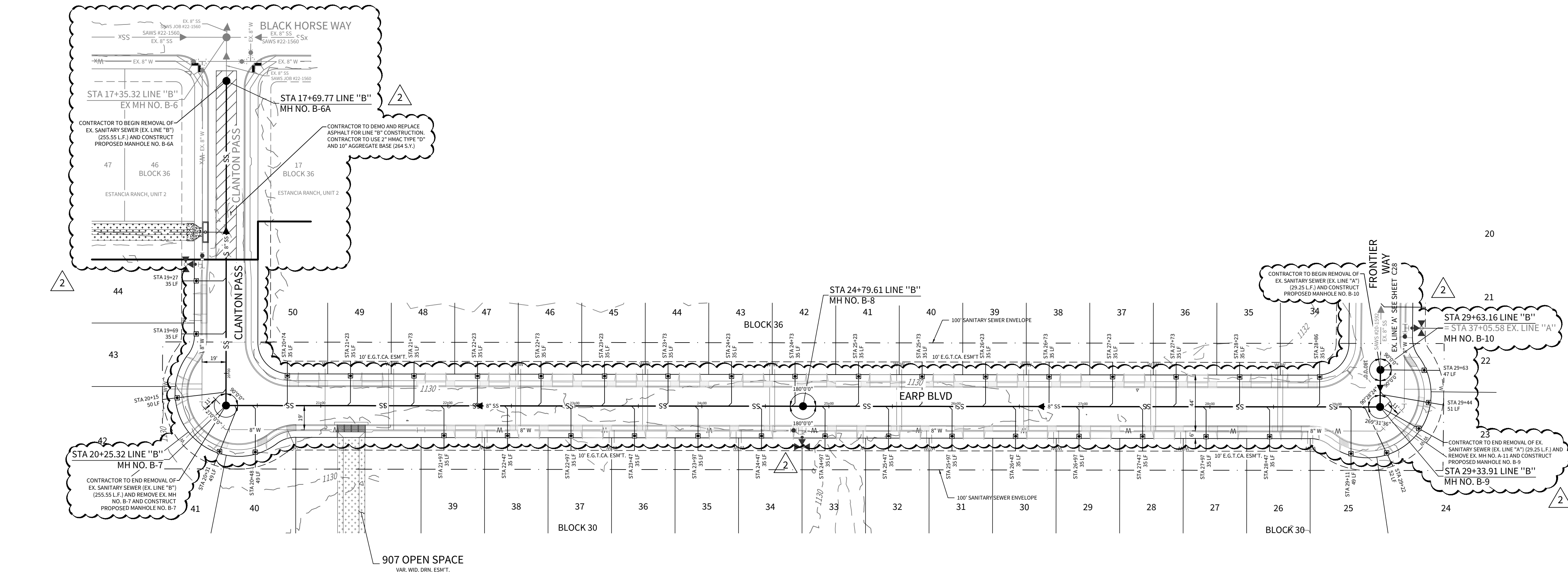
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



SAN. SEW.
INV.

SAN. SEW.
INV.

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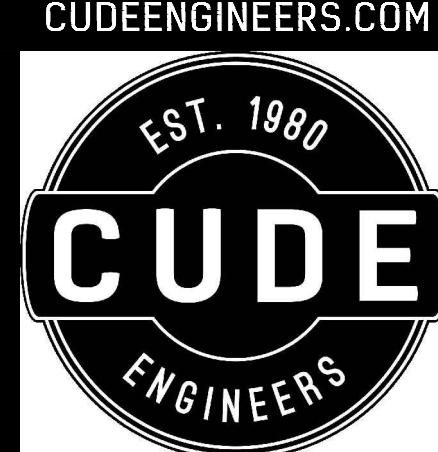
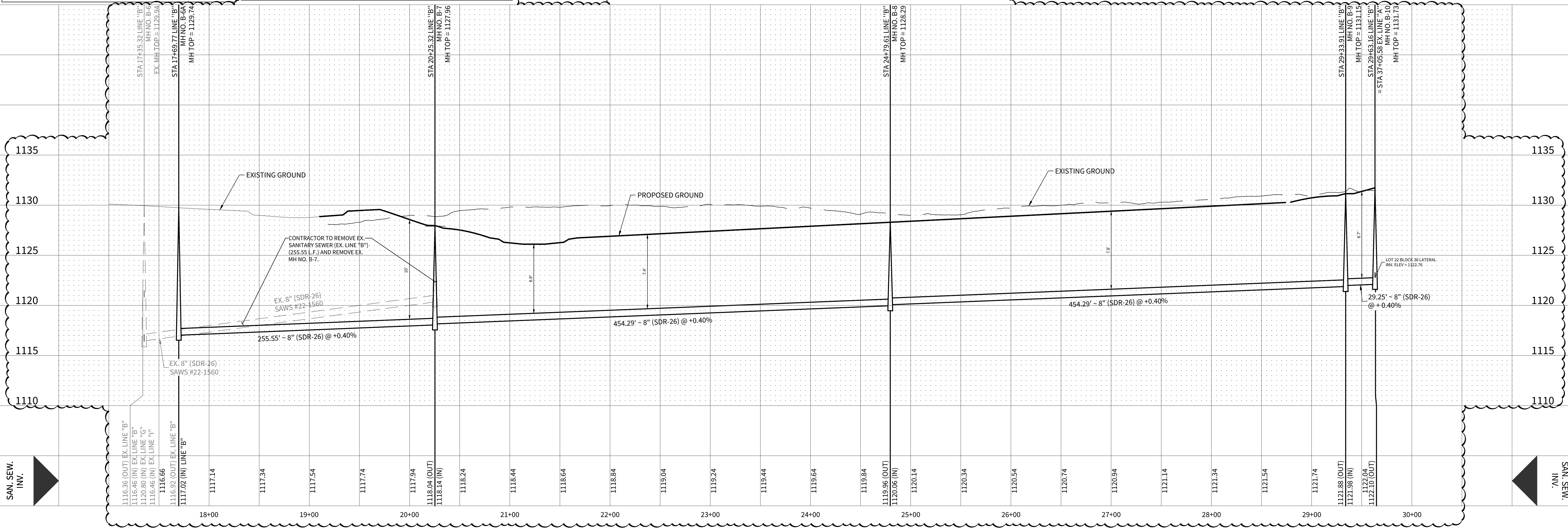


TRENCH EXCAVATION PROTECTION
CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEES OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER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

UPPER - EAST BENCHMARK - DGS RDS / LEON CREEK				
Developer's Name	MERITAGE HOMES OF TEXAS, L.L.C.			
Developer's Address	2722 WEST BITTERS ROAD, SUITE 200			
City	SAN ANTONIO	State	TEXAS	Zip 78231
Phone #	(210) 298-4294	Fax #		
SAWS Block Map #	156590	Total EDU's	152	Total Acreage 65.64
Total Linear Footage of Pipe	3,899.55 L.F. OF 8" SS - SDR 26	Plat No.	23-11800329	
Number of Lots	152	SAWS Job No.	23-1641	

EX LINE "B" & LINE "B"

STA. 19+10.38 TO STA. 29+33.91



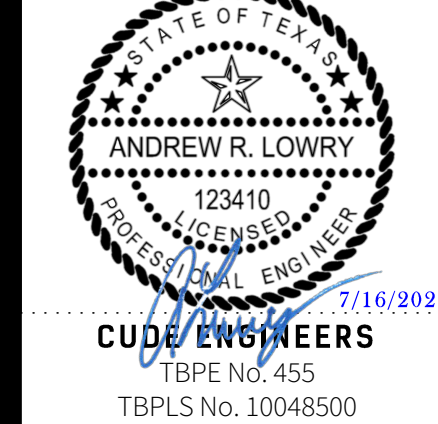
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

ESTANCIA RANCH SUBDIVISION UNIT 3

SANITARY SEWER PLAN & PROFILE EX LINE B & LINE B

DATE
07/16/2024
PROJECT NO.
03473.010
DRAWN BY
CG/TC/DXV
CHECKED BY
XV/AL

DATE	REVISIONS
1. 2024-04-16	1. ISSUED FOR PERMITTING AND RECORDING OF PLANS
2. 2024-06-19	2. REVISED LINE ALIGNMENT, ADDED CLEANOUTS
3. 2024-07-16	3. ADDED CLEANOUT DETAIL REF.

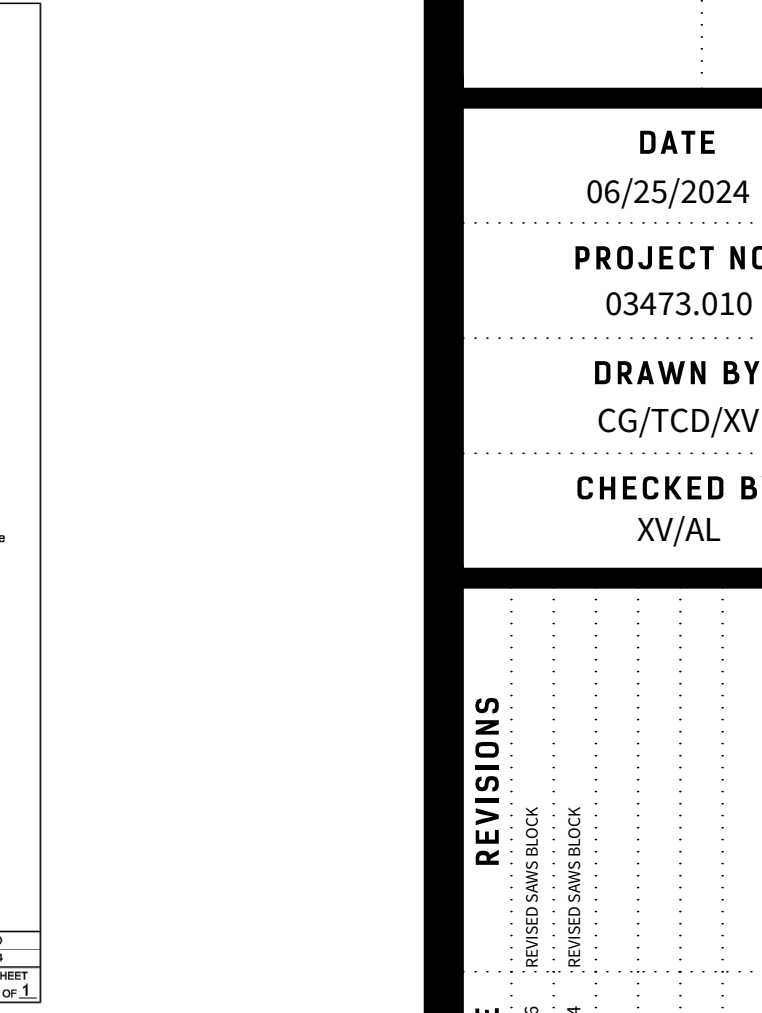
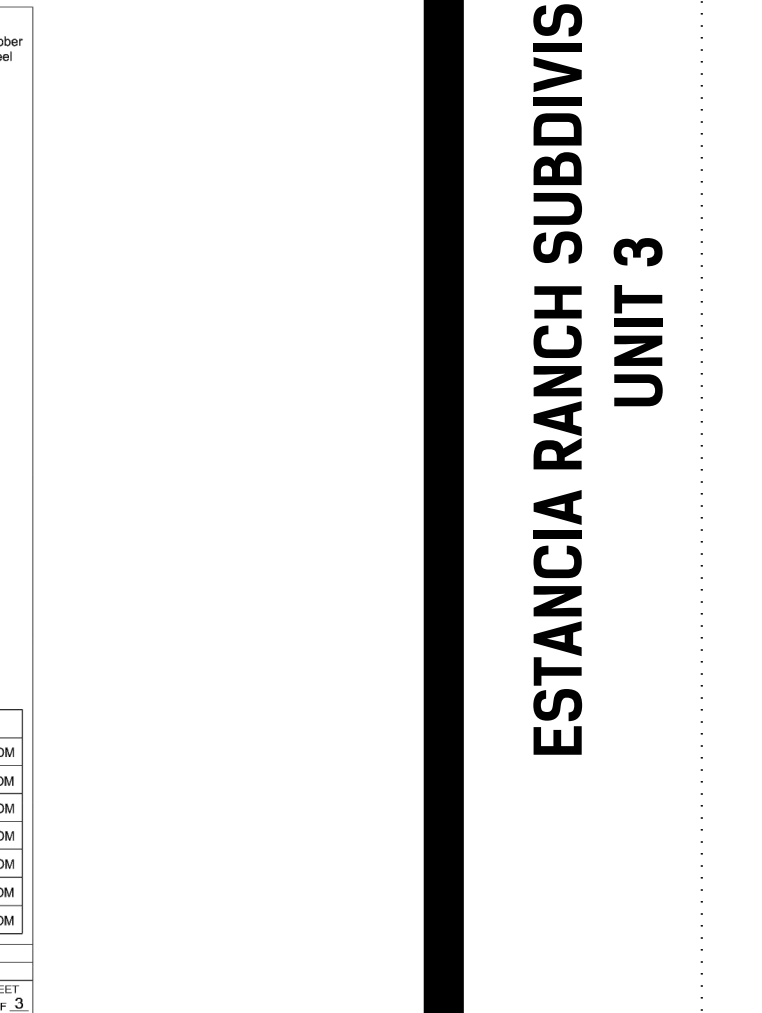
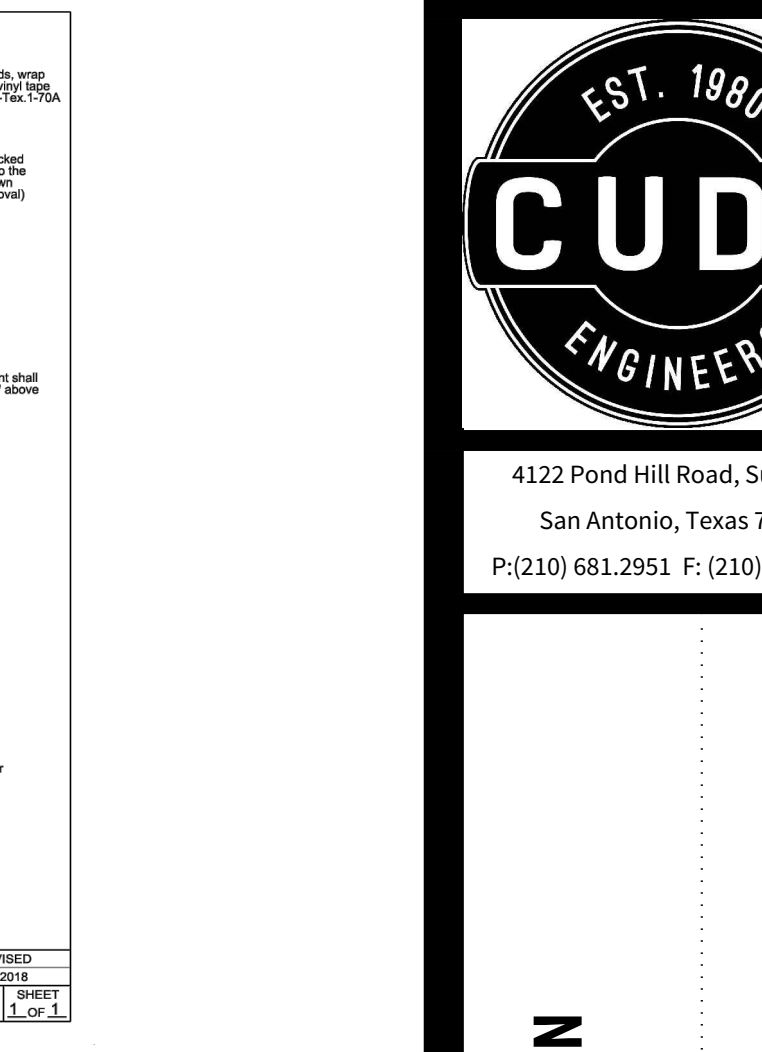
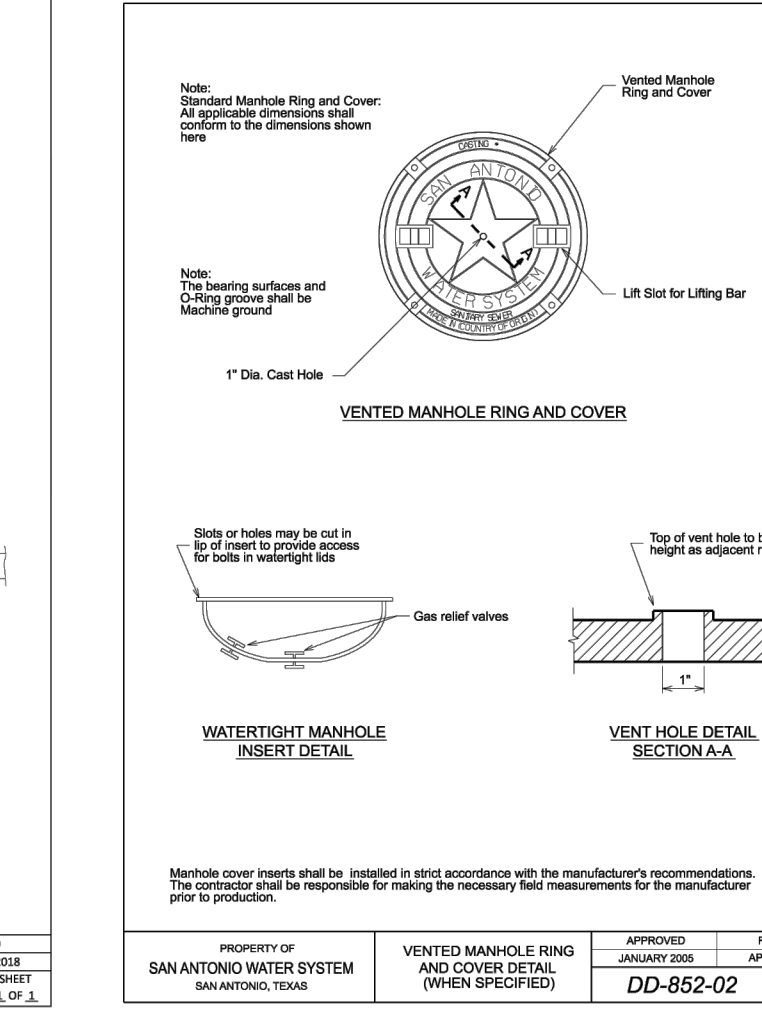
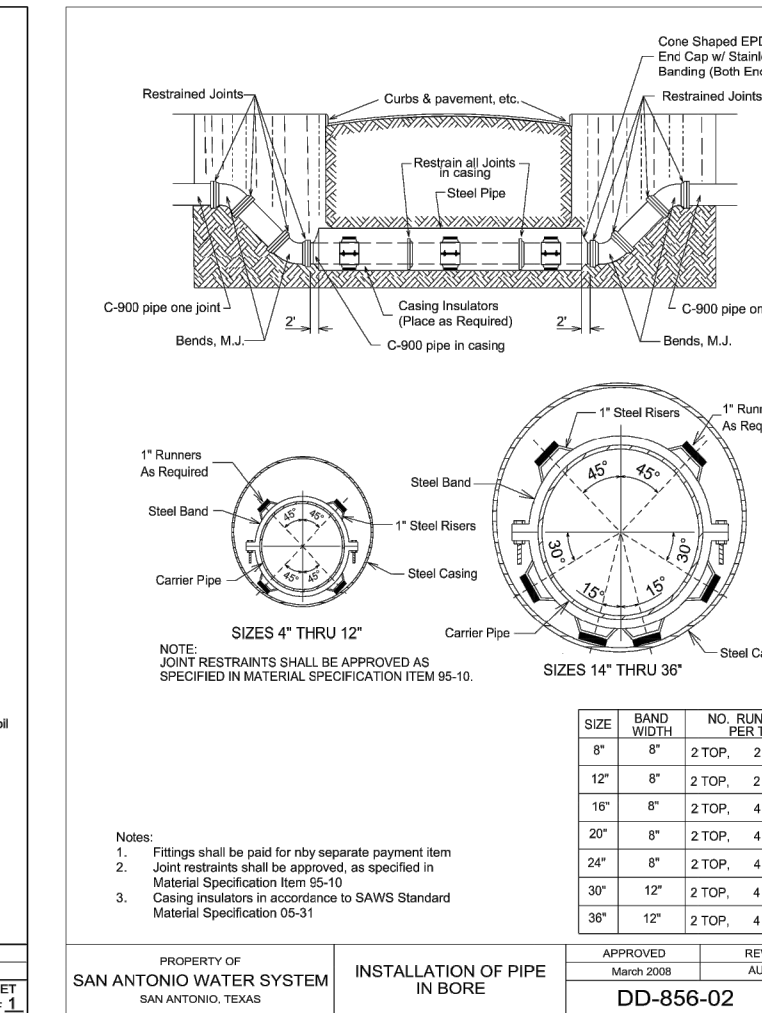
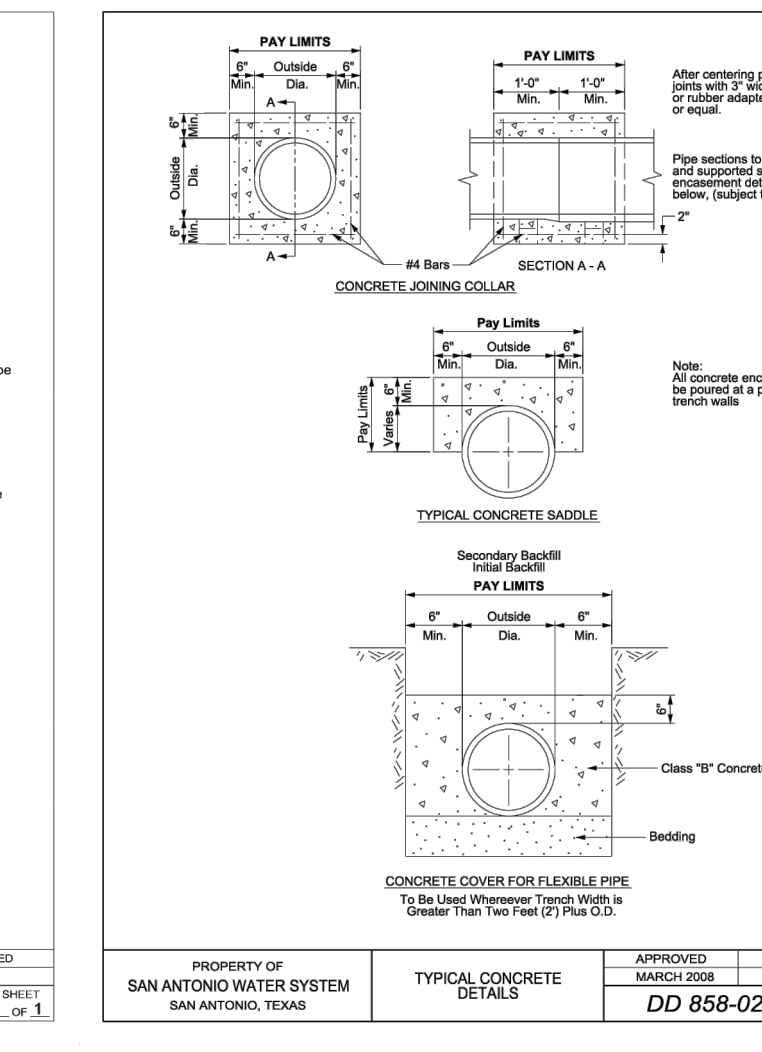
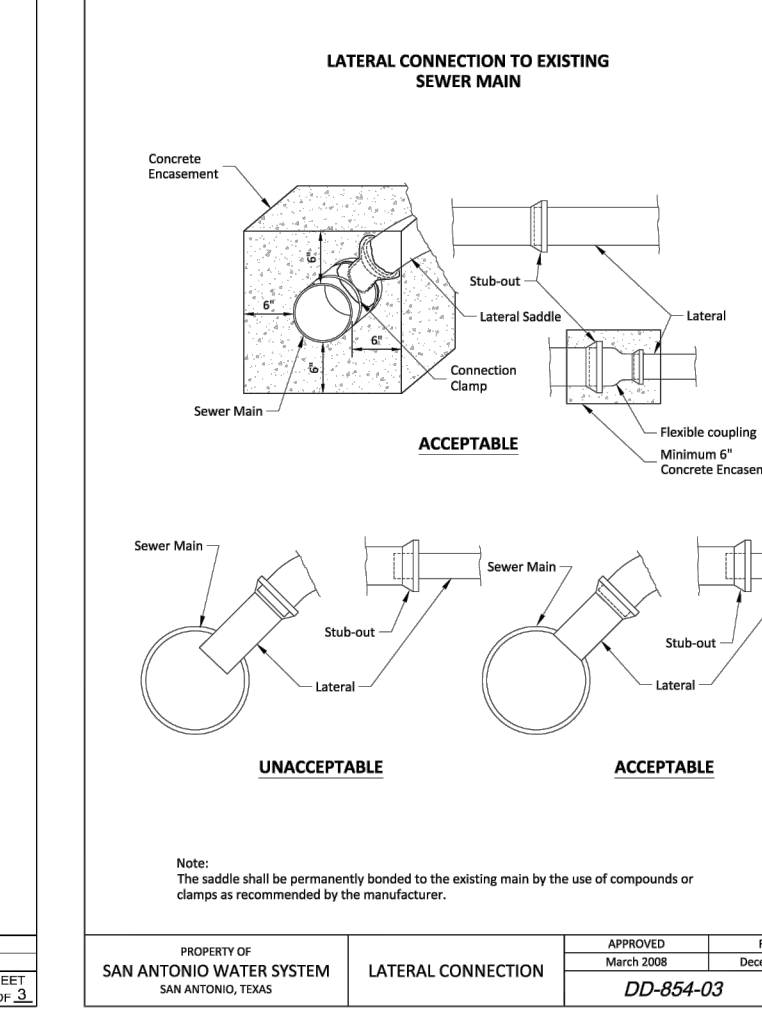
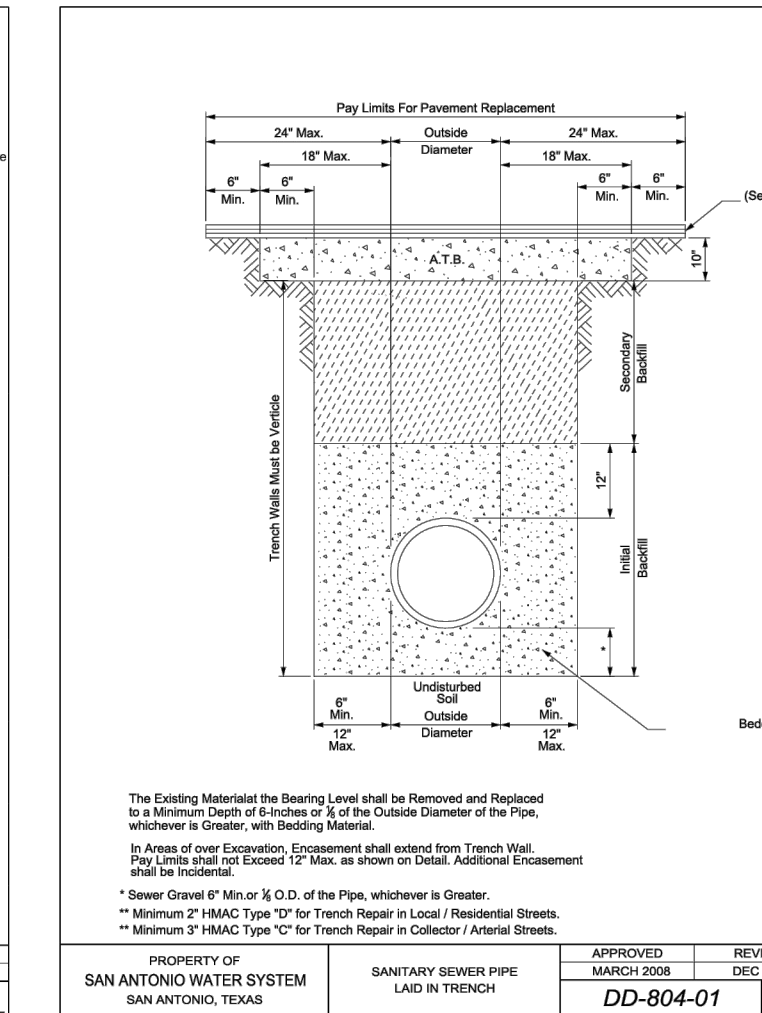
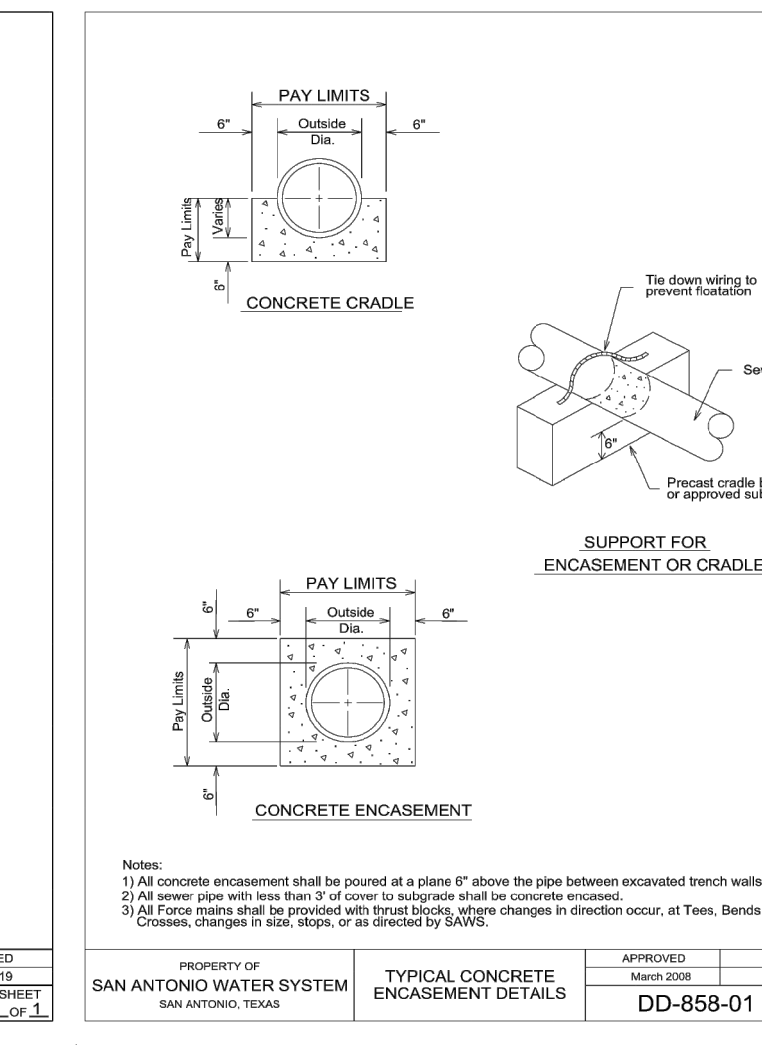
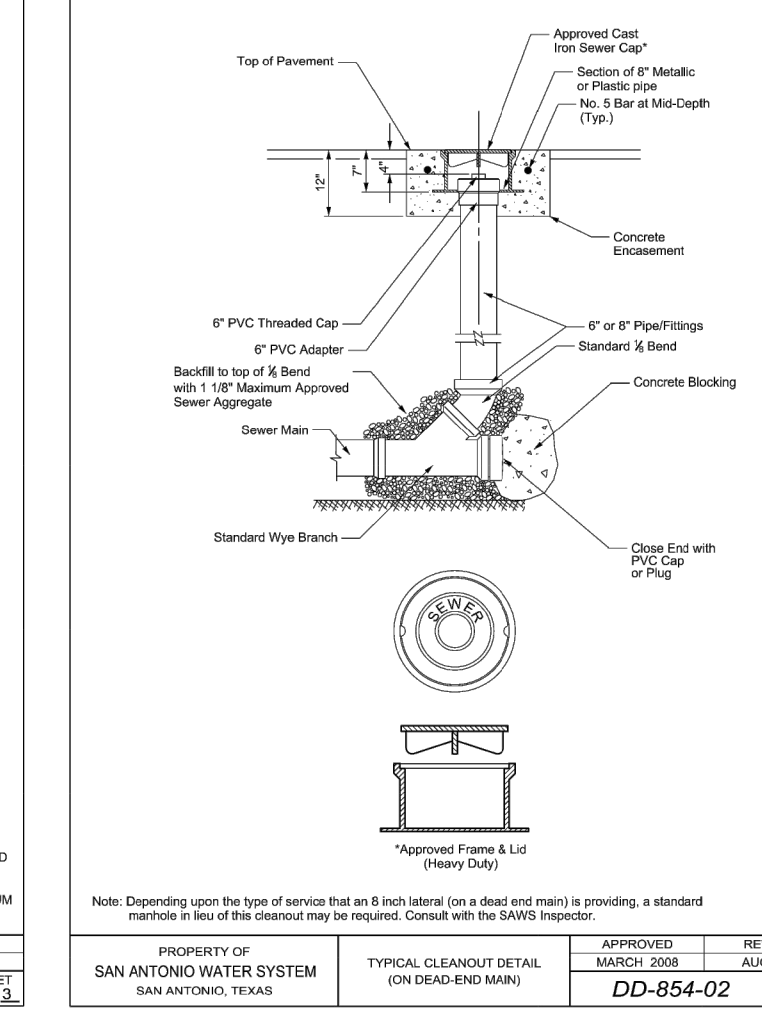
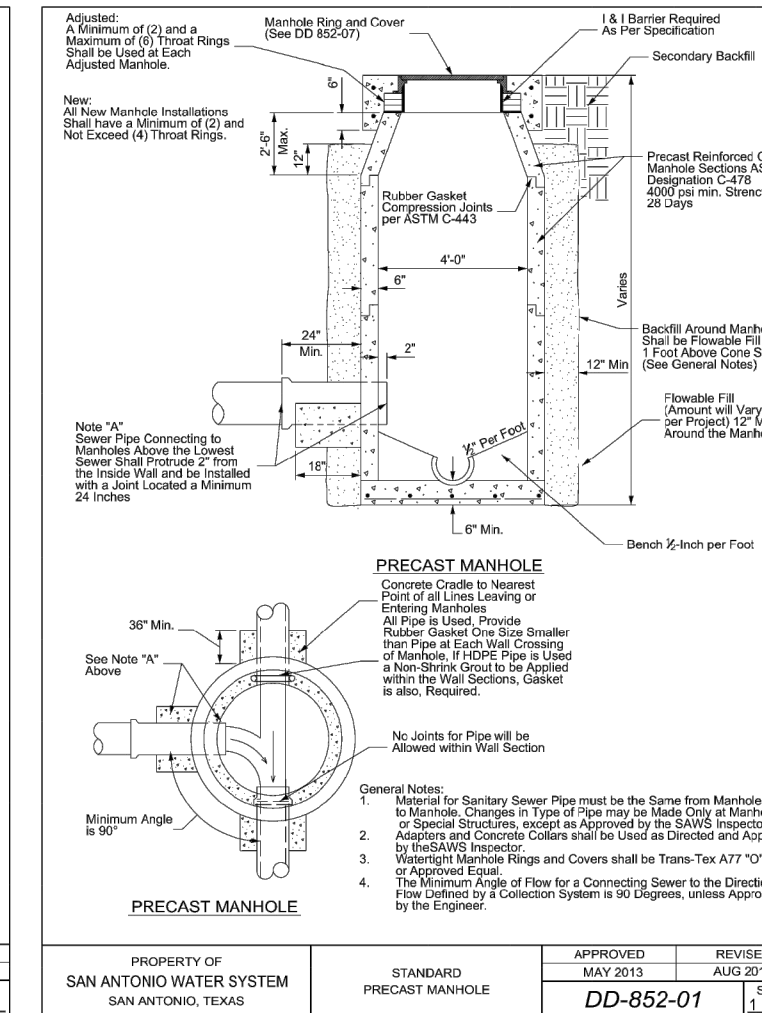
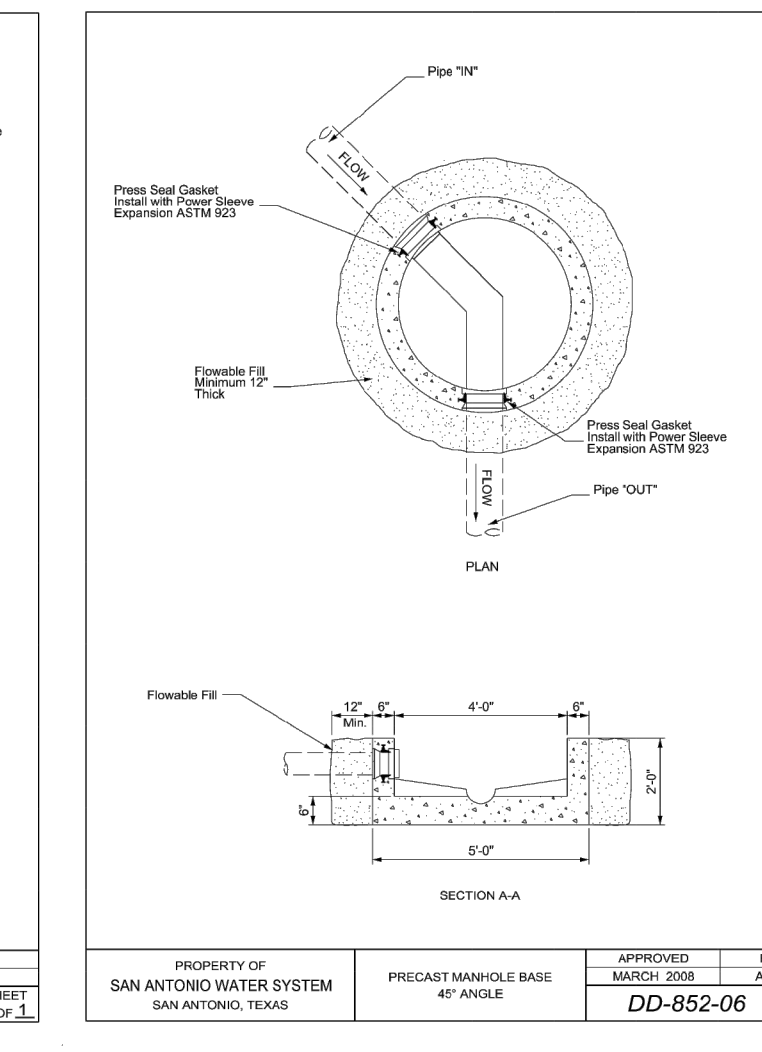
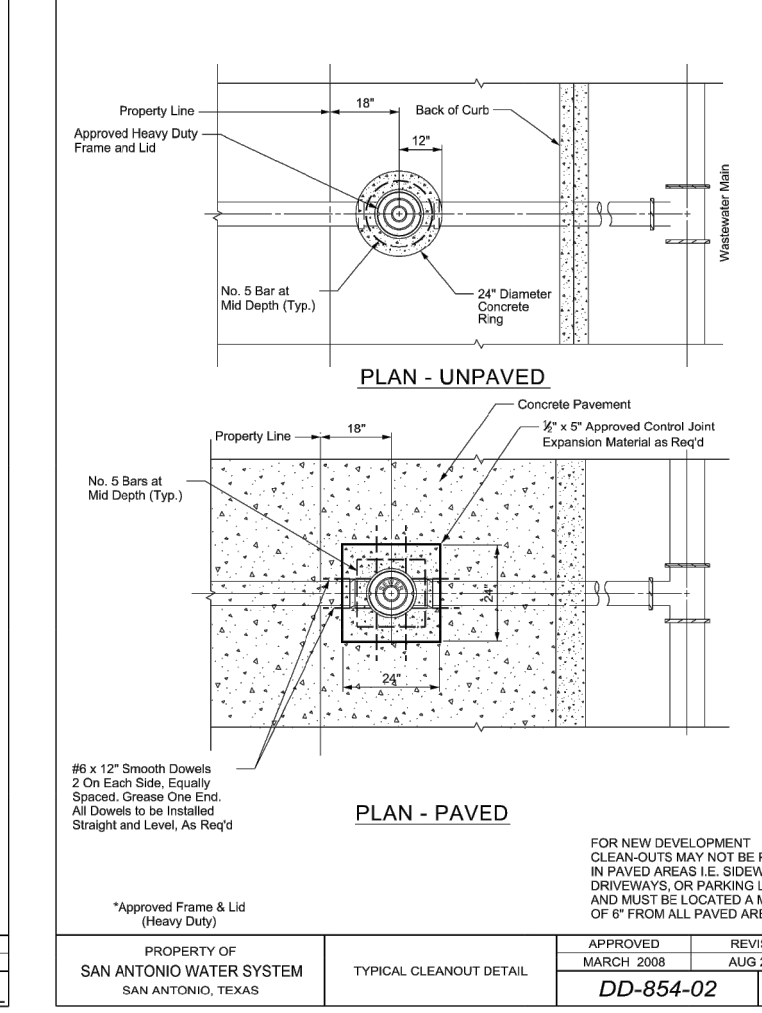
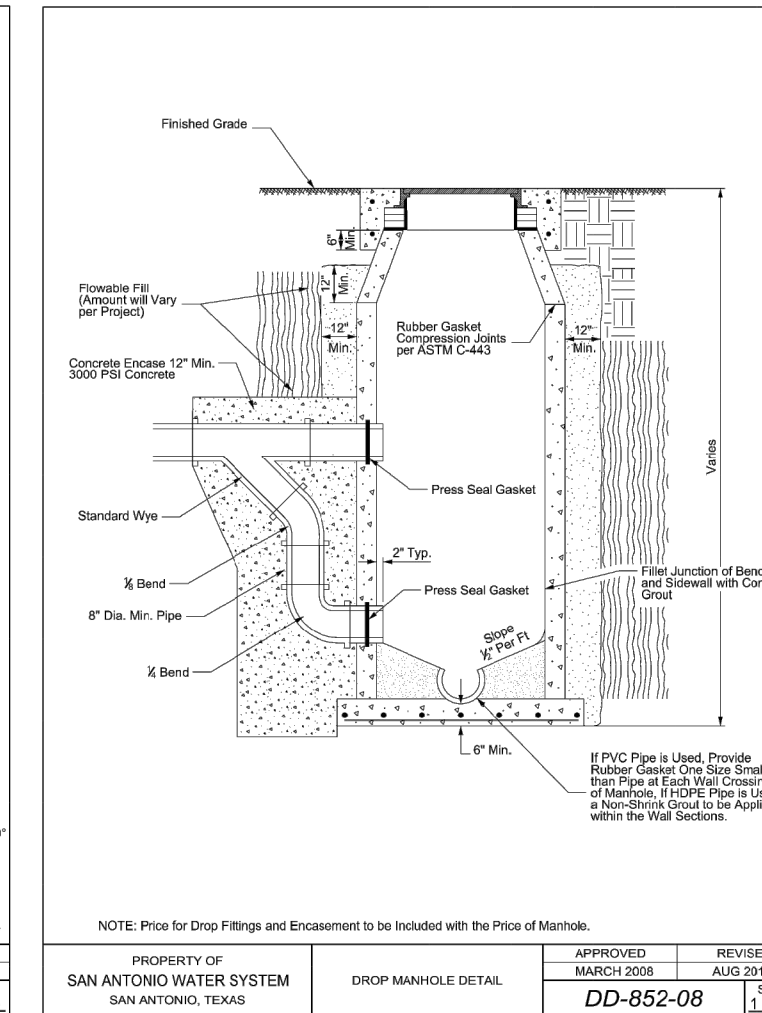
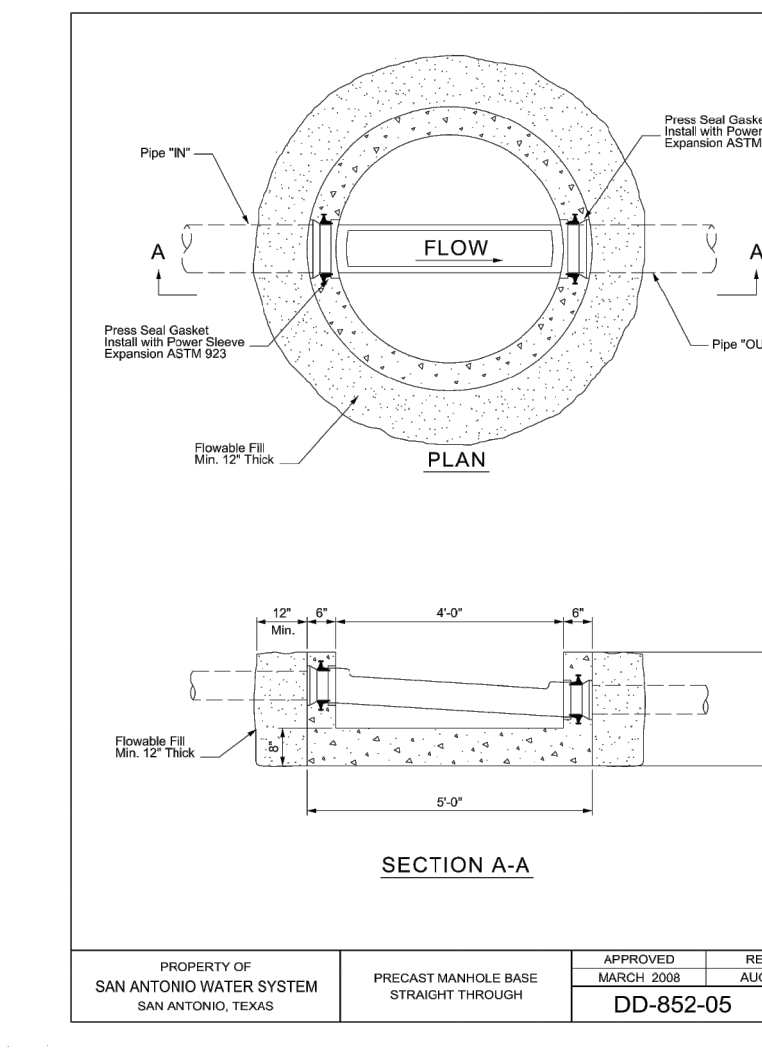
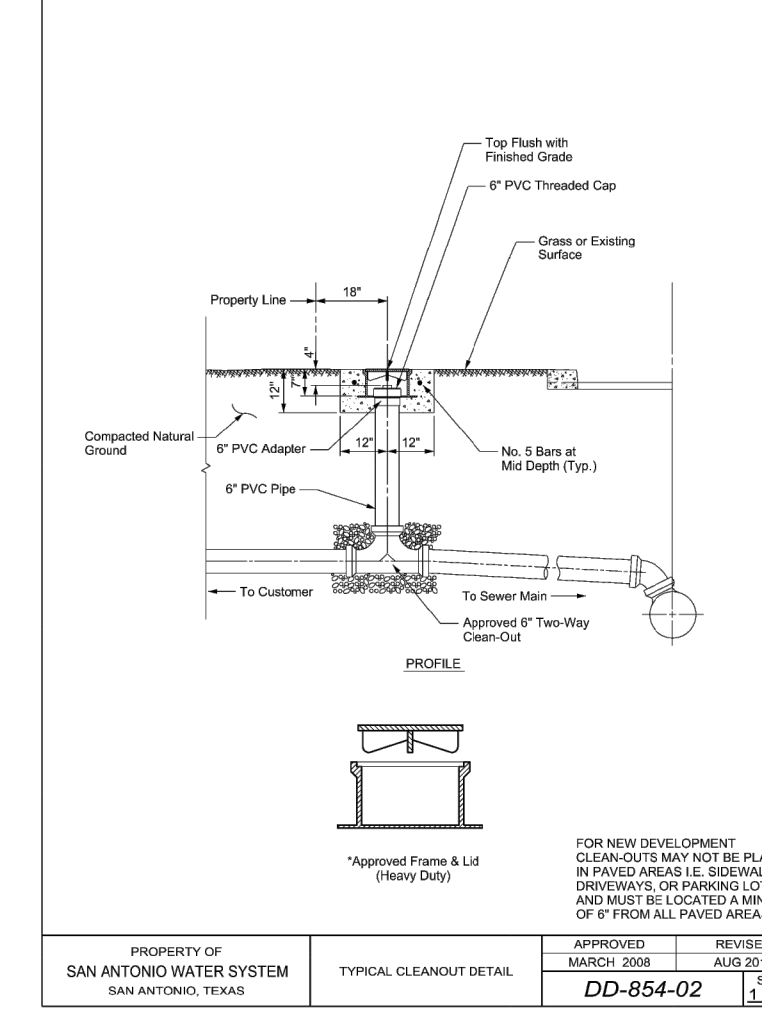
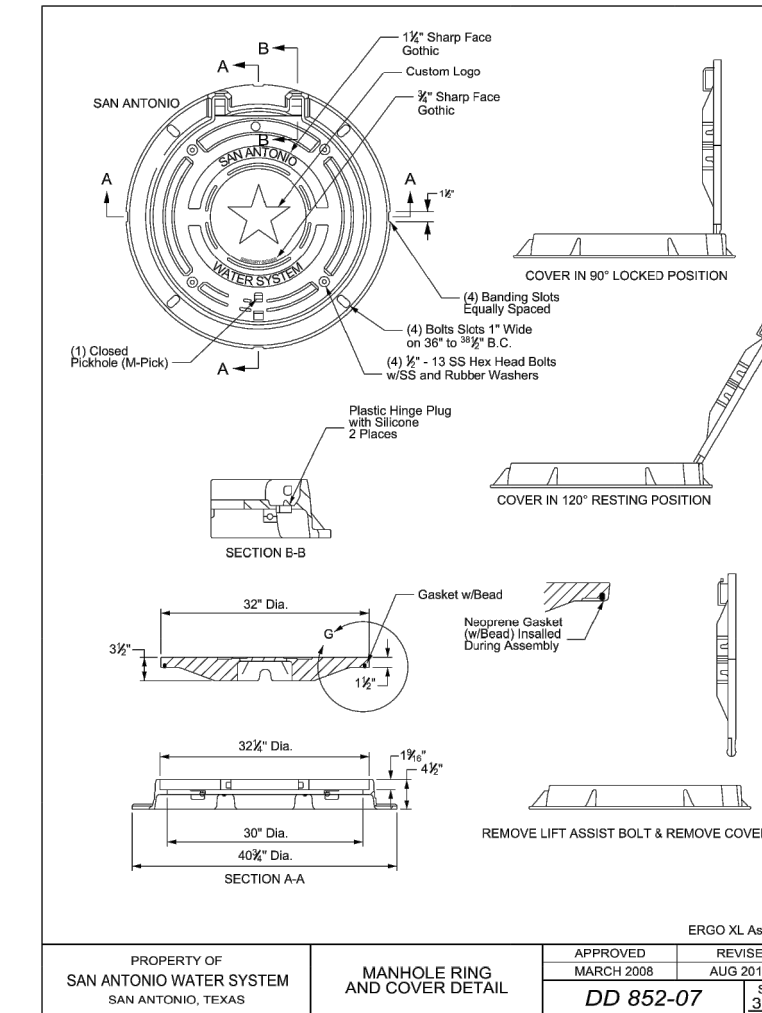
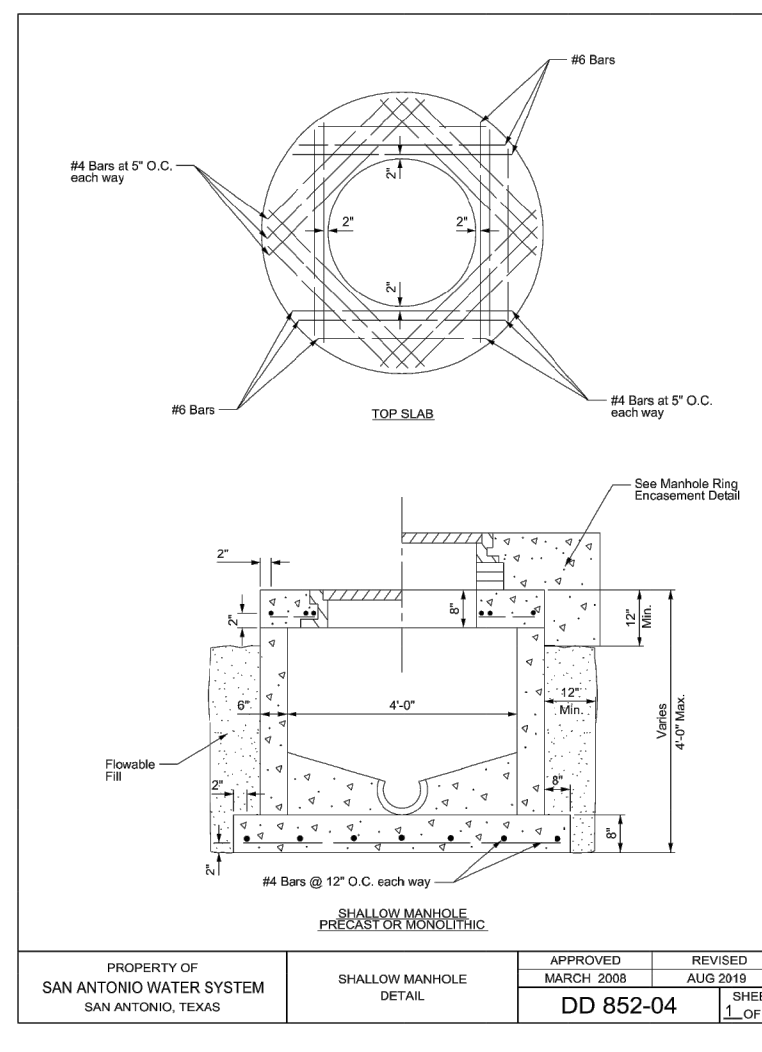
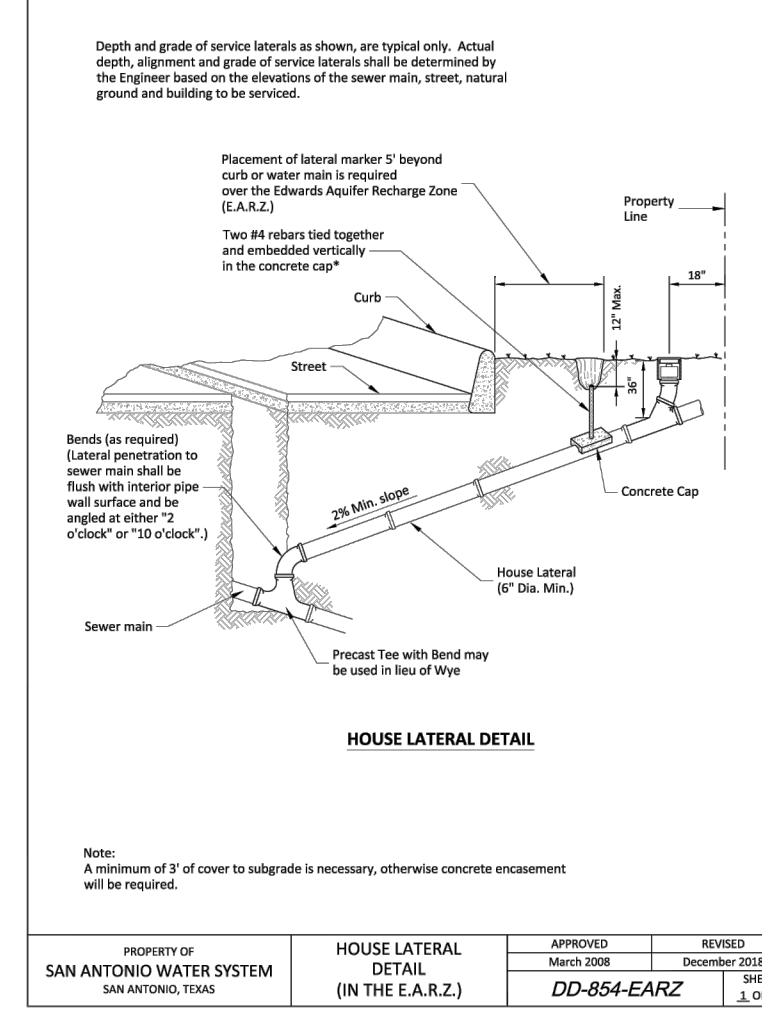
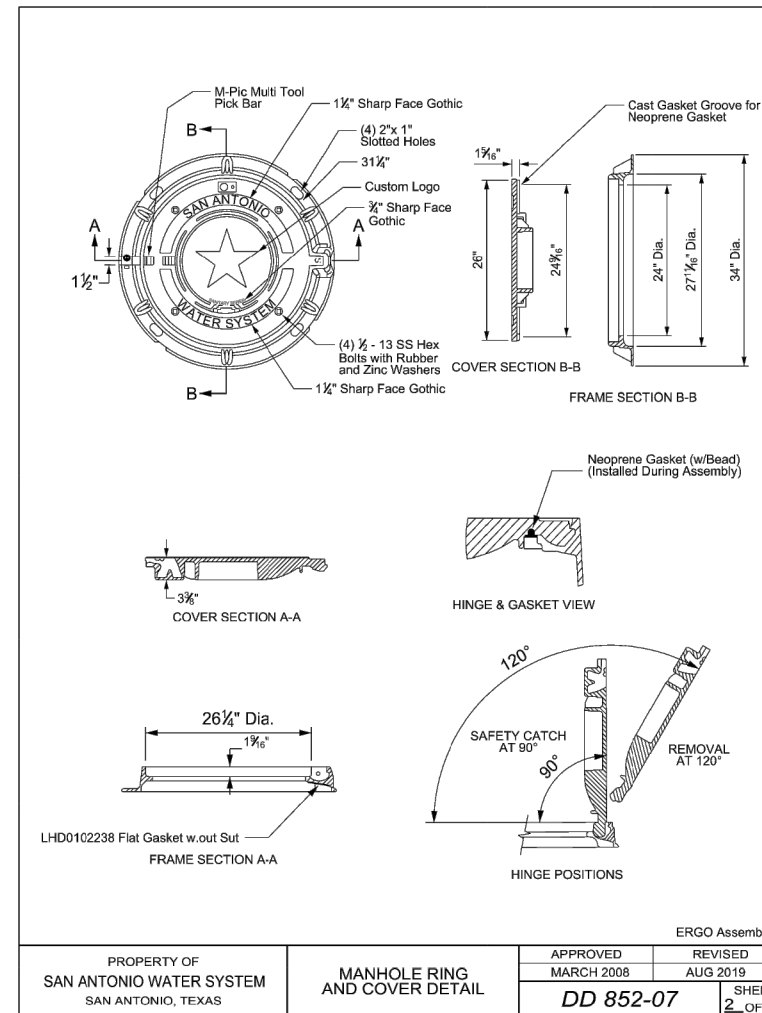
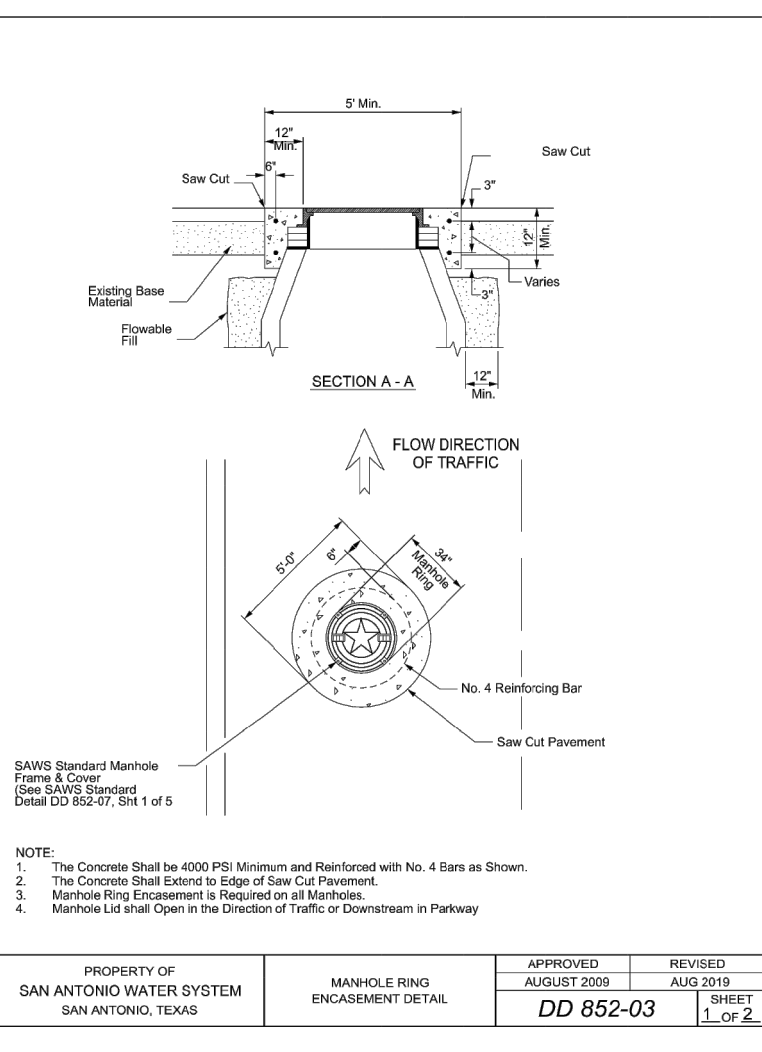
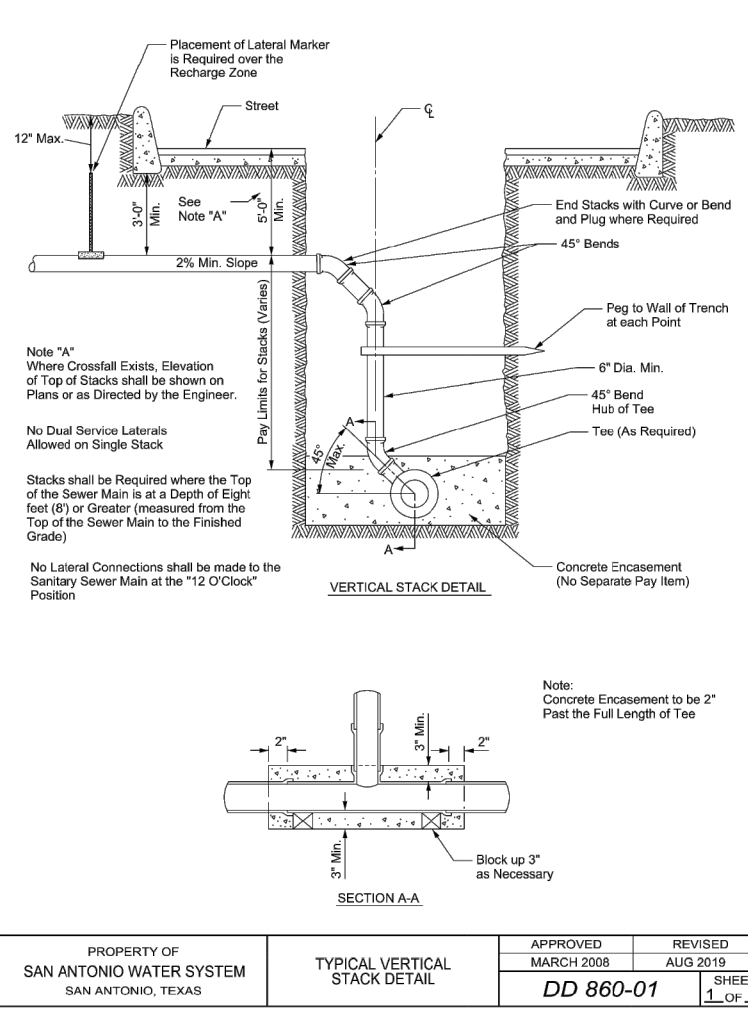
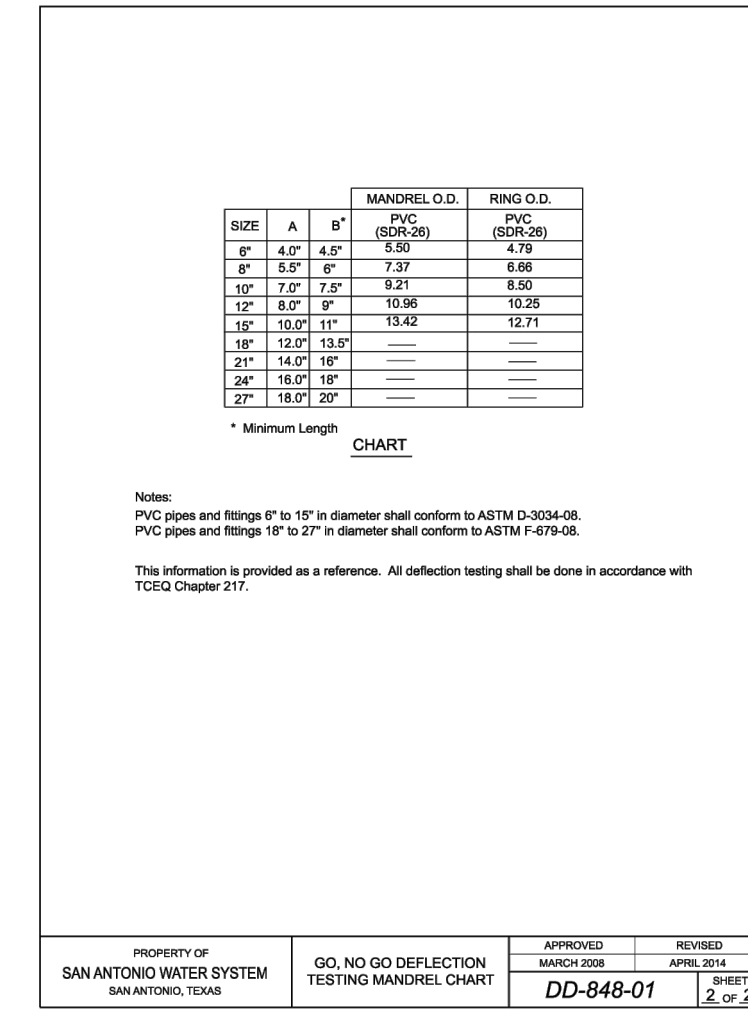
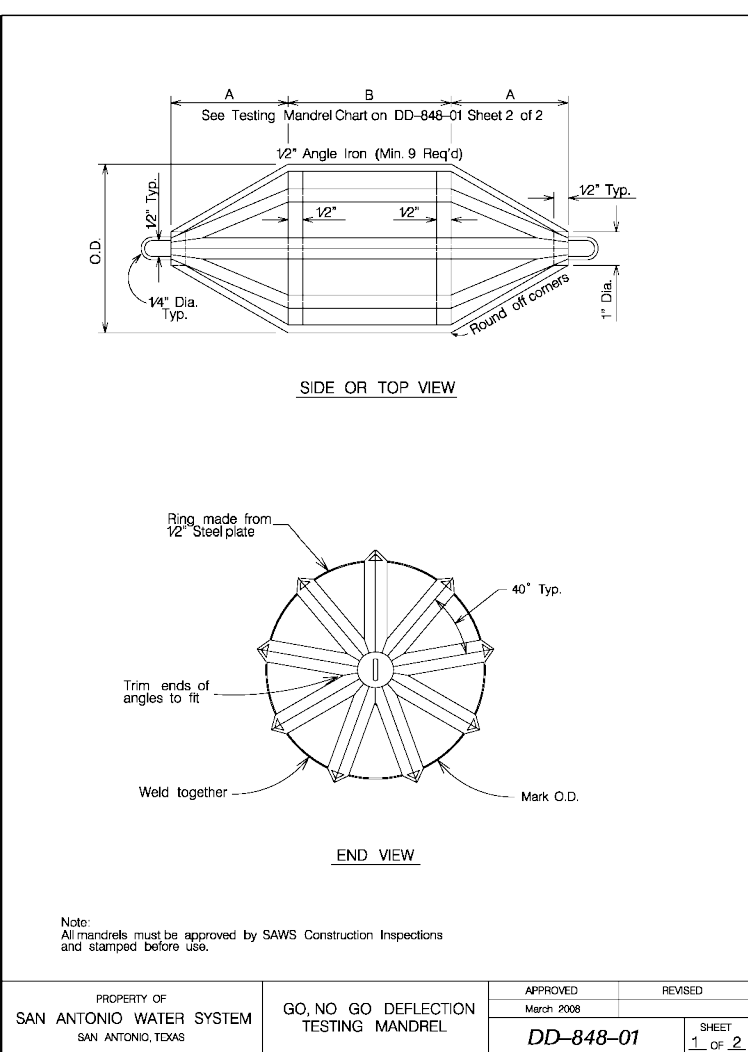


CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500
PLAT NO.
23-11800329
SAWS JOB NO.
23-1641

C29

CUDEENGINEERS.COM

REPRODUCTION OF THE ORIGINAL SIGNED AND SEALED PLAN AND/OR ELECTRONIC MEDIA MAY HAVE BEEN INADVERTENTLY ALTERED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE SCALE OF THE DOCUMENT AND CONTACTING CUDE ENGINEERS TO VERIFY DISCREPANCIES PRIOR TO CONSTRUCTION.



CUDEENGINEERS.COM

EST. 1980

CUDE

ENGINEERS

4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

ESTANCIA RANCH SUBDIVISION

UNIT 3

SANITARY SEWER STANDARD DETAILS

DATE

06/25/2024

PROJECT NO.

03473.010

DRAWN BY

CG/TC/XV

CHECKED BY

XV/AL

REVISIONS

DATE

1

2024-04-16

2

2024-05-24

3

2024-06-24

4

2024-07-24

5

2024-08-24

6

2024-09-24

7

2024-10-24

8

2024-11-24

9

2024-12-24

STATE OF TEXAS

ANDREW R. LOWRY

123410

6/24/2024

CUDE ENGINEERS

TBPE No. 455

TBPLS No. 10048500

PLAT NO.

23-11800329

SAWS JOB NO.

23-1641

C32

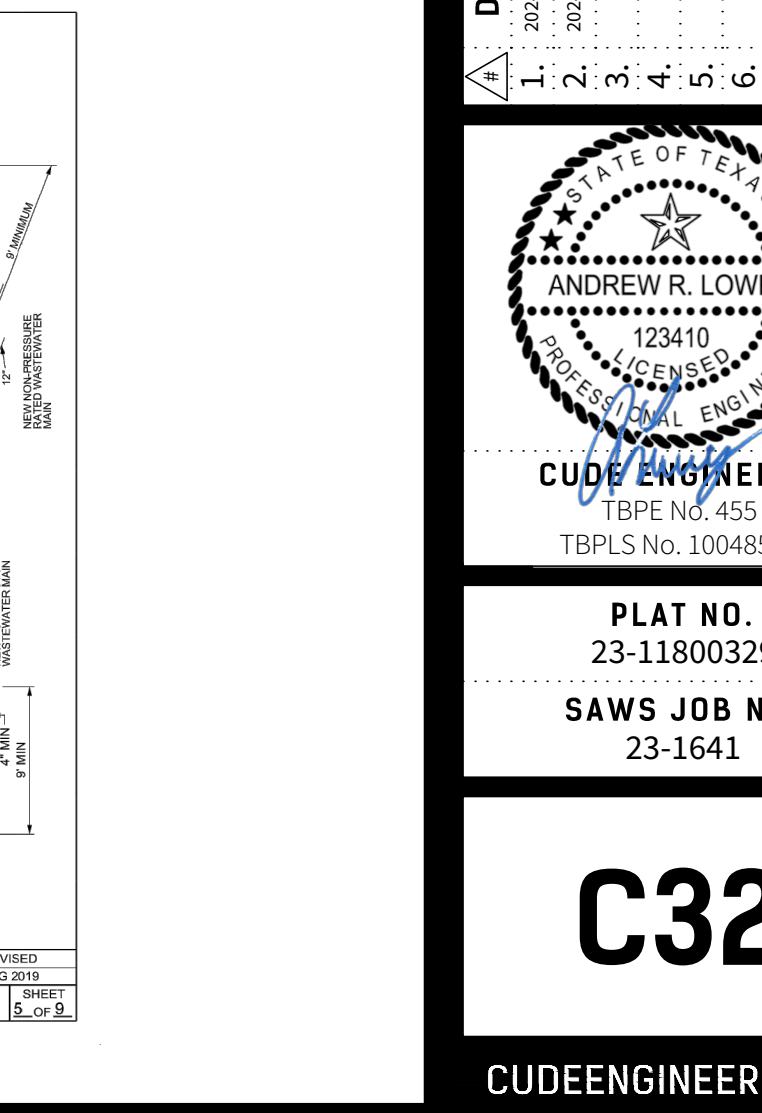
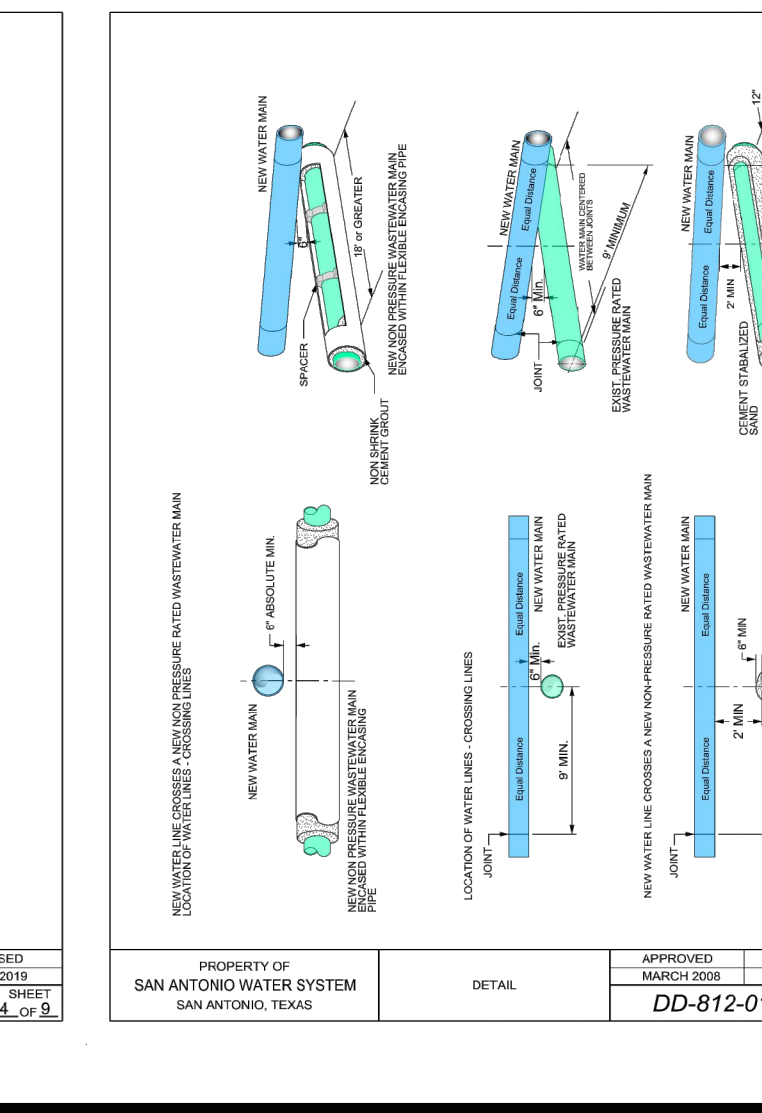
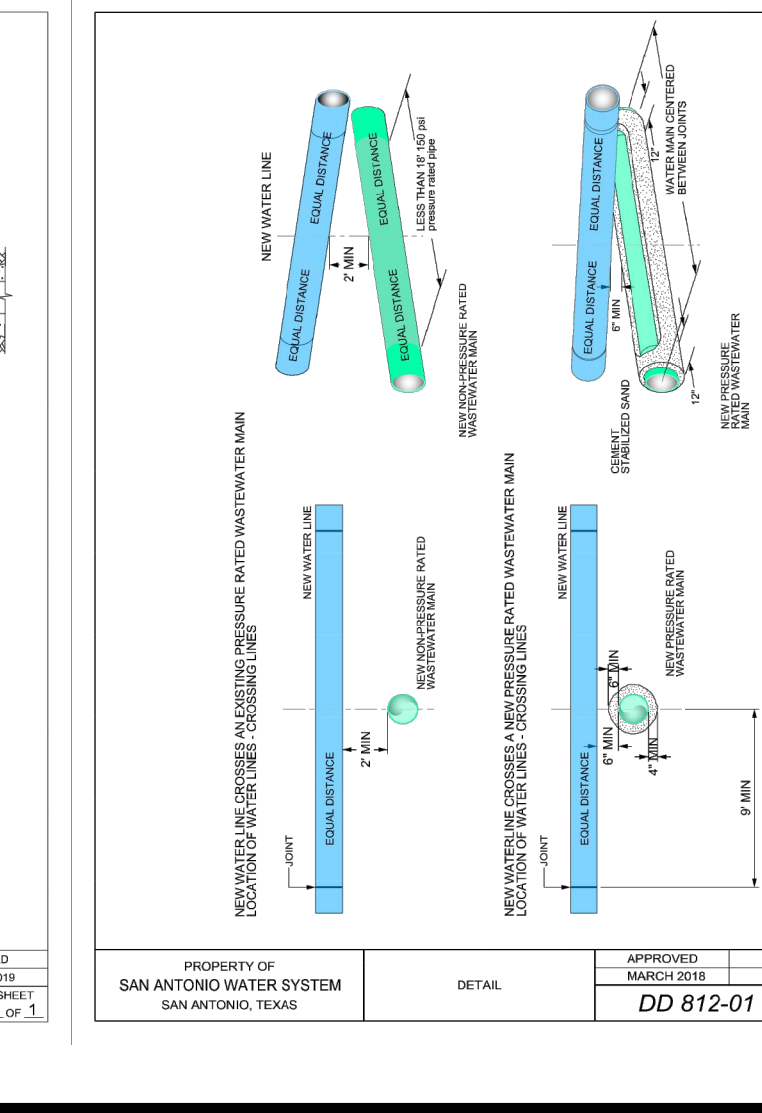
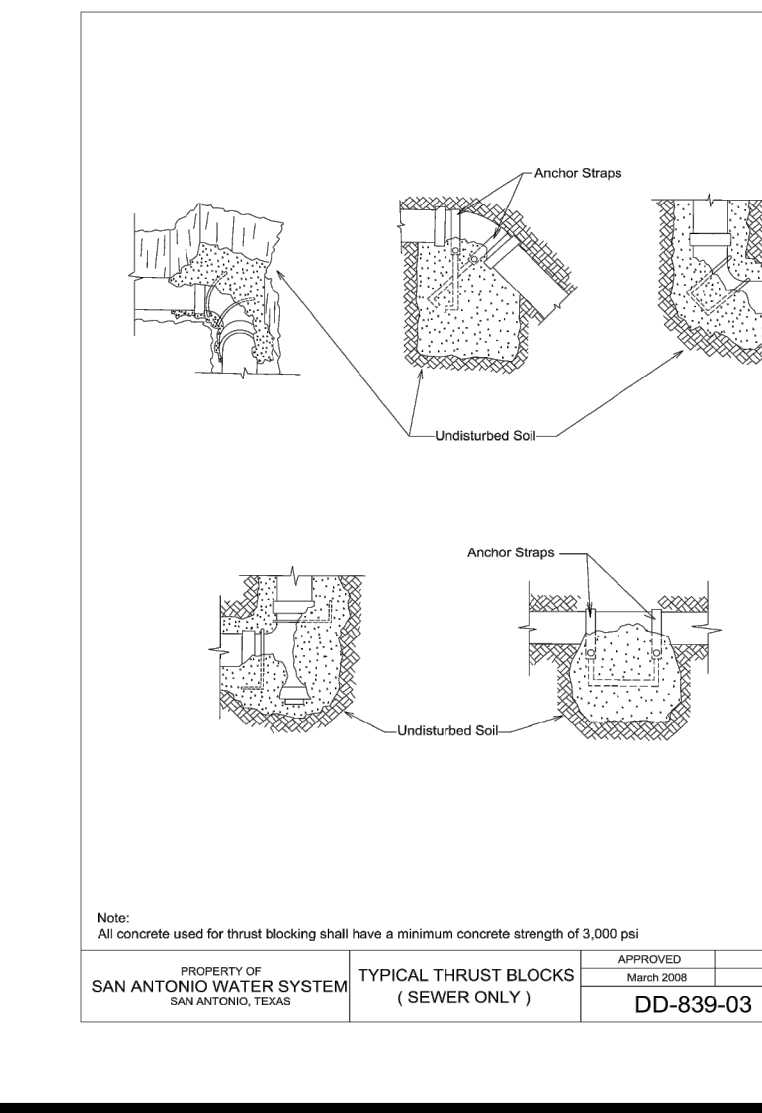
CUDEENGINEERS.COM

TRENCH EXCAVATION 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 SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

UPPER - EAST SEWERSHED - DOS RIOS / LEON CREEK

Developer's Name: MERITAGE HOMES OF TEXAS, L.L.C.
Developer's Address: 2722 WEST BITTERS ROAD, SUITE 200
City: SAN ANTONIO State: TEXAS Zip: 78231
Phone #: (210) 298-4294 Fax #: _____
SAWS Block Map #: 156690 Total EDU's: 152 Total Acreage: 65.64
Total Linear Footage of Pipe: 3,899.55 L.F. OF 8" SS - SDR 26 Plat No.: 23-11800329
Number of Lots: 132 SAWS Job No.: 23-1641



SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT REVISED JANUARY 2022

GENERAL SECTION

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the Inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locations requesting pipe location markers on SAWS facilities. The following contact information is supplied for verification purposes:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - COSEA Drainage (210) 207-0724 or (210) 207-5026
 - COSEA Traffic Signal Operations (210) 206-8480

- COSEA Traffic Signal Damages (210) 207-3951
 - Texas State Wide One Call Locator 1-800-545-0005 or 811
- The contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
 - All work in Texas department of transportation (TxDot) and/or Bexar county right-of-way shall be done in accordance with respective construction specifications and permit requirements.
 - The contractor shall comply with city of San Antonio or other governing municipality's tree ordinances when excavating near trees.
 - The contractor shall not place any waste materials in the 100-year flood plain without first obtaining an approved flood plain permit.
 - Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constrworkreq@saws.org.
- Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constrworkreq@saws.org.
- Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
- Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
 - A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division, Water Section.

WATER SECTION

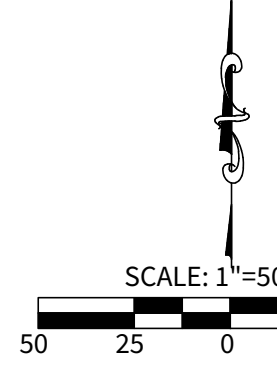
- Prior to tie-in, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
 - For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014
- Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
- Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)

- Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
- All valves shall read "open right".
- PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 1215 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 1215 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if:
 - "PRV is/are required for such lot(s), only single service connections shall be allowed.
 - "Note: A pressure regulator is also known as a pressure reducing valve (PRV).

- Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
- Backflow Prevention Devices:
 - All irrigation services within prevention devices.
 - All commercial backflow prior to installation.
- Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.
- Division Valves: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by SAWS Distribution and Collection staff and only with prior written approval of the SAWS Director of Production and Operations and proper coordination with all SAWS departments. Contractor shall provide written notification to the inspector a minimum of two weeks in advance to start the coordination process and will be informed by the Inspector when the division valve will be operated by the SAWS Distribution and Collection staff. The Division Valve can only be operated by SAWS Distribution and Collection staff member not the inspector or the contractor. Operation of a Division Valve without the express prior written approval of the SAWS Distribution and Collection staff will constitute a material breach of any written SAWS contract or permit in addition to subjecting the Contractor to liability for any and all fines, fees, or other damages, direct or consequential, that may arise from or be caused by the operation of the valve without prior written permission. Please be informed that the approval of the operation or opening or closing of a division valve can take several weeks for approval. Division Valves will also have a valve lid labeled Division Valve and a locking mechanism installed with a key. The lock and key mechanism will be paid for by the contractor but will be installed by SAWS Distribution and Collection staff.

PRESSURE ZONE 1400 HGL

Developer's Name	MERITAGE HOMES OF TEXAS, L.L.C.		
Developer's Address	2722 WEST BITTERS ROAD, SUITE 200		
City	SAN ANTONIO	State	TEXAS
Zip	78231		
Phone #	(210) 298-4294	Fax #	
SAWS Block Map #	084-622	Total EDUs	156
Total Linear Footage of Pipe	8" W - 3,195 L.F.	Plat No.	23-11800329
Number of Lots	152	SAWS Job No.	23-1172

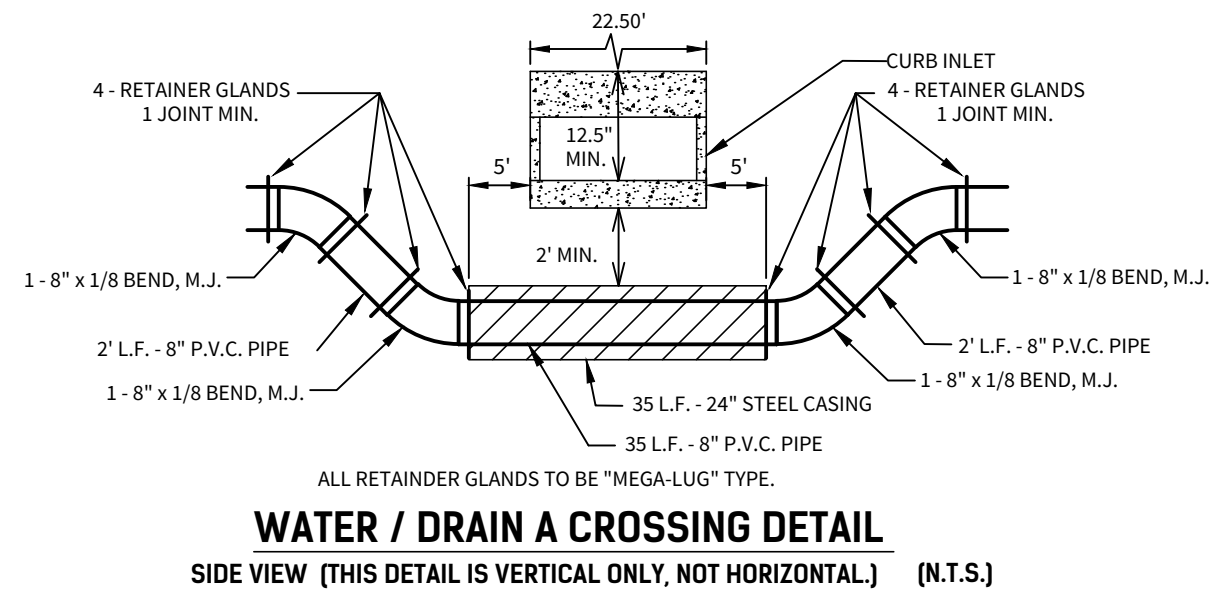
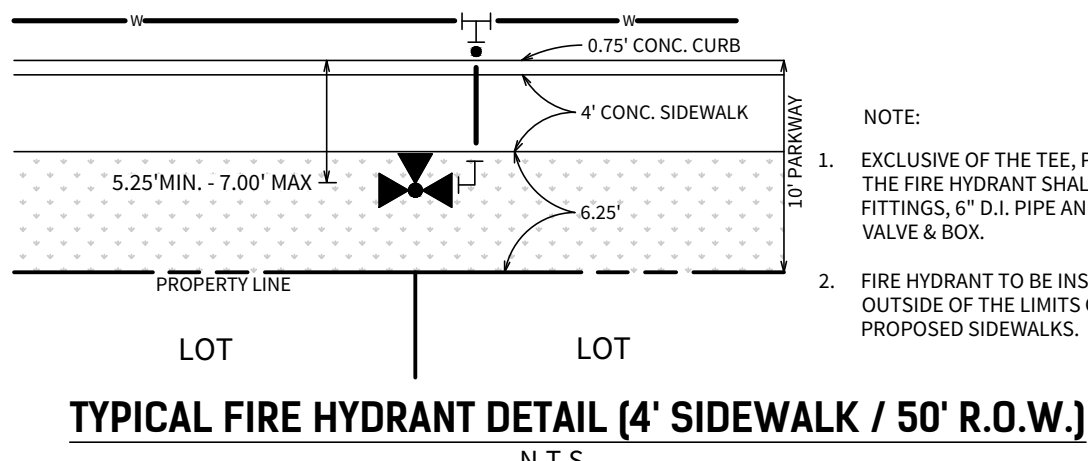
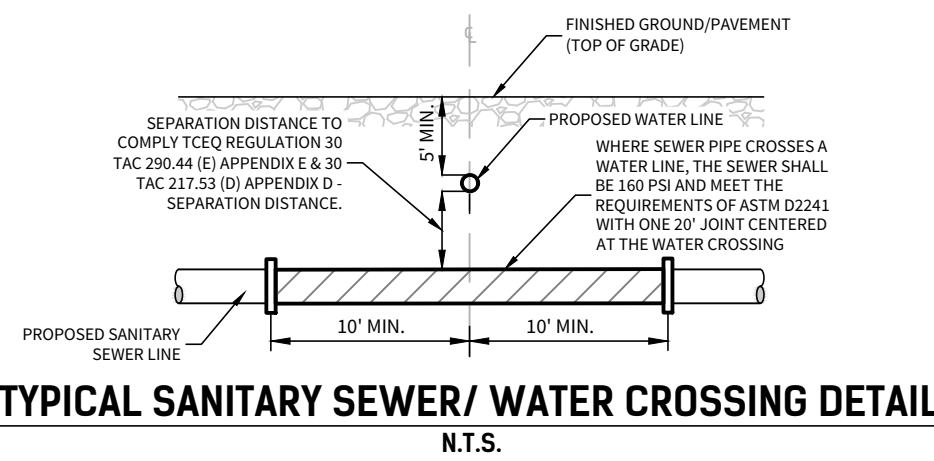
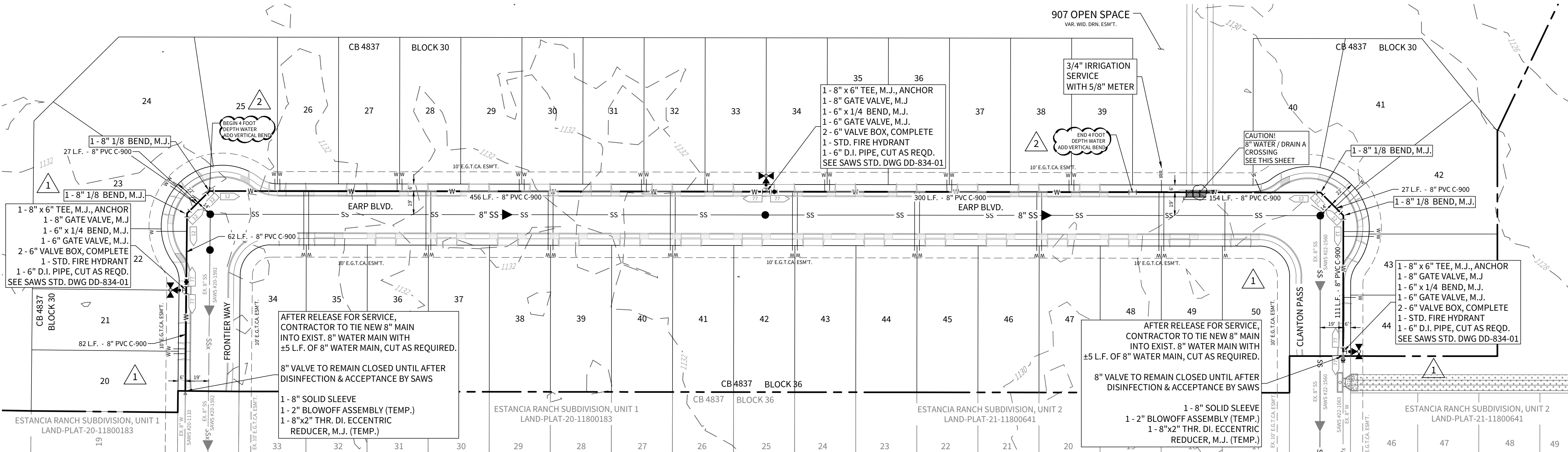


LEGEND

OVERALL UNIT BOUNDARY	---
PROPOSED LOT LINE	---
PROPOSED RIGHT OF WAY	---
E.G.T.C.A. EASEMENT	---
EXISTING 2' CONTOUR	--- 499 ---
EXISTING 10' CONTOUR	--- 500 ---
EXISTING WATER LINE	--- W ---
EXISTING SEWER LINE	--- SS ---
EXISTING MANHOLE	●
EXISTING FIRE HYDRANT	⊕
PROPOSED WATER LINE	--- W ---
PROPOSED WATER SERVICE	--- WS ---
PROPOSED IRRIGATION SERVICE	--- IRR ---
PROPOSED FIRE HYDRANT	⊕
PROPOSED SEWER MAIN	--- SS ---
PROPOSED MANHOLE	●
PROPOSED SEWER SERVICE	--- SS ---
PROPOSED JOINT RESTRAINT	--- X ---
LENGTH TO BE JOINT RESTRAINT	--- X L.F. ---

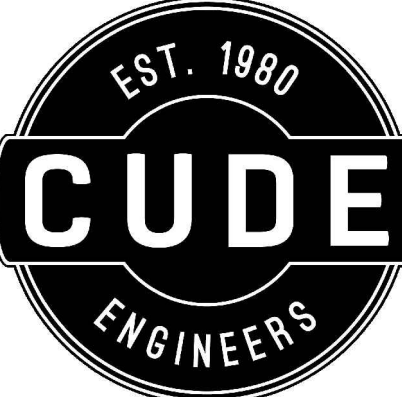
SHEET NOTES:

- ALL 8" 8 1/2" PVC SHALL BE C-900 CLASS 235 DR 18.
- SAWS SHALL MACHINE CHLORINATE ALL NEW WATER MAINS.
- CONTRACTOR SHALL NOTIFY ENGINEER AND CITY OF SAN ANTONIO TREE INSPECTIONS DEPARTMENT PRIOR TO THE REMOVAL OF ANY TREES. DAMAGE TO ANY PROTECTED TREES WILL BE MITIGATED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 5 FEET ON ALL 8" MAIN.
- CONTRACTOR SHALL MAINTAIN A DEPTH OF 4 FEET ON 8" MAIN WHERE DESCRIBED AND ADD A VERTICAL BEND AS REQUIRED.
- CONTRACTOR SHALL REFERENCE GRADING PLAN FOR FUTURE GRADES OF STREETS FOR CORRECT DEPTH INSTALLATION OF THE OFFSITE WATER MAINS.
- ALL WATER SERVICES SHALL BE 3/4" COPPER SERVICE WITH 1/2" METER UNLESS OTHERWISE NOTED.



TRENCH EXCAVATION 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 SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



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ESTANCIA RANCH SUBDIVISION
UNIT 3
WATER DISTRIBUTION PLAN

DATE

06/25/2024

PROJECT NO.

03473.010

DRAWN BY

CG/TC/XV

CHECKED BY

XV/AL

REVISIONS

DATE

1. 2024-04-16
2. 2024-05-24

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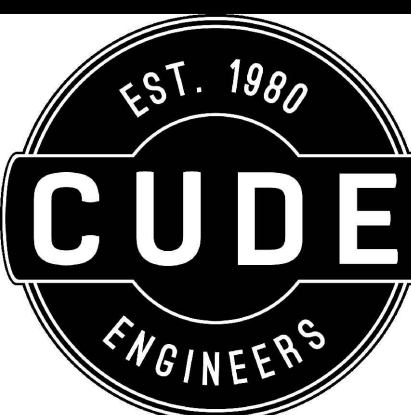
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TRENCH EXCAVATION PROTECTION

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 FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR 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.

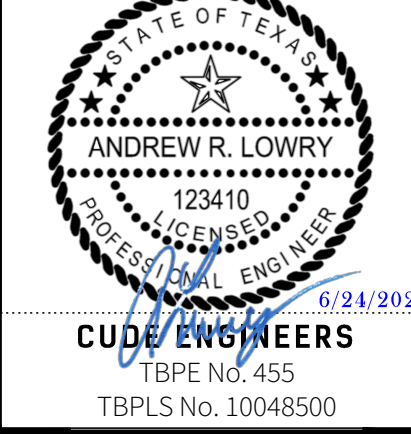


4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
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ESTANCIA RANCH SUBDIVISION
UNIT 3
WATER DISTRIBUTION STANDARD DETAILS

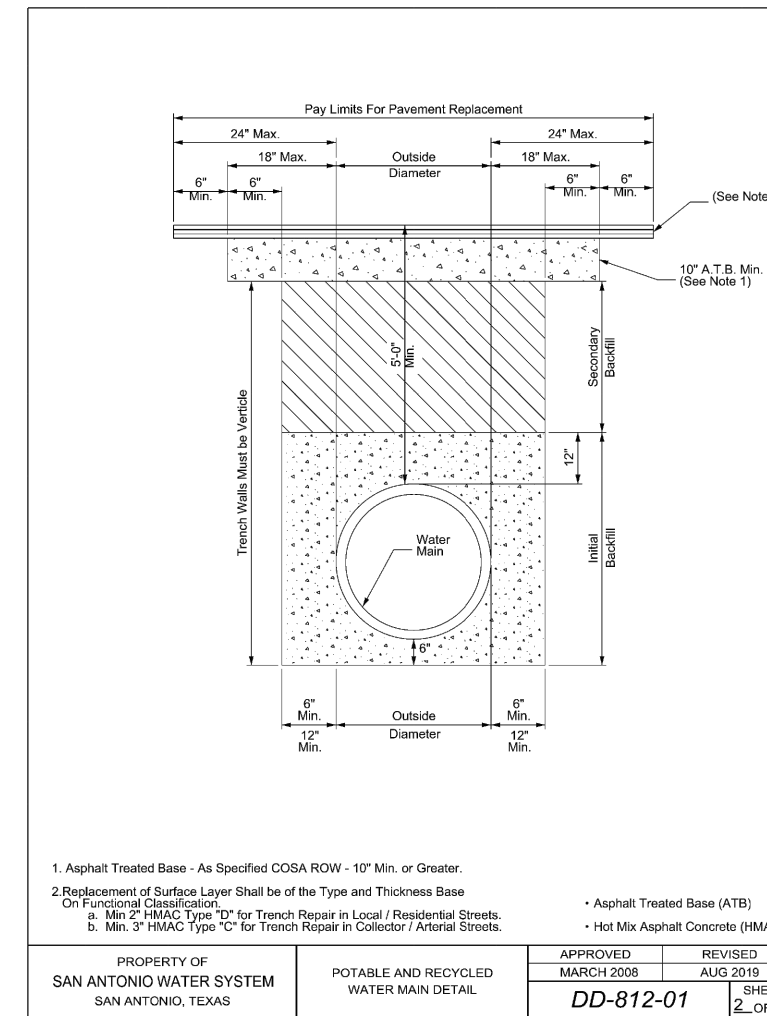
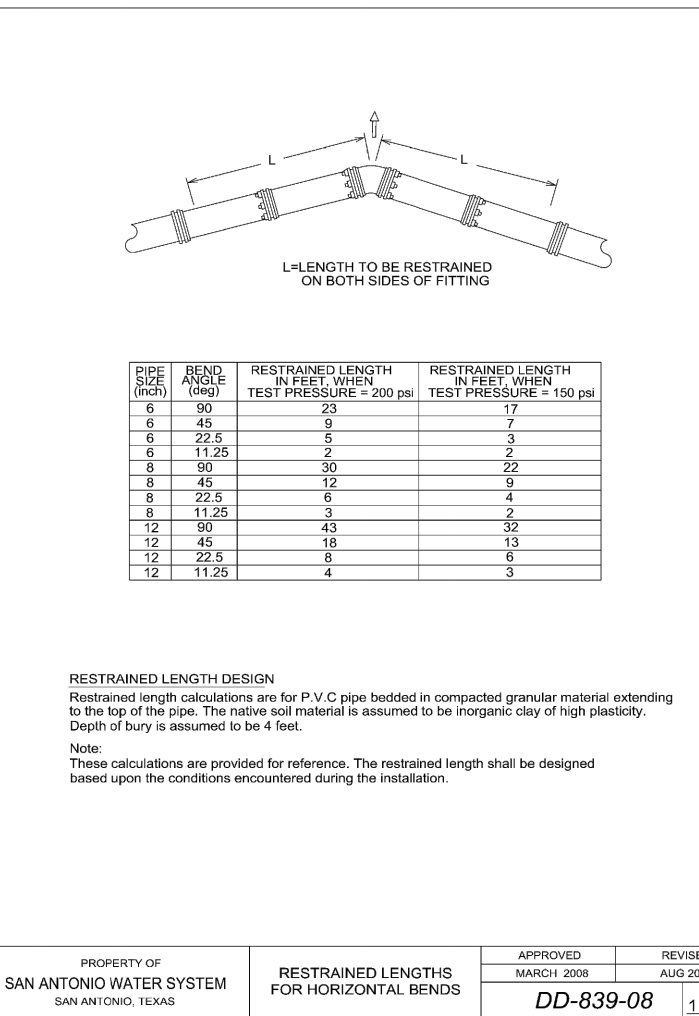
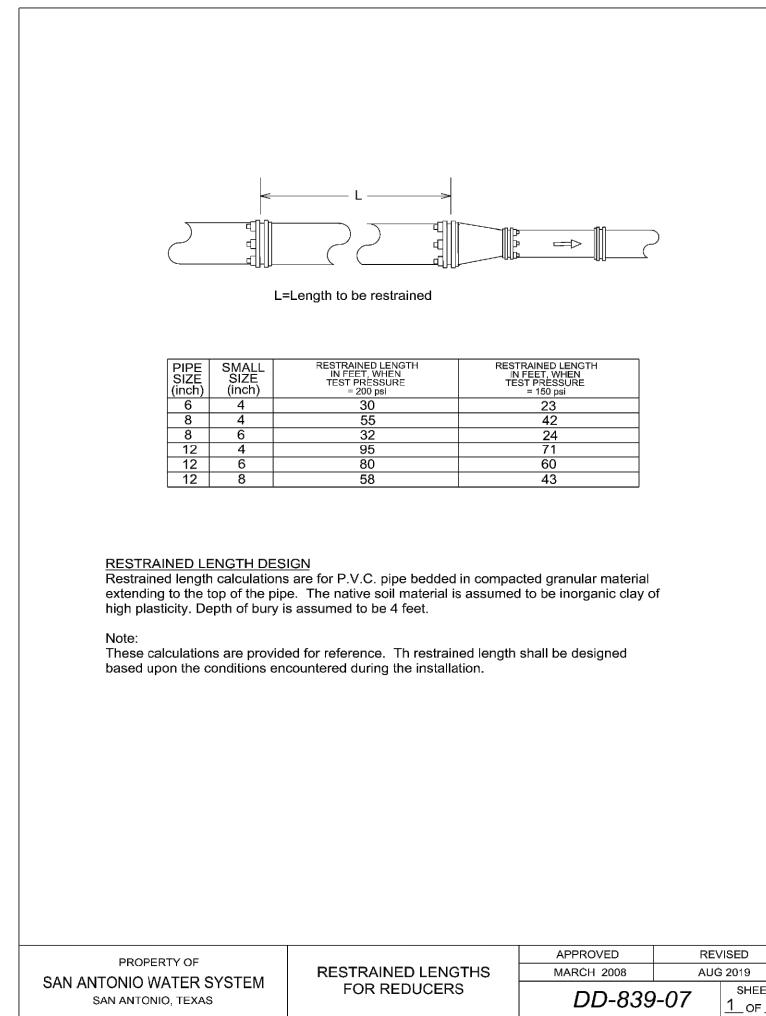
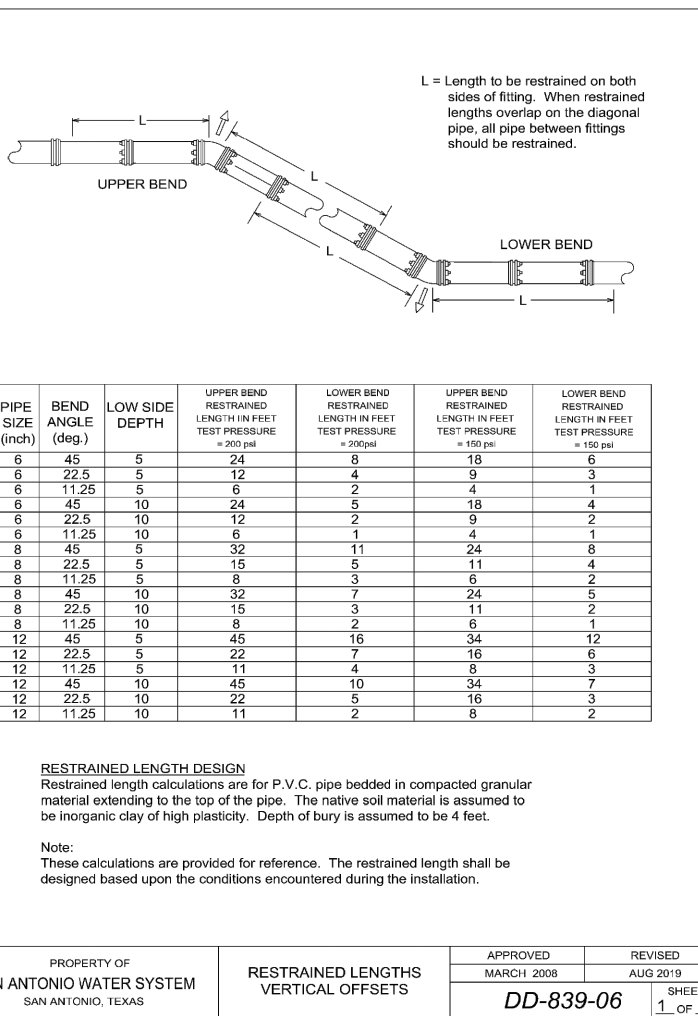
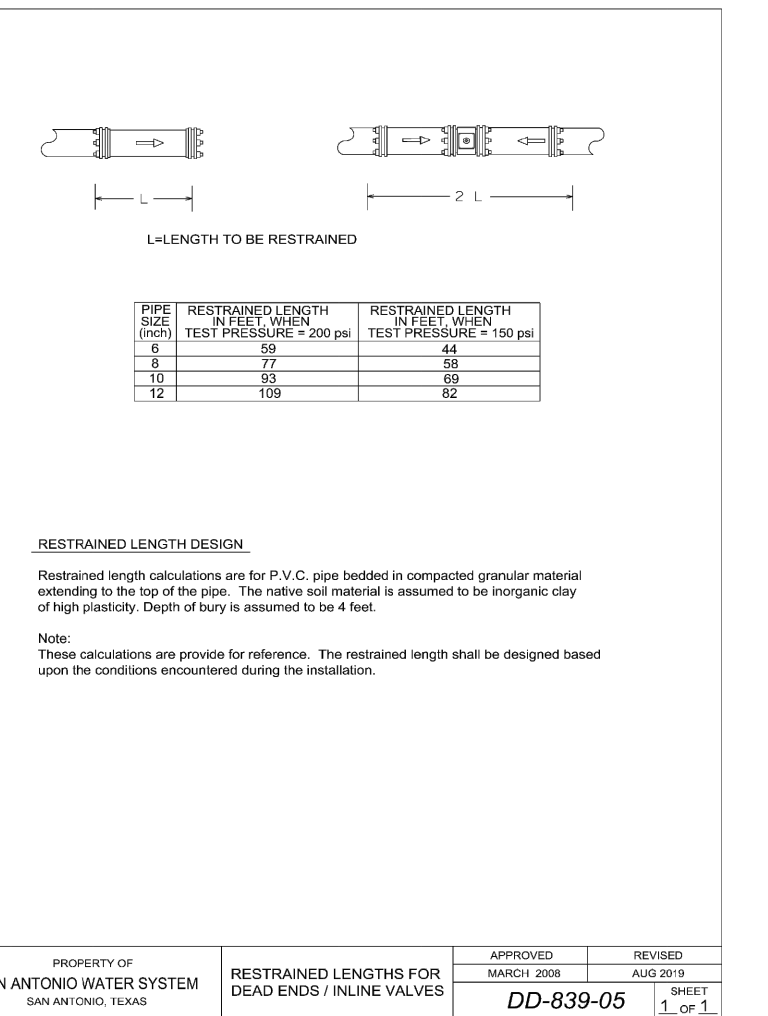
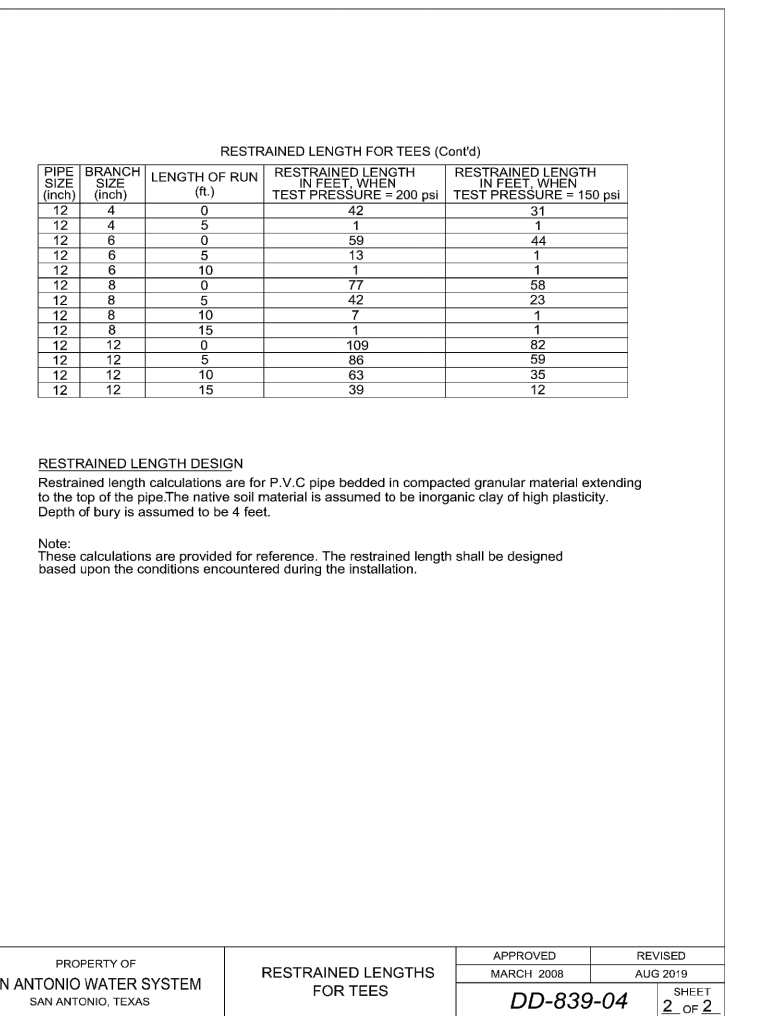
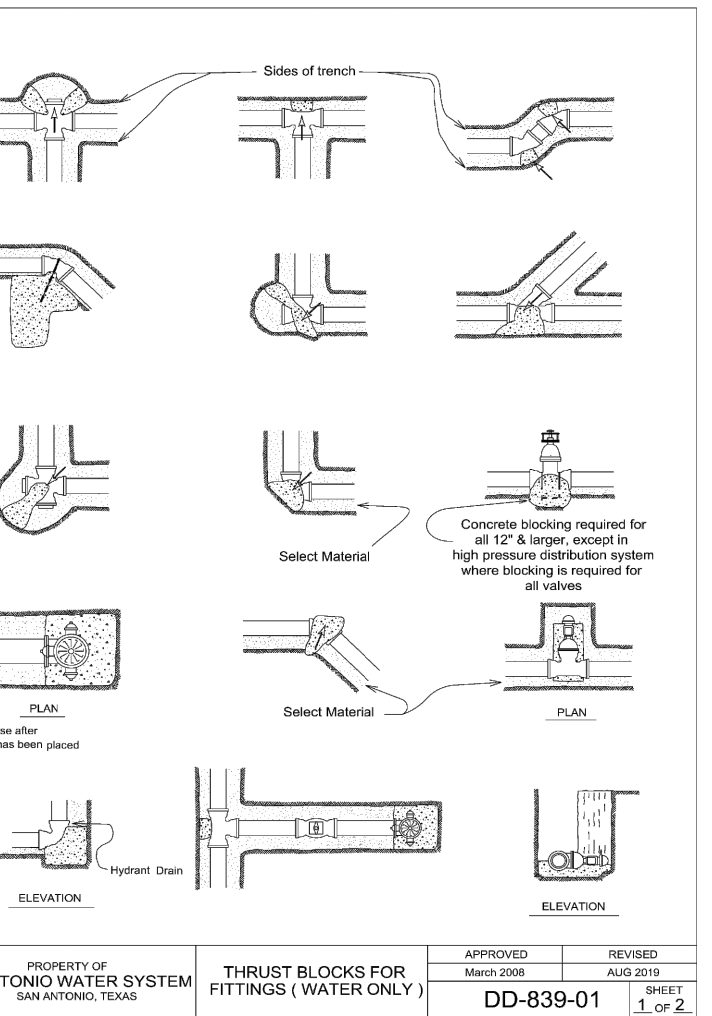
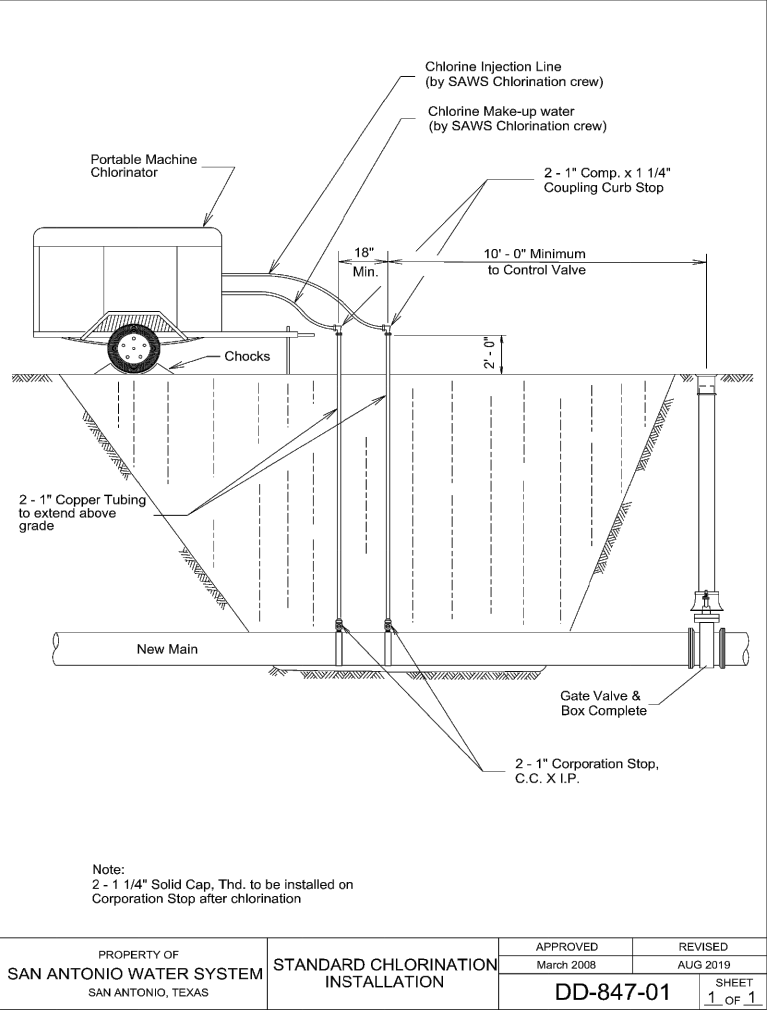
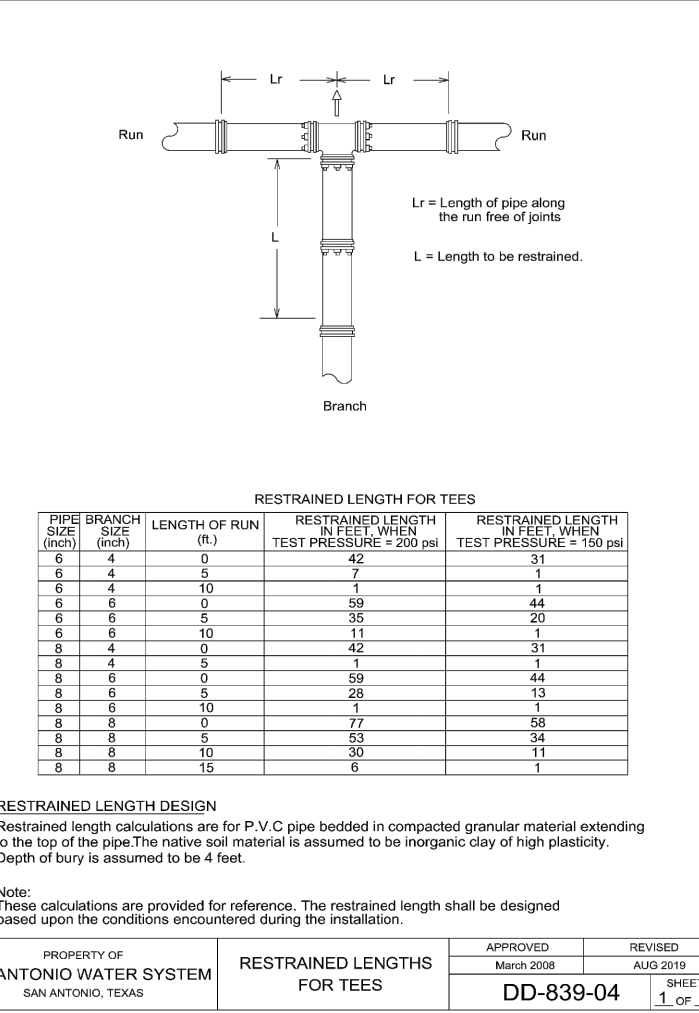
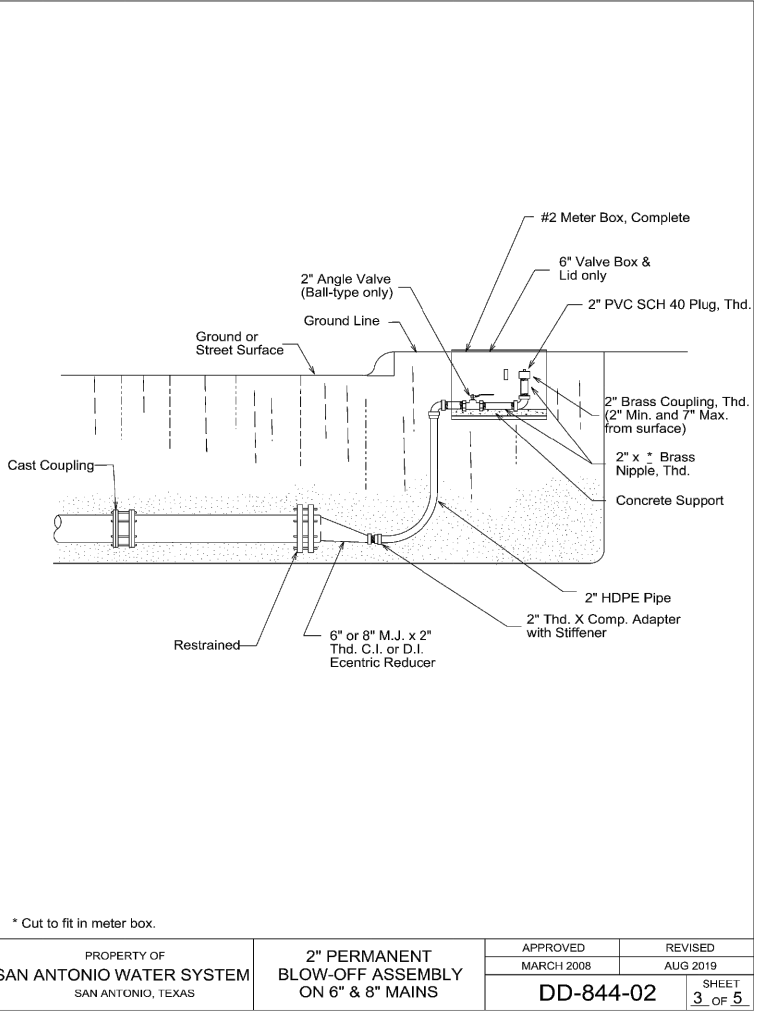
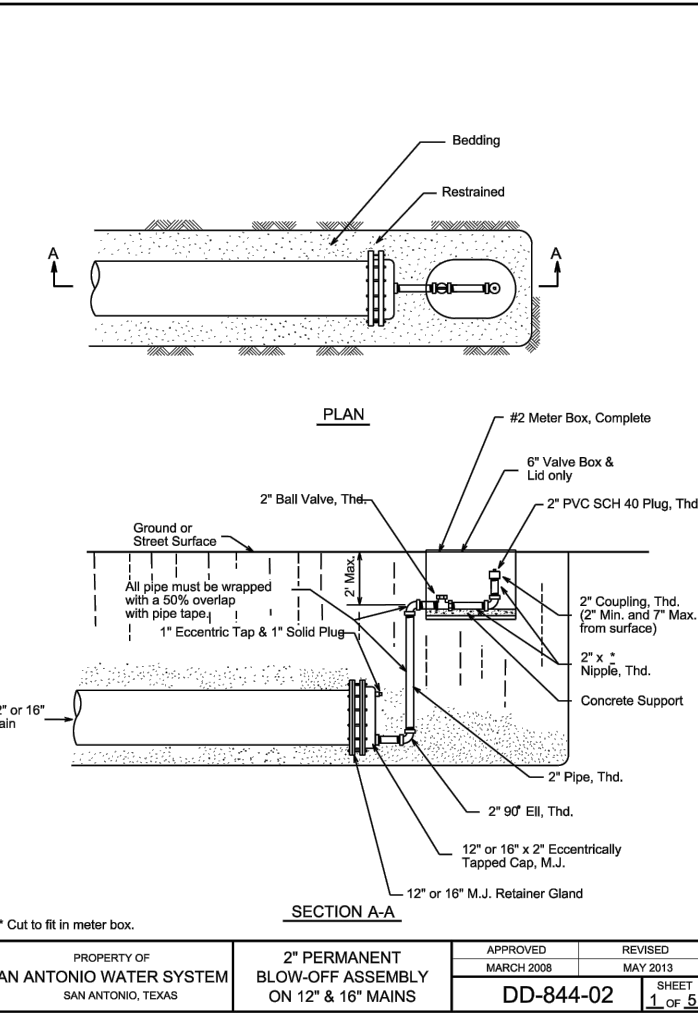
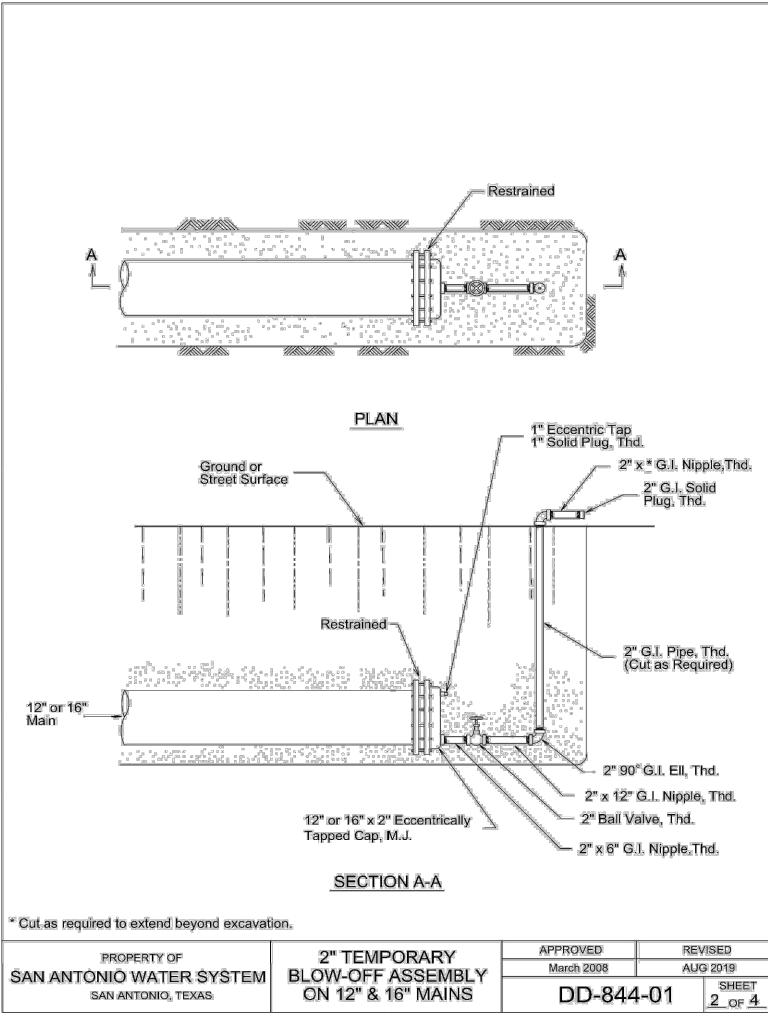
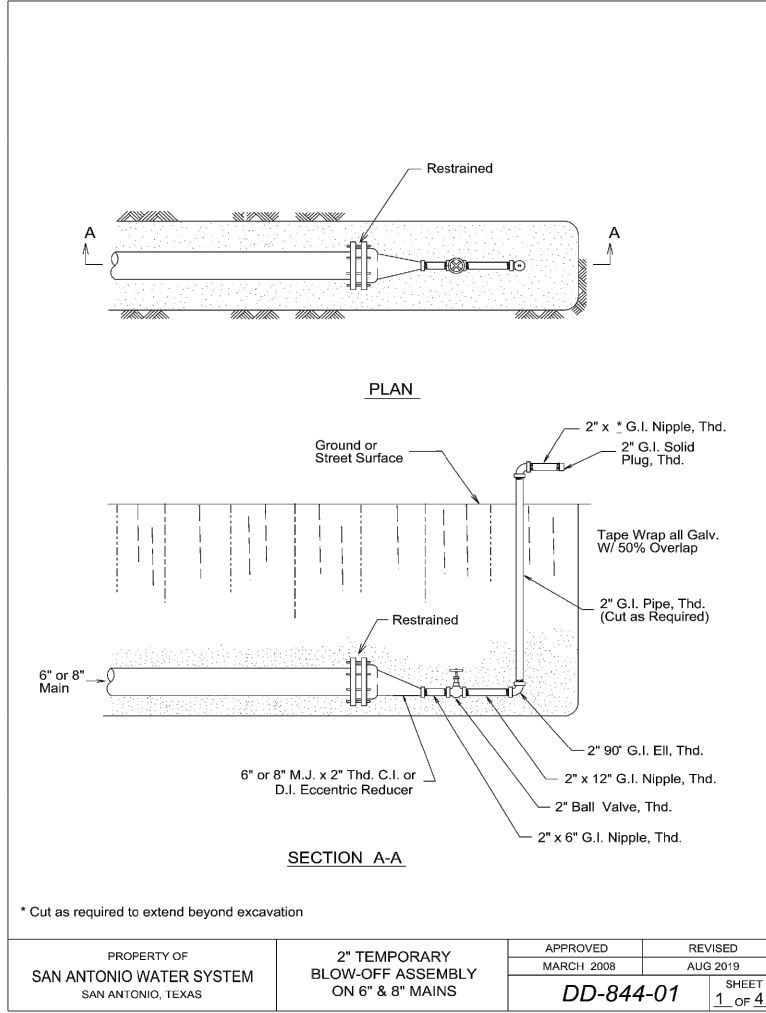
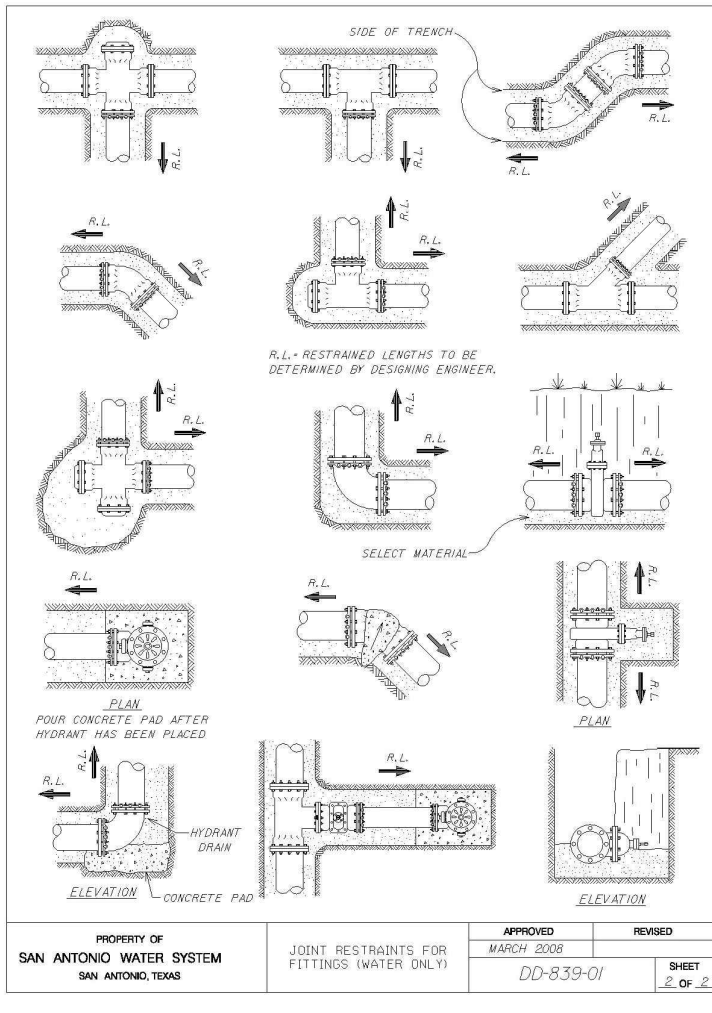
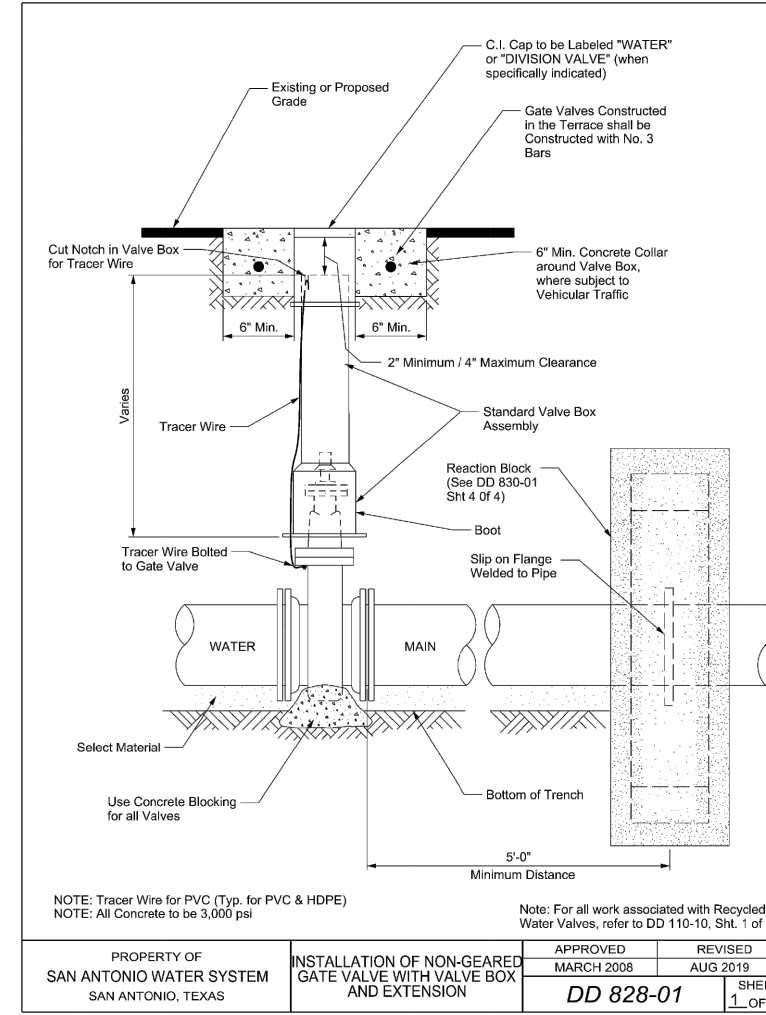
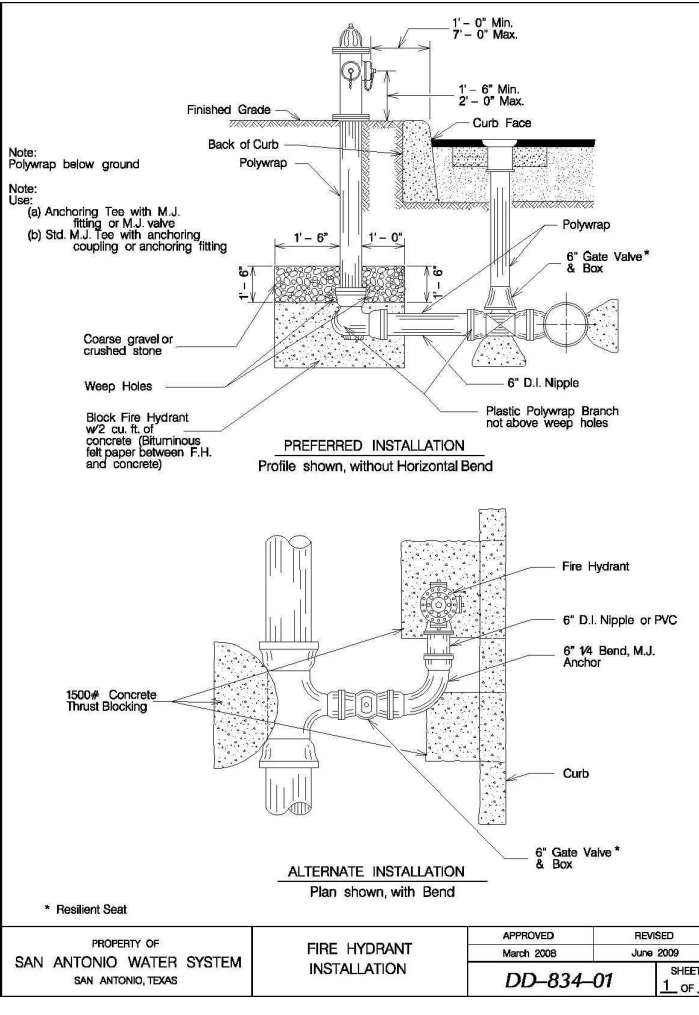
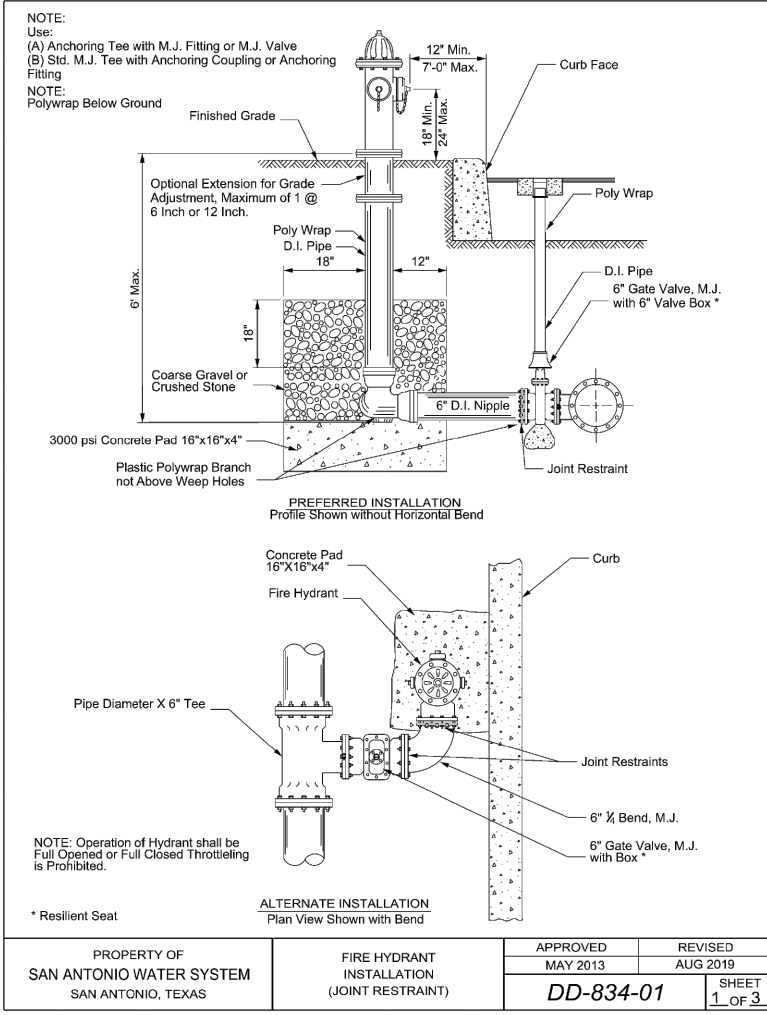
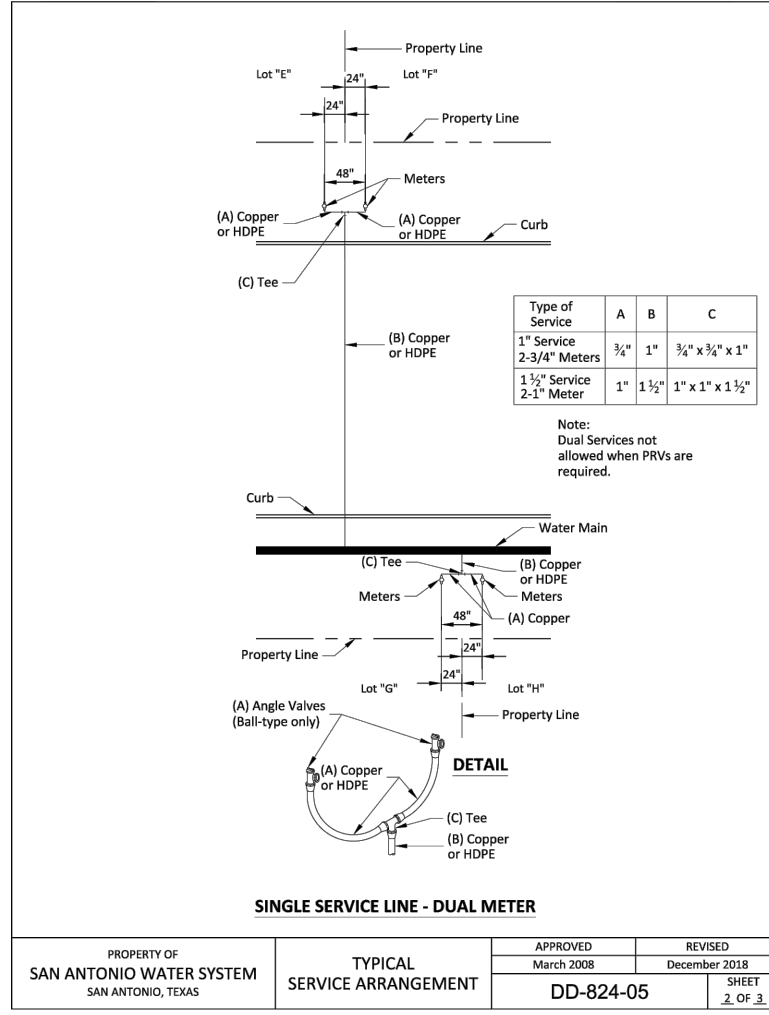
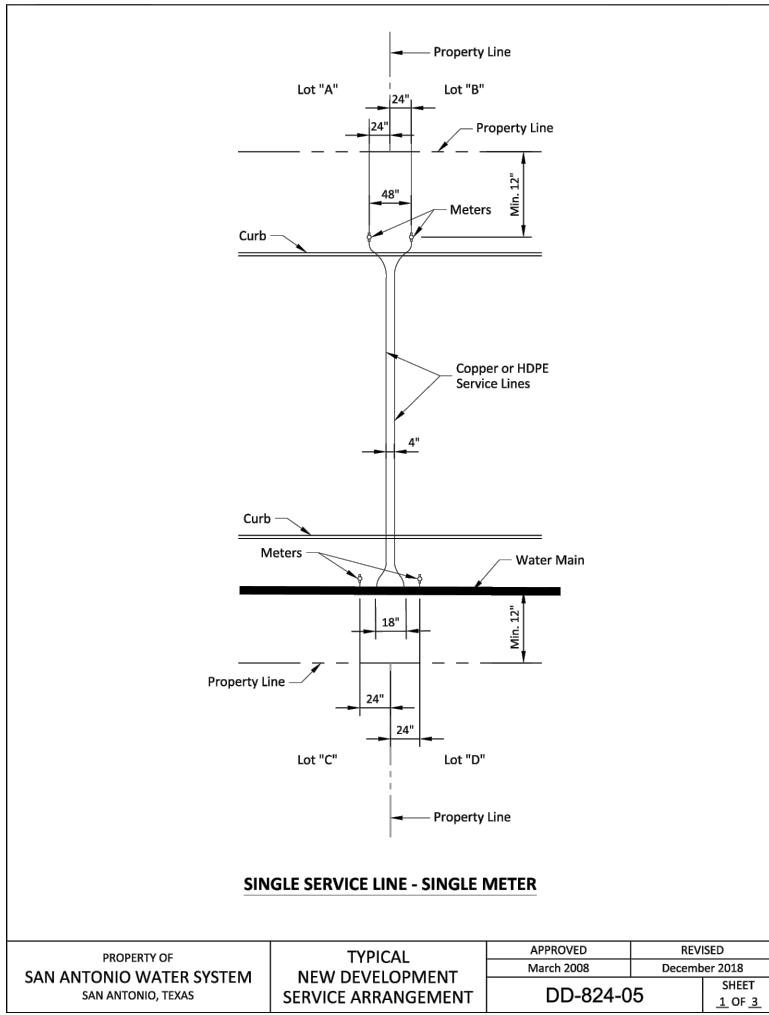
DATE
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PROJECT NO.
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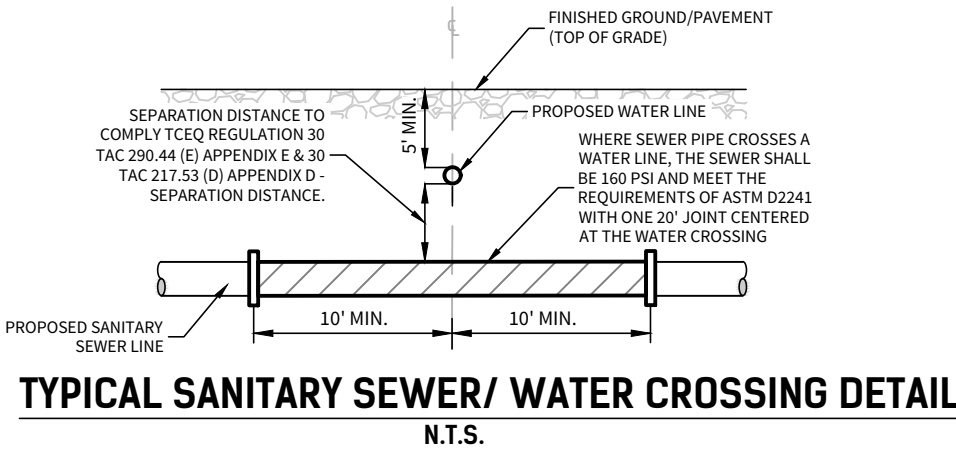
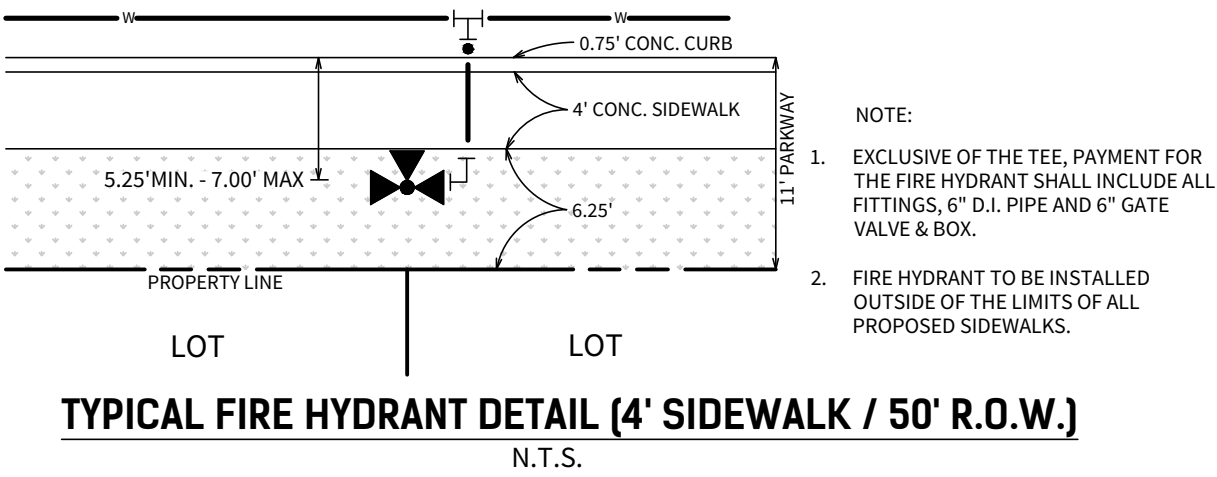
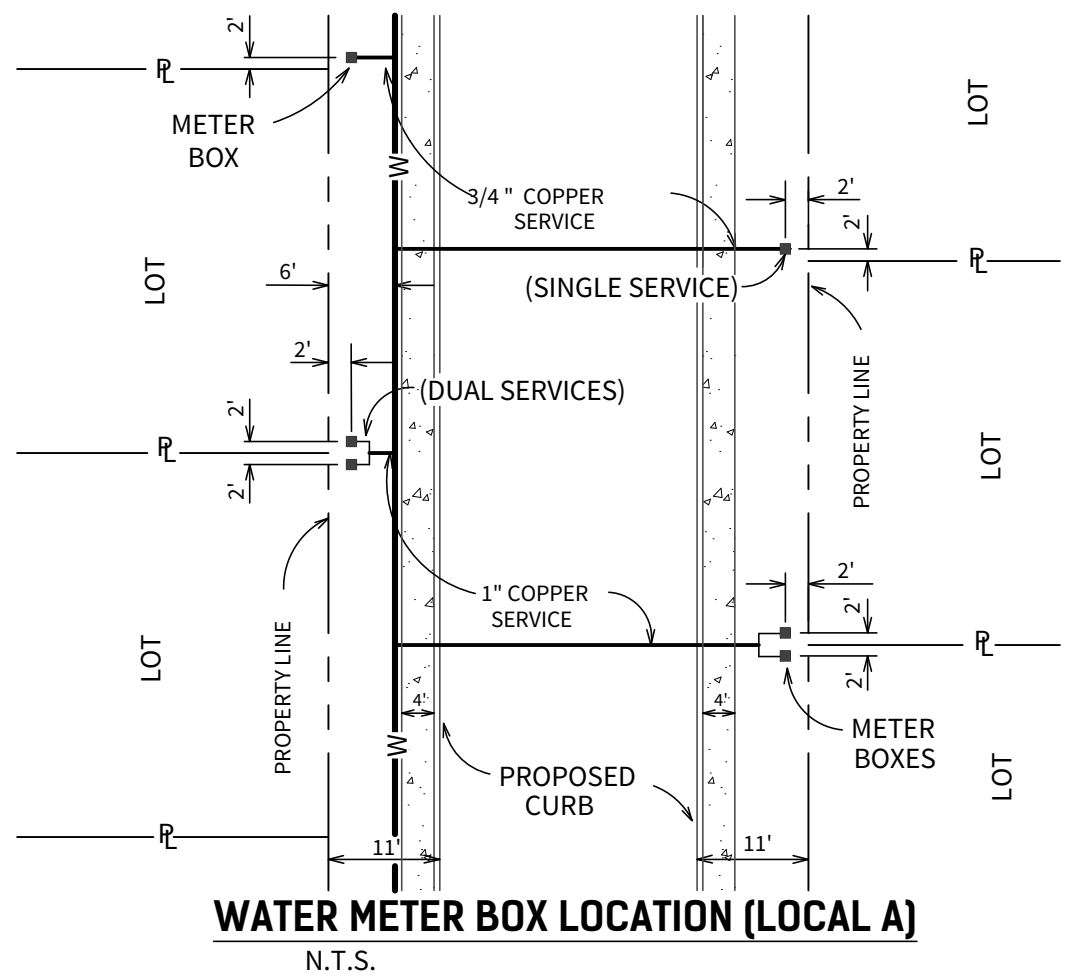
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2024-06-24	REVISED SAWS BLOCK



PLAT NO.
23-11800329
SAWS JOB NO.
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NOTES

STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO

SAN ANTONIO WATER SYSTEM 233-2010
COSA DRAINAGE 207-2800
CITY SIDEWALK AND TRENCHING DIVISION 821-3240
COSA TRAFFIC SIGNAL OPERATIONS 207-7765
TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005
C.P.S. ENERGY
TIME WARNER CABLE
VALERO ENERGY CO.
AT&T AND TIME WARNER CABLE LINES TO GO IN JOINT TRENCH WITH C.P.S. ENERGY LOTS WITH SHALL HAVE WATER METER PLACED 5' FROM PROPERTY LINE WHERE THE CONFLICT OCCURS.

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 TEST 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. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION PROTECTION

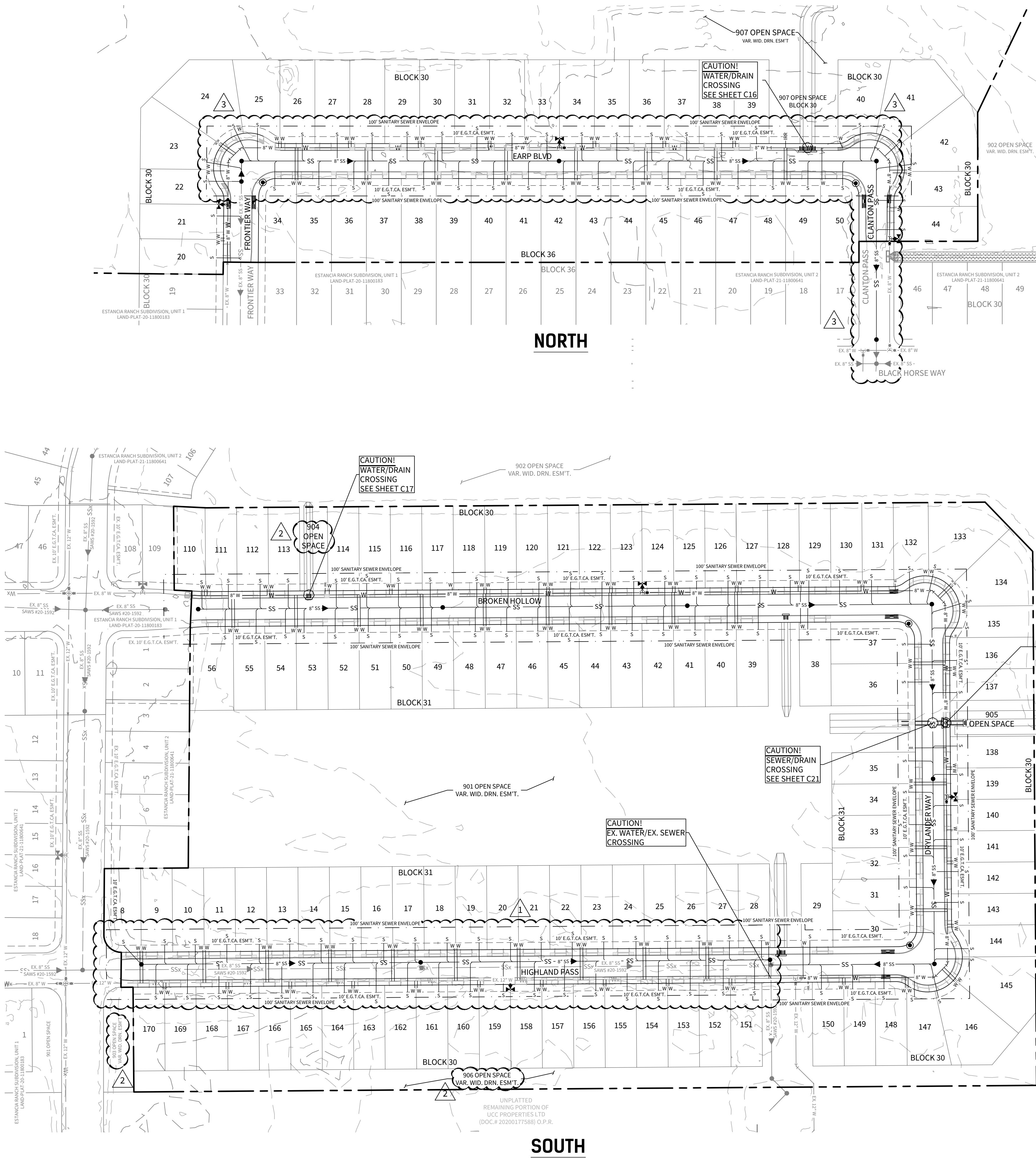
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

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* CONDUIT ONLY TO BE INSTALLED IF:

- 1) STREET BASE AND DRAINAGE COMPLETION PRECEDES CPS UTILITY LINE INSTALLATION.
- 2) INSTALLATION IS AUTHORIZED BY THE DEVELOPER.



LEGEND

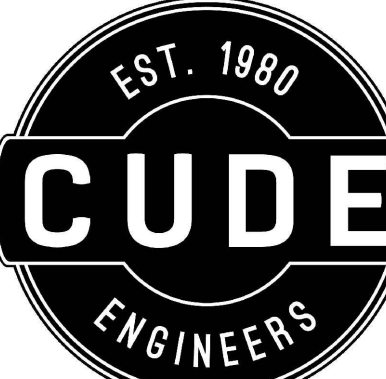
OVERALL UNIT BOUNDARY	---
PROPOSED LOT LINE	---
PROPOSED RIGHT OF WAY	---
E.G.T.CA. EASEMENT	---
SANITARY SEWER ENVELOPE	---
EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EXISTING WATER LINE	---
EXISTING SEWER LINE	---
EXISTING MANHOLE	●
EXISTING FIRE HYDRANT	⋈
PROPOSED WATER LINE	W
PROPOSED WATER SERVICE	W
PROPOSED IRRIGATION SERVICE	IR
PROPOSED FIRE HYDRANT	⋈
PROPOSED SEWER MAIN	SS
PROPOSED MANHOLE	●
PROPOSED SEWER SERVICE	SS
PROPOSED STREET LIGHT	⊙

BENCHMARK

BM-1

BENCHMARK TO BE SET BY ENGINEER PRIOR TO CONSTRUCTION.

NOTE: ALL LATERALS TO BE INSTALLED @ MIN. 2.0% SLOPE, UNLESS OTHERWISE NOTED. ALL SANITARY SEWER PIPE SHALL BE P.V.C. THAT MEETS ASTM SPECIFICATION D-3034, SDR-26. CONTRACTOR TO INSTALL CONCRETE SADDLE ON EXISTING SEWER LINES AT EVERY PROPOSED LATERAL PER SAWS SPECIFICATIONS.



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ESTANCIA RANCH SUBDIVISION

UNIT 3

UTILITY PLAN

DATE

06/25/2024

PROJECT NO.

03473.010

DRAWN BY

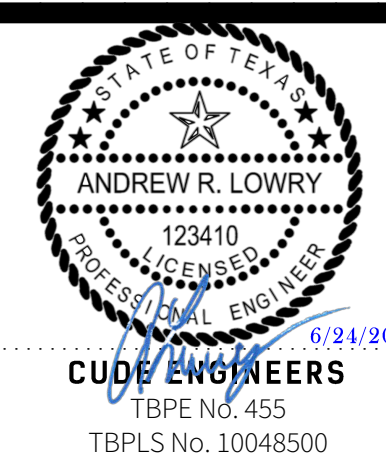
CG/TC/D/XV

CHECKED BY

XV/JAL

REVISIONS

DATE	REVISIONS
1. 2024-04-16	REVISED SEWER ALIGNMENT
2. 2024-04-30	REVISED LOT NUMBERS
3. 2024-05-24	REVISED SEWER ALIGNMENT

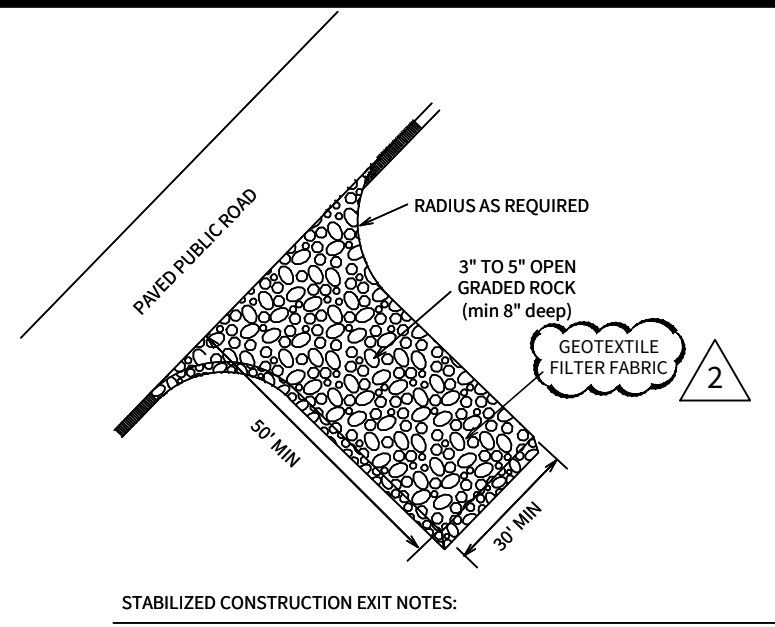


PLAT NO.

23-11800329

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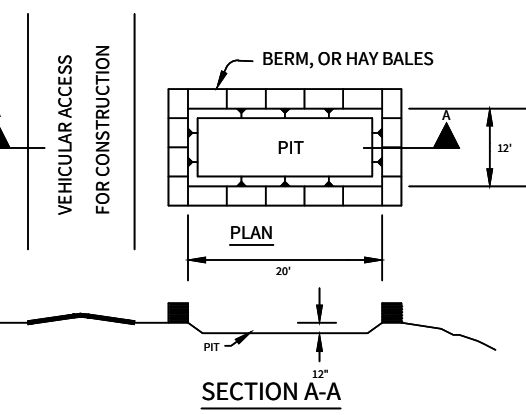
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STABILIZED CONSTRUCTION EXIT NOTES:

1. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ON PUBLIC ROADWAY.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS MUST BE REMOVED IMMEDIATELY.

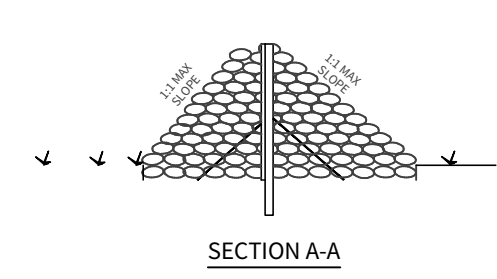
1 TEMPORARY CONSTRUCTION ENTRANCE/EXIT N.T.S.



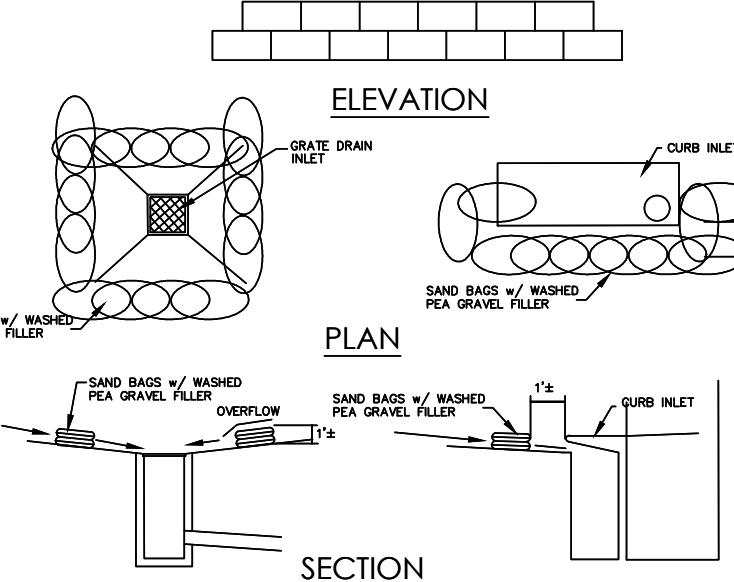
GENERAL NOTES:

- Detail above illustrates minimum dimensions. Pit can be increased in size depending on expected frequency of use.
 - If hay bales are used, they shall be placed in accordance with details shown on Exhibit for hay bales.
- Washout pit shall be located in an area easily accessible to
- Washout pit shall not be located in areas subject to inundation from storm water runoff.
- Washout pit shall be lined with a 10-mil thick polyethylene sheeting free of holes, tears and other defects.

3 CONCRETE TRUCK WASHOUT PIT N.T.S.



5 ROCK BERM W/ SILT FENCE DETAIL N.T.S.



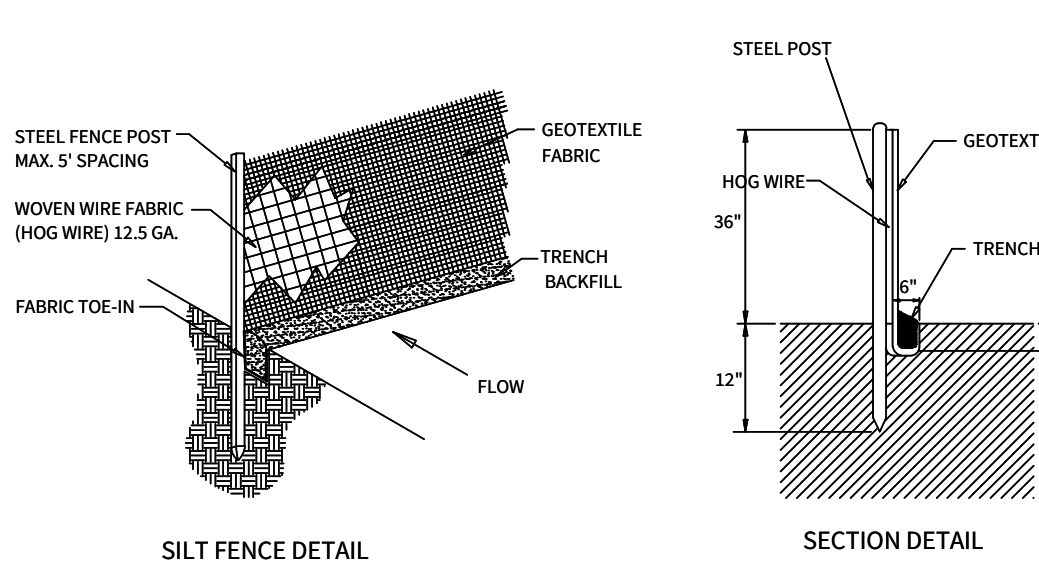
4 TYP. CONSTRUCTION STAGING AREA N.T.S.

- BAGGED GRAVEL INLET FILTER NOTES
1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
 2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
 3. THE GRAVEL BAGS SHOULD BE FILLED WITH 70" GRAVEL.
 4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
 5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
 6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
 8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

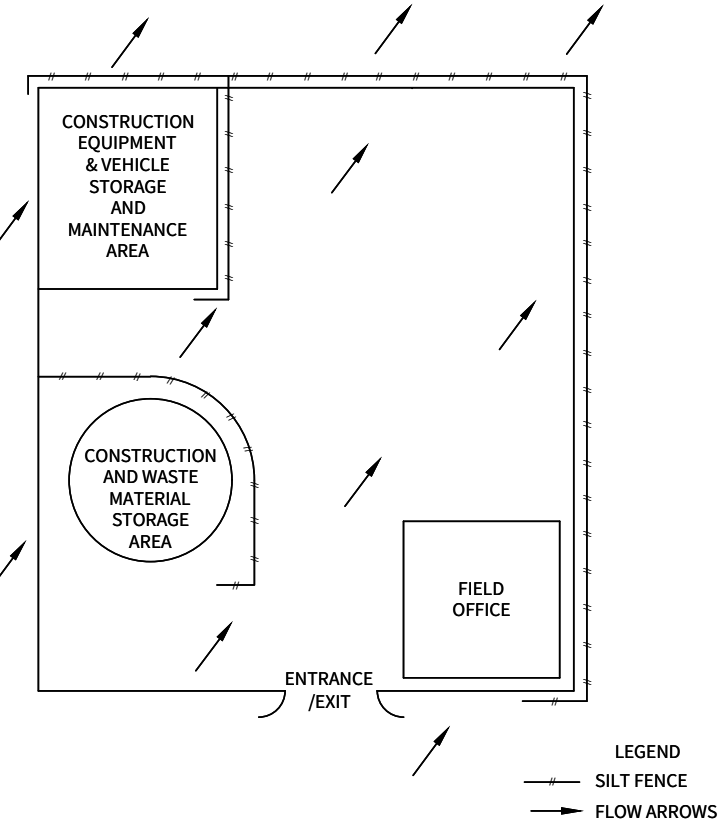
6 BAGGED GRAVEL INLET FILTER NOTES N.T.S.

SWPPP MODIFICATIONS

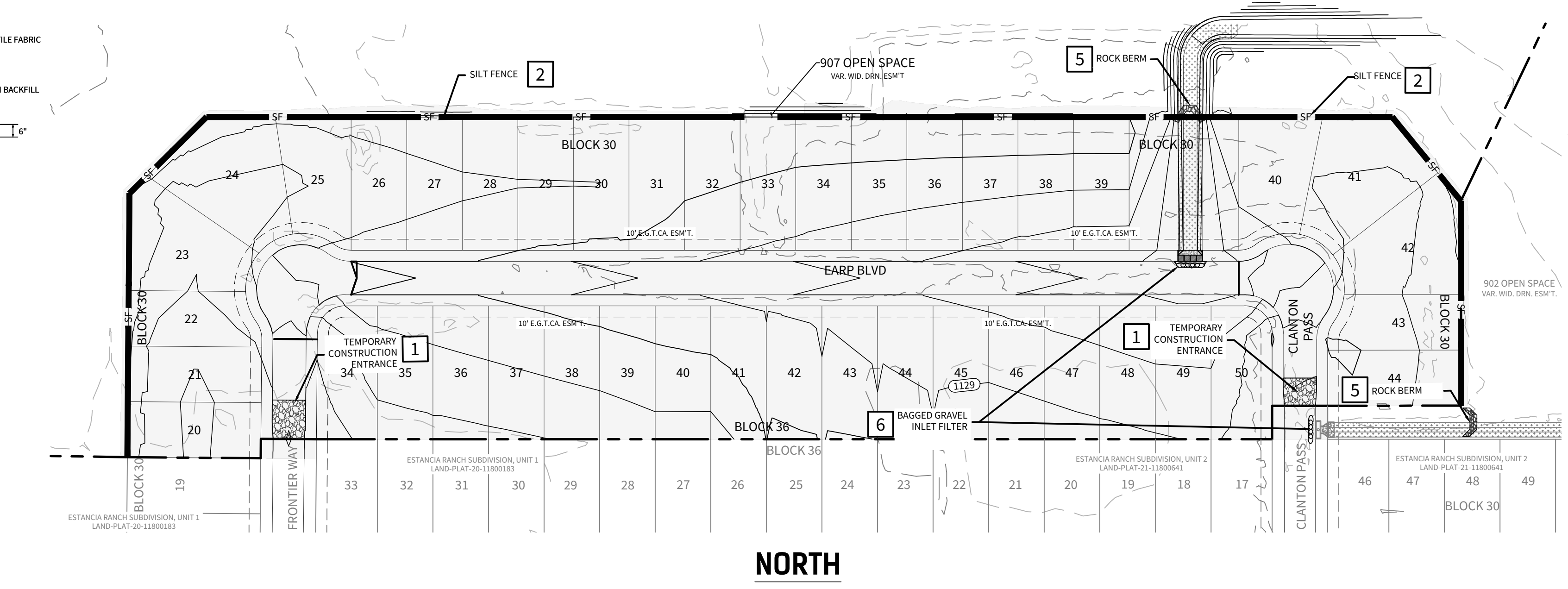
DATE	SIGNATURE	DESCRIPTION



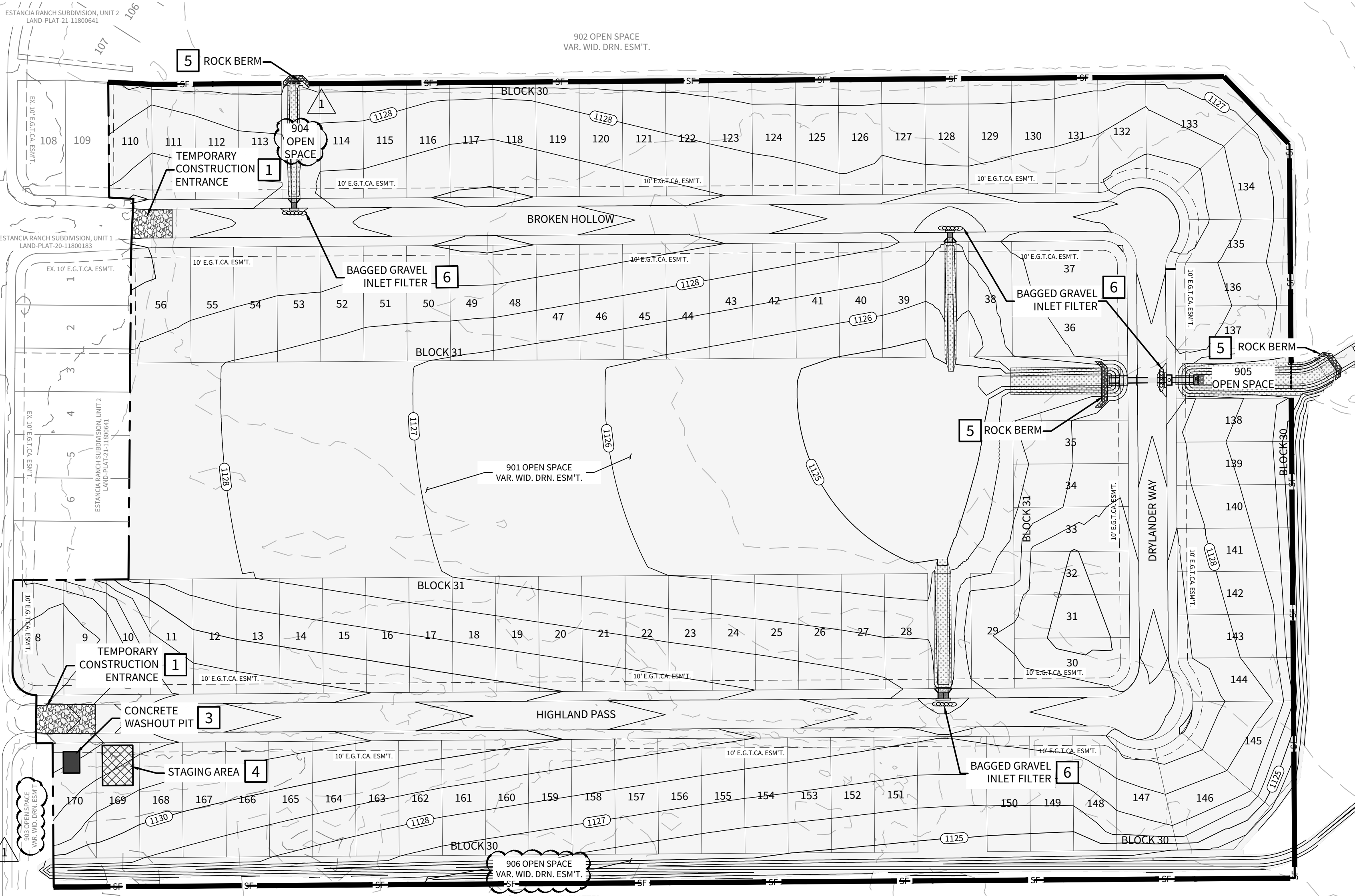
2 STANDARD SILT FENCE N.T.S.



LEGEND
SILT FENCE
FLOW ARROWS



NORTH



SOUTH

LEGEND

- OVERALL UNIT BOUNDARY
- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY
- E.G.T.CA. EASEMENT
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- BMP ITEM NUMBER
- PROPOSED TEMPORARY CONSTRUCTION ENTRANCE/EXIT
- PROPOSED ROCK BERM
- PROPOSED SILT FENCE
- STAGING AREA
- CONCRETE WASHOUT PIT

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES SEQUENCE OF INSTALLATION DURING CONSTRUCTION PROCESS:

1. STORM WATER MANAGEMENT FACILITIES MUST BE INSTALLED PRIOR TO SITE CONSTRUCTION. SUBD. ORD. 6.01.003
2. THE TEMPORARY CONSTRUCTION ENTRANCE/EXIT (ITEM 2) SHALL BE INSTALLED PRIOR TO DISTURBING ANY SOIL EXCEPT AT THE LOCATION OF THE TEMPORARY CONSTRUCTION ENTRANCE/EXIT. IT SHALL STAY IN PLACE AND BE MAINTAINED UNTIL THE END OF THE INFRASTRUCTURE CONSTRUCTION
3. SILT FENCE (ITEM 4) SHALL BE INSTALLED ALONG THE DOWN-GRADIENT BOUNDARY OF THE SITE PRIOR TO ANY DISTURBANCE OF THE SITE AS SHOWN ON THE SITE PLAN.
4. BAGGED GRAVEL INLET FILTERS (ITEM 6) SHALL BE PLACED AROUND ALL INLETS FOLLOWING INSTALLATION.
5. ROCK BERMS (ITEM 5) SHALL BE INSTALLED AROUND THE PERIMETER OF THE PROJECT AT NATURAL LOW POINTS FOLLOWING ROUGH GRADING OF THE SITE AND SHALL BE REMOVED ONCE GRADING TO THE ON-SITE STORMWATER DRAINAGE SYSTEM WITH BAGGED GRAVEL INLET FILTERS IN SUMP IS COMPLETE. ROCK BERMS WILL ALSO BE UTILIZED AT THE OUTLET OF THE POND WHILE IT IS BEING CONSTRUCTED.

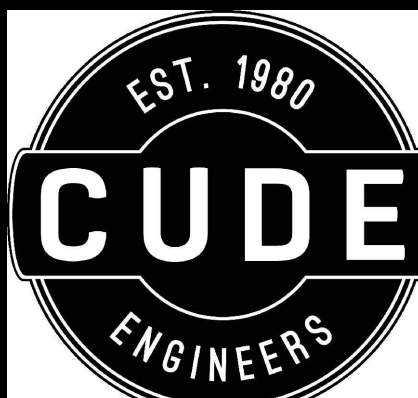
INSPECTIONS:

DESIGNATED AND QUALIFIED PERSON(S) SHALL INSPECT POLLUTION CONTROL MEASURES EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT GREATER THAN 0.5 INCHES OF RAINFALL. AN INSPECTION REPORT THAT SUMMARIZES THE SCOPE OF THE INSPECTION, NAMES AND QUALIFICATIONS OF PERSONNEL CONDUCTING THE INSPECTION, DATE OF THE INSPECTION, MAJOR OBSERVATIONS, AND ACTIONS TAKEN AS A RESULT OF THE INSPECTION SHALL BE RECORDED AND MAINTAINED AS PART OF STORM WATER TPDES DATA FOR A PERIOD OF THREE YEARS AFTER THE DATE OF THE INSPECTION. COPY OF THE INSPECTION REPORT FORM IS PROVIDED IN THIS STORM WATER POLLUTION PREVENTION PLAN.

AS A MINIMUM, THE INSPECTOR SHALL OBSERVE: (1) SIGNIFICANT DISTURBED AREAS FOR EVIDENCE OF EROSION, (2) STORAGE AREAS FOR EVIDENCE OF LEAKAGE FROM THE EXPOSED STORED MATERIALS, (3) STRUCTURAL CONTROLS (ROCK BERM OUTLETS, SILT FENCES, DRAINAGE SWALES, ETC.) FOR EVIDENCE OF FAILURE OR EXCESS SILTATION (OVER 6 INCHES DEEP), (4) VEHICLE EXIT POINT FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING, (5) VEHICLE STORAGE AREAS FOR SIGNS OF LEAKING EQUIPMENT OR SPILLS, AND (6) CONCRETE TRUCK RINSE-OUT PIT FOR SIGNS OF POTENTIAL FAILURE. DEFICIENCIES NOTED DURING THE INSPECTION WILL BE CORRECTED AND DOCUMENTED WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE INSPECTION OR BEFORE THE NEXT ANTICIPATED STORM EVENT IF PRACTICABLE.

NOTES

1. ALL SILT FENCES AND/OR ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE PLACED AT THE MOST DOWN-GRADIENT POINT OF CONSTRUCTION AS SHOWN ON THIS SITE PLAN. CONTRACTOR SHALL TAKE INTO CONSIDERATION ANY PROPOSED CONSTRUCTION THAT MAY TAKE PLACE AT THESE LOCATIONS. ANY RELOCATION OF THE SILT FENCE, ROCK BERMS AND/OR TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE AT THE CONTRACTOR'S EXPENSE.
2. AREA OF SOIL DISTURBANCES INCLUDE STREET RIGHT-OF-WAYS, EASEMENTS AND LOTS.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN EROSION CONTROLS THROUGHOUT THE DURATION OF THE PROJECT.
4. THE CITY AND/OR COUNTY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF MODIFICATIONS.



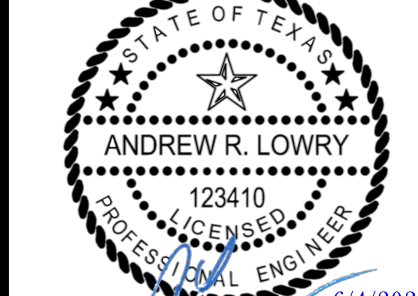
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ESTANCIA RANCH SUBDIVISION UNIT 3

STORM WATER POLLUTION PREVENTION PLAN

DATE
06/04/2024
PROJECT NO.
03473.010
DRAWN BY
CG/TC/XV
CHECKED BY
XV/AL

DATE	REVISIONS
1. 2024-04-30	1. REVISION 1: TO 100% CONSTRUCTION ENTRANCE DETAIL
2. 2024-05-04	2. REVISION 2: TO 100% CONSTRUCTION ENTRANCE DETAIL
3. 2024-05-04	3. REVISION 3: TO 100% CONSTRUCTION ENTRANCE DETAIL
4. 2024-05-04	4. REVISION 4: TO 100% CONSTRUCTION ENTRANCE DETAIL
5. 2024-05-04	5. REVISION 5: TO 100% CONSTRUCTION ENTRANCE DETAIL
6. 2024-05-04	6. REVISION 6: TO 100% CONSTRUCTION ENTRANCE DETAIL
7. 2024-05-04	7. REVISION 7: TO 100% CONSTRUCTION ENTRANCE DETAIL
8. 2024-05-04	8. REVISION 8: TO 100% CONSTRUCTION ENTRANCE DETAIL
9. 2024-05-04	9. REVISION 9: TO 100% CONSTRUCTION ENTRANCE DETAIL



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TBPLS No. 10048500

PLAT NO.
23-11800329

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