

BLOCK 8
LOT 904

594

508

6" SS

OFF-SE

597

OF EASE EX IN

598

601

UNPLATTED
REMAINING PORTION OF
104.23 ACRES
KB HOME LONE STAR INC.
DOC# 20210224330 Q.P.R.

UNPLATTED
REMAINING PORTION OF
104.23 ACRES

603

604

OF EASE EX IN

MATCH LINE "A"
SEE THIS SHEET

[illegible]














Diagram showing the typical fire hydrant location relative to the street and sewer main. The hydrant is located on the sidewalk, 10' from the street edge and 30' from the sewer main. The sewer main is 4' conc. sidewalk. The street has a 2% slope. The hydrant is labeled "TYPICAL FIRE HYDRANT" and "NOT-TO-SCALE".

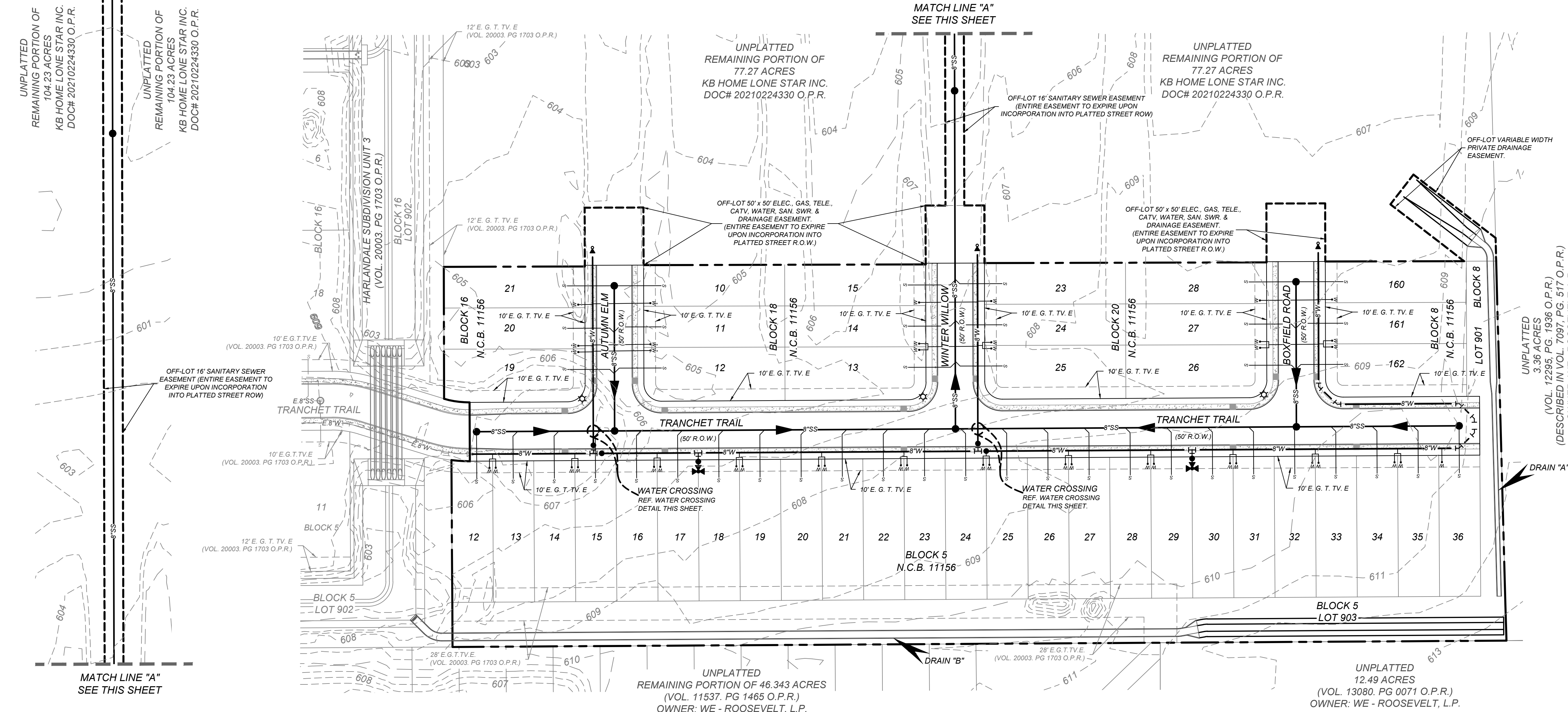
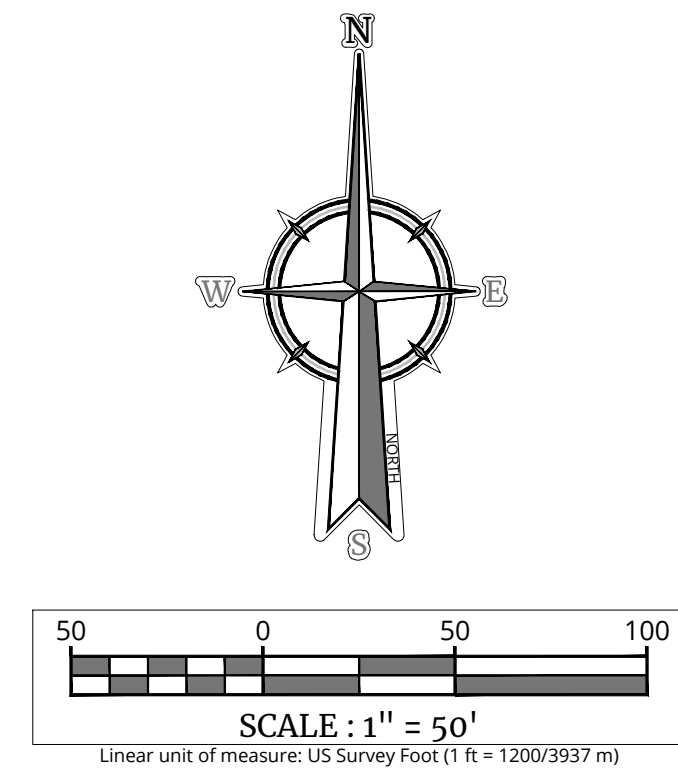
SECTION

EC. GAS, TELE.
V EASEMENT

PROP. 4'
SIDEWALK

DETAIL

PROPOSED WATER MAIN	=	——— W ———
PROPOSED WATER SERVICE & METER BOX	=	
PROPOSED PRV SERVICE & METER BOX	=	——— S _r ———
PROPOSED FIRE HYDRANT	=	
PROPOSED WATER VALVE	=	
PROPOSED 100W STREETLIGHT	=	
PROPOSED SANITARY SEWER MAIN	=	——— SS ——— 
PROPOSED SANITARY SEWER MANHOLE	=	———  ———
PROPOSED SANITARY SEWER LATERAL	=	 ———
PROPOSED ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT	=	E. G. T. V. E
EXISTING WATER MAIN	=	——— E. W. ———
EXISTING FIRE HYDRANT	=	
EXISTING WATER VALVE	=	
EXISTING SANITARY SEWER MAIN	=	——— E. SS ——— 
EXISTING SANITARY SEWER MANHOLE	=	———  ———
EXISTING OVERHEAD ELECTRIC WIPOWER PO	=	—OHE—  —OHE—
EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	—OHE—  —OHE—



Engineering
& Design

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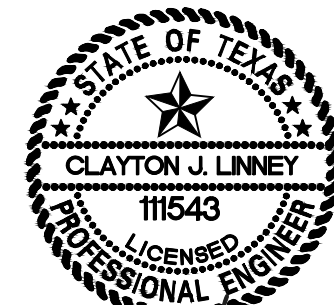
Formerly Known as **KFW**



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EXCAVATORS, DESIGNERS, OR ANY PERSON
PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN ANY STATE

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

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Chapman University
8/27/2024

PRELIMINARY

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HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS



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: DF	CHECKED BY: CG
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SHEET TITLE:

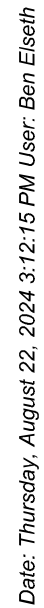
OVERALL UTILITY

SHEET NUMBER: 1.0

Date: Wednesday, August 21, 2024 2:46:43 PM User: Ben Elsieh
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RESIDENTIAL LOTS = 43

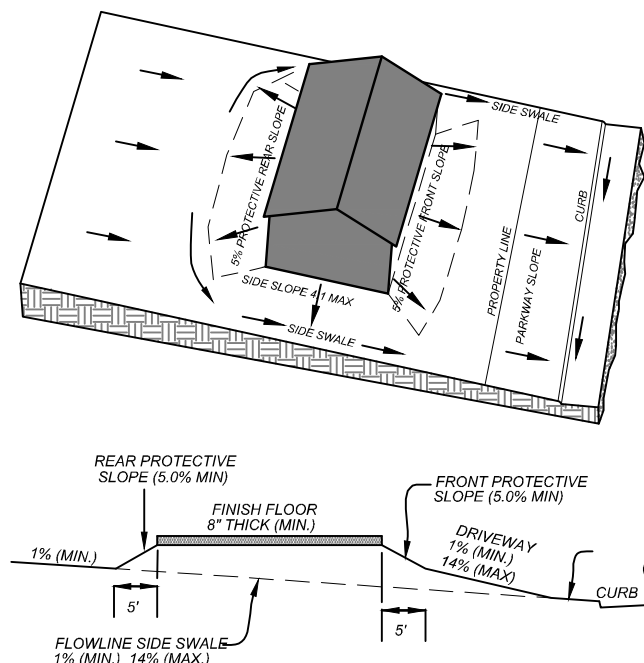
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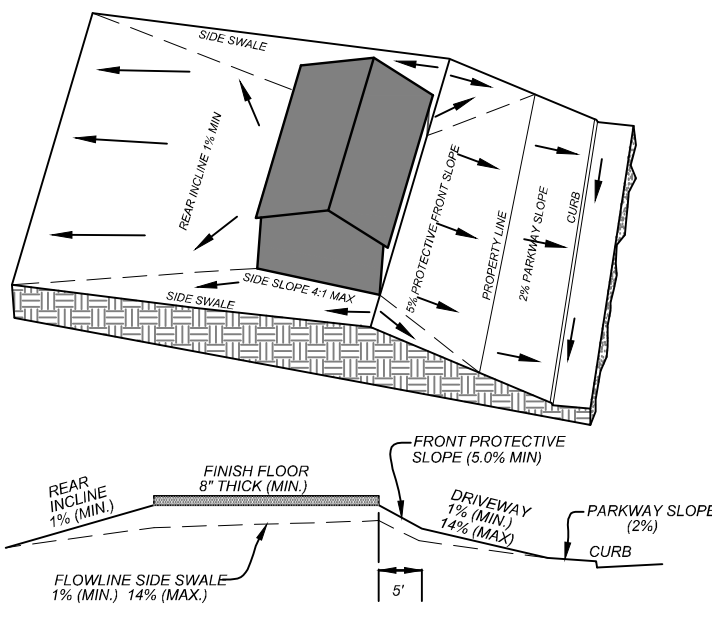
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Study Point	AREA	(Acres)	C	Towl (min)	Carryover	Tsc (min)	Tch (min)	Ttot (min)	I5 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q5 (ft3/s)	Q25 (ft3/s)	Q100 (ft3/s)
1	DA-1	6.46	0.93	20.00		10.00	1.00	31	3.618	4.955	6.145	21.85	29.93	37.11
2	DA-2	3.08	0.77	20.00		8.00	0.00	28	3.812	5.221	6.476	9.04	12.38	15.36
3	DA-3	5.27	0.77	14.00		2.00	1.00	17	4.906	6.762	8.420	19.91	27.44	34.17
4	DA-4	8.99	0.77	10.00		0.00	3.00	13	5.612	7.818	9.760	38.85	54.12	67.56
5	DA-5	7.17	0.77	10.00		0.00	3.00	13	5.612	7.818	9.760	30.98	43.16	53.88
6	DA-6	6.40	0.77	10.00		1.00	2.00	13	5.612	7.818	9.760	27.66	38.53	48.10
	DA-7	1.19	0.77	10.00		1.00	1.00	12						
7	Pt. 4, Pt. 5, DA-7	17.35	0.77	10.00	From pt. 4	0.00	3.00	13	5.612	7.818	9.760	74.97	104.45	130.38
8	DA-8	8.86	0.77	10.00		1.00	4.00	15	5.240	7.240	9.027	35.75	49.39	61.59
9	DA-9	2.59	0.77	10.00		0.00	2.00	12	5.810	8.120	10.141	11.59	16.19	20.22
10	DA-10	2.73	0.77	10.00		1.00	2.00	13	5.612	7.818	9.760	11.80	16.44	20.52
12	DA-12	0.92	0.77	10.00		0.00	1.00	11	6.018	8.433	10.536	4.26	5.97	7.46
	DA-13	3.58	0.77	10.00		3.00	1.00	14						
13	Pt. 3, Pt. 13A, DA-13, Pt. 35	62.56	0.79	19.00	From pt. 18	9.00	3.00	31	3.618	4.955	6.145	155.30	211.58	265.63
13A	Pt. 12, Pt. 18	50.54	0.78	19.00	From pt. 18	9.00	3.00	31	3.618	4.955	6.145	121.81	165.72	208.76
	DA-14	8.51	0.77	10.00		1.00	3.00	14						
14	Pt. 8, Pt. 14A, DA-14, Pt. 15, Pt. 16	92.50	0.79	19.00	From pt. 13	5.00	8.00	32	3.559	4.875	6.044	235.25	321.08	401.40
14A	Pt. 13, Pt. 34	63.33	0.78	19.00	From pt. 13	5.00	8.00	32	3.559	4.875	6.044	155.30	211.59	265.64
15	DA-15	3.16	0.77	14.00		7.00	0.00	21	4.405	6.050	7.517	10.72	14.72	18.29
16	DA-16	8.64	0.77	14.00		2.00	3.00	19	4.634	6.374	7.927	30.83	42.41	52.74
17	DA-17	7.31	0.77	14.00		2.00	3.00	19	4.634	6.374	7.927	26.08	35.88	44.62
	DA-18	2.83	0.77	0.00		0.00	2.00	2						
18	Pt. 18A, DA-18, Pt. 31, Pt. 33, Pt. 32	49.62	0.78	20.00	carry over from pt. 33	13.00	5.00	38	3.246	4.450	5.520	109.71	149.26	188.41
18A	Pt. 2, Pt. 25	12.74	0.85	20.00	carry over from pt. 25	10.00	3.00	33	3.503	4.797	5.948	38.09	52.17	64.68
	DA-19	3.11	0.96	20.00		12.00	1.00	33	3.503	4.797	5.948	10.46	14.32	17.76
19	DA-19, Pt. 28	5.07	0.89	20.00		12.00	1.00	33	3.503	4.797	5.948	15.76	21.59	26.77
	DA-20	2.51	0.77	10.00		0.00	2.00	12						
20	Pt. 19, DA-20, Pt. 29	18.17	0.84	20.00	From pt. 29	14.00	2.00	36	3.344	4.582	5.682	50.95	69.81	86.58
	DA-21	0.85	0.77	10.00		1.00	1.00	12						
21	Pt. 4, Pt. 5, Pt. 7, DA-21	18.20	0.77	10.00	From pts. 4 & 7	0.00	5.00	15	5.240	7.240	9.027	73.43	101.46	126.51
	DA-22	10.67	0.77											
22	Pt. 4, Pt. 5, Pt. 6, Pt. 7, Pt. 9, Pt. 21, DA-22, Pt. 24	41.70	0.77											
	DA-23	5.82	0.77											
23	Pt. 10, Pt. 14, Pt. 17, Pt. 20, DA-23	126.53	0.79											
24	DA-24	3.84	0.77	10.00		2.00	1.00	13	5.612	7.818	9.760	16.59	23.12	28.86
	DA-25	3.20	0.77	0.00		0.00	2.00	2						
25	Pt. 1, DA-25	9.66	0.88	20.00	From pt. 1	10.00	3.00	33	3.503	4.797	5.948	29.78	40.79	50.58
26	DA-26	0.48	0.77	14.00		4.00	0.00	18	4.764	6.559	8.161	1.76	2.42	3.02
27	DA-27	9.74	0.78	19.00		12.00	1.00	32	3.559	4.875	6.044	26.91	36.85	45.69
28	DA-28	1.96	0.77	19.00		8.00	0.00	27	3.882	5.319	6.558	5.88	8.06	9.99
29	DA-29	10.59	0.83	19.00		15.00	0.00	34	3.448	4.723	5.856	30.36	41.58	51.56
30	DA-30	4.53	0.81	20.00		13.00	1.00	34	3.448	4.723	5.856	12.62	17.28	21.43
31	DA-31	1.02	0.77	20.00		0.00	1.00	21	4.405	6.050	7.517	3.46	4.75	5.90
32	DA-32	18.05	0.77									26.59	35.32	47.07
	DA-33	0.71	0.77	0.00		0.00	2.00	2						
33	Pt. 27, Pt. 30, DA-33	14.98	0.79	20.00	From Pt. 30	13.00	3.00	36	3.344	4.582	5.682	39.34	53.91	66.86
34	DA-34	0.77	0.77	20.00		2.00	0.00	22	4.303	5.907	7.336	2.55	3.50	4.35
35	DA-35	3.17	0.77	19.00		4.00	1.00	24	4.119	5.649	7.011	10.05	13.79	17.11

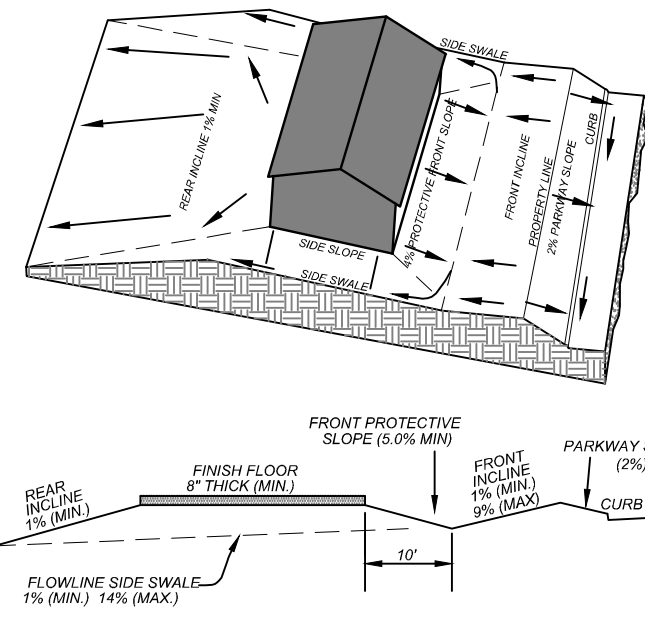
- GENERAL NOTES:
- ELEVATION SHOWN ON FOUNDATION IS FOR FINISHED FLOOR.
 - CONTRACTOR SHALL PROVIDE OWNER ALL NECESSARY DENSITY TESTS FOR FILL LOTS AS REQUIRED BY HUD SPECIFICATIONS.
 - HOME BUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
 - AS SOON AS PRACTICAL, HOME BUILDER SHALL ESTABLISH VEGETATION (HYDROMULCH, SEEDING, SODDING, ETC.) TO PREVENT EROSION FROM OCCURRING.
 - CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
 - POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS AND TOWARDS THE PROPER DRAINAGE EASEMENT OR STREET RIGHT OF WAY ACCORDING TO THE MASTER DRAINAGE PLAN FOR THE PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW PONDING OF WATER.
 - ALL ELEVATIONS AND CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVEMENT, CURBS, AND SIDEWALKS MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
 - GRADING PLAN IS INTENDED FOR USE IN LOT GRADING ONLY. CONTRACTOR SHOULD REFER TO CONSTRUCTION DRAWINGS FOR ALL OTHER GRADES, INCLUDING, BUT NOT LIMITED TO, CHANNELS, ROADS, AND DETENTION PONDS.
 - CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALL SWALES.



TYPE 'A' LOT GRADING



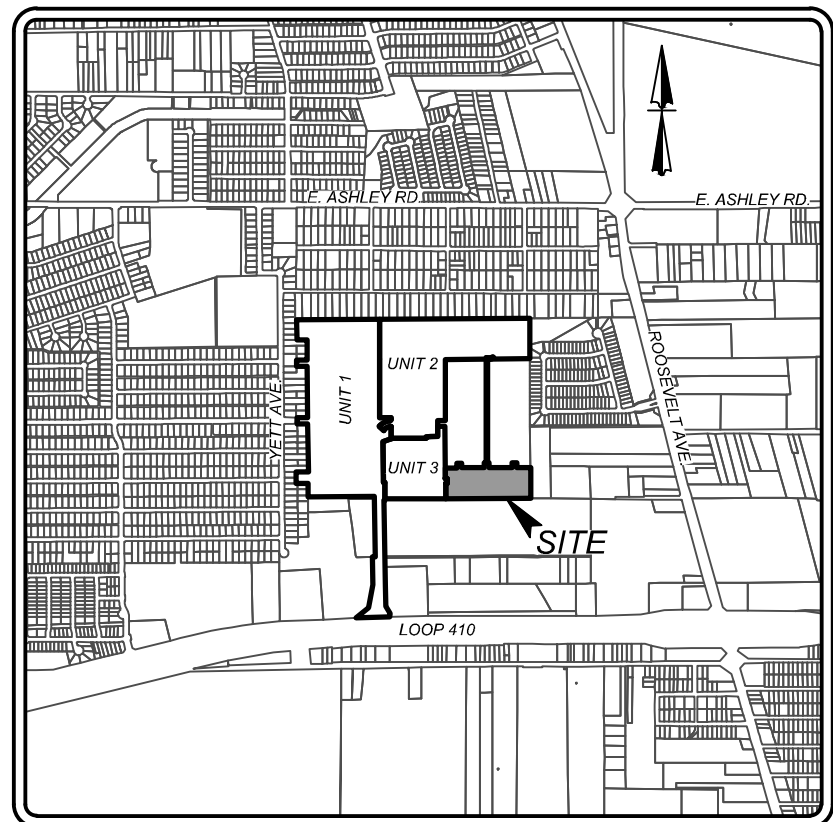
TYPE 'B' LOT GRADING



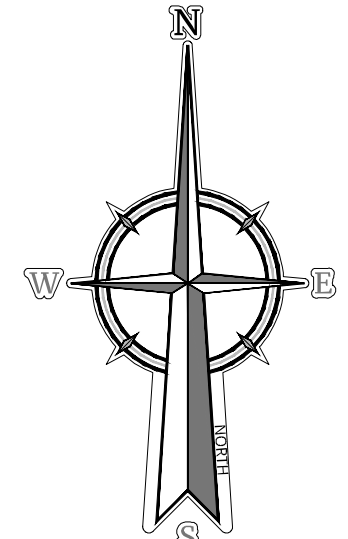
TYPE 'C' LOT GRADING

LEGEND

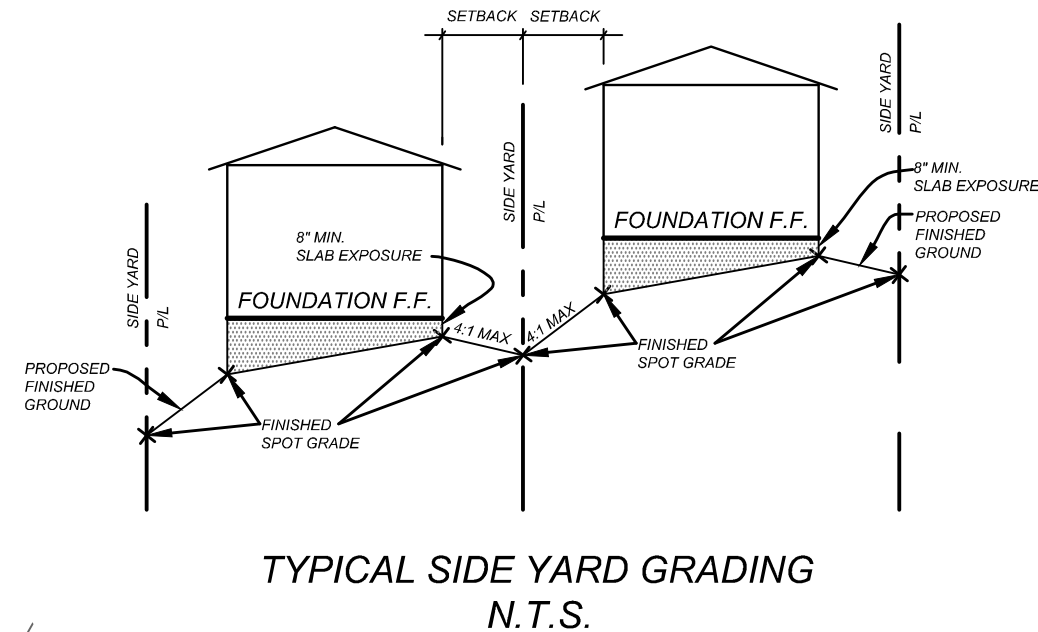
- E.G.T.V.E = ELECTRIC, GAS, TELEPHONE, CABLE T.V. EASEMENT
C.B. = COUNTY BLOCK
V.N.A.E. = VEHICULAR NON-ACCESS EASEMENT
= FLOW ARROW
= LOT GRADE TYPE
H.P. = HIGH POINT
F.F. MIN = 598.0'
-735- = EXISTING CONTOUR
-735- = PROPOSED CONTOUR
-735- = EXISTING CONTOUR
+ 731.69 = SPOT ELEVATION



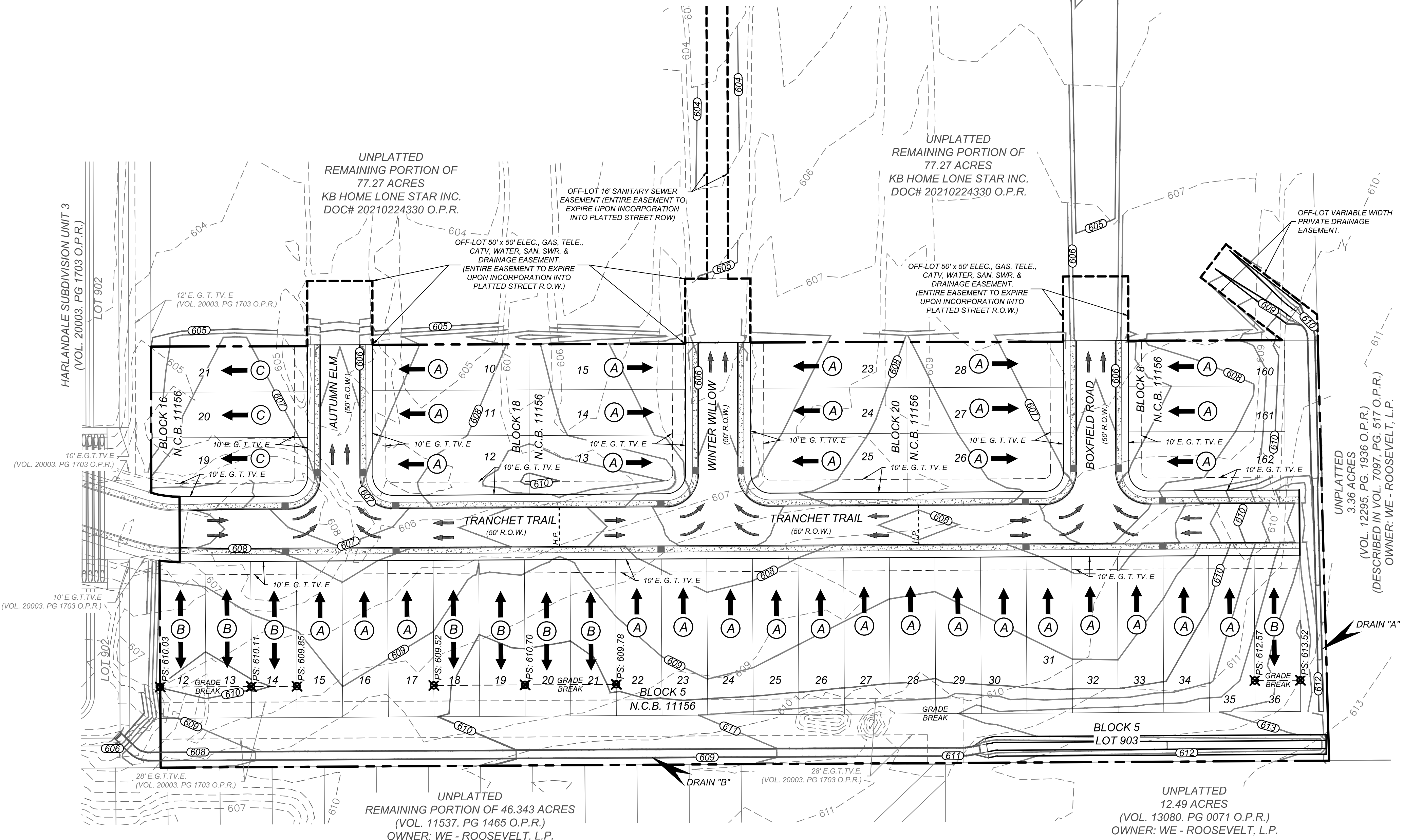
LOCATION MAP
NOT-TO-SCALE



SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 Ft = 1200/3937 m)



TYPICAL SIDE YARD GRADING
N.T.S.



RESIDENTIAL LOTS = 43

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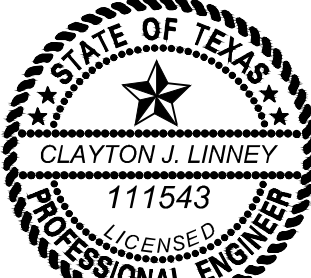
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KFW



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Clayton J. Linney
8/21/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS

Colliers

Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos Parkway
San Antonio, TX 78231
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COLLIERS ENGINEERING & DESIGN, INC.
1800 Fennell Loop, Suite 100
San Antonio, TX 78231

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
PROJECT NUMBER:	418-15-08	DF	CG
DRAWING NAME:	GR4181508		

SHEET TITLE:

OVERALL GRADING PLAN

SHEET NUMBER:

3.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

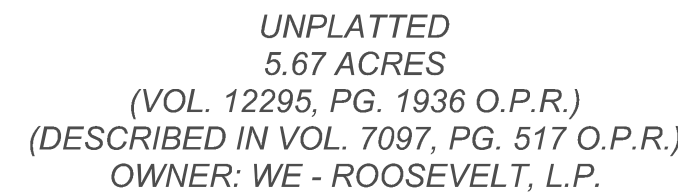
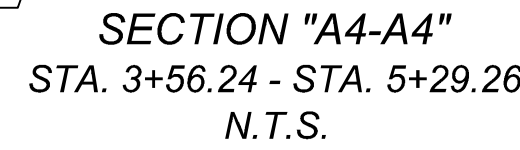
CAUTION!!

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-TISS AT 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.

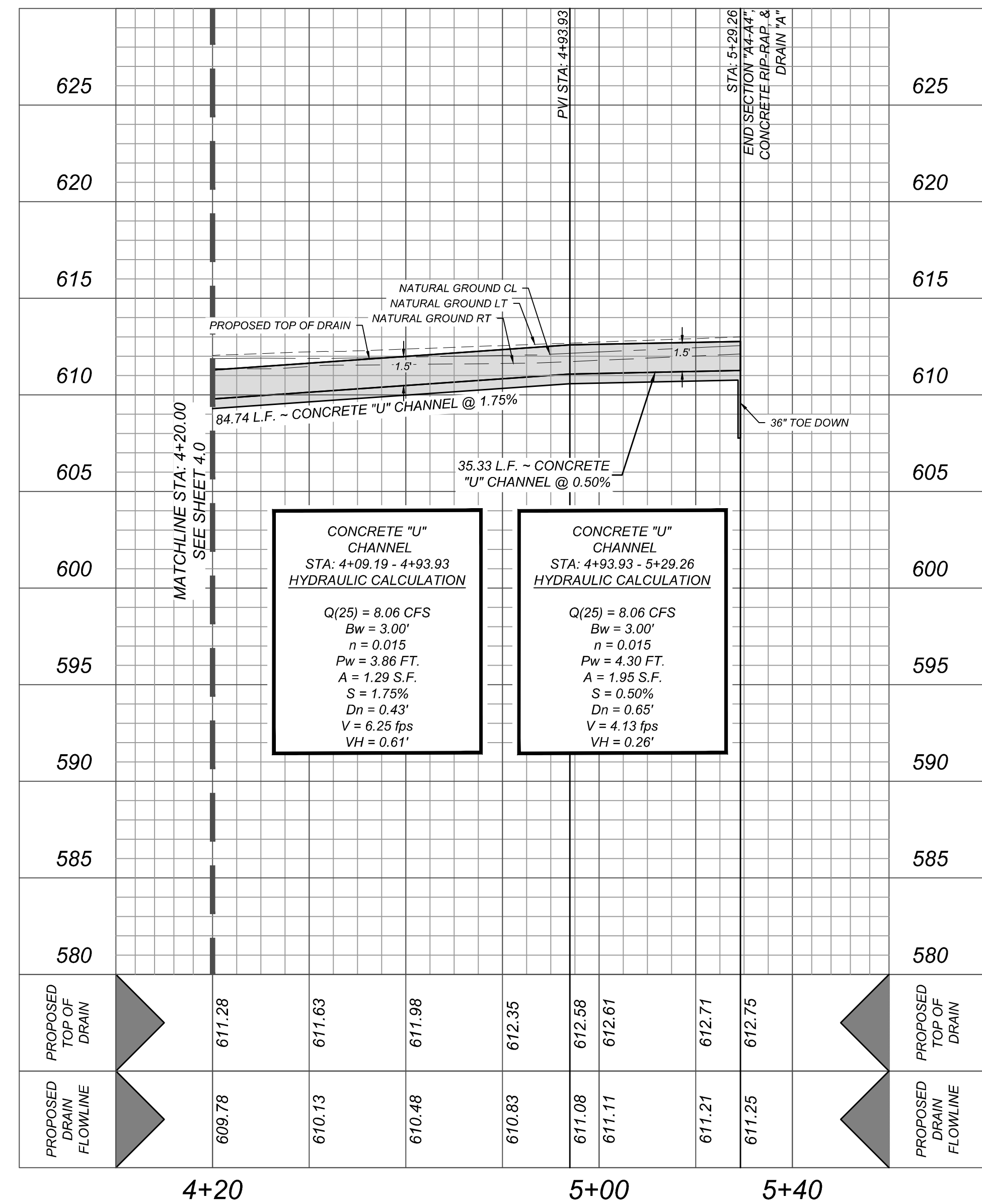
IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.

2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.



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



NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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Formerly Known as



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

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

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Clayton Brown
8/21/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS



Engineering
& Design

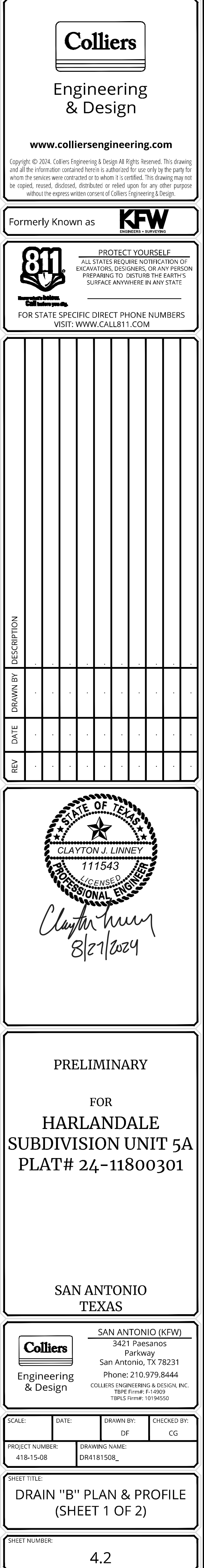
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY: DF	CHECKED BY: CG
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SHEET TITLE:

DRAIN "A" PLAN & PROFILE
(SHEET 2 OF 2)

SHEET NUMBER: 4.1



STA: 1+17.69
BEGIN DRAIN &
CONCRETE "U" CHANNEL
STA: 1+10.22
BEGIN TOP OF
DRAIN TRANSITION
PVI STA: 1+25.99
SECTION 19.67'
PVI STA: 1+31.28

DRAIN "C"
HARLANDE
SUBDIVISION UNIT 3
DOC #: 20240103249

24" TOE DOWN

5.95 L.F. ~ CONCRETE
"U" CHANNEL @ 33.33%

7.63 L.F. ~ CONCRETE
"U" CHANNEL @ 0.55%

2.0'

2.0'

2.0'

2.0'

650.66 L.F. ~ CONCRETE "U" CHANNEL @ 0.50%

NATURAL GROUND CL
NATURAL GROUND LT
NATURAL GROUND RT

PROPOSED TOP OF DRAIN

PROPOSED TOP OF DRAIN

NATURAL GROUND CL
NATURAL GROUND LT
NATURAL GROUND RT

2.0'

2.0'

CONCRETE "U"
CHANNEL
STA: 1+25.32 - 1.31.28
HYDRAULIC CALCULATION

Q(25) = 53.91 CFS
BW = 6.00'
N = 0.015
PW = 6.70 FT.
A = 2.10 S.F.
S = 33.33%
Dn = 0.35'
V = 25.67 fps
VH = 10.60'

CONCRETE "U"
CHANNEL
STA: 1+31.28 - 7+81.94
HYDRAULIC CALCULATION

Q(25) = 53.91 CFS
BW = 6.00'
N = 0.015
PW = 8.70 FT.
A = 8.10 S.F.
S = 0.50%
DN = 1.36'
V = 6.66 FPS
VH = 2.04'

PROPOSED TOP OF DRAIN

PROPOSED DRAIN FLOWLINE

1+00 2+00 3+00 4+00 5+00 6+00

625 620 615 610 605 600 595 590 585 580

625 620 615 610 605 600 595 590 585 580

MATCHLINE STA: 6+00.00
SEE SHEET 4.3

RESIDENTIAL LOTS = 43

4.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

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.

EARTHEN CHANNEL

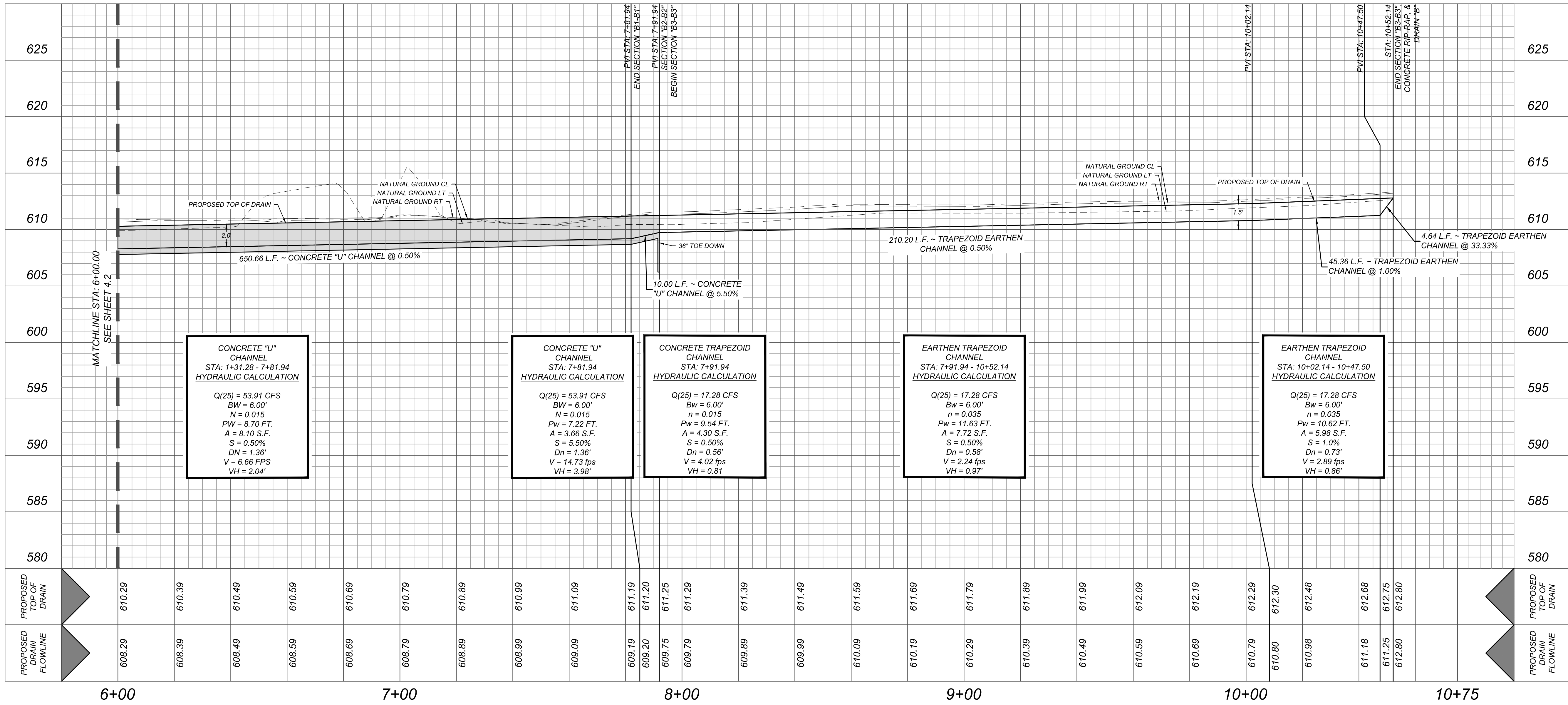
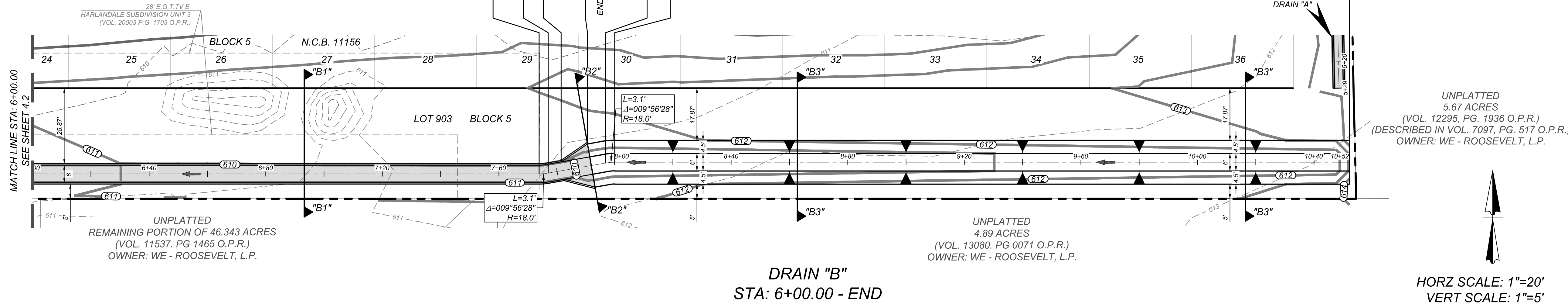
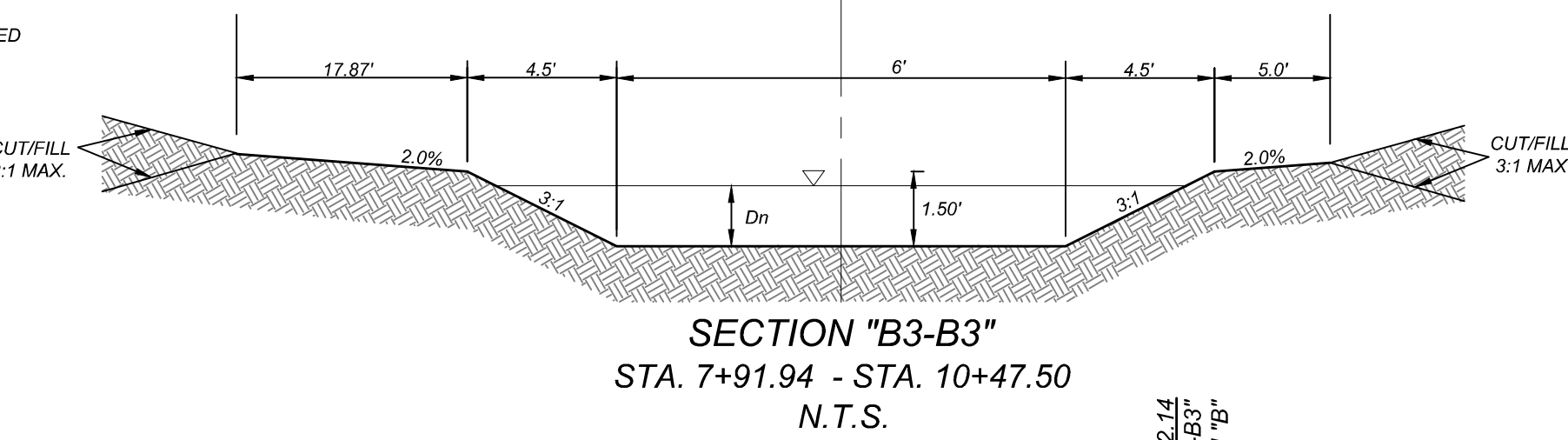
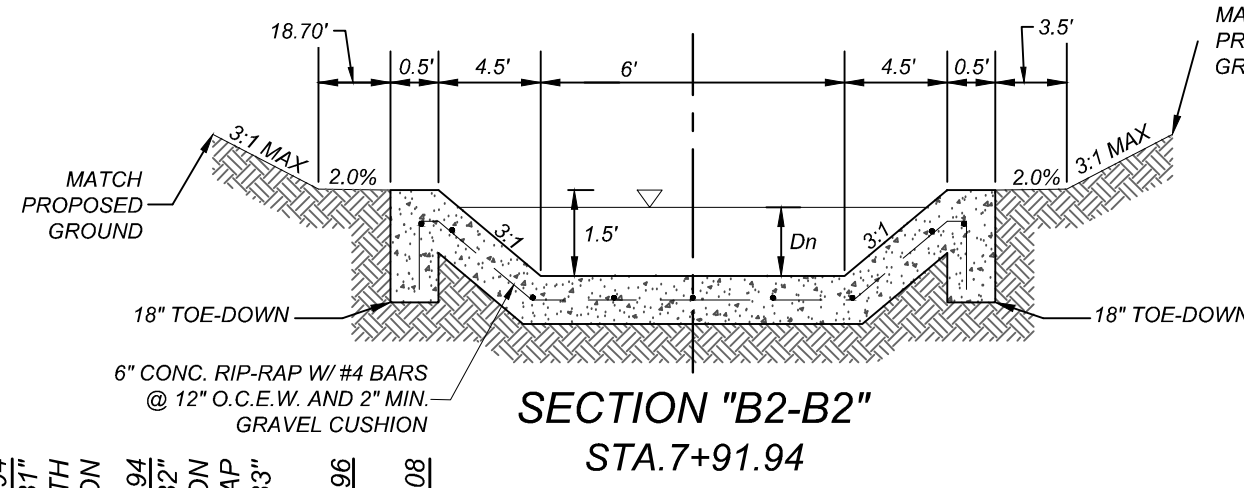
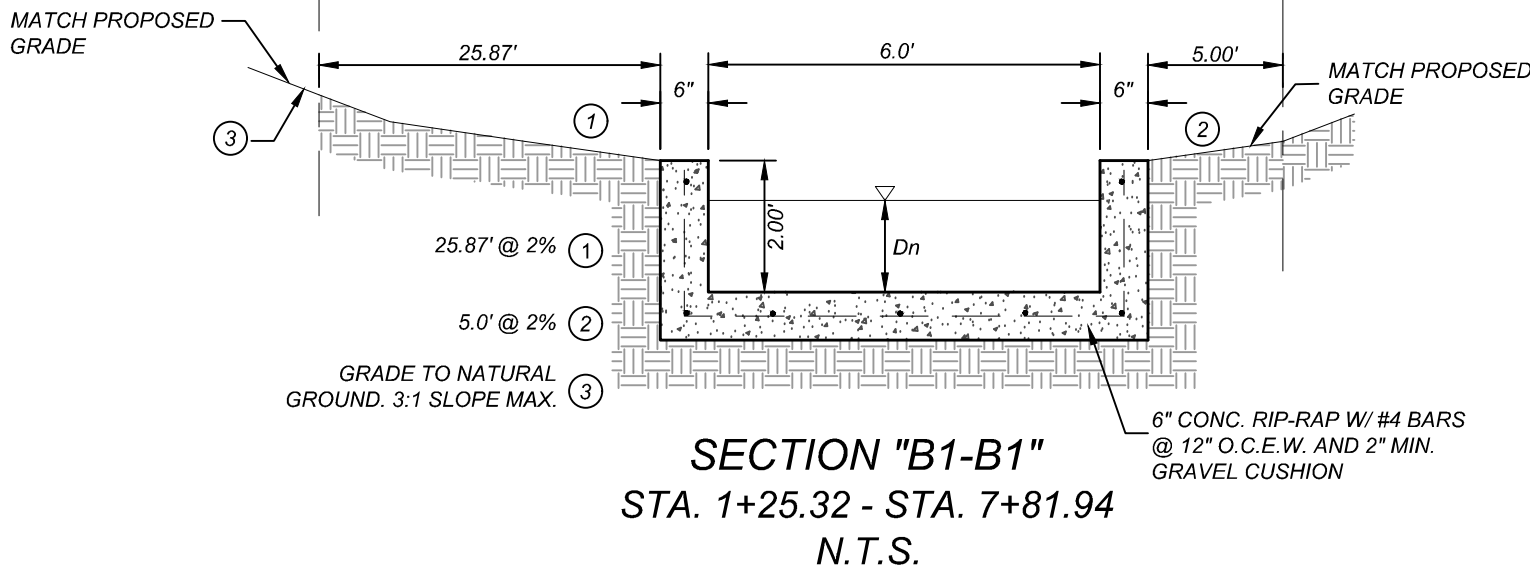
IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

NOTE:

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.
2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

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.



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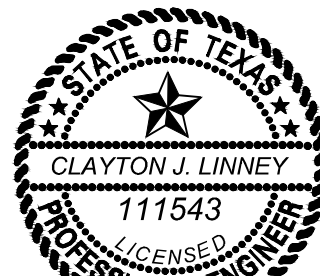
Formerly Known as

KFW



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

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



Clayton J. Linney
8/1/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS



Engineering
& Design

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Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBD'S Form: 11-0009
TBD'S Form: 10194550

SCALE: DATE: DRAWN BY: CHECKED BY:
PROJECT NUMBER: 418-15-08 DRAWING NAME: DRA181508L

SHEET TITLE:
DRAIN "B" PLAN & PROFILE
(SHEET 2 OF 2)

SHEET NUMBER:
4.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

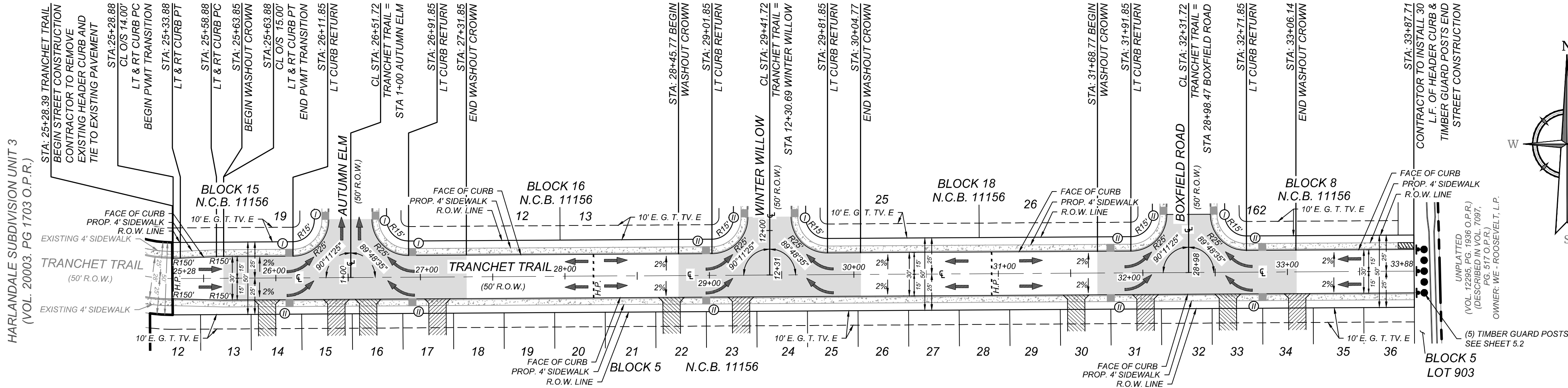
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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 DUCT BANKS, 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.

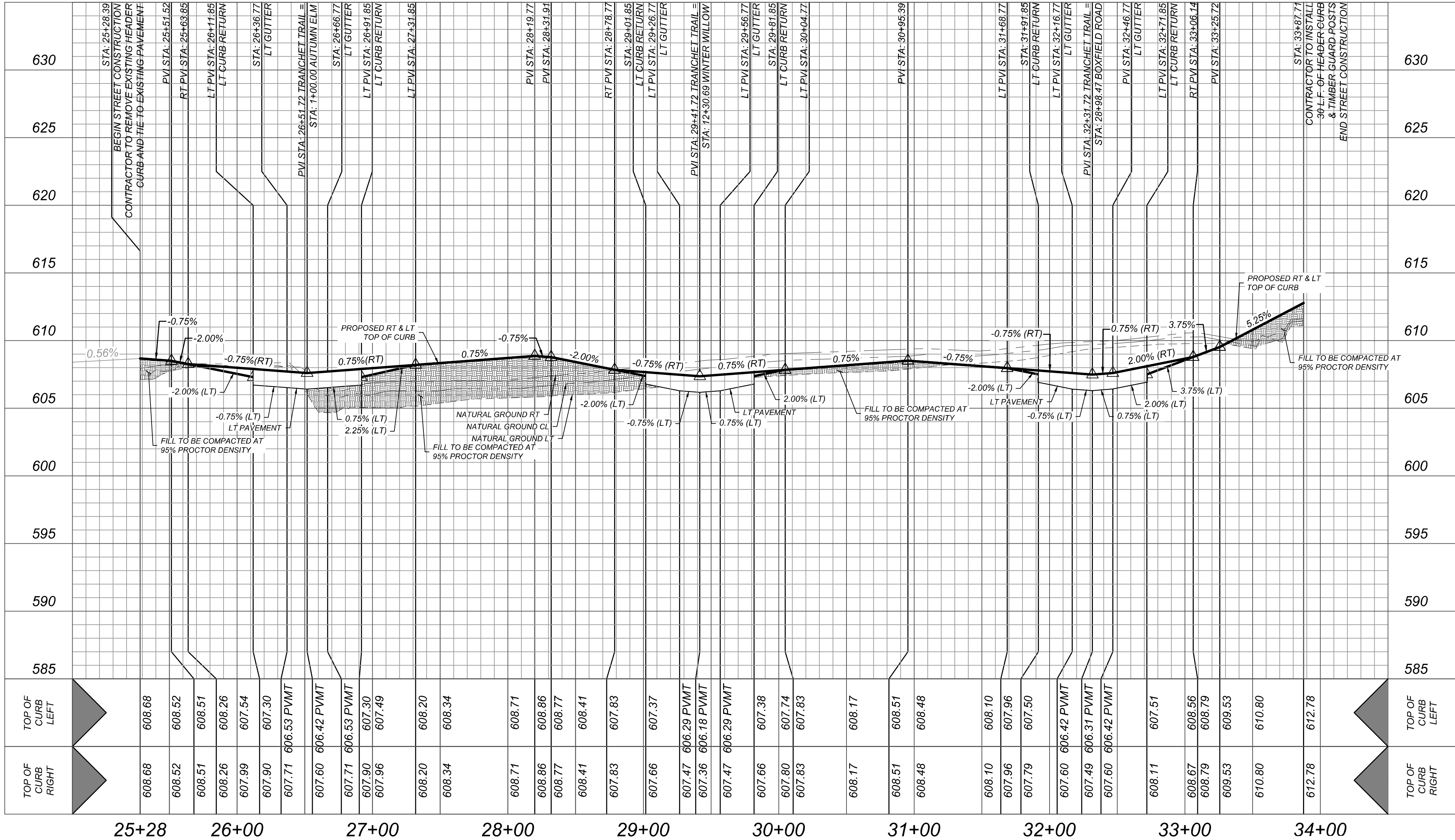
LEGEND

- R.O.W. = RIGHT OF WAY
G.E.T.V.E. = GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
= FLOW ARROW
= WASHOUT CROWN
= WHEELCHAIR RAMP TYPE I
SEE SHEET 5.4
= WHEELCHAIR RAMP TYPE II
SEE SHEET 5.4
= SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
= SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
= PROPOSED DRIVEWAY LOCATION
H.P. = HIGH POINT
L.P. = LOW POINT
= PROPOSED TOP OF CURB ELEVATION



TRANCHET TRAIL
STA: 25+28.39 - END

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



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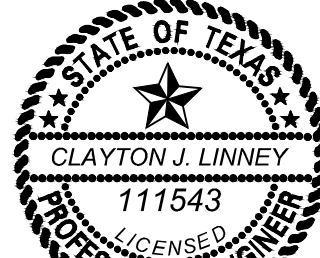
KFW

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PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF
EXCAVATIONS, DESIGNERS, OR ANY PERSON
PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN ANY STATE

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

REV. DATE DRAWN BY DESCRIPTION



Clayton J. Linney
8/21/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS

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& Design

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Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TYPE FIRM: F-1-0009
TBP&S FIRM: 10194550

SCALE: DATE: DRAWN BY: CHECKED BY:
PROJECT NUMBER: 418-15-08 DRAWING NAME: ST4181508L

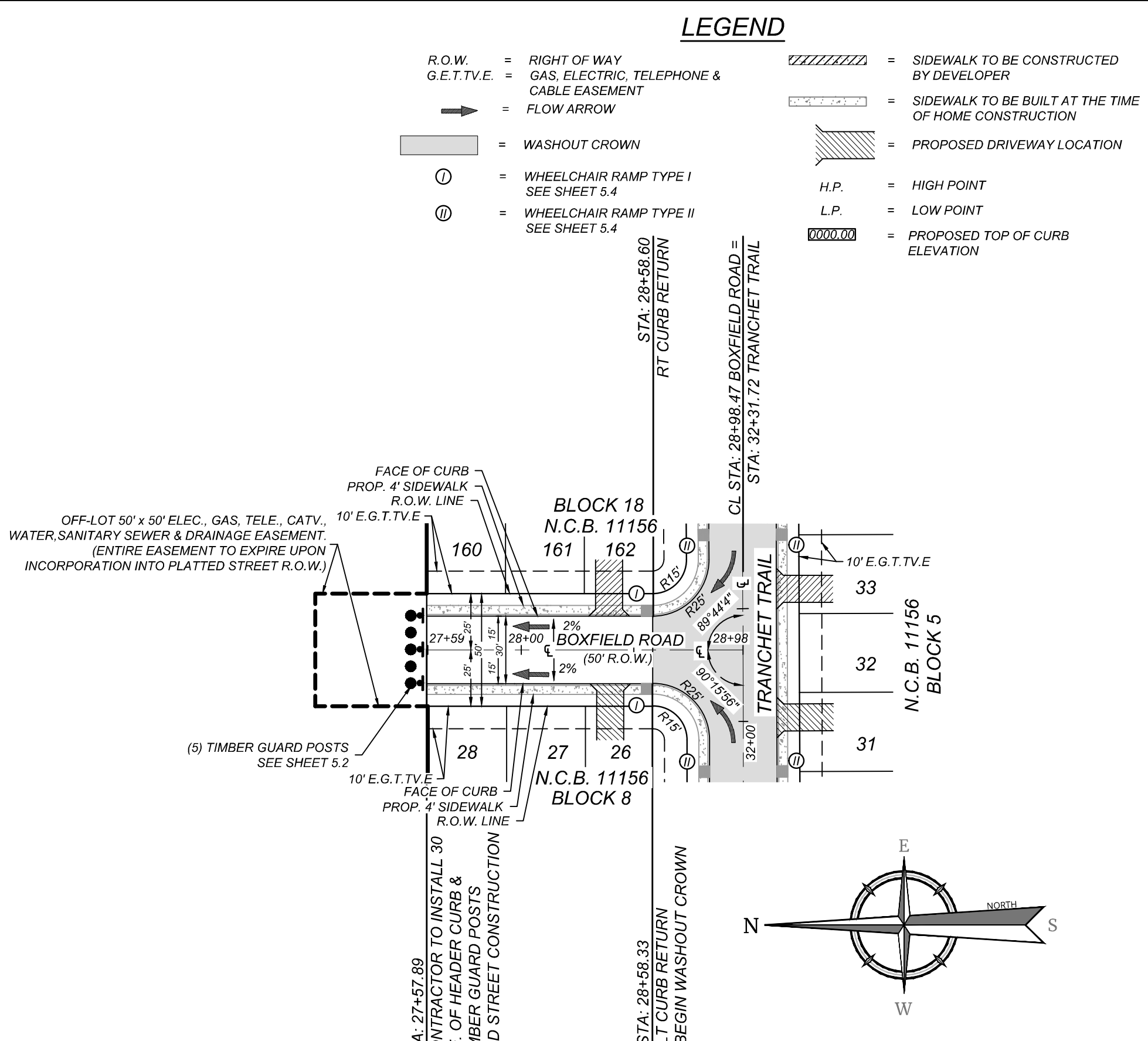
SHEET TITLE
TRANCHET TRAIL PLAN &
PROFILE

SHEET NUMBER:

5.0

CAUTION!!

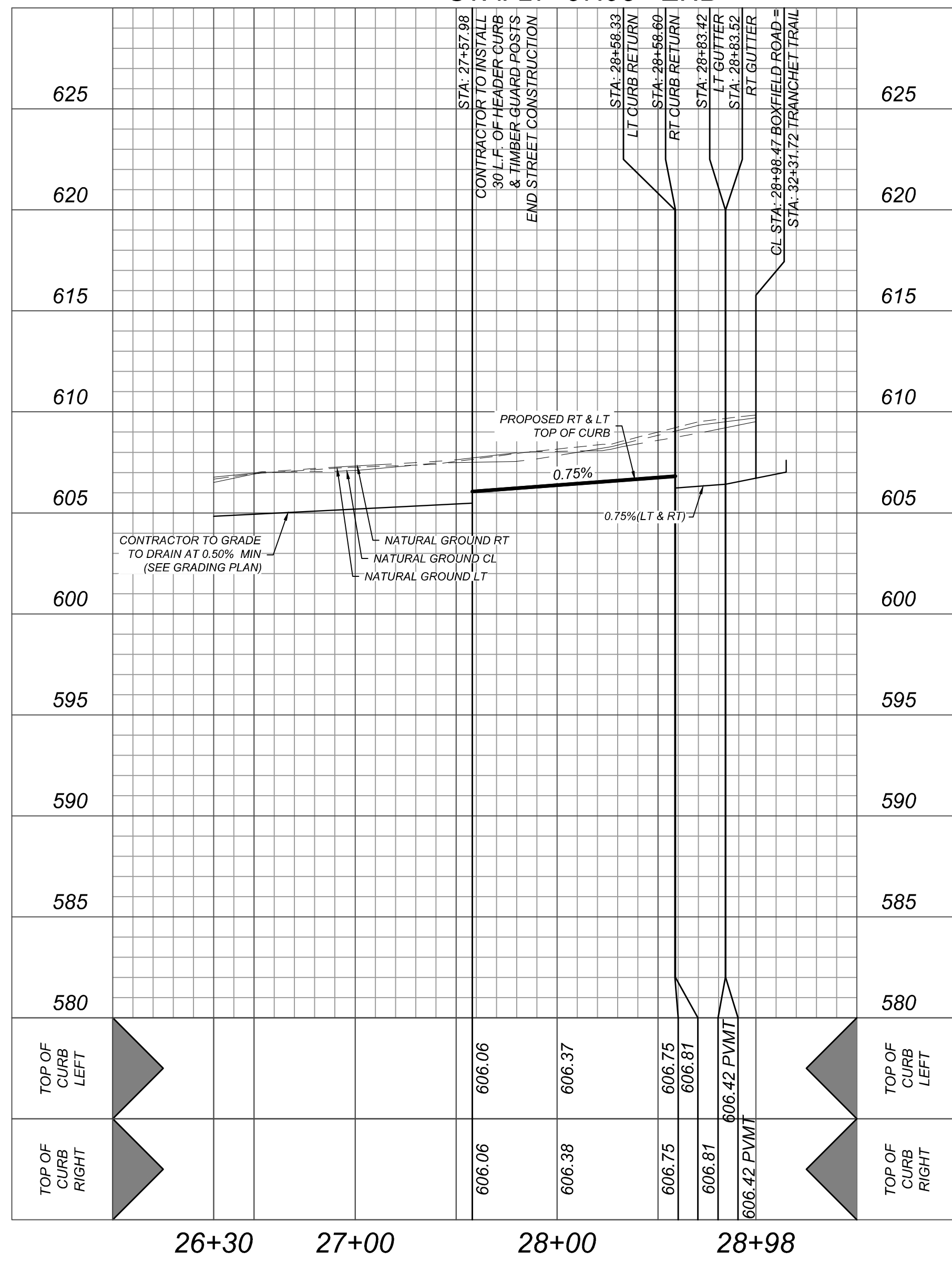
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES, INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING, ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 800-822-TELECOM (800-822-8356) PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO 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.



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

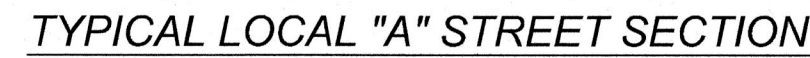
HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'

BOXFIELD ROAD
STA: 27+57.98 - END



NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

[illegible]



ASPHALT PAVEMENT DETAIL

DETAIL FOR ALL LOCAL TYPE A

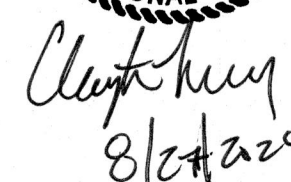
4. CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.

- SHOULD NOT CONTAIN ANY DELETERIOUS MATERIAL.
- SHOULD HAVE A CBR VALUE OF 3.0 OR GREATER
- SHOULD HAVE THE "LIME PERCENTAGE/APPLICATION RATE" RE-EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF FILL MATERIAL
- MAXIMUM PLASTICITY INDEX VALUE OF 45
- GRAVEL SIZE NOT TO EXCEED 3 INCHES IN SIZE
- MATERIAL PLACED AND COMPACTED AS PER APPLICABLE CITY/COUNTY GUIDELINES

2. THE APPLICATION RATE OF LIME SHALL BE DETERMINED BASED ON LABORATORY TESTING AND SHALL BE THE LOWEST PERCENTAGE OF LIME THAT PROVIDES AN UNCONFINED COMPRESSIVE STRENGTH (UCS) AT 7-DAYS OF AT LEAST 160 PSI IN ACCORDANCE WITH ASTM D5102 STANDARD TEST METHODS FOR UNCONFINED COMPRESSIVE STRENGTH OF COMPACTED SOIL-LIME MIXTURES (PROCEDURE B) (IN ADDITION, CURING SHOULD OCCUR FOR 7 DAYS AT 40° AND SPECIMENS SHOULD BE SUBJECT TO 24-HR CAPILLARY SOAK PRIOR TO TESTING.

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
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PRELIMINARY
FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

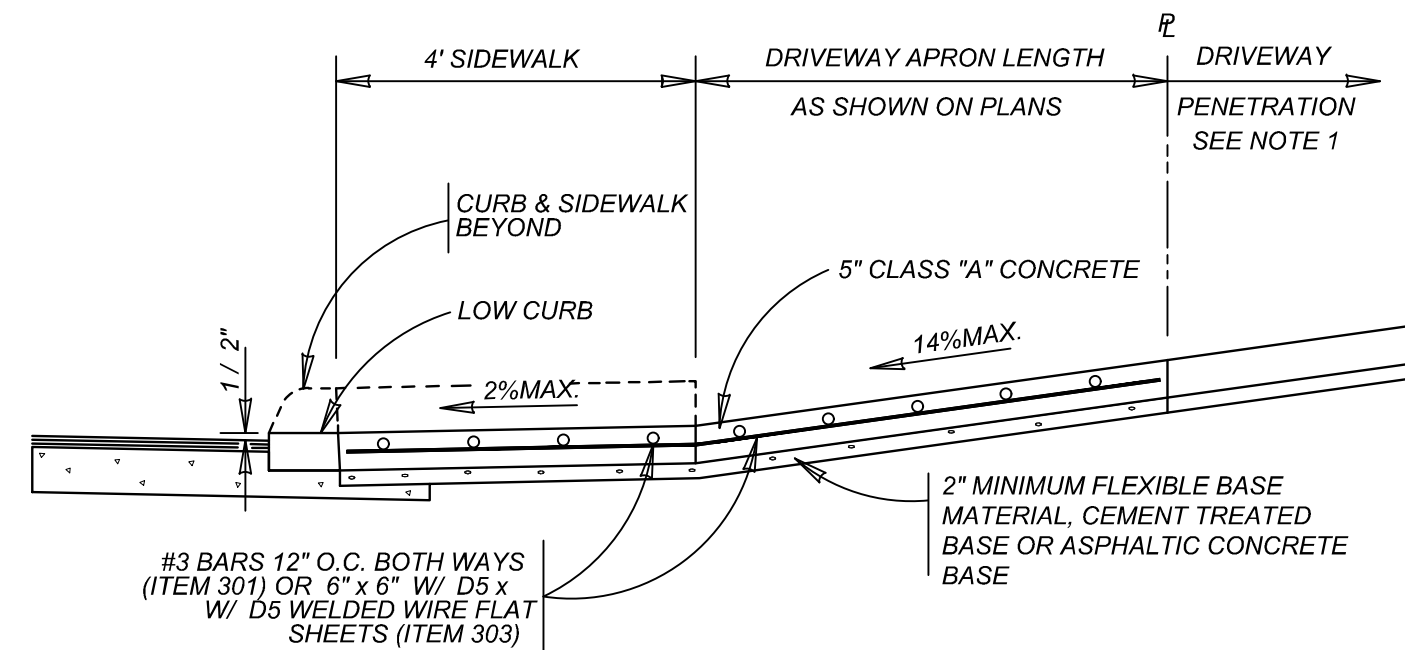
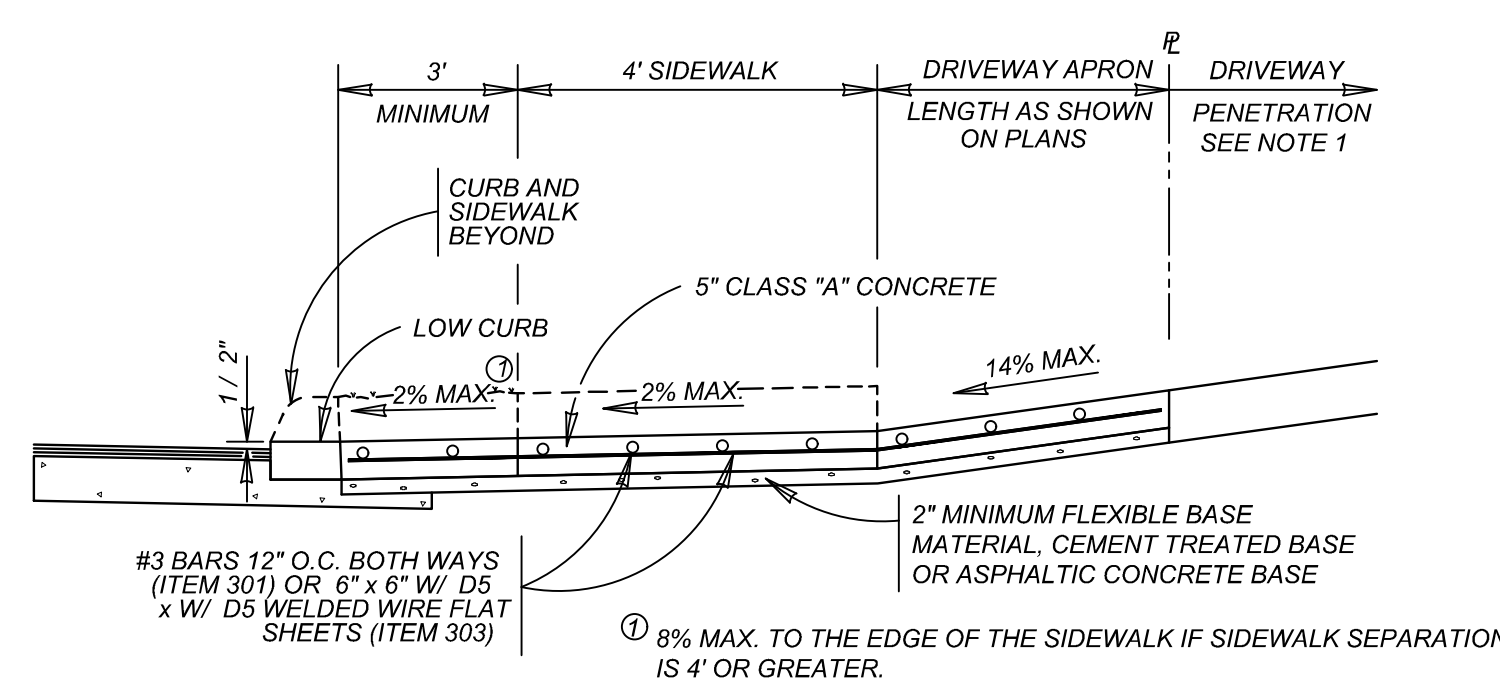
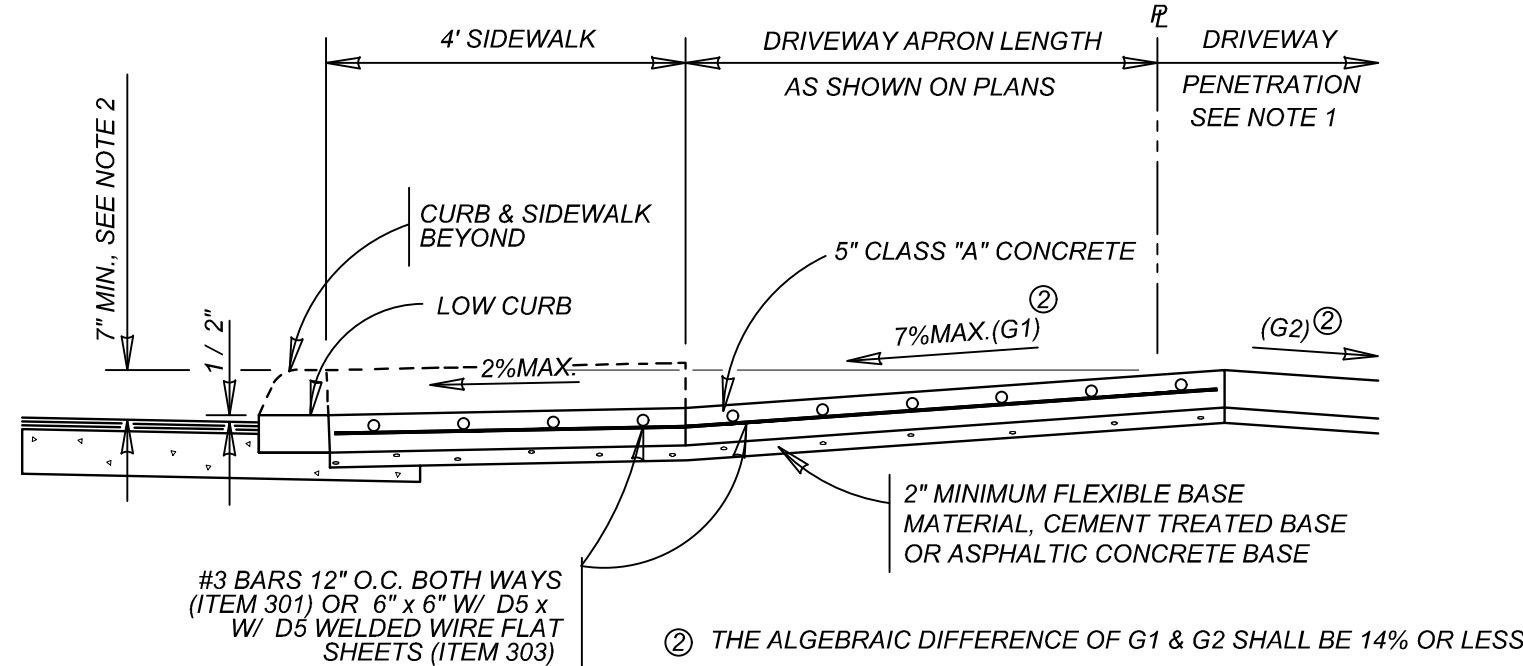
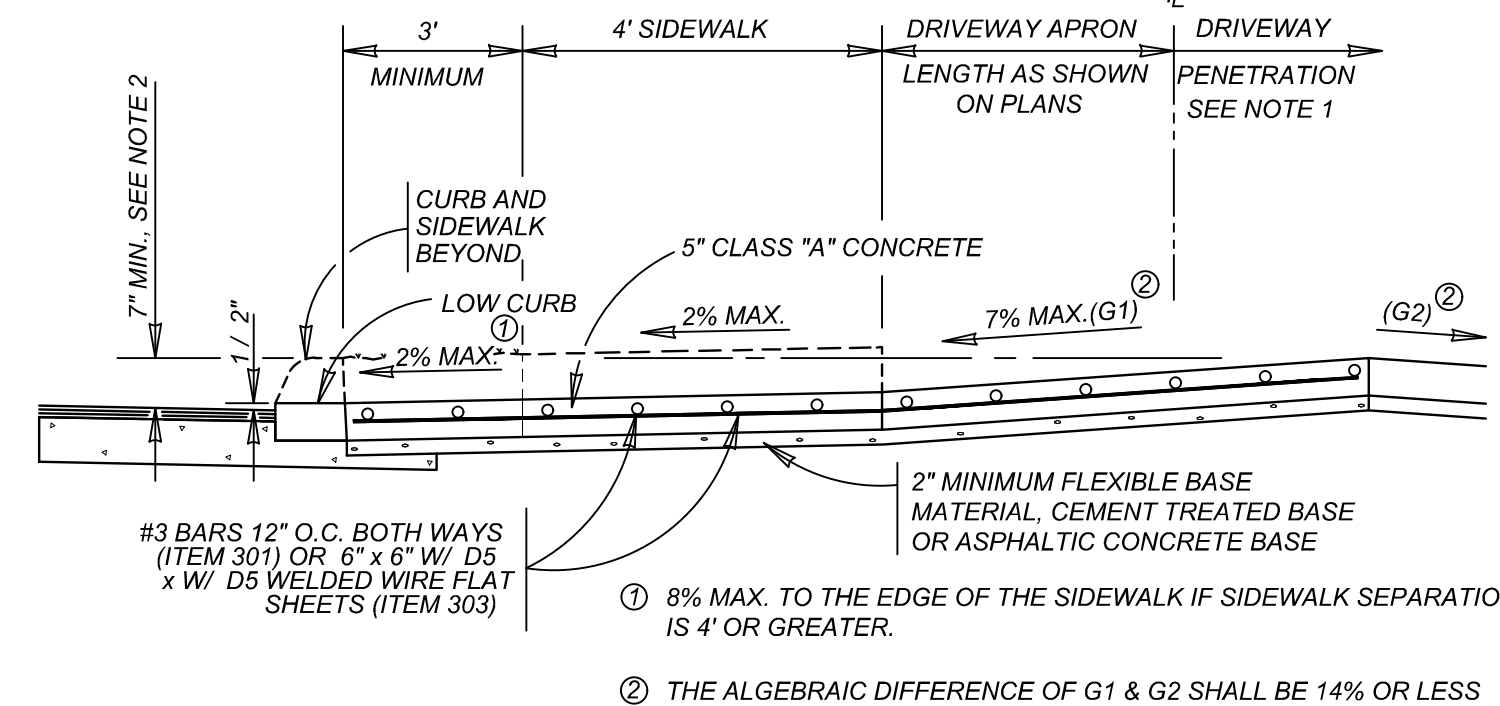
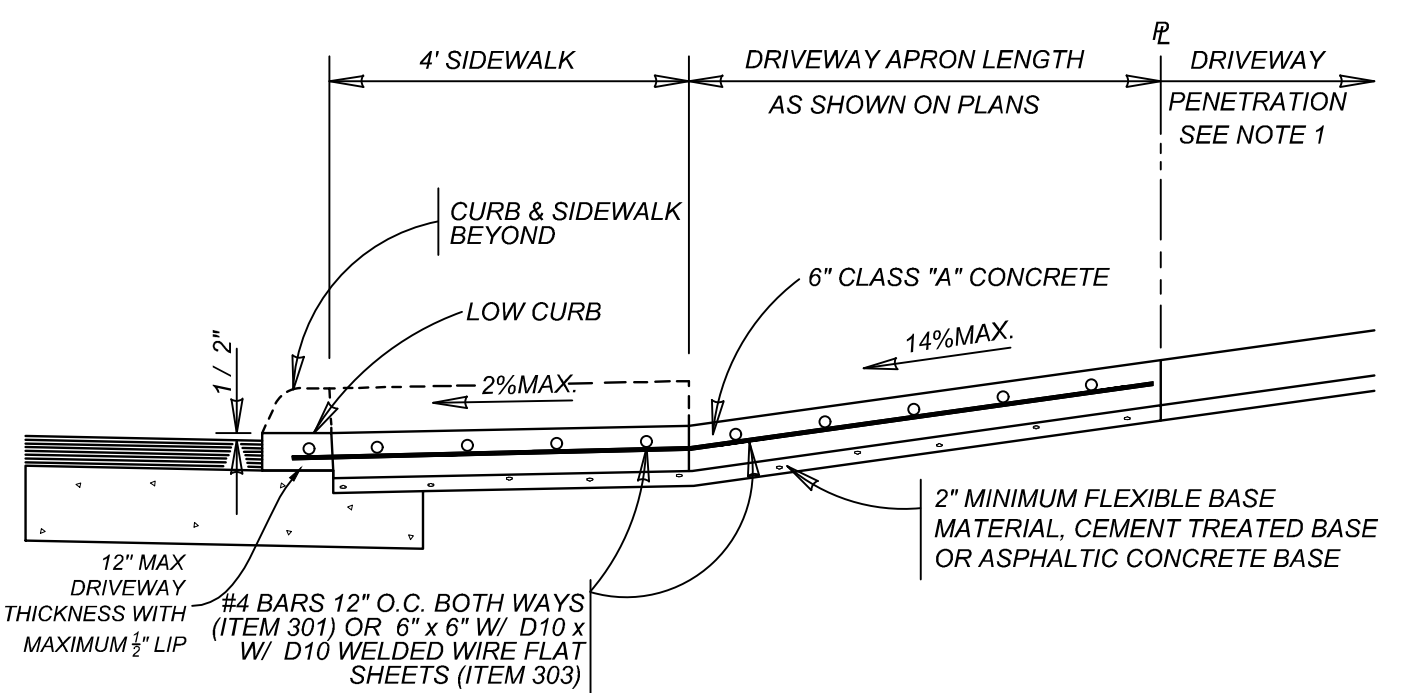
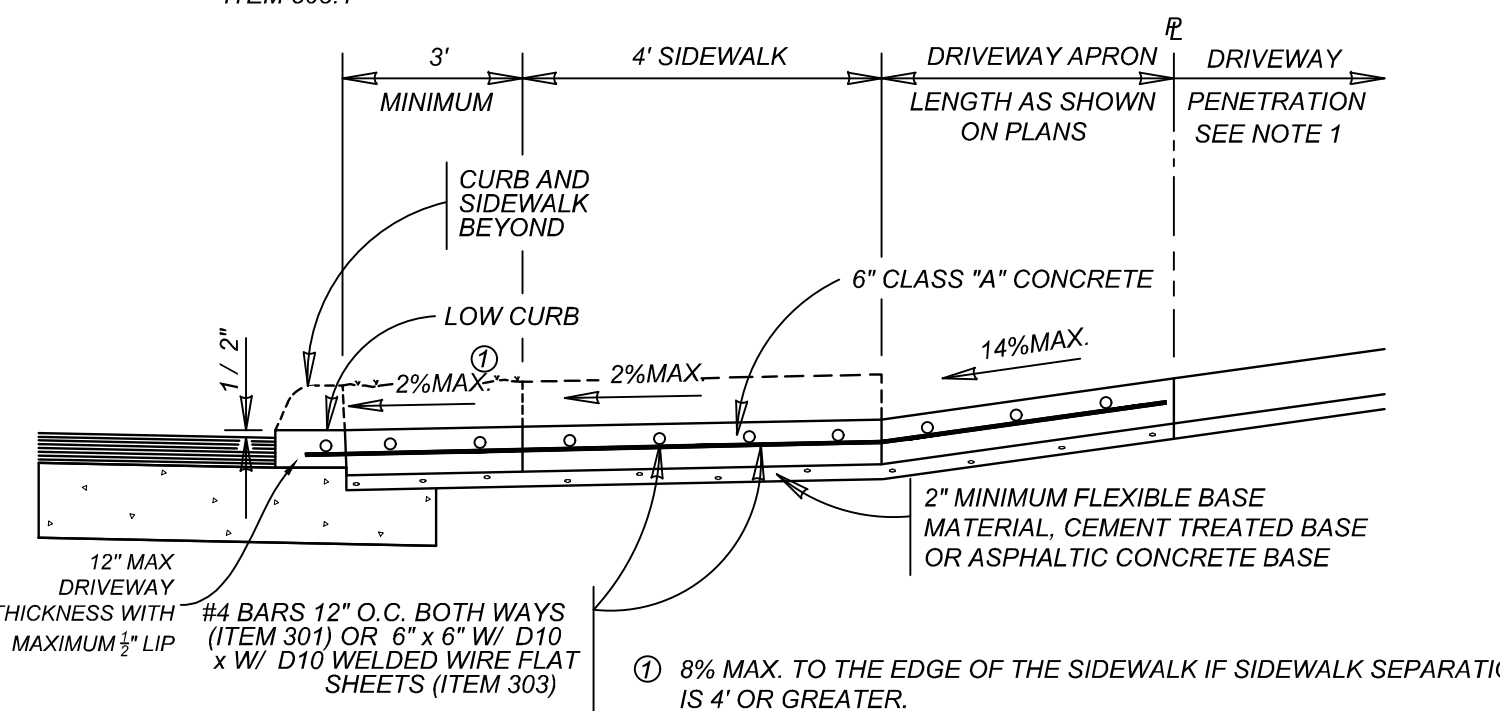
SAN ANTONIO (KFW)
3421 Paesanos
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San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY: DF	CHECKED BY: CG
PROJECT NUMBER: 418-15-08		DRAWING NAME: STD4181508	

TYPICAL STREET DETAILS

5.2

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

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:

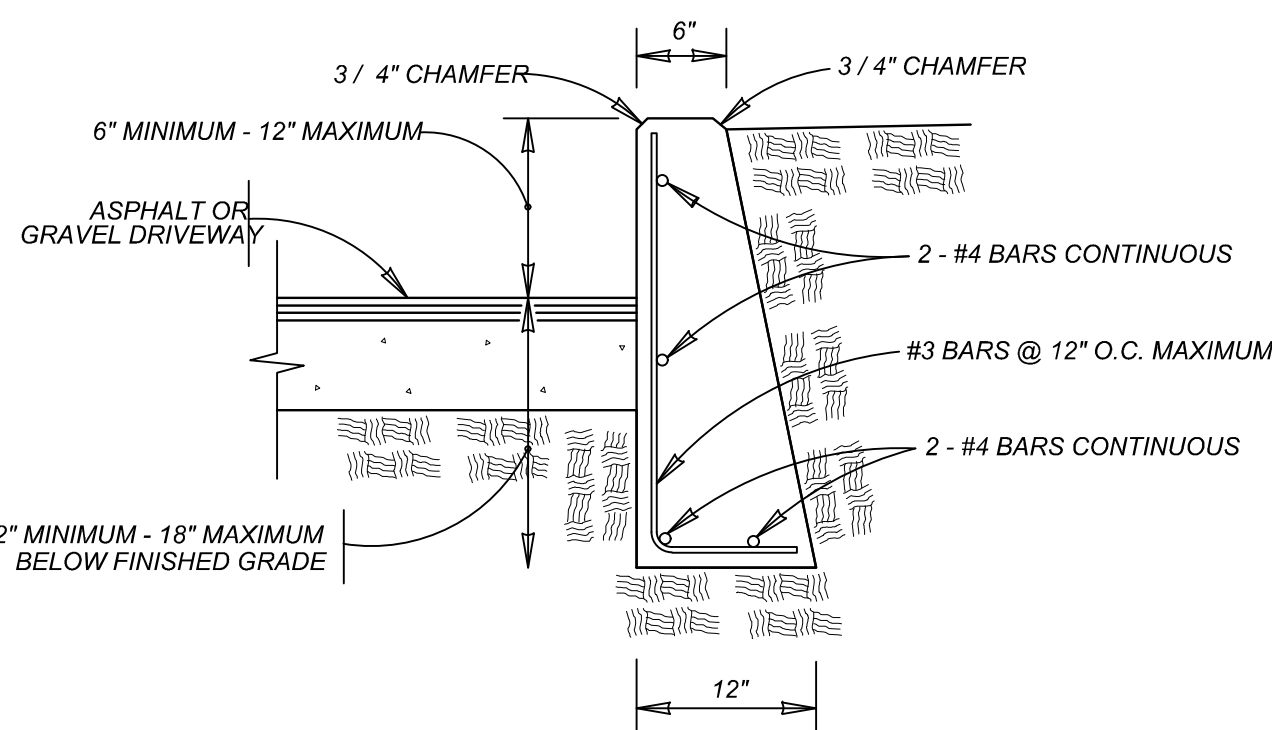
TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL - ONE WAY	12'	20'
COMMERCIAL - TWO WAY	24'	30'

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.

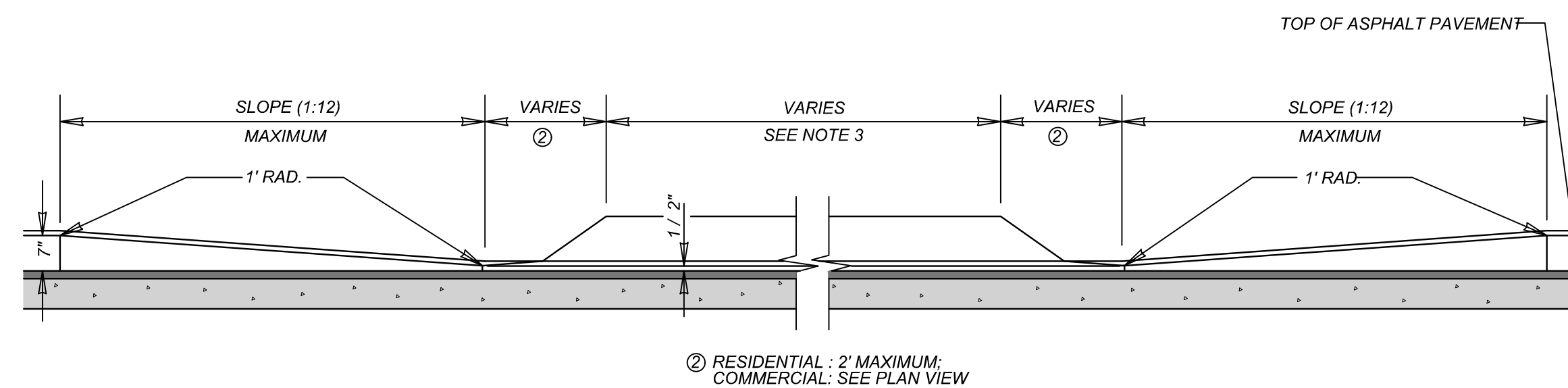
8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.

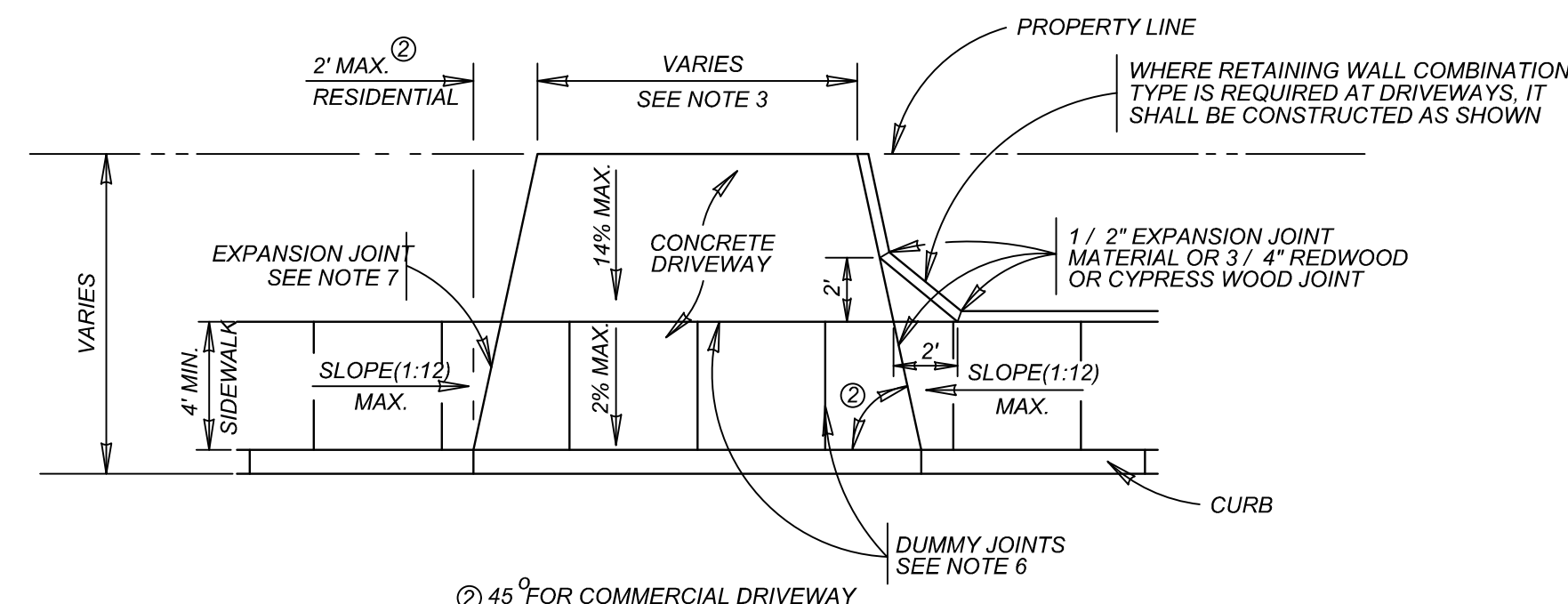


NOTE:

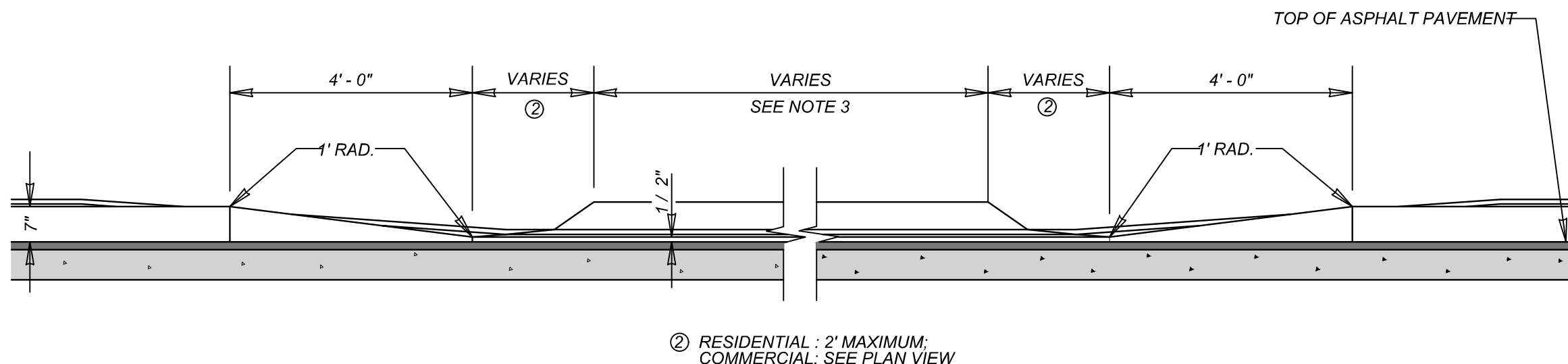
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY - CONCRETE RETAINING WALLON COMPACTED SUBGRADE
ITEM 307.1**CURB PROFILE AT DRIVEWAY**

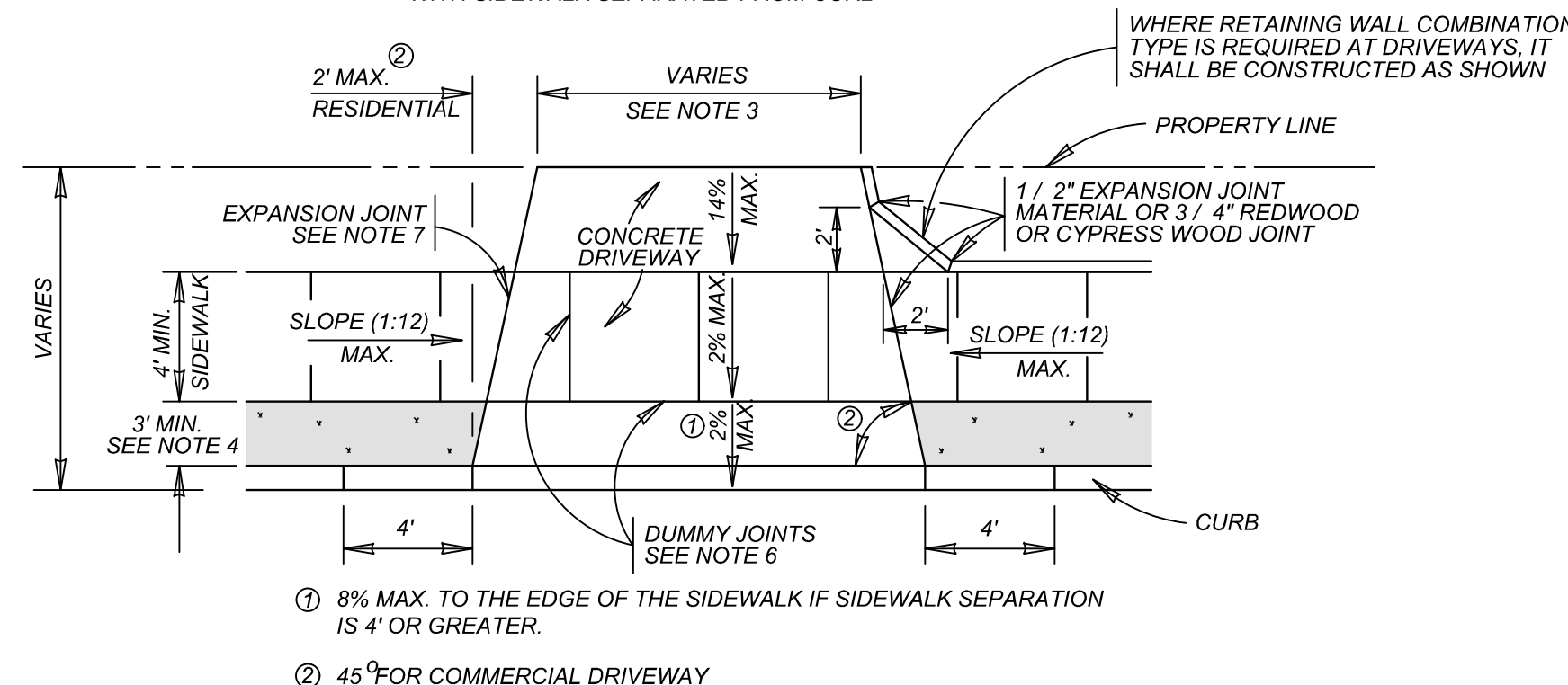
WITH SIDEWALK ABUTTING CURB

**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.

SHEET NO.:	OF:
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PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301SAN ANTONIO
TEXAS

Colliers

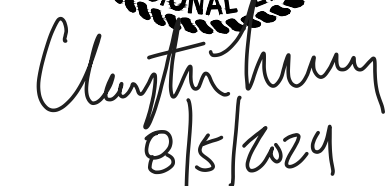
Engineering
& DesignSAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TYPE FORM: TEL-1009
TBP&S FORM: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
		DF	CG

PROJECT NUMBER:	DRAWING NAME:
418-15-08	STD14181508

SHEET TITLE:
**CONCRETE DRIVEWAY
DETAILS**SHEET NUMBER:
5.3

REV	DATE	DRAWN BY	DESCRIPTION
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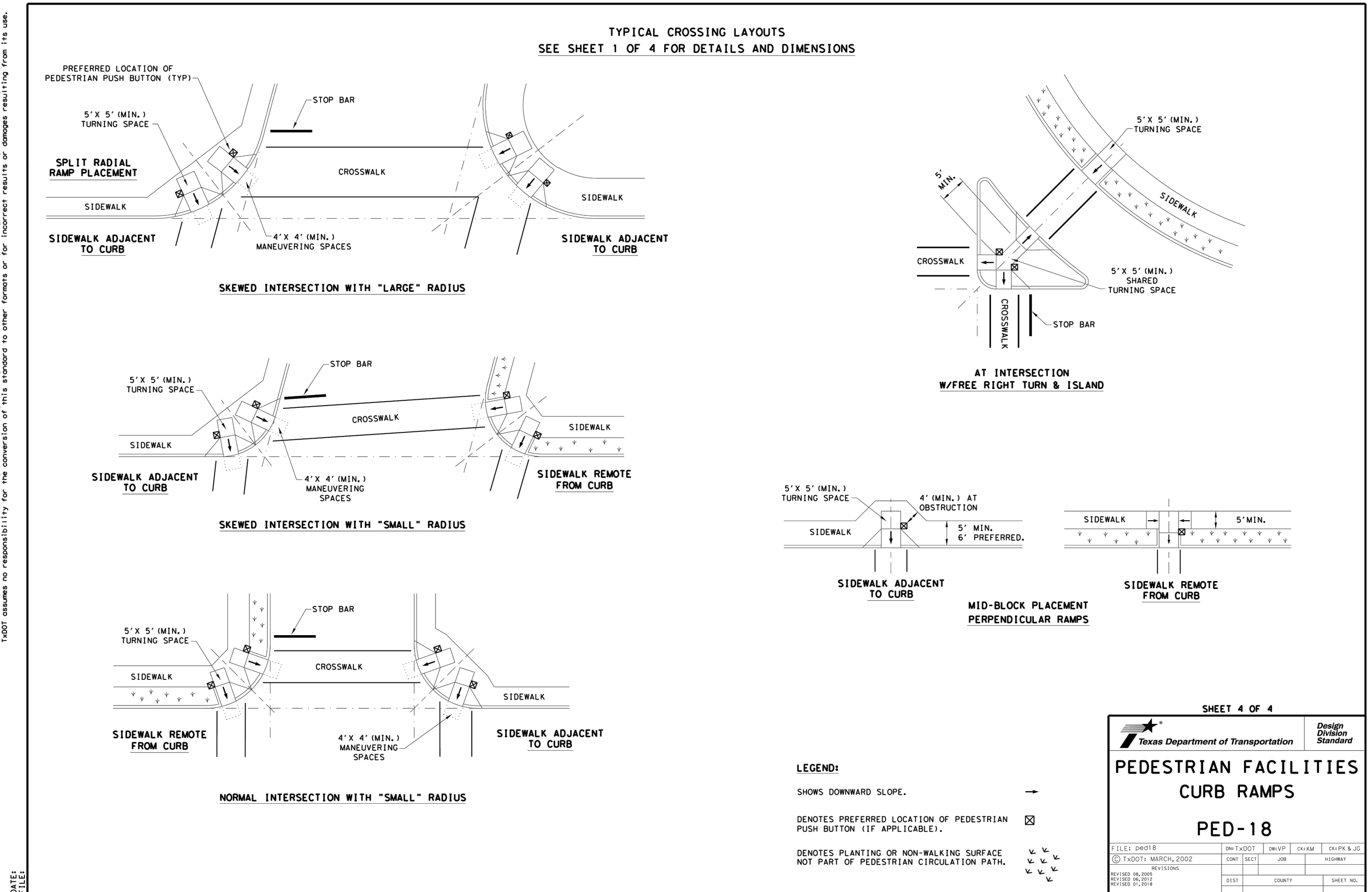
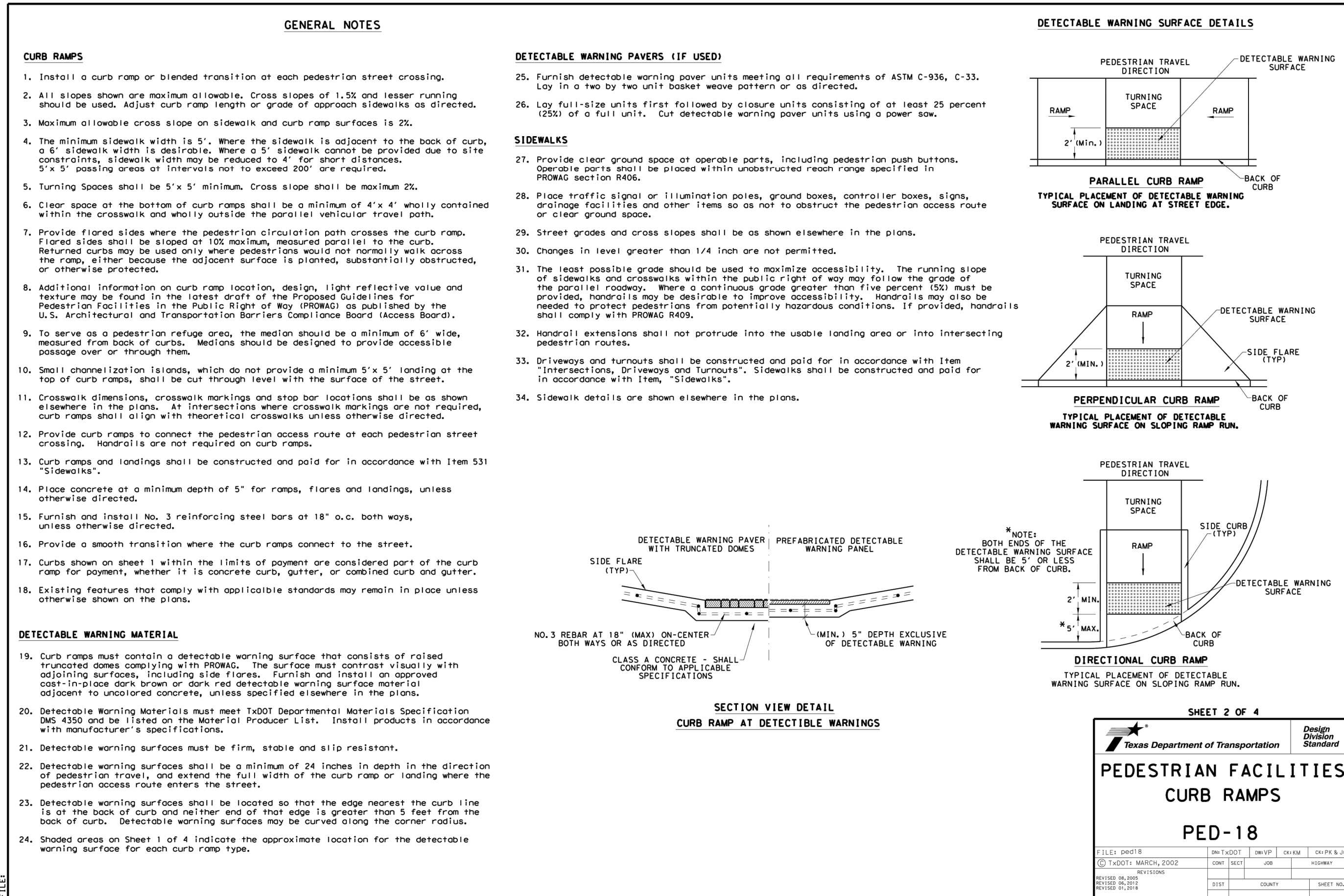
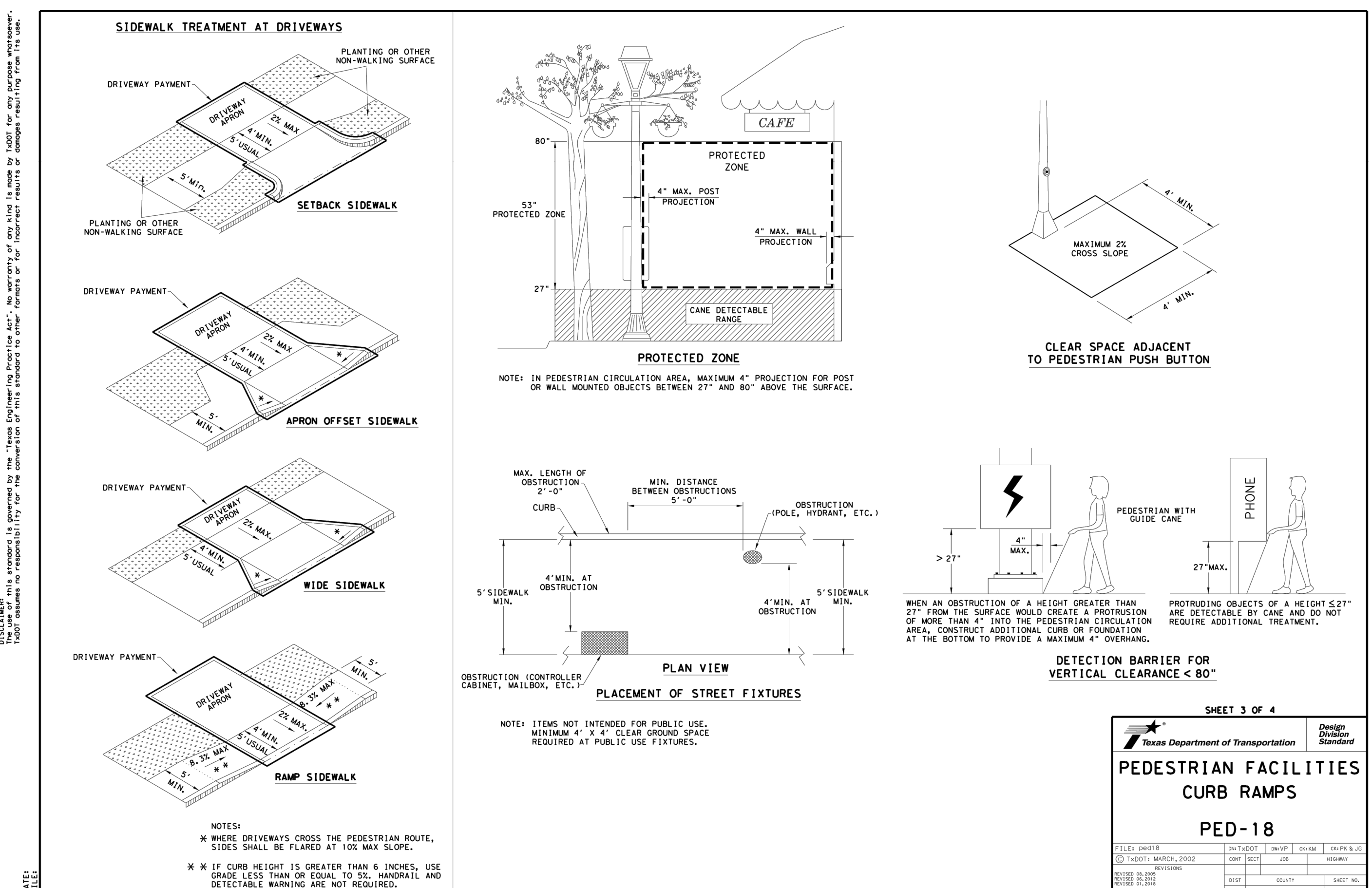
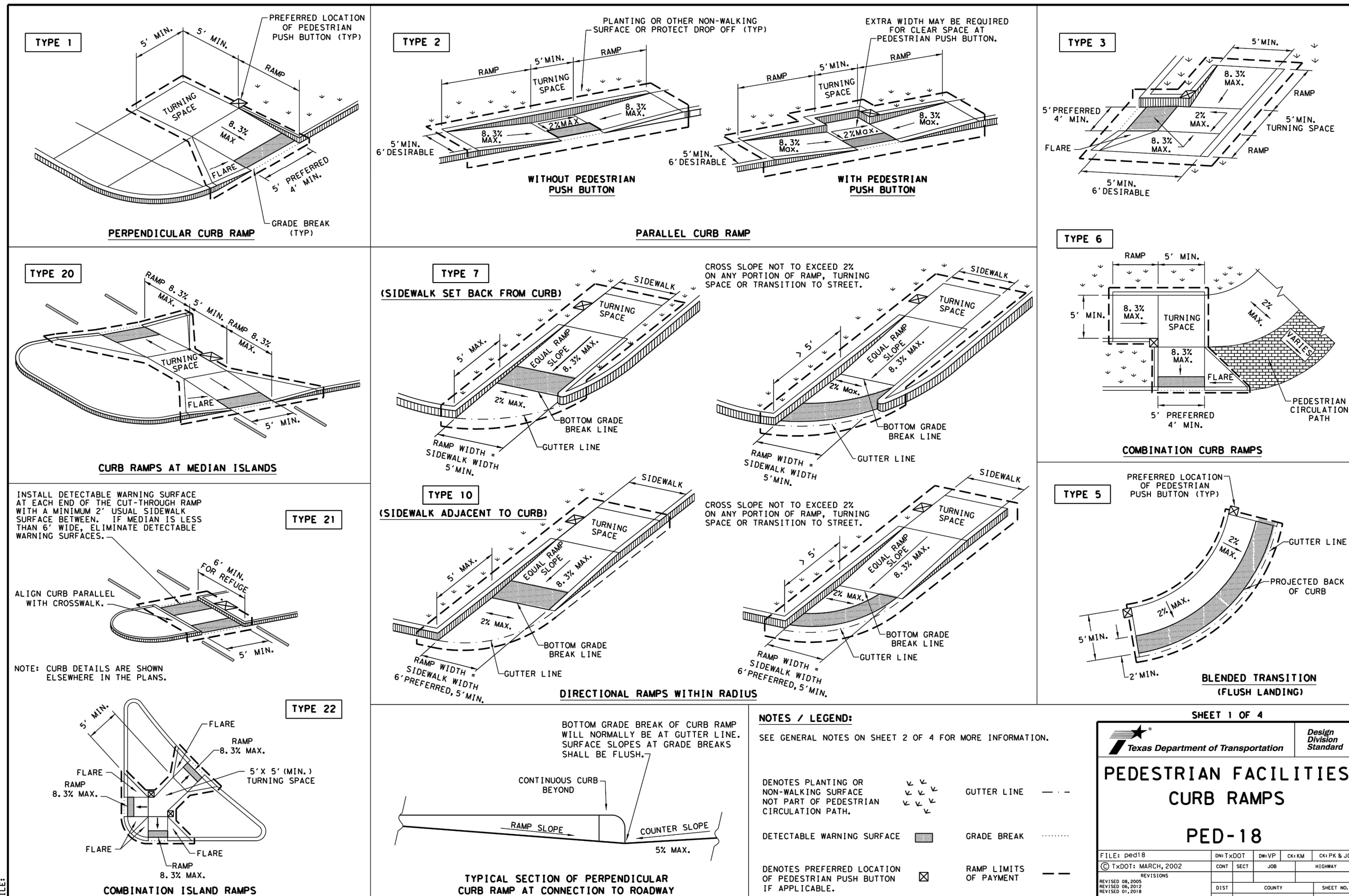
SUBDIVISION UNIT 5A
PLAT# 24-11800301

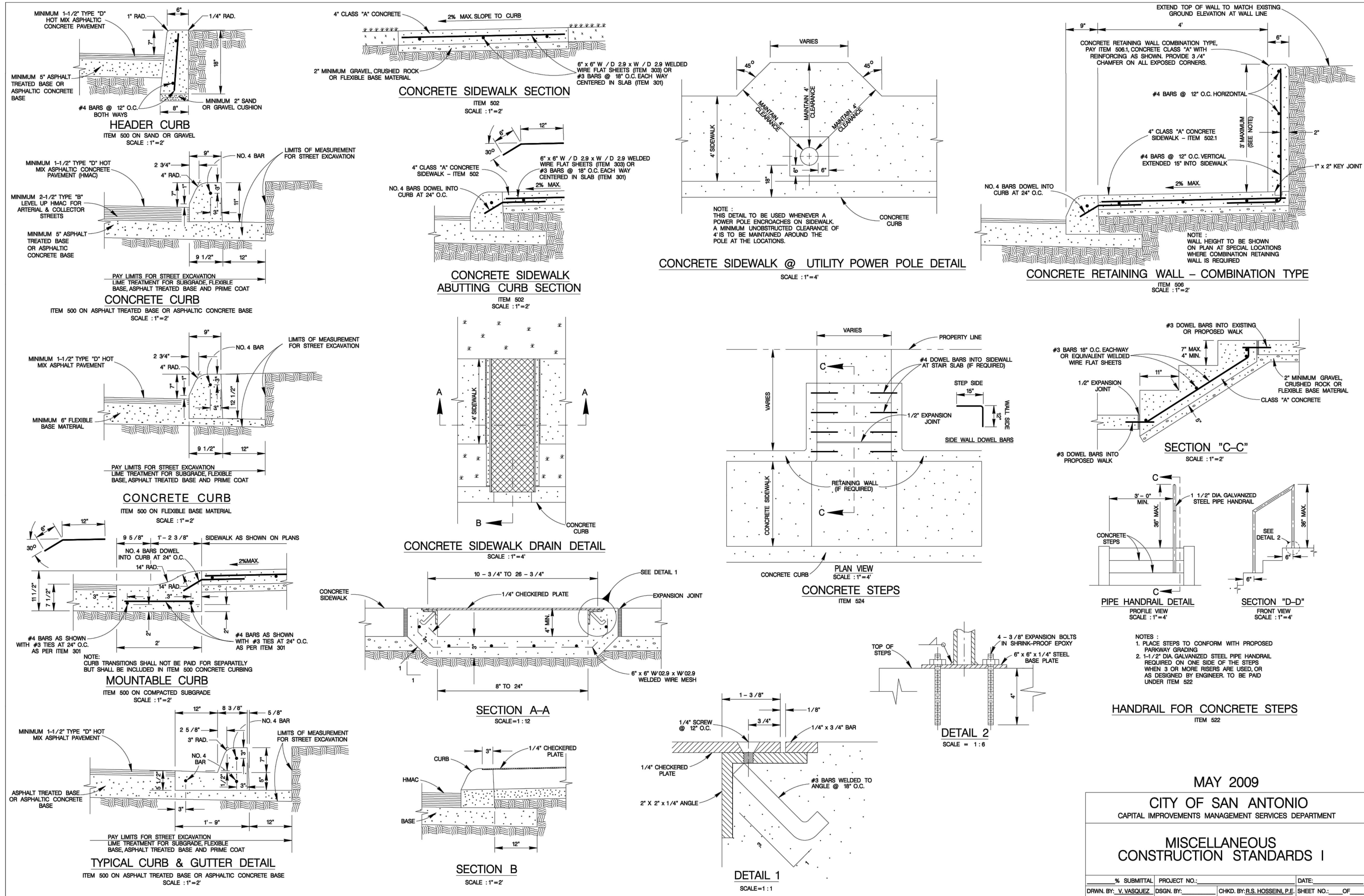
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY: DF	CHECKED BY: CG
PROJECT NUMBER: 418-15-08		DRAWING NAME: STDT4181508	

55

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION





Drawn: Wednesday, August 21, 2024 2:46:46 PM User: Ben Elough
File: M:\4181508\DESIGN\CONCRETE\STREET\STD14181508.DWG

Colliers

Engineering
& Design

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KFW

811

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

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

STATE OF TEXAS

CLAYTON J. LINNEY

111543

LICENSED
PROFESSIONAL ENGINEER

Clayton Linney

8/21/2024

PRELIMINARY

FOR

HARLANDALE

SUBDIVISION UNIT 5A

PLAT# 24-11800301

SAN ANTONIO
TEXAS

San Antonio (KFW)

3421 Paesanos
Parkway
San Antonio, TX 78231

Phone: 210.979.8444

COLLIERS ENGINEERING & DESIGN, INC.

TBPLS Firm# 10194550

SCALE: DATE: DRAWN BY: CHECKED BY:

PROJECT NUMBER: 418-15-08 DRAWING NAME: STD14181508

SHEET TITLE:

MISCELLANEOUS
CONSTRUCTION
STANDARDS 1

SHEET NUMBER:

5.6

DATE: MAY 2009

CITY OF SAN ANTONIO




CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

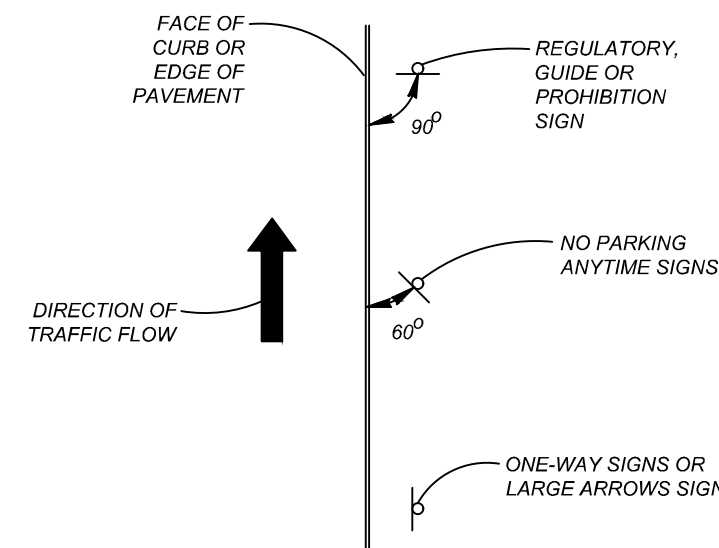
MISCELLANEOUS
CONSTRUCTION STANDARDS I

% SUBMITTAL PROJECT NO: DATE:

DRWN. BY: V. VASQUEZ DESGN. BY: CHKD. BY: R.S. HOSSEINI, P.E. SHEET NO: OF






TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNING/ENGINEERING/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR THE DESIGN OF THE SAFETY PROTECTION SYSTEM, 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 SUPERVISOR SHALL BE RESPONSIBLE FOR THE PROPER USE OF THE SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. CONTRACTOR'S SUPERVISOR 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 STRUCTURAL DESIGNING/ENGINEERING/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR THE DESIGN OF THE SAFETY PROTECTION PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

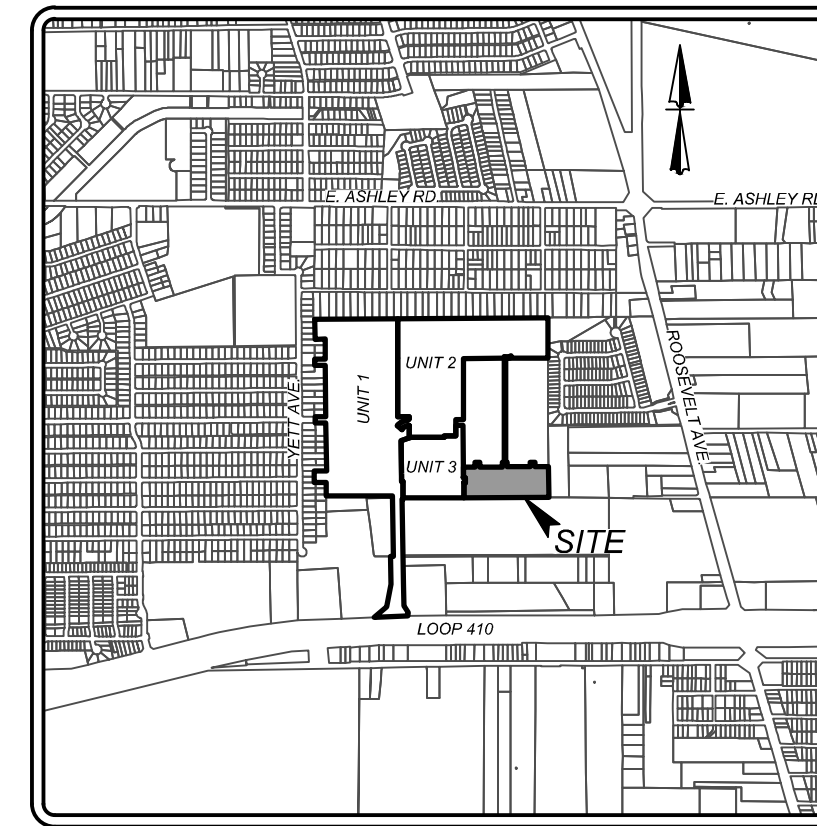
<i>SYMBOL</i>	<i>ITEM NUMBER</i>
 <div style="display: inline-block; vertical-align: middle; text-align: center;"> <i>R1-1</i> 30" X 30" </div>	531.3
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <i>STREET NAME</i>  </div> <div style="display: inline-block; vertical-align: middle; text-align: center;"> <i>STANDARD COSA</i> <i>STREET NAME</i> <i>SIGN STD X 9"</i> </div>	531.57
 <div style="display: inline-block; vertical-align: middle; text-align: center;"> <i>TYPE II BLUE</i> <i>PAVEMENT MARKER</i> </div>	537.8



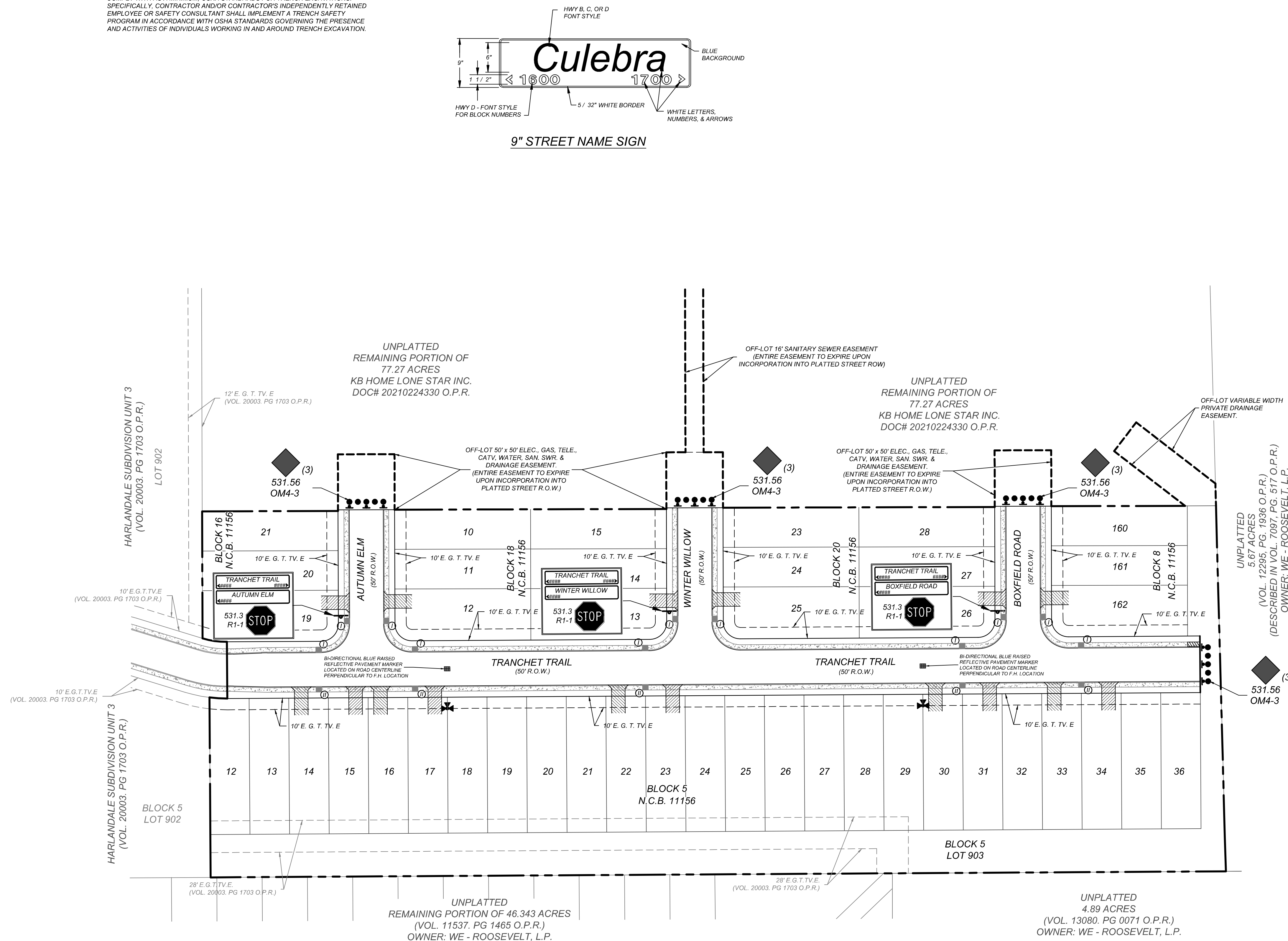
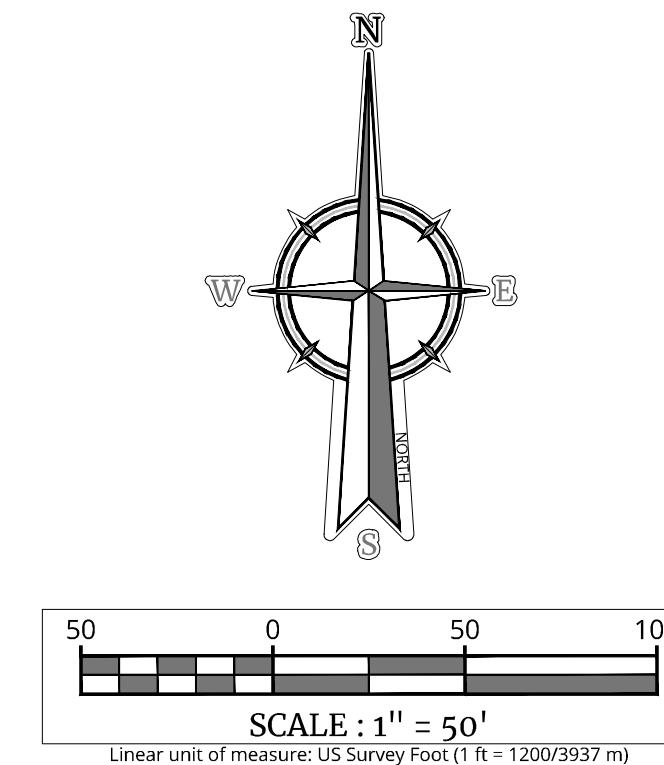
TYPICAL GROUND MOUNTED
SIGN PLACEMENT

LEGEND

COUNTY BLOCK	=	N.C.B.
ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT	=	E.G.T.V.E.
WHEELCHAIR RAMP TYPE I SEE SHEET 5.4	=	
WHEELCHAIR RAMP TYPE II SEE SHEET 5.4	=	
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION	=	
DRIVEWAY LOCATION	=	



LOCATION MAP
NOT-TO-SCALE



Date: Wednesday, August 21, 2024 3:58:07 PM User: Ben Elseth
File: N:\4181508\DESIGN\CIVIL\STREET\STS4181508.DWG

RESIDENTIAL LOTS = 43



Engineering
& Design

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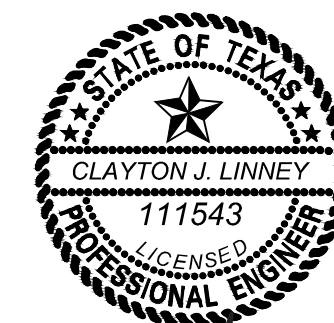
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Formerly Known as



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PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN ANY STATE

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VISIT: WWW.CALL811.COM

[illegible]

Clayton Turner
8/27/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
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

TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY: DF	CHECKED BY: CG
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SHEET TITLE:
TRAFFIC SIGNAGE &
PEDESTRIAN ACCESSIBILITY
PLAN

SHEET NUMBER

5.7

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

SAWS ASSOCIATED GENERAL CONSTRUCTION NOTES
STANDARD WITH 2021 SAWS STANDARD SPECS
Updated December 14, 2021

General Section

1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:

- A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System"; Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water"; TAC Title 30 Part 1 Chapter 290.
- B. Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
- C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
- D. Current City of San Antonio "Standard Specifications for Public Works Construction".
- E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:

- A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System," Technical Directive Code (TDC) 1701, Title 26, Chapter 217 and "Public Drinking Water," TAC Title 30 Part 1 Chapter 290.
- B. Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
- C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
- D. Current City of San Antonio "Standard Specifications for Public Works Construction".
- E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by the consultant that the inspection is required 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.

3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_centers/specs. Unless otherwise noted within the design plans.

4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.

5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.

6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locating and marking pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
SAWS Utility Locates: <http://www.saws.org/Service/Locates>
COSA Drainage (210) 207-0724 or (210) 207-6026
COSA Traffic Signal Group (210) 206-8844
COSA Traffic Signal Details (210) 207-3951
Texas State Wide One Call Locator 1-800-455-6005 or 811

7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.

8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.

9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.

10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to contractwork@saws.org. Weekend Work: Contractors are required to notify the SAWS Construction Department 48 hours in advance to request weekend work. Request should be sent to contractwork@saws.org. Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.

12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Contractors who wish to waive this requirement must be approved in writing by the 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 because without this requirement being met and verified by providing all necessary documented test results.

13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

- The Contractor is responsible for ensuring that no **Sanitary Sewer Overflow (SSO)** occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:

 - A. Identify the source of the SSO and notify **SAWS Emergency Operations Center (EOC)** immediately at (210) 233-2014. Provide the address of the spill and an estimated volume or flow.
 - B. Attempt to eliminate the source of the SSO.
 - C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
 - D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated solid materials.
 - E. Clean the affected sewer mains and remove any debris.
 - F. Clean all post-SO equipment in accordance with EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours. Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies. No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.
2. If bypass pumping is required, the Contractor shall perform such work in accordance with **SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping"**.
3. Prior to tie-ins, any shutdowns of existing force mains at any size must be coordinated with the **SAWS Construction Inspection Division** at (210) 233-5373 at least one week in advance of the work. The Contractor shall be responsible for all costs of work as related to tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to coordinate the work accordingly.
4. Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, Class 217.53 and TCEQ 290.44(e)(4)(B). Contractor shall center a 20' joint of 160 psi pressure rated PVC at the proposed water crossing.
5. **ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY:** It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade to the project's improvements. (NSPI)
6. **Spills, Overflows, or Discharges of Wastewater:** All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Construction Inspection Division at (210) 233-5373. The Contractor shall use the (GCP). This requirement applies to every spill, overflow, or discharge regardless of size.
7. Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications for Water and Sanitary Sewer Construction.
8. All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.

PHONE: (210) 301 - 5485

The map illustrates the study area, bounded by E. Ashley Rd. to the north, Loop 410 to the south, Yett Ave. to the west, and Roosevelt Ave. to the east. A large building complex is outlined, divided into Unit 1, Unit 2, and Unit 3. A shaded area within Unit 3 is labeled 'SITE' with an arrow pointing to it. A north arrow is located in the top right corner.

PHONE: (210) 301 - 5485

<i>SHEET NUMBER</i>	<i>SHEET TITLE</i>
<i>6.0</i>	<i>SANITARY SEWER COVER SHEET</i>
<i>6.1</i>	<i>OVERALL SANITARY SEWER PLAN</i>
<i>6.2</i>	<i>LINE "A" PLAN & PROFILE (SHEET 1 OF 2)</i>
<i>6.3</i>	<i>LINE "A" PLAN & PROFILE (SHEET 2 OF 2)</i>
<i>6.4</i>	<i>LINE "C" PLAN & PROFILE</i>
<i>6.5</i>	<i>LINE "B" & LINE "D" PLAN & PROFILE</i>

DEVELOPER'S NAME: KB HOME LONESTAR INC.		
DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.		
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78229
PHONE#: (210) 301 - 5485	FAX#:	TOTAL ACREAGE: 7.29 AC.
SAWS BLOCK MAP#: 162544, 162542, 162540, 164544		TOTAL EDUS: 43
TOTAL LINEAR FOOTAGE OF PIPE: <u>2,439</u>		PLAT NO.: 24-11800301
NUMBER OF LOTS: 43	SAWS JOB#: 24-XXXXX	

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

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HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SHEET TITLE:

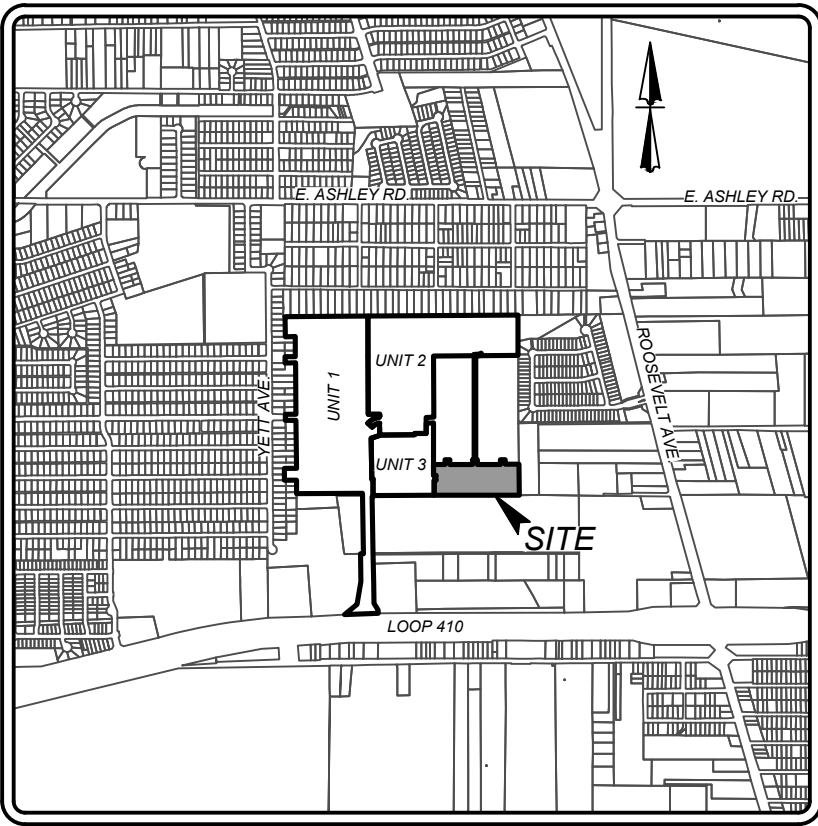
SANITARY SEWER COVER
SHEET

SHEET NUMBER:

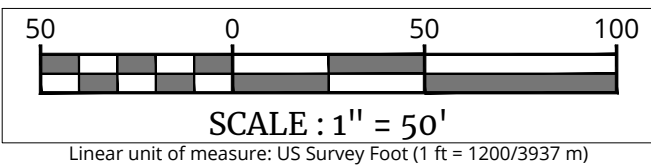
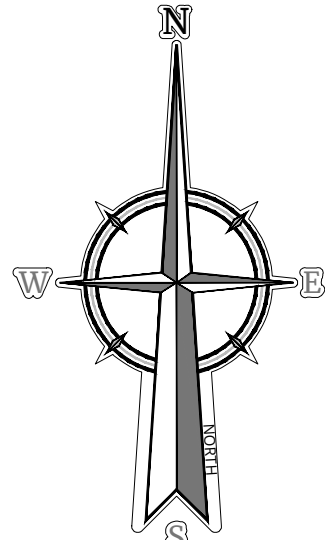
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION














Date: Friday, August 2, 2024 2:53:48 PM User: Ben Elseth
File: N:\4181508\DESIGN\CIVIL\SEWER\CVS4181508.DWG



LOCATION MAP
NOT-TO-SCALE

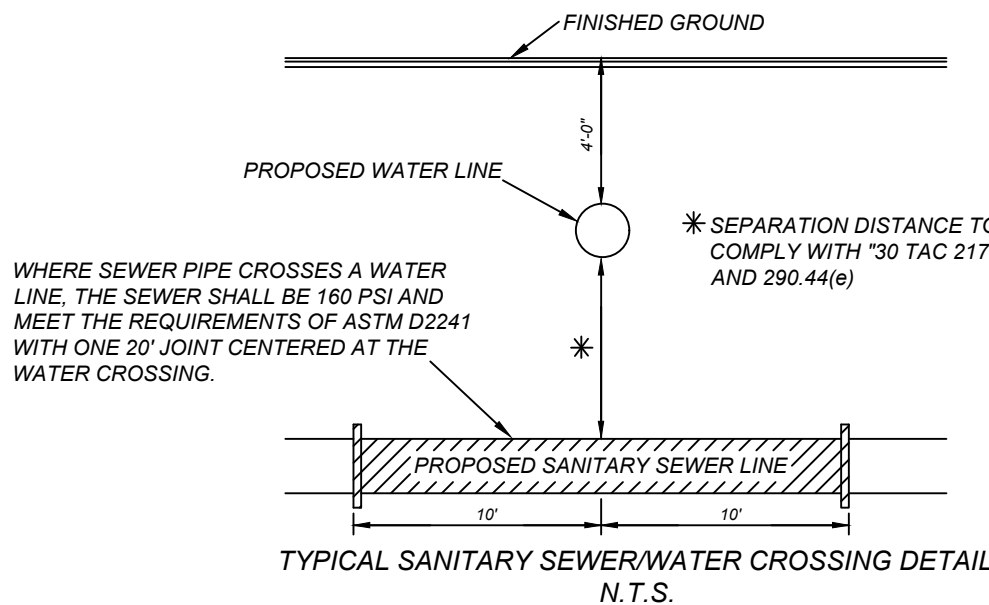


LEGEND

PROPOSED WATER MAIN	=	— W —
PROPOSED WATER SERVICE & METER BOX	=	
PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX	=	
PROPOSED FIRE HYDRANT	=	
PROPOSED WATER VALVE	=	
PROPOSED SANITARY SEWER MAIN	=	— SS — 
PROPOSED SANITARY SEWER MANHOLE	=	—  —
PROPOSED SANITARY SEWER LATERAL	=	—  —
PROPOSED ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT	=	E. G. T. V. E
EXISTING WATER MAIN	=	— E W —
EXISTING FIRE HYDRANT	=	
EXISTING WATER VALVE	=	
EXISTING SANITARY SEWER MAIN	=	— E SS — 
EXISTING SANITARY SEWER MANHOLE	=	—  —
EXISTING OVERHEAD ELECTRIC WIRE/POLE	=	— OHE —  — OHE —
EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	—  — OHE —

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, 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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH
WATERTIGHT RINGS AND COVERS. THESE
MANHOLES MUST BE VENTED PER SAWS DETAIL
DD852-02.



MATCH LINE "A"
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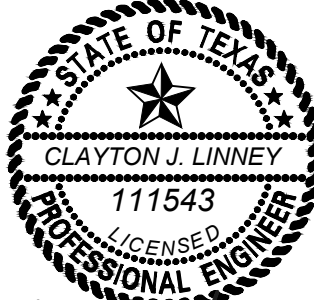
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100	11	1	1



Clayton Henry
8/27/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS



Engineering
& Design

SAN ANTONIO (KF)
3421 Paesanos
Parkway
San Antonio, TX 782
Phone: 210.979.84
COLLIERS ENGINEERING & DESIGN
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY: DF	CHECKED BY: CG
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PROJECT NUMBER: 418-15-08	DRAWING NAME: QS4181508
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SHEET TITLE:

OVERALL SANITARY SEWER
PLAN

SHEET NUMBER

6.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

Date: Wednesday, August 21, 2024 2:49:50 PM User: Ben Elseth
File: N:\4181508\DESIGN\CIVIL\SEWER\IOS4181508.DWG

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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

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

NOTE:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. 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 SHEET THIS, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. SEE THIS SHEET FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SOR 26.
5. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

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.

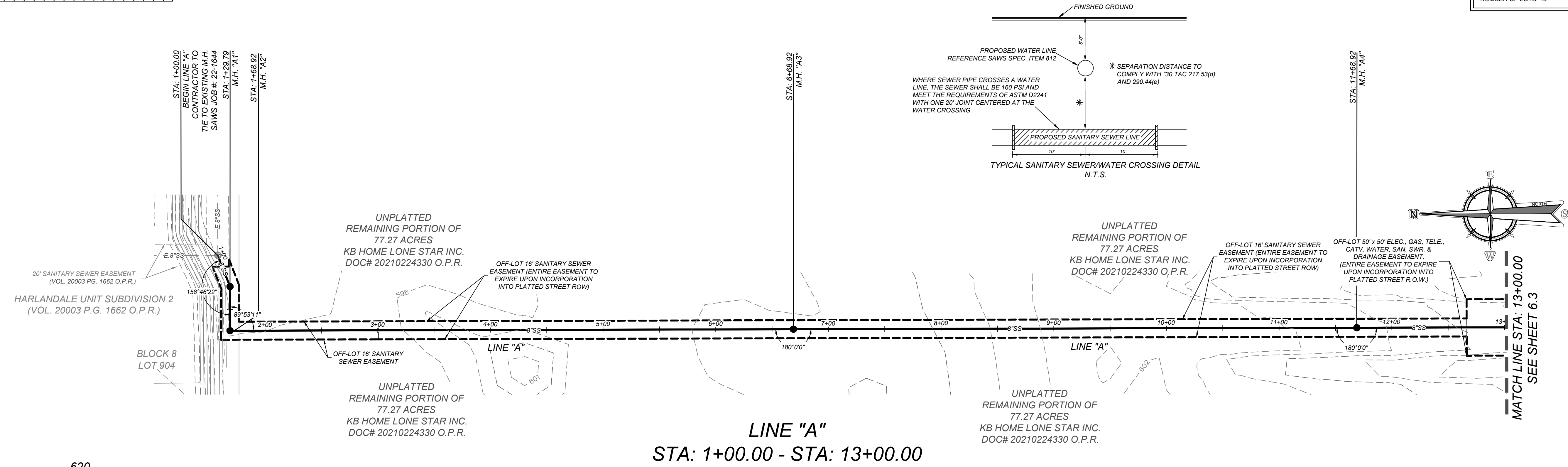
REFERENCE S.A.W.S. SEWER DETAILS

DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH
DD-804-02 TRENCH COMPACTION DETAIL
DD-949-01 GO, NO GO DEFLECTION TESTING MANHOLE
DD-852-01 STANDARD PRECAST MANHOLE
DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)
DD-852-03 MANHOLE RING ENCASEMENT DETAIL
DD-854-ERDZ HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)
DD-858-01 TYPICAL CONCRETE ENCASEMENT DETAILS
DD-858-02 TYPICAL CONCRETE DETAILS
DD-860-01 TYPICAL VERTICAL STACK DETAILS
DD-855-06 PRECAST MANHOLE BASE 45° ANGLE
DD-852-08 DROP MANHOLE DETAIL
DD-852-07 MANHOLE RING AND COVER DETAIL

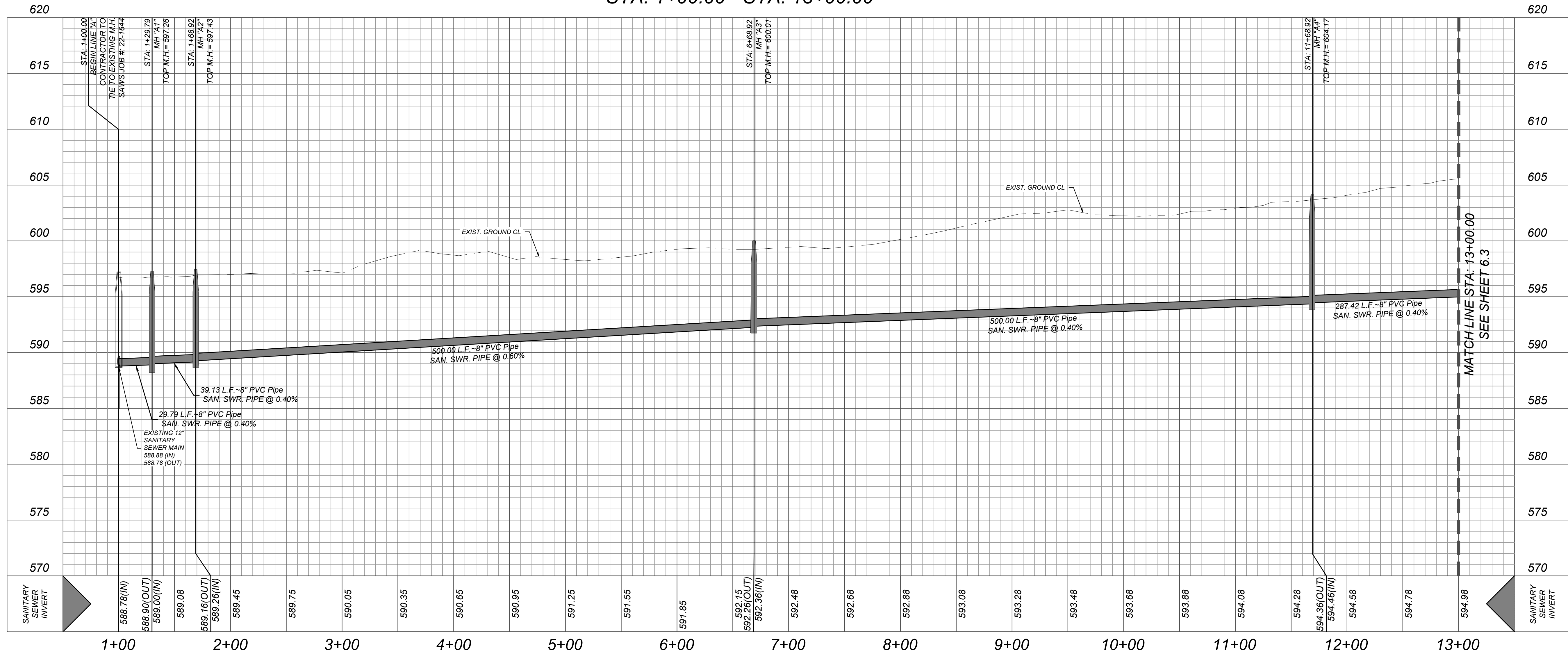
SEWER:

Lower - Central Sewershed - Dos Rios/Leon Creek

DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301 - 5485 FAX#: TOTAL ACREAGE: 7.29 AC.
SAWS BLOCK MAP#: 162544, 162542, 162540, 164544 TOTAL EDUS: 43
TOTAL LINEAR FOOTAGE OF PIPE: 2,439 PLAT NO.: 24-11800301
NUMBER OF LOTS: 43 SAWS JOB#: 24-XXXX



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



Date: Wednesday, August 21, 2024 3:44 PM User: Ben Elzagh
File: M:\4181600\DESIGN\CVL\SEWER\SSPP4181508.DWG

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HARLANDE UNIT 5A

PLAT# 24-11800301

SAN ANTONIO TEXAS

Colliers

Engineering & Design

SAN ANTONIO (KFW)

3421 Paesanos Parkway

San Antonio, TX 78231

Phone: 210.979.8444

COLLIERS ENGINEERING & DESIGN, INC.

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TBPLS Form# 10194550

SCALE:

DATE:

DRAWN BY:

CHECKED BY:

DF

CG

PROJECT NUMBER:

DRAWING NAME:

SSPP4181508

SHEET TITLE:

LINE "A" PLAN & PROFILE (SHEET 1 OF 2)

SHEET NUMBER:

6.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATER TIGHT, WITH WATER TIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL D0852-02.

TRENCH EXCAVATION SAFETY PROTECTION

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

REFERENCE S.A.W.S. SEWER DETAILS

DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH
DD-804-02 TRENCH COMPACTION DETAIL
DD-849-01 CO. NO GO DEFLECTION TESTING MANDREL
DD-852-01 STANDARD PRECAST MANHOLE
DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)
DD-852-03 MANHOLE RING ENCASUREMENT DETAIL
DD-854-ER2D HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)
DD-855-01 TYPICAL CONCRETE ENCASUREMENT DETAILS
DD-858-02 TYPICAL CONCRETE DETAILS
DD-860-01 TYPICAL VERTICAL STACK DETAILS
DD-852-06 PRECAST MANHOLE BASE 45° ANGLE
DD-852-08 DROP MANHOLE DETAIL
DD-852-07 MANHOLE RING AND COVER DETAIL

NOTE:

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- 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 SHEET THIS, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 26.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
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SEWER:

Lower - Central Sewershed - Dos Rios/Leon Creek

DEVELOPER'S NAME: KB HOME LONESTAR INC.

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229

PHONE#: (210) 301 - 5485 FAX#: TOTAL ACREAGE: 7.29 AC.

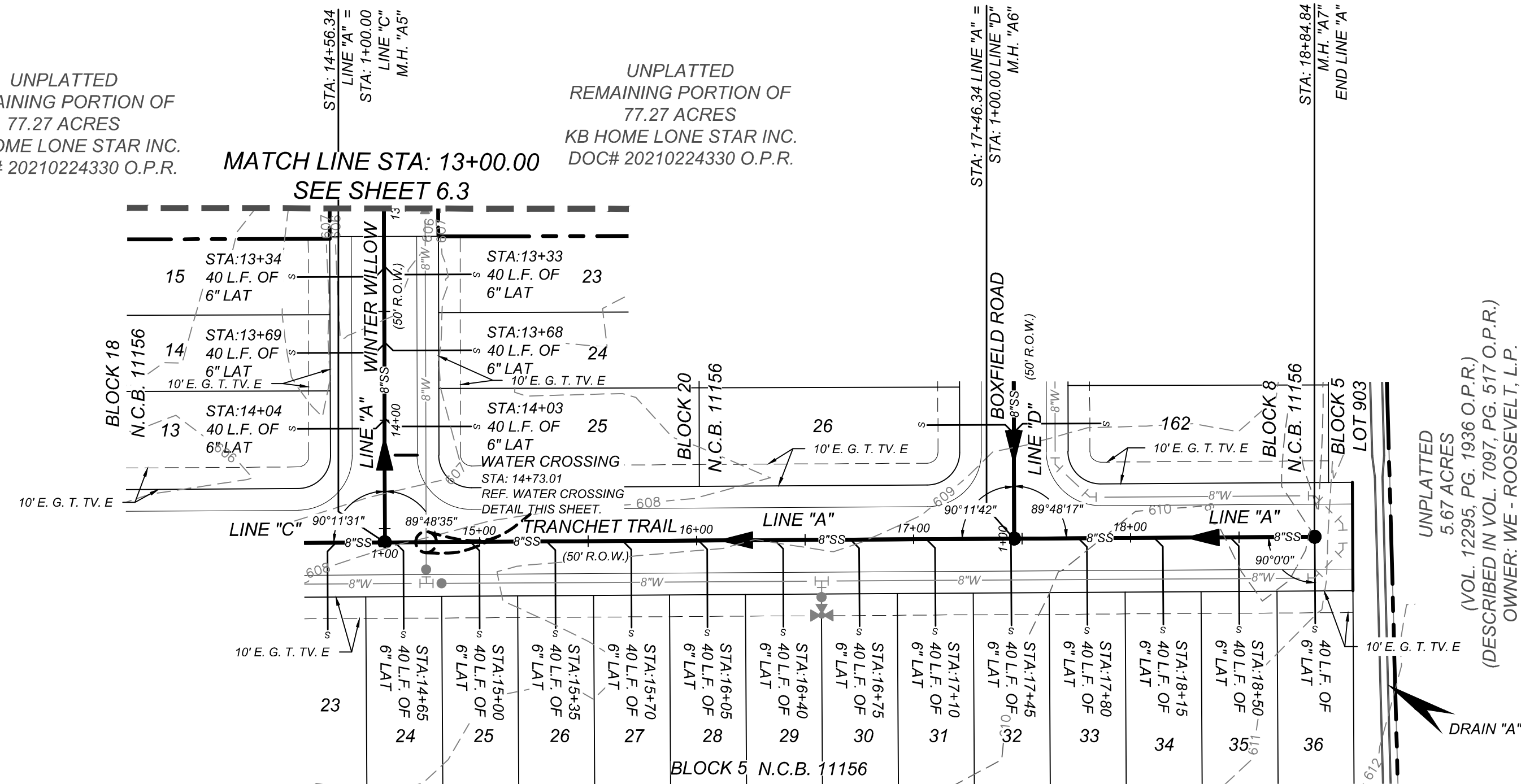
SAWS BLOCK MAP#: 162544, 162542, 162540, 164544 TOTAL EDU'S: 43

TOTAL LINEAR FOOTAGE OF PIPE: 2,439 PLAT NO.: 24-11800301

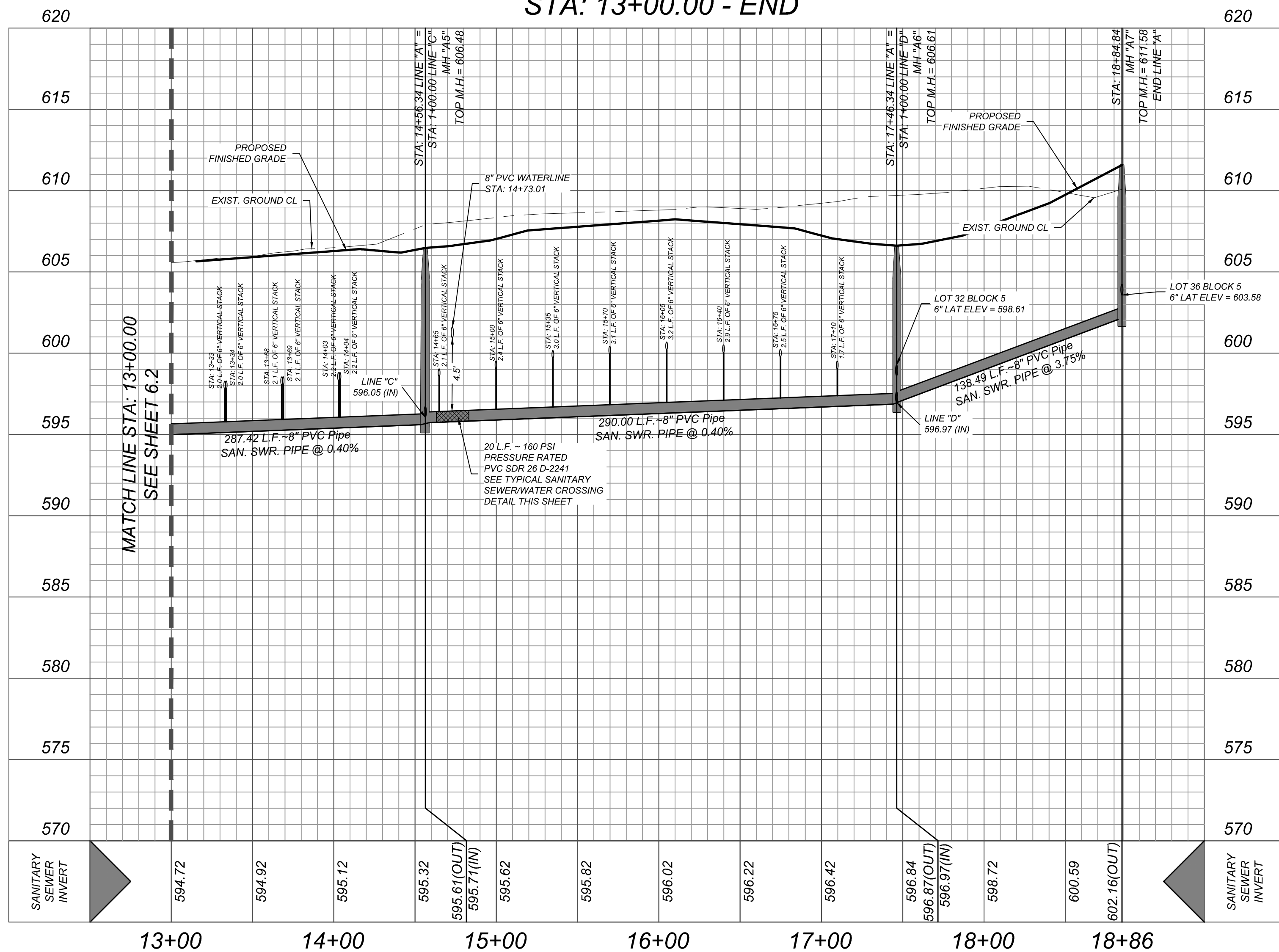
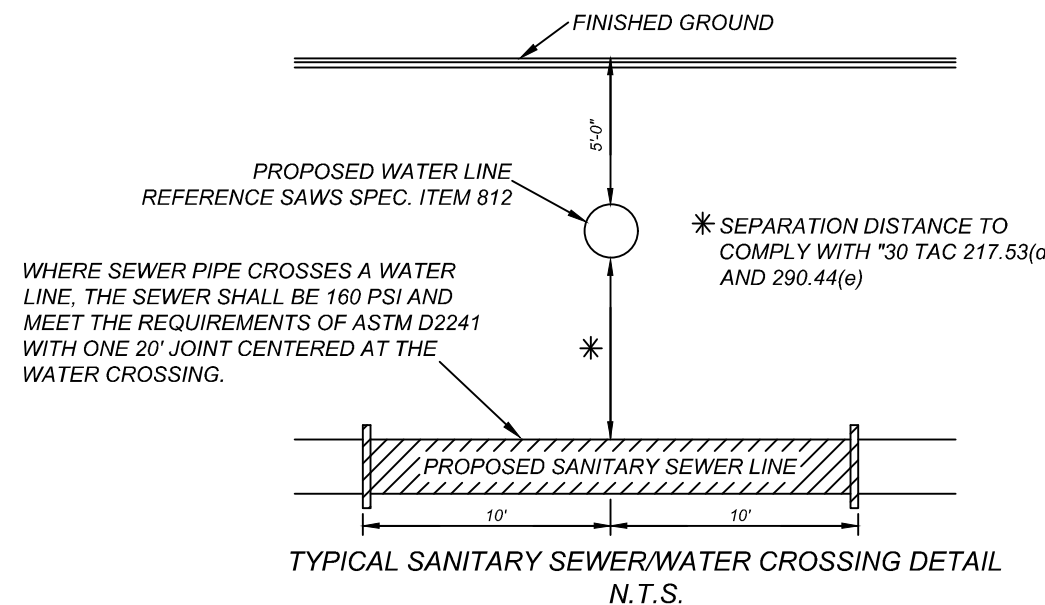
NUMBER OF LOTS: 43 SAWS JOB#: 24-XXXX

UNPLATTED
REMAINING PORTION OF
77.27 ACRES
KB HOME LONE STAR INC.
DOC# 20210224330 O.P.R.

UNPLATTED
REMAINING PORTION OF
77.27 ACRES
KB HOME LONE STAR INC.
DOC# 20210224330 O.P.R.



LINE "A"
STA: 13+00.00 - END



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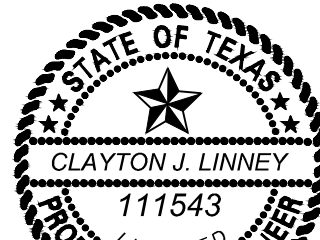
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Clayton J. Linney
8/21/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS

Colliers

Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBD'S Permit: 10194550

SCALE: DATE: DRAWN BY: CHECKED BY:
DF CG

PROJECT NUMBER: 418-15-08 DRAWING NAME: SSPP4181508

SHEET TITLE:
LINE "A" PLAN & PROFILE
(SHEET 2 OF 2)

SHEET NUMBER:
6.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MANHOLE NOTE:
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DD852-02.

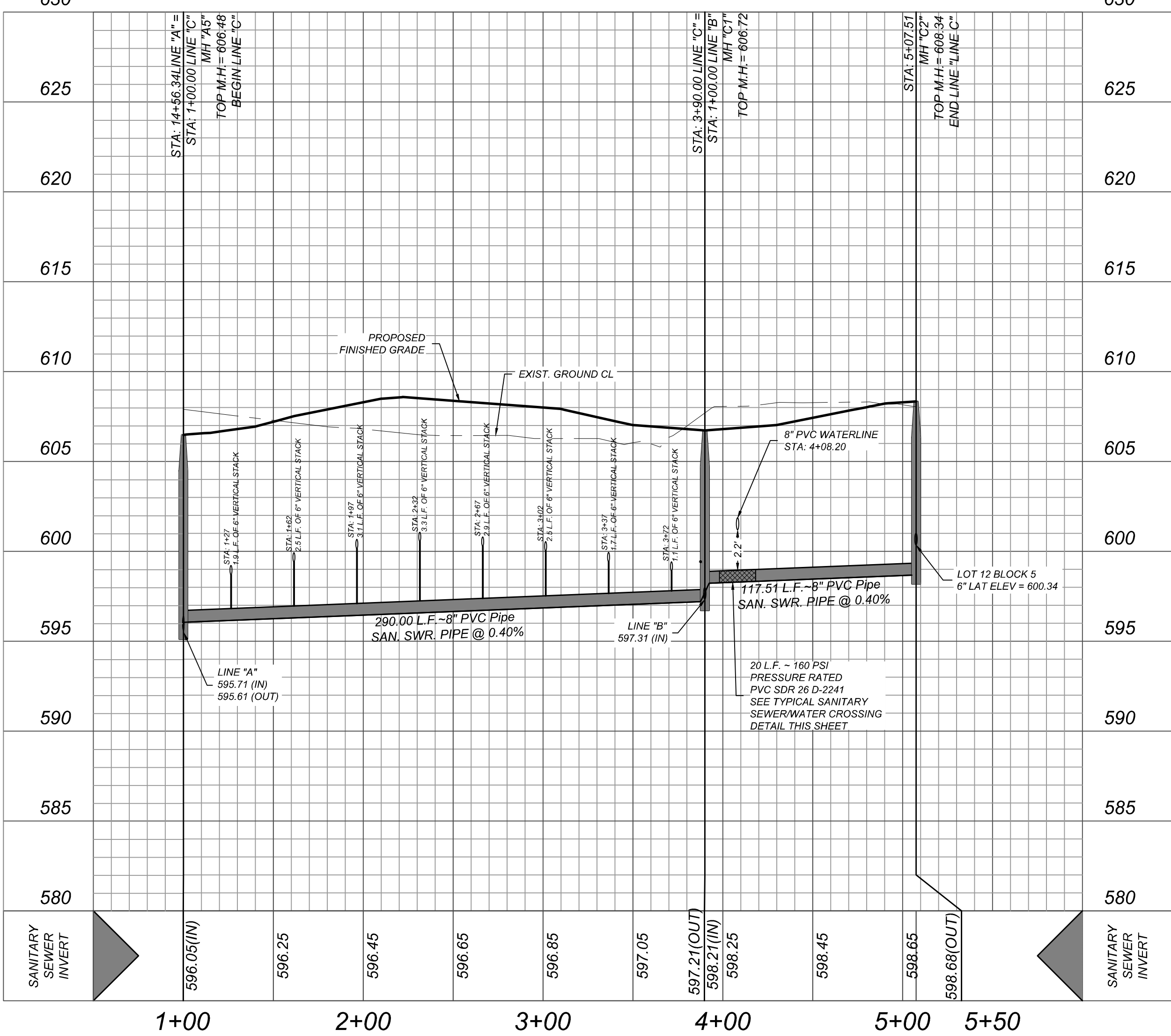
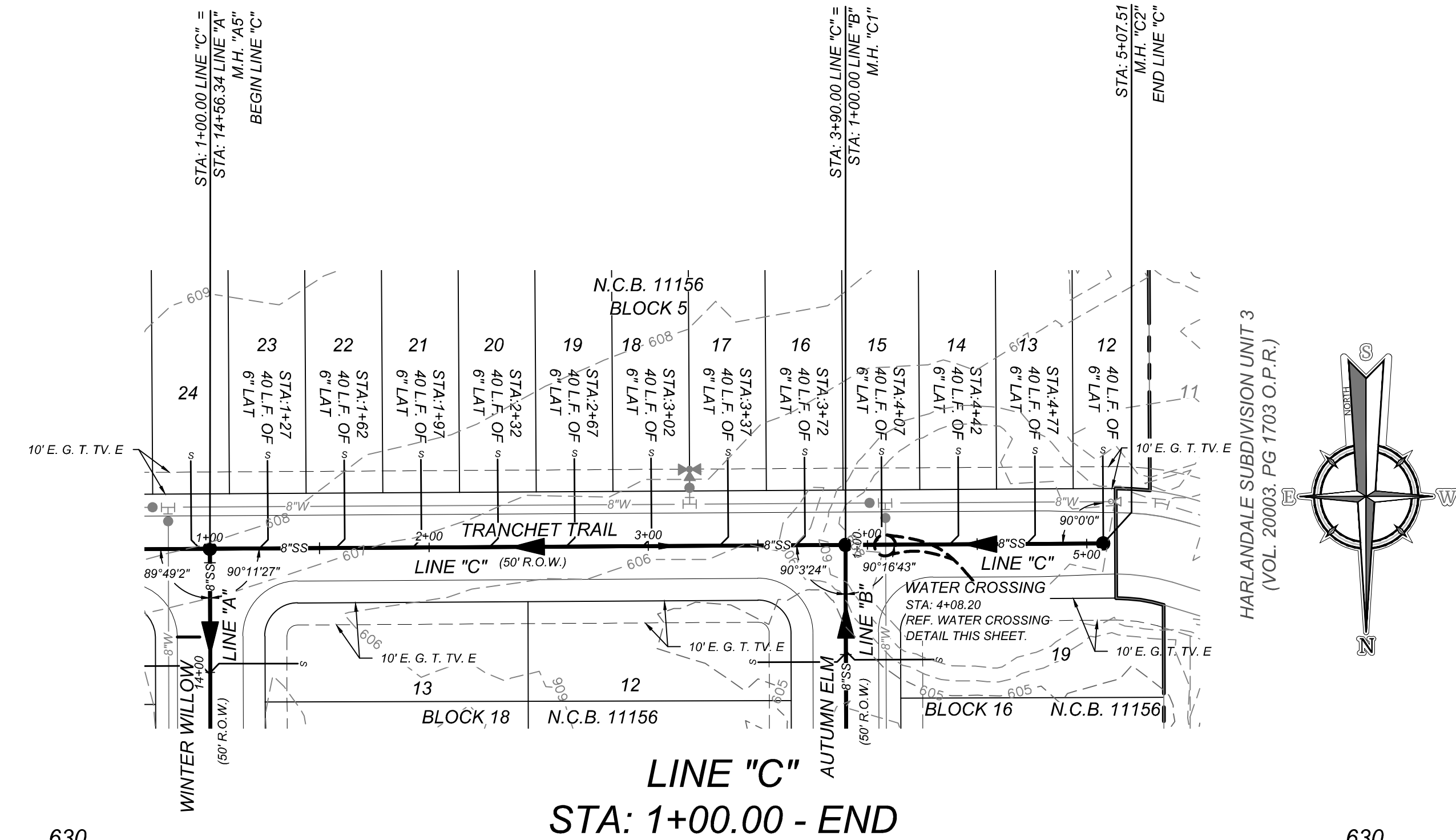
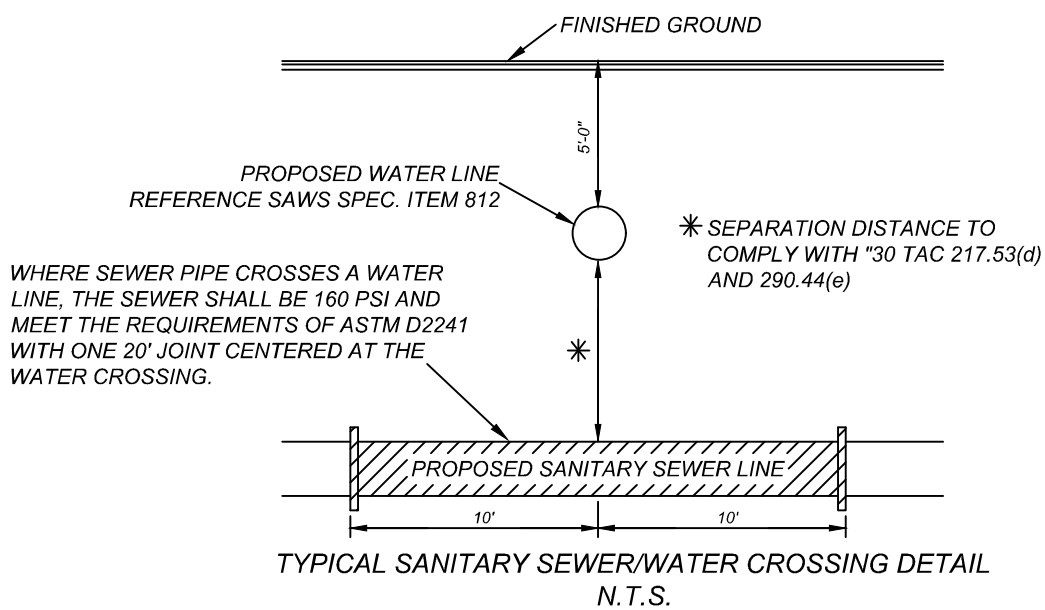
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNED/TECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL TRENCHES AND ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, CONSTRUCTION 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 CONSULTANT SHALL BE RESPONSIBLE FOR THE TRENCH SAFETY PROGRAMS AND/OR PROCEDURES THAT SHALL BE DEVELOPED, OVERSEEN, THE DIRECTION AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. SEWER PIPE WHERE WATER LINE CROSSINGS SHALL MEET THE REQUIREMENTS OF SDG&A 20241. CONTRACTOR SHALL CENTER A 20 FOOT FOOT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET THIS, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. SEE THIS SHEET FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDG&A 20241.
5. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

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 PER 100' OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 IN. 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.

DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH
DD-804-02 TRENCH COMPACTION DETAIL
DD-848-01 GO, NO GO DEFLECTION TESTING MANHOLE
DD-852-01 STANDARD PRECAST MANHOLE
DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)
DD-852-03 MANHOLE RING ENCASEMENT DETAIL
DD-854-ER2D HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)
DD-858-01 TYPICAL CONCRETE ENCASEMENT DETAILS
DD-858-02 TYPICAL CONCRETE DETAILS
DD-860-01 TYPICAL VERTICAL STACK DETAILS
DD-852-06 PRECAST MANHOLE BASE 45° ANGLE
DD-852-08 DROP MANHOLE DETAIL
DD-852-07 MANHOLE RING AND COVER DETAIL

DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301 - 5485 FAX#: TOTAL ACREAGE: 7.29 AC.
SAWS BLOCK MAP#: 162544, 162542, 162540, 164544 TOTAL EDUS: 43
TOTAL LINEAR FOOTAGE OF PIPE: 2,439 PLAT NO.: 24-11800301
NUMBER OF LOTS: 43 SAWS JOB#: 24-XXXX

[illegible]

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Tuesday, August 27, 2024 2:33:27 PM User: Ben Elseth
File: N:\418\1508\DESIGN\CIVIL\SEWER\SSPP4181508.DWG

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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

TRENCH EXCAVATION SAFETY PROTECTION

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

NOTE:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
- 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 SHEET THIS, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SOR 26.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

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.

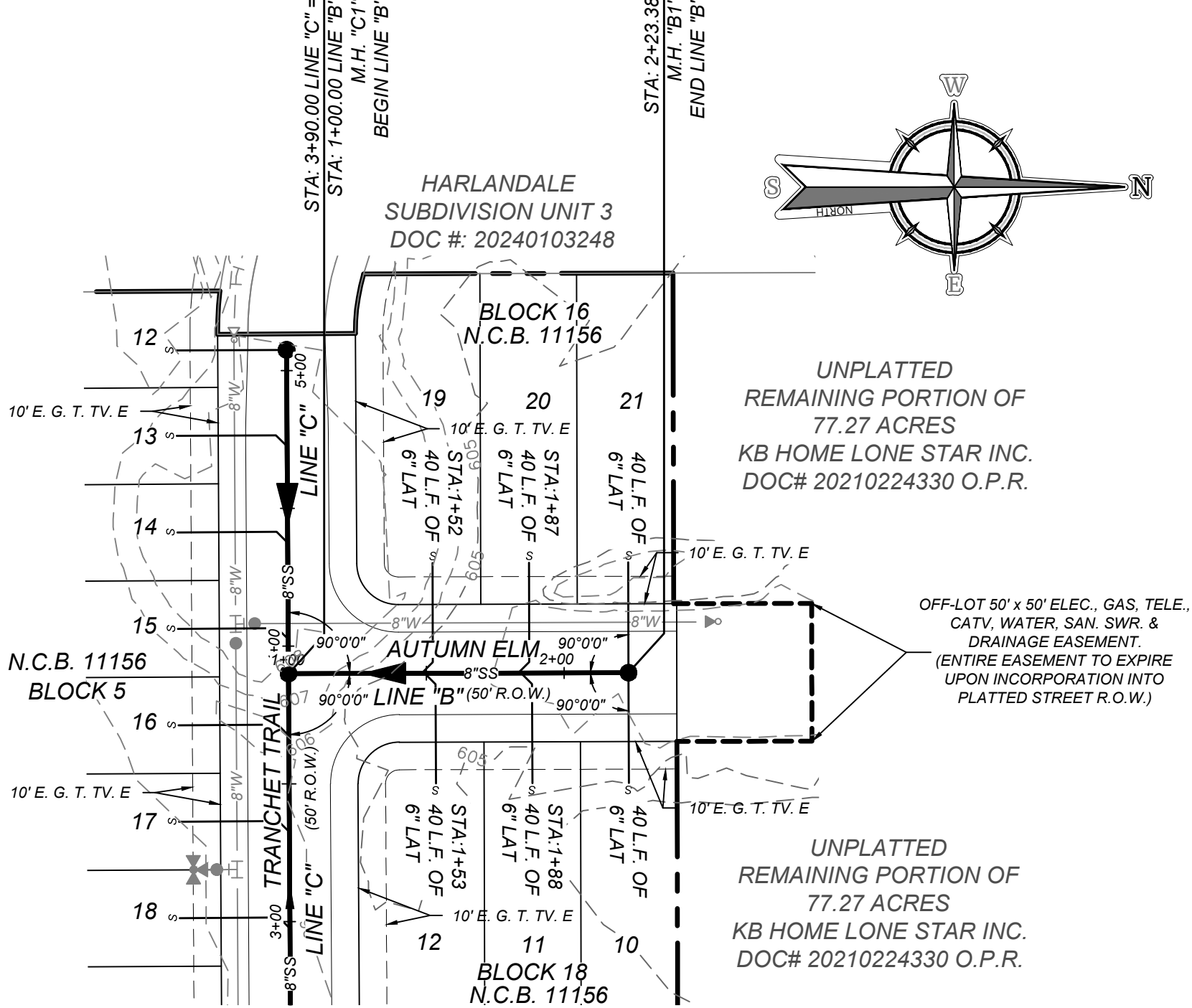
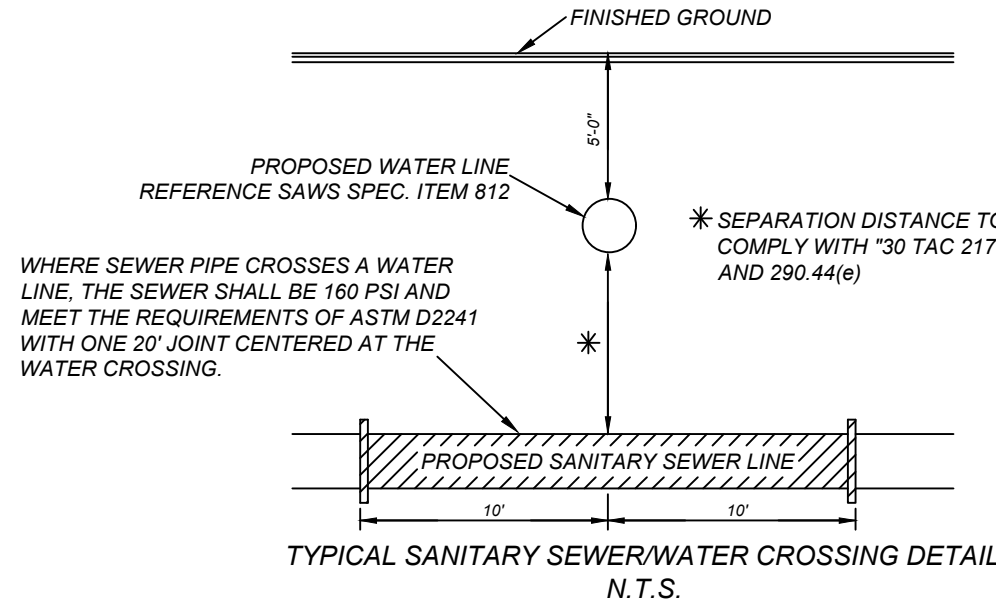
REFERENCE S.A.W.S. SEWER DETAILS

DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH
DD-804-02 TRENCH COMPACTION DETAIL
DD-848-01 GO, NO GO DEFLECTION TESTING MANDREL
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DD-852-08 PRECAST MANHOLE BASE 45° ANGLE
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SEWER:

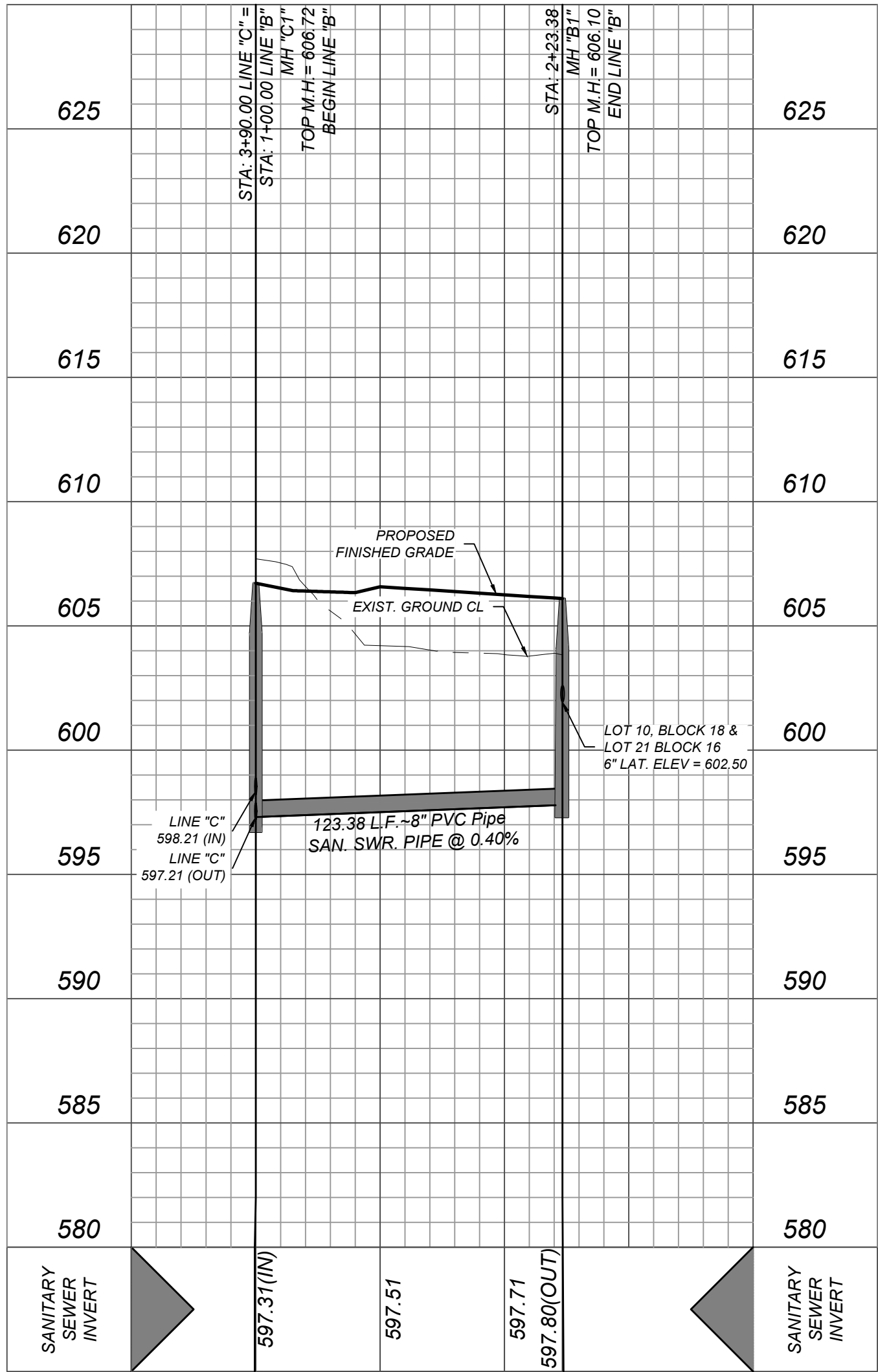
Lower - Central Sewershed - Dos Rios/Leon Creek

DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301 - 5485 FAX#: TOTAL ACREAGE: 7.29 AC.
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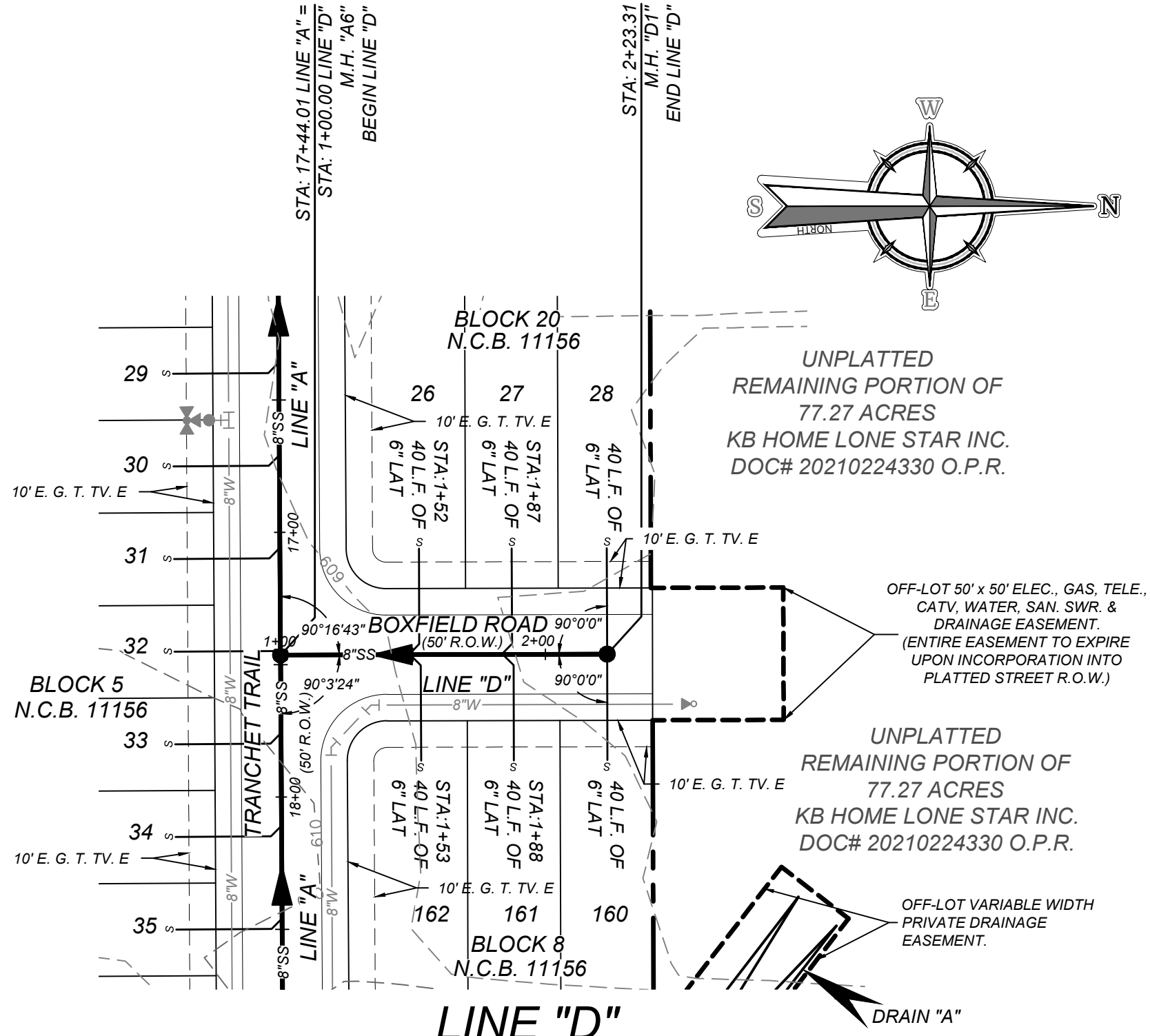


LINE "B"

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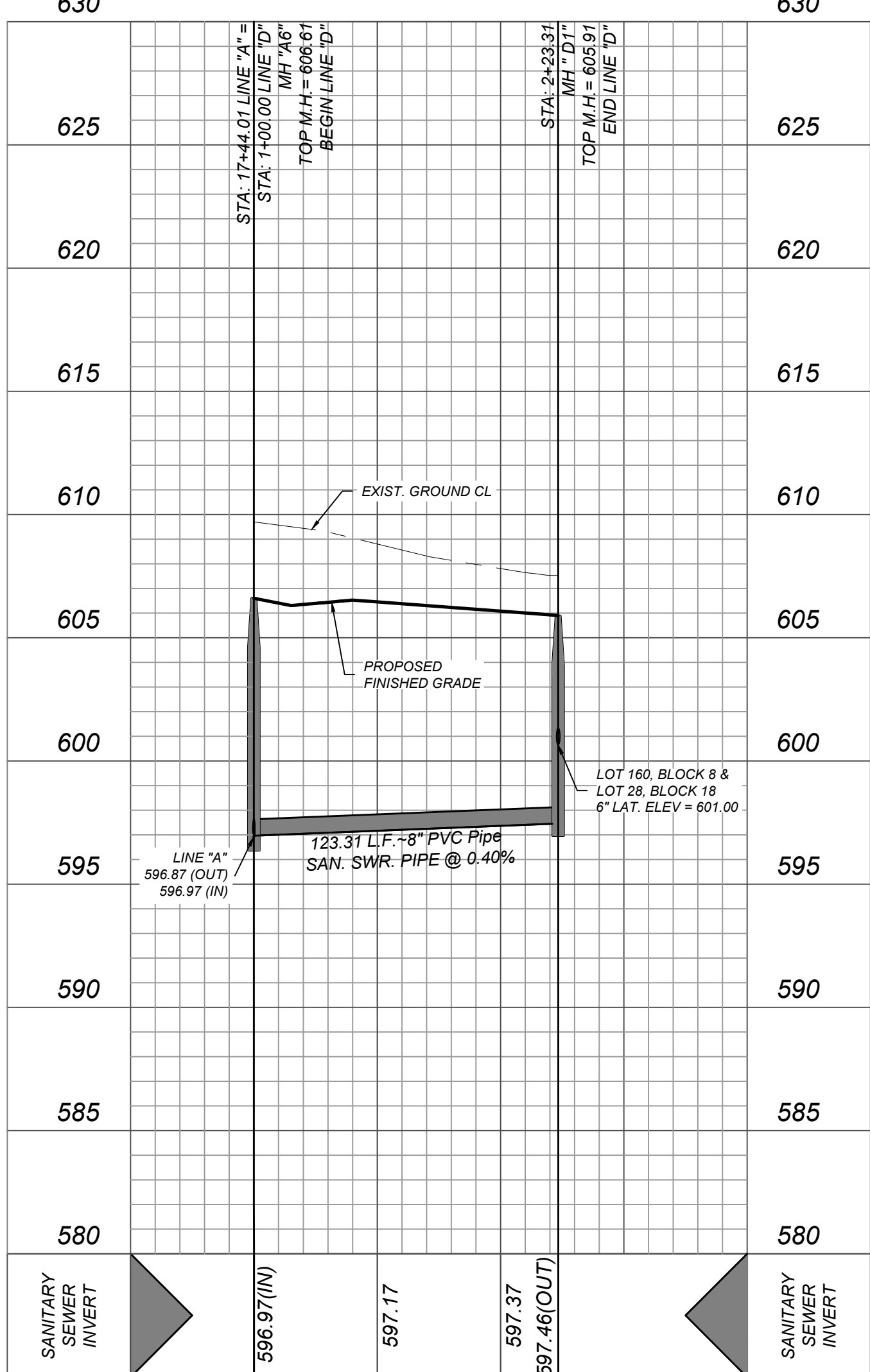


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LINE "D"

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Formerly known as

KFW



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ALL STATES REQUIRE NOTIFICATION OF
EXCAVATIONS, DISBURSERS, OR ANY PERSON
PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN ANY STATE

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

REV. DATE. DRAWN BY. DESCRIPTION.



Clayton J. Linney
8/21/2024

PRELIMINARY

FOR
HARLANDALE
SUBDIVISION UNIT 5A
PLAT# 24-11800301

SAN ANTONIO
TEXAS



Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBP's Firm# P-15009
TBP's Firm# 10194550

SCALE: DATE: DRAWN BY: CHECKED BY:
PROJECT NUMBER: 418-15-08 DRAWING NAME: SPP4181508
SHEET TITLE: LINE "B" & LINE "D" PLAN & PROFILE
SHEET NUMBER: 6.5

SAWS STANDARD GENERAL CONSTRUCTION NOTES
ASSOCIATED WITH 2021 SAWS STANDARD SPECS
Updated December 14, 2021

General Section

1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:

- A. *Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System"; Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water"; TAC Title 30 Part 1 Chapter 280.*
- B. *Current "DOTDOT" Standard Specifications for Construction of Highways, Streets and Drainage".*
- C. *Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".*
- D. *Current City of San Antonio "Standard Specifications for Public Works Construction".*
- E. *Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).*

- A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for the San Antonio Wastewater System," Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water," TAC Title 30 Part 1 Chapter 290.
- B. Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
- C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
- D. Current City of San Antonio "Standard Specifications for Public Works Construction".
- E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and the contractor shall be responsible for coordinating and communicating with the consultant 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.
3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, <http://www.saws.org/business/center/specs>. Unless otherwise noted within the design plans.
4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to be notified affected home residents and/or property owners 48 hours prior to beginning any work.
5. Location and depth of existing utilities and service laterals shown on the plans are intended to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for the contractor to request pipe location markers on SAWS facilities. The following information are supplied for verification purposes:
SAWS Utility Locations: <http://www.saws.org/Service/Locates>
COSA Drilling: (210) 207-0724 or (210) 207-6026
COSA Traffic Signal Control: (210) 207-3551
COSA Traffic Signal Detectors: (210) 207-3951
Texas State Wide One Call Locator 1-800-455-6005 or 811
7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
8. All work in Texas Department of Transportation (TxDOT) and/or Bear County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to cnstorkweek@saaws.org. Weekend Work: Contractors are required to notify the SAWS Construction Inspection Department 48 hours in advance to request weekend work. Request should be sent to cnstorkweek@saaws.org. Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
12. Compaction note (Item 804): the contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. A minimum of 3 tests will be required for each trench section selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division

1. The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:
 - A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. Provide the address of the spill and an estimated volume of flow.
 - B. Attempt to eliminate the source of the SSO.
 - C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
 - D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.
 - E. Clean the affected sewer mains and remove any debris.
- F. Meet all post-SO requirements of the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours. Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, for any and all Federal, State or Local Agencies. No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.
2. If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".
3. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the tie-in. The Contractor shall be responsible for the sequence of work as related to the tie-in; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to conduct the work accordingly.
4. Sewer pipe where water line cross shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44a(e)(4). Contractor shall center a joint of 20' joint 160 psi pressure rated PVC at the proposed water crossing.
5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements. (NSPI)
6. Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Construction Inspection Division at (210) 233-2973. (NSPI)
(GCP). This requirement applies to every spill, overflow, or discharge regardless of size.
7. Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications for Water and Sanitary Sewer Construction.
8. All PVC pipe over 14' feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.

The map illustrates the study area's context. E. Ashley Rd. runs horizontally across the top. Loop 410 runs horizontally across the bottom. Yett Ave. runs vertically on the left, and Roosevelt Ave. runs vertically on the right. A large building complex is outlined, divided into Unit 1, Unit 2, and Unit 3. A shaded area within Unit 3 is labeled 'SITE' with an arrow pointing to it. A north arrow is located in the top right corner.

OWNER INFORMATION
KB HOMES
4800 FREDERICKSBURG RD.
SAN ANTONIO, TX 78229
PHONE: (210) 301 - 5485

SHEET NUMBER	SHEET TITLE
7.0	WATER COVER SHEET
7.1	WATER DISTRIBUTION PLAN

REV	DATE	DRAWN BY	DESCRIPTION
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SAN ANTONIO
TEXAS

SCALE:	DATE:	DRAWN BY: DF	CHECKED BY: CG
PROJECT NUMBER: 418-15-08		DRAWING NAME: CVOW4181508	

SHEET NUMBER:
7.0

DEVELOPER'S NAME: KB HOME LONESTAR INC.		
DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.		
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78229
PHONE#: (210) 301 - 5485	FAX#:	TOTAL ACREAGE: 7.29 AC.
SAWS BLOCK MAP#: 162544, 162542, 162540, 164544		TOTAL EDU'S: 43
TOTAL LINEAR FOOTAGE OF PIPE: <u>1,490</u> L.F. 8" C-900 PVC		PLAT NO.: 24-11800301
NUMBER OF LOTS: 43	SAWS JOB#: 24-XXXX	

Date: Friday, August 2, 2024 2:54:42 PM User: Ben Elseth
File: N:\418\1508\DESIGN\CIVIL\WATERC\WOW4181508.DWG

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION



