

VERAMENDI PRECINCT 19 UNIT 1

CONSTRUCTION DOCUMENT SET NEW BRAUNFELS, TEXAS 78132

COMAL COUNTY

NBU #: W-236397 / WW-236398

TCEQ SCS # RN111965133

CONB #: PI2023-0081

NBU NOTES:

- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER AND WASTEWATER IMPROVEMENTS MUST COMPLY WITH CRITERIA FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, THE CITY OF NEW BRAUNFELS, NBU W&WW DESIGN CRITERIA, AND OTHER GOVERNING ENTITY ORDINANCES OR CODES, AND SOUND ENGINEERING JUDGEMENT.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR THE NBU WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE/LATERAL/LEAD FROM THE CUSTOMER'S METER, BACKFLOW PREVENTER, OR EASEMENT EDGE. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, PERMITTING, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR A NBU WASTEWATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL FROM THE CUSTOMER'S CLEAN OUT OR PROPERTY LINE, WHICHEVER IS NEARER. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.
- WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSED IS PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED, THE CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

NBU AS-BUILT REQUIREMENTS:

NBU REQUIRES GPS POINTS FOR CERTAIN WATER, WASTEWATER AND ELECTRIC IMPROVEMENTS. SOME OF THIS INFORMATION/DATA MUST BE PERFORMED DURING CONSTRUCTION, PRIOR TO BACKFILLING OPERATIONS. CONTRACTOR SHALL COORDINATE WITH NBU INSPECTOR TO VERIFY ANY ADDITIONAL ITEMS NOT SHOWN BELOW THAT NEED TO BE GPS LOCATED AND THE SURVEY/DELIVERY REQUIREMENTS REGARDING THIS INFORMATION.

GPS POINTS SHALL BE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER, A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE. THE ELECTRIC GPS POINTS SHALL BE TO MAP GRADE.

WATER
VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
HORIZONTAL BENDS PRIOR TO BACKFILL
TEES PRIOR TO BACKFILL
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
FIRE HYDRANTS (TOP OF FLANGE)
VALVES
METERS (TOP CENTER OF BOX)
BLOW OFF ASSEMBLY
CORNER SLAB OF WATER TANK & GATE VALVE ON TANK

WASTEWATER
MANHOLES (AND INVERT DEPTH(S))
CLEANOUTS
CORNER SLAB OF LIFT STATION

ELECTRIC
POLES
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
PULL BOXES
STREET LIGHTS
SEE NBU'S "CAD/GPS DELIVERABLES" ON NBU WEBSITE AT NBUGTEXAS.COM FOR COMPLETE DETAILS AND REQUIREMENTS.

NOTES:

- TYPE 3 DEVELOPMENT.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER RECORD.
- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- THIS PROJECT IS WITHIN THE EDWARDS AQUIFER JURISDICTIONAL ZONES.
- NO PORTION OF THIS PROJECT IS WITHIN AN INDICATED SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE FEMA FIRI MAP NO.4809100435F EFFECTIVE DATE 9/2/2009.
- GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- FOLLOWING PERMITS ARE REQUIRED PRIOR TO START OF CONSTRUCTION:
 - CITY OF NEW BRAUNFELS PUBLIC INFRASTRUCTURE PERMIT
 - NEW BRAUNFELS UTILITY APPROVAL
 - TCEQ WATER POLLUTION ABATEMENT PLAN APPROVAL
 - TCEQ SEWAGE COLLECTION SYSTEM APPROVAL

BENCHMARK INFORMATION:

CONTROL POINT 1: SET $\frac{5}{8}$ " IRON ROD W/ ALUMINUM CAP STAMPED
"LJA SURVEYING"
NORTHING: 13820751.12
EASTING: 2242380.08
ELEVATION: 732.75'

CONTROL POINT 2: SET $\frac{5}{8}$ " IRON ROD W/ ALUMINUM CAP STAMPED
"LJA SURVEYING"
NORTHING: 13820380.93
EASTING: 2243004.12
ELEVATION: 738.93'

CONTROL POINT 3: SET $\frac{5}{8}$ " IRON ROD W/ ALUMINUM CAP STAMPED
"LJA SURVEYING"
NORTHING: 13819426.13
EASTING: 2241536.34
ELEVATION: 723.80'

ALL COORDINATES SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT EPOCH 2010.00. COORDINATES ARE IN SURFACE VALUES, AND MAY BE CONVERTED TO GRID BY MULTIPLYING THE SURFACE ADJUSTMENT FACTOR OF 0.999870017.

ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), GEOID 18.

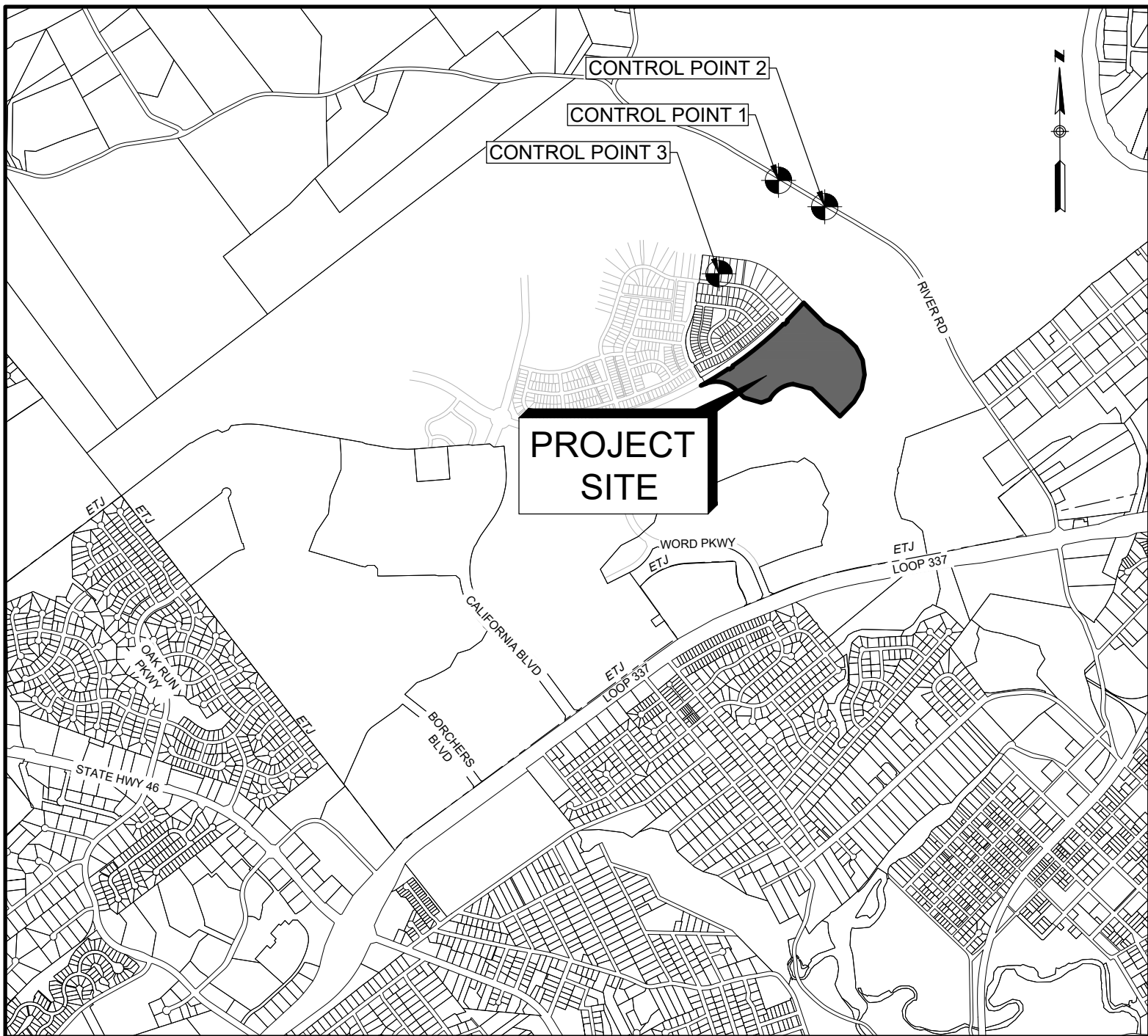
SURVEY OBSERVATIONS WERE MADE ON THE GROUND USING A COMBINATION OF RTK AND STATIC NETWORKS.

THIS INFORMATION PROVIDED BY LJA SURVEYING.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



Know what's below.
Call before you dig.



LOCATION MAP

1" = 2000'

SUBMITTAL DATE: NOVEMBER 2023

PROPERTY DESCRIPTION

BEING 38.4273 ACRES OF LAND, OUT OF THE 244.440 ACRE TRACT DESCRIBED IN DOCUMENT NUMBER 202206035304 IN THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, IN THE JAN MARTIN VERAMENDI SURVEY NO. 2, ABSTRACT 3, COMAL COUNTY, TEXAS.

DEVELOPER: VERAMENDI PE - EMERALD, LLC
387 W. MILL STREET, SUITE 200
NEW BRAUNFELS, TX 78132
CONTACT: GARRETT MECHLER
TELEPHONE: (830)643-5633

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA FLORES, P.E.
PHONE # (210) 503-2700
LJA.COM

SURVEYOR: LJA SURVEYING
9830 COLONNADE BOULEVARD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: GORDON ANDERSON
PHONE # (210) 503-2700

CONTOUR DATA: FIELD SURVEY BY PAPE DAWSON



LJA JOB NO. SA3856.0401

SHEET NO.	DESCRIPTION
1	COVER
2	GENERAL NOTES
3	PLAT (SHEET 1 OF 3)
4	PLAT (SHEET 2 OF 3)
5	PLAT (SHEET 3 OF 3)
6	EXISTING DRAINAGE AREA MAP
7	PROPOSED - ULTIMATE DRAINAGE AREA MAP
8	OVERALL UTILITY LAYOUT
9	S.S.L. 'D3' &'G1' PLAN & PROFILE STA. 1+00 TO END
10	S.S.L. 'F1' & 'F2' PLAN & PROFILE STA. 1+00 TO END
11	WATER QUALITY POND G
12	BASIN DETAILS
13	DRAINAGE DETAILS (SHEET 1 OF 3)
14	DRAINAGE DETAILS (SHEET 2 OF 3)
15	DRAINAGE DETAILS (SHEET 3 OF 3)
16	SENDERO VW PLAN & PROFILE STA 1+00 TO 8+50
17	SENDERO VW PLAN & PROFILE STA 8+50 TO END
18	BELLOTA TRL PLAN & PROFILE STA 1+00 TO 9+00
19	BELLOTA TRL PLAN & PROFILE STA 9+00 TO END
20	LENTISCO ST PLAN & PROFILE STA 1+00 TO 6+50
21	LENTISCO ST PLAN & PROFILE STA 6+50 TO END
22	PAMILLA AVE PLAN & PROFILE STA 1+00 TO END
23	STREET DETAILS (SHEET 1 OF 2)
24	STREET DETAILS (SHEET 2 OF 2)
25	SIGNAGE LAYOUT (SHEET 1 OF 3)
26	SIGNAGE LAYOUT (SHEET 2 OF 3)
27	SIGNAGE LAYOUT (SHEET 3 OF 3)
28	SIGNAGE DETAILS (SHEET 1 OF 2)
29	SIGNAGE DETAILS (SHEET 2 OF 2)
30	UTILITY LAYOUT (SHEET 1 OF 3)
31	UTILITY LAYOUT (SHEET 2 OF 3)
32	UTILITY LAYOUT (SHEET 3 OF 3)
33	WATER LAYOUT (SHEET 1 OF 3)
34	WATER LAYOUT (SHEET 2 OF 3)
35	WATER LAYOUT (SHEET 3 OF 3)
36	WATER DETAILS
37	WASTEWATER LAYOUT (SHEET 1 OF 3)
38	WASTEWATER LAYOUT (SHEET 2 OF 3)
39	WASTEWATER LAYOUT (SHEET 3 OF 3)
40	WASTEWATER LINE 'A' PLAN & PROFILE STA. 1+00 TO STA. 11+00
41	WASTEWATER LINE 'A' PLAN & PROFILE STA. 11+00 TO END
42	WASTEWATER LINE 'B' PLAN & PROFILE STA. 1+00 TO END
43	WASTEWATER LINE 'C' PLAN & PROFILE STA. 1+00 TO STA. 6+00
44	WASTEWATER LINE 'C' PLAN & PROFILE STA. 6+00 TO END
45	WASTEWATER LINE 'D' PLAN & PROFILE STA. 1+00 TO END
46	WASTEWATER LINE 'E' PLAN & PROFILE STA. 1+00 TO END
47	WASTEWATER LINE 'F' PLAN & PROFILE STA. 1+00 TO END
48	WASTEWATER DETAILS (SHEET 1 OF 2)
49	WASTEWATER DETAILS (SHEET 2 OF 2)
50	GRADING PLAN (SHEET 1 OF 3)
51	GRADING PLAN (SHEET 2 OF 3)
52	GRADING PLAN (SHEET 3 OF 3)
53	STORMWATER POLLUTION PREVENTION PLAN (SHEET 1 OF 3)
54	STORMWATER POLLUTION PREVENTION PLAN (SHEET 2 OF 3)
55	STORMWATER POLLUTION PREVENTION PLAN (SHEET 3 OF 3)
56	SWPPP DETAILS
57	TREE PRESERVATION PLAN (SHEET 1 OF 3)
58	TREE PRESERVATION PLAN (SHEET 2 OF 3)
59	TREE PRESERVATION PLAN (SHEET 3 OF 3)
60	TREE PRESERVATION PLAN CALCULATIONS

REVISIONS			
NO.	DESCRIPTION	BY	DATE

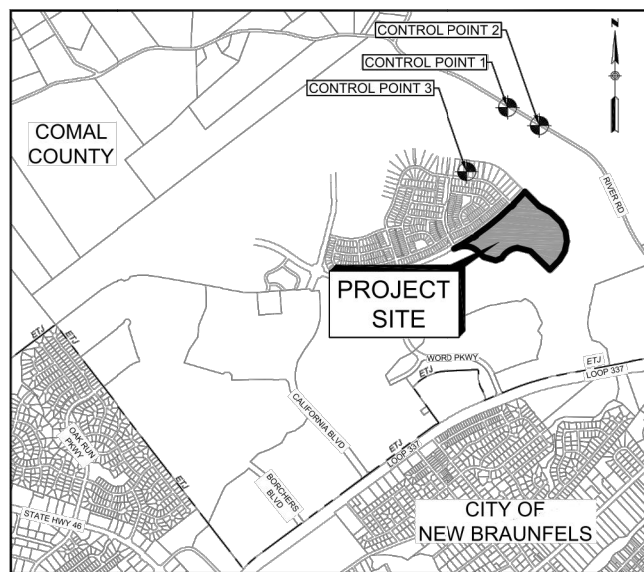
LJA Engineering, Inc.

9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

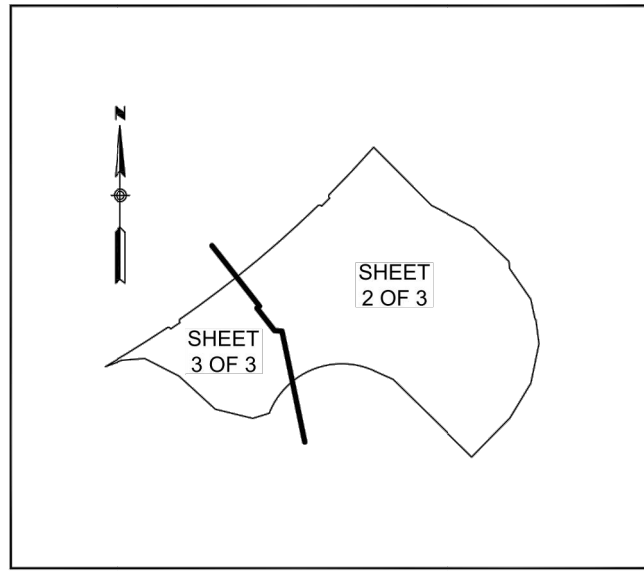


Phone 210.503.2700
LJA.COM
FRN-F-1386

K:\A24856 ASA Properties\A2401 Veramendi Precinct 19 Unit 1\A24856 Site Development Plans\A24856-Site-Plan-19-Unit-1.dwg
User: ngower Plot Date/Time: Nov, 19, 24 - 17:24:48
Last Modified: Sep, 19, 24 - 12:21
Plot Date/Time: Nov, 20, 24 - 09:40:03



LOCATION MAP
NOT TO SCALE



INDEX MAP
NOT TO SCALE

CERTIFICATE OF APPROVAL

APPROVED THIS _____ DAY OF _____, 20____
BY THE PLANNING AND DEVELOPMENT SERVICES DEPARTMENT OF THE
CITY OF NEW BRAUNFELS, TEXAS.

PLANNING DIRECTOR

APPROVED FOR ACCEPTANCE

PLANNING DIRECTOR

CITY ENGINEER

NEW BRAUNFELS UTILITIES

SURVEYOR NOTES:

- MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION AS NOTED. MONUMENTS AN LOT MARKERS WILL BE SET WITH 3/4" IRON ROD WITH CAP MARKED "LJA" OR MAG NAIL WITH DISK MARKED "LJA" AFTER THE COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
- COORDINATES SHOWN ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 NAD83 (NAD2011) EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE DISPLAYED IN GRID VALUES DERIVED FROM THE NGS COOPERATIVE CORS NETWORK.
- DIMENSIONS SHOWN ARE SURFACE (SCALE FACTOR = 1.00014).
- BEARINGS ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 NAD83 (NAD2011) EPOCH 2010.00, FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE.

STATE OF TEXAS
COUNTY OF COMAL

I, THE UNDERSIGNED, GORDON ANDERSON, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

GORDON ANDERSON
REGISTERED PROFESSIONAL LAND SURVEYOR #8617
LJA SURVEYING
9830 COLONNADA BOULEVARD, SUITE 300
SAN ANTONIO, TEXAS 78230

NSU NOTES:

- MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OF DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT. MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES. ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
- UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
- UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
- EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER/DEVELOPERS EXPENSE.
- DO NOT COMBINE ANY NEW UTILITY EASEMENTS (UE) WITH DRAINAGE EASEMENTS (DE) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (UE) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.
- NSU IS NOT RESPONSIBLE FOR LANDSCAPING OR IRRIGATION IN UE/LE.

FLOOD ZONE NOTES:

NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE COMAL COUNTY, TEXAS, FLOOD INSURANCE RATE MAP NO. 48091C0435F EFFECTIVE DATE 9/2000 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

UTILITY PROVIDER NOTES:

THE PROPERTY WILL BE SERVED BY THE FOLLOWING:
NEW BRAUNFELS UTILITIES (WATER, SEWER, ELECTRIC)
AT&T (TELECOMMUNICATIONS)
SPECTRUM (TELECOMMUNICATIONS)

DRAINAGE EASEMENT NOTES:

- DRAINAGE EASEMENTS SHALL REMAIN FREE OF ALL OBSTRUCTIONS.
- MAINTENANCE OF DRAINAGE EASEMENT SHOWN OUTSIDE OF LOT LINES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS, OR THE PROPERTY OWNERS ASSOCIATION, OR ITS SUCCESSORS OR ASSIGNS AND NOT THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS OR COMAL COUNTY.
- NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASES THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS AND COMAL COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

SIDEWALK NOTES:

- FOUR (4) FOOT WIDE SIDEWALK WILL BE CONSTRUCTED BY THE HOME BUILDER PER CITY STANDARDS AT THE TIME OF BUILDING CONSTRUCTION ALONG:
A. SENDERO VW
B. BELLOTA TRL
C. LENTISCO ST
D. PALMILLA AVE
- FOUR (4) FOOT WIDE SIDEWALK WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:
A. SENDERO VW - LOT 900, BLOCK 121; LOT 900, BLK 120; LOT 900, BLK 124; LOT 900, BLK 119; LOT 900, BLK 118.
B. BELLOTA TRL - LOT 900, BLOCK 125; LOT 900, BLK 121; LOT 900, BLK 124.
C. LENTISCO ST - LOT 901, BLOCK 117; LOT 900, BLK 121; LOT 900, BLK 117; LOT 900, BLK 125.
- TEN (10) FOOT WIDE SIDEWALK WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION CONSTRUCTION WITHIN: A. LOT 900 BLOCK 119 AND LOT 900 BLOCK 124.

CURVE TABLE					
Curve #	Arc	Rad	I	Tan	Chord Bearing
C1	23.44	15.00	89°32'49"	14.88	N0°03'54"E 21.13
C2	335.41	5550.00	3°27'46"	167.78	N43°06'25"E 335.36
C3	653.66	405.00	92°28'28"	422.88	S67°46'28"W 564.99
C4	380.09	5550.00	3°55'26"	190.12	N58°07'39"E 380.01
C5	23.44	15.00	89°32'49"	14.88	S79°03'39"E 21.13
C6	23.44	15.00	89°32'49"	14.88	N10°29'10"E 21.13
C7	921.70	5550.00	9°30'55"	461.91	N50°30'07"E 920.64
C8	23.44	15.00	89°32'49"	14.88	S89°28'56"E 21.13
C9	226.84	724.00	17°57'07"	114.36	N53°41'04"W 225.92
C10	144.02	601.00	13°43'48"	72.36	N55°47'44"W 143.68
C11	449.35	276.00	93°16'57"	292.28	N2°17'21"W 401.34
C12	10.07	15.00	38°27'27"	5.23	N25°07'24"E 9.88
C13	145.66	50.00	166°54'54"	435.97	N89°21'07"E 99.35
C14	10.07	15.00	38°27'27"	5.23	S26°25'09"E 9.88
C15	194.64	652.00	17°06'15"	98.05	S54°12'00"E 193.91
C16	5.22	776.00	0°23'09"	2.61	S62°33'33"E 5.22
C17	22.78	15.00	87°01'44"	14.24	N74°07'09"E 20.66
C18	286.72	326.00	50°55'10"	155.21	N56°03'53"E 280.28

SUBDIVISION PLAT
OF
VERAMENDI PRECINCT 19 UNIT 1

BEING 38.4273 ACRES OF LAND, OUT OF THE 244.440 ACRE TRACT DESCRIBED IN DOCUMENT NUMBER 202206035304 IN THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, IN THE JUAN MARTIN VERAMENDI SURVEY NO. 2, ABSTRACT 3, COMAL COUNTY, TEXAS.

LINE TABLE		
LINE	DIRECTION	LENGTH

L1	N45° 17' 29"E	58.00
L2	S14° 33' 33"E	48.77
L3	S11° 17' 48"E	61.20
L4	S15° 01' 03"E	41.39
L5	S7° 16' 46"E	144.80
L6	N65° 59' 17"W	109.97
L7	S72° 46' 02"W	90.00
L8	S85° 44' 51"W	120.00
L9	S69° 30' 30"W	95.65
L10	N55° 42' 46"E	58.00
L11	S44° 42' 31"E	39.00
L12	S42° 59' 25"E	100.04
L13	S44° 42' 31"E	39.25
L14	S62° 39' 38"E	90.66
L15	S48° 55' 50"E	51.17
L16	S44° 21' 07"W	19.51
L17	N62° 45' 07"W	84.91
L18	S30° 36' 17"W	17.64
L19	S81° 31' 28"W	130.65
L20	S57° 00' 07"W	50.00
L21	N54° 16' 43"W	48.40
L22	N55° 59' 49"W	100.04
L23	N54° 16' 43"W	28.51
L24	N34° 17' 14"W	82.52
L25	S34° 17' 14"E	82.52
L26	N37° 44' 35"E	22.51
L27	N51° 53' 16"E	397.97
L28	N7° 51' 03"E	14.79
L29	N44° 42' 31"W	110.17
L30	S46° 27' 43"E	98.05
L31	S44° 42' 31"E	39.25
L32	S62° 39' 38"E	90.66
L33	S48° 55' 50"E	51.17
L34	S44° 21' 07"W	28.83

LINE TABLE		
L35	N62° 45' 07"W	84.91

L36	N45° 51' 56"W	75.28
L37	N7° 51' 03"E	14.79
L38	S45° 51' 56"E	75.28
L39	S30° 36' 17"W	17.64
L40	S81° 31' 28"W	130.65
L41	S57° 00' 07"W	50.00
L42	N54° 16' 43"W	48.40
L43	N52° 31' 26"W	97.97
L44	N37° 44' 35"E	24.10
L45	N51° 53' 16"E	397.97
L46	S38° 06' 44"E	131.36
L47	N38° 06' 44"W	138.34
L48	S47° 50' 11"W	60.64
L49	N86° 23' 21"W	38.22
L50	S30° 57' 16"E	20.00
L51	S14° 49' 34"E	72.58

PLAT NOTES:

- THIS PLAT IS SUBJECT TO THE REQUIREMENTS AND REGULATIONS OF THE VERAMENDI DEVELOPMENT COMPANY DEVELOPMENT AGREEMENT, RECORDED AS DOCUMENT NO. 201506029547 AND AS AMENDED.
- THIS PLAT IS LOCATED WITHIN THE NEIGHBORHOOD (MIXED DENSITY) RESIDENTIAL PLANNING AREA.
- STANDARDS FOR PLANT MATERIALS SHALL CONFORM TO THE STANDARDS OF THE LATEST EDITION OF THE AMERICAN NATIONAL STANDARD A300 PLANTING AND TRANSPLANTING NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- TREE REPLACEMENT SHALL OCCUR WITHIN 12 MONTHS OF REMOVAL OF THE HIGH VALUE TREE UNLESS DEFERRED TO AN ADJACENT UNIT. WHERE A REPLACEMENT TREE DOES NOT SURVIVE FOR A PERIOD OF AT LEAST 24 MONTHS, THE ORIGINAL APPLICANT OR CURRENT LANDOWNER SHALL REPLACE THE TREE, PREFERABLY DURING OCTOBER - FEBRUARY, UNTIL THE TREE SURVIVES A 12-MONTH PERIOD.
- SHOULD ANY TREE DESIGNATED FOR RETENTION IN AN APPROVED TREE PROTECTION PLAN DIE PRIOR TO, OR WITHIN 12 MONTHS OF THE COMPLETION OF CONSTRUCTION WORKS, THE APPLICANT SHALL REPLACE THE DEAD TREE WITH A REPLACEMENT TREE(S) EQUAL TO THE TOTAL CALIPER INCHES OF THE DEAD TREE. NO GRADING, TRENCHING OR EQUIPMENT SHALL BE CONDUCTED IN THE AREA IDENTIFIED IN THE ROOT PROTECTION ZONE. ALL WORK TO BE PERFORMED BY HAND OR UNDER THE SUPERVISION OF A CERTIFIED ARBORIST.
- DURING CONSTRUCTION, THE CLEANING OF EQUIPMENT OR MATERIALS AND/OR THE DISPOSAL OF ANY WASTE MATERIAL, INCLUDING, BUT NOT LIMITED TO PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR, ETC., UNDER THE CANOPY OR DRIP LINE OF ANY HIGH VALUE TREE SHALL BE PROHIBITED. NO GRADING, TRENCHING OR EQUIPMENT SHALL BE CONDUCTED OR USED IN THE AREA IDENTIFIED IN THE ROOT PROTECTION ZONE. ALL WORK SHALL BE PERFORMED BY HAND OR UNDER THE SUPERVISION OF A CERTIFIED ARBORIST. NO ATTACHMENTS OR WIRES OF ANY KIND, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY HIGH VALUE TREE.
- LOTS TO BE HELD IN COMMON PROPERTY BY A HOMEOWNERS OR PROPERTY OWNERS ASSOCIATION SHALL BE SHOWN ON THE PLAT AS A SEPARATE LOT.
- NO BUILDING SHALL BE SITED WITHIN THE EXTENT OF A SENSITIVE FEATURE AND ASSOCIATED BUFFER. FOR ANY LOT WHICH CONTAINS A HIGH VALUE TREE, AND A BUILDING ENVELOPE WAS NOT APPROVED AS PART OF A FINAL PLAT, THE LOCATION OF A BUILDING ENVELOPE SHALL BE APPROVED BY THE PLANNING DIRECTOR PRIOR TO A BUILDING PERMIT BEING ISSUED.
- FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- IMPERVIOUS COVER - THE MAXIMUM CUMULATIVE IMPERVIOUS COVER PERCENTAGE FOR THE PROPERTY AS A WHOLE AND FOR EACH SECTOR PLAN SHALL NOT EXCEED SIXTY-FIVE PERCENT (65%).
- AMENDMENTS TO THE PARK PROGRAMMING SCHEDULE, INCLUDING BUT NOT LIMITED TO THE PROVISION OF ADDITIONAL IMPROVEMENTS OR SUBSTITUTING IMPROVEMENTS, SHALL BE ADMINISTRATIVELY APPROVED BY THE PARKS DIRECTOR.
- THIS PLAT WILL COMPLY WITH LOCATION AND AMENITY STANDARDS FOR TRAILS AS SHOWN IN THE SECTOR PLAN.
- (7B) RESIDENTIAL LOTS, (B) COMMON SPACE LOTS.

COMMON SPACE NOTES:

LOT 900, BLOCK 117 IS A LANDSCAPE, PEDESTRIAN, DRAINAGE, & ACCESS EASEMENT
LOT 901, BLOCK 117 IS A DRAINAGE, LANDSCAPE, PEDESTRIAN, UTILITY & ACCESS EASEMENT
LOT 900, BLOCK 118 IS A LANDSCAPE, PEDESTRIAN, DRAINAGE, & ACCESS EASEMENT
LOT 900, BLOCK 119 IS A LANDSCAPE, PEDESTRIAN & ACCESS EASEMENT
LOT 900, BLOCK 120 IS A LANDSCAPE, PEDESTRIAN, UTILITY & ACCESS EASEMENT
LOT 900, BLOCK 121 IS A LANDSCAPE, PEDESTRIAN, UTILITY & ACCESS EASEMENT
LOT 900, BLOCK 124 IS A LANDSCAPE, PEDESTRIAN & ACCESS EASEMENT
LOT 900, BLOCK 125 IS A DRAINAGE, LANDSCAPE, PEDESTRIAN, UTILITY & ACCESS EASEMENT

ALL AFOREMENTIONED LOTS TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION OR PROPERTY OWNER AND NOT THE CITY OF NEW BRAUNFELS.

CURVE TABLE					
Curve #	Arc	Rad	I	Tan	Chord Bearing
C19	117.27	274.00	24°31'21"	59.55	N69°15'47"E 116.38
C20	211.09	176.00	68°43'10"	120.33	S88°38'18"E 198.66
C21	128.75	369.00	19°59'29"	65.04	S44°16'59"E 128.10
C22	54.32	311.00	10°00'28"	27.23	S39°17'29"E 54.25
C23	25.65	15.00	97°57'43"	17.24	N86°43'26"E 22.63
C24	68.14	276.00	14°08'41"	34.24	N44°48'55"E 67.96
C25	142.66	226.00	36°10'05"	73.80	N69°58'19"E 140.31
C26	21.00	15.00	80°12'18"	12.63	N47°57'12"E 19.32
C27	98.67	151.00	37°26'26"	51.17	N26°34'16"E 96.93
C28	23.56	15.00	90°00'00"	15.00	N0°17'29"E 21.21
C29	23.56	15.00	90°00'00"	15.00	S89°42'31"E 21.21
C30	243.14	776.00	17°57'07"	122.57	S53°41'04"E 242.14
C31	131.56	549.00	13°43'48"	66.10	S55°47'44"E 131.24
C32	364.69	224.00	93°16'57"	237.22	S2°17'21"E 325.73
C33	23.56	15.00	90°00'00"	15.00	S89°21'07"W 21.21
C34	210.16	704.00	17°06'15"	105.87	N54°12'00"W 209.38
C35	213.38	724.00	16°53'11"	107.47	N54°18'32"W 212.61
C36	104.48	226.00	26°29'18"	53.19	N59°06'35"W 103.55

CURVE TABLE					
Curve #	Arc	Rad	I	Tan	Chord Bearing
C37	21.00	15.00	80°12'18"	12.63	N32°15'05"W 19.32
C38	64.69	99.00	37°26'26"	33.55	N26°34'16"E 63.55
C39	110.19	174.00	36°17'01"	57.01	S64°00'26"E 108.36
C40	143.00	776.00	10°33'30"	71.70	S51°08'41"E 142.80
C41	22.78	15.00	87°01'44"	14.24	S12°54'34"E 20.66
C42	243.51	274.00	50°55'10"	130.46	S56°03'53"W 235.57
C43	139.53	326.00	24°31'21"	70.85	S69°15'47"W 138.47
C44	146.72	124.00	68°43'10"	84.78	N88°38'18"W 139.97
C45	24.09	15.00	92°01'16"	15.54	N8°16'04"W 21.58
C46	55.30	224.00	14°08'41"	27.79	N44°48'55"E 55.16
C47	139.58	174.00	45°57'47"	73.79	N74°52'10"E 135.87
C48	350.29	5570.00	3°36'12"	175.20	N43°11'29"E 350.24
C49	65.23	291.00	12°50'37"	32.75	N40°42'33"W 65.10
C50	538.58	5570.00	5°32'24"	269.50	N52°26'19"E 538.37
C51	356.51	5570.00	3°40'02"	178.32	N47°37'45"E 356.45
C52	195.77	5570.00	2°00'50"	97.90	N57°01'04"E 195.76

STATE OF TEXAS
COUNTY OF COMAL

I, _____, DO HEREBY CERTIFY THAT FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOCK _____ OF COMAL COUNTY ON THE _____ DAY OF _____, 20____ AT _____ M.

WITNESS MY HAND AND OFFICIAL SEAL, THIS _____ DAY OF _____, 20____.

COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY

SHEET 1 OF 3

NOTE

THE VERAMENDI PRECINCT 19 UNIT 1 PLAT WAS APPROVED WITH CONDITIONS AT THE CITY OF NEW BRAUNFELS PLANNING COMMISSION ON XX/XX/XX.

VERAMENDI PRECINCT 19 UNIT 1

PLAT (SHEET 1 OF 3)

NO.	DATE	BY	DESCRIPTION	REVISIONS
11/20/2024	NG	MAP		
	PGF			
	sh	Plat CD.dwg		



LJA Engineering, Inc.

9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

Phone 210.503.2700
LJA.COM
TBP# No. F-1386

JOB NUMBER: SA3856.0401

SHEET NO.

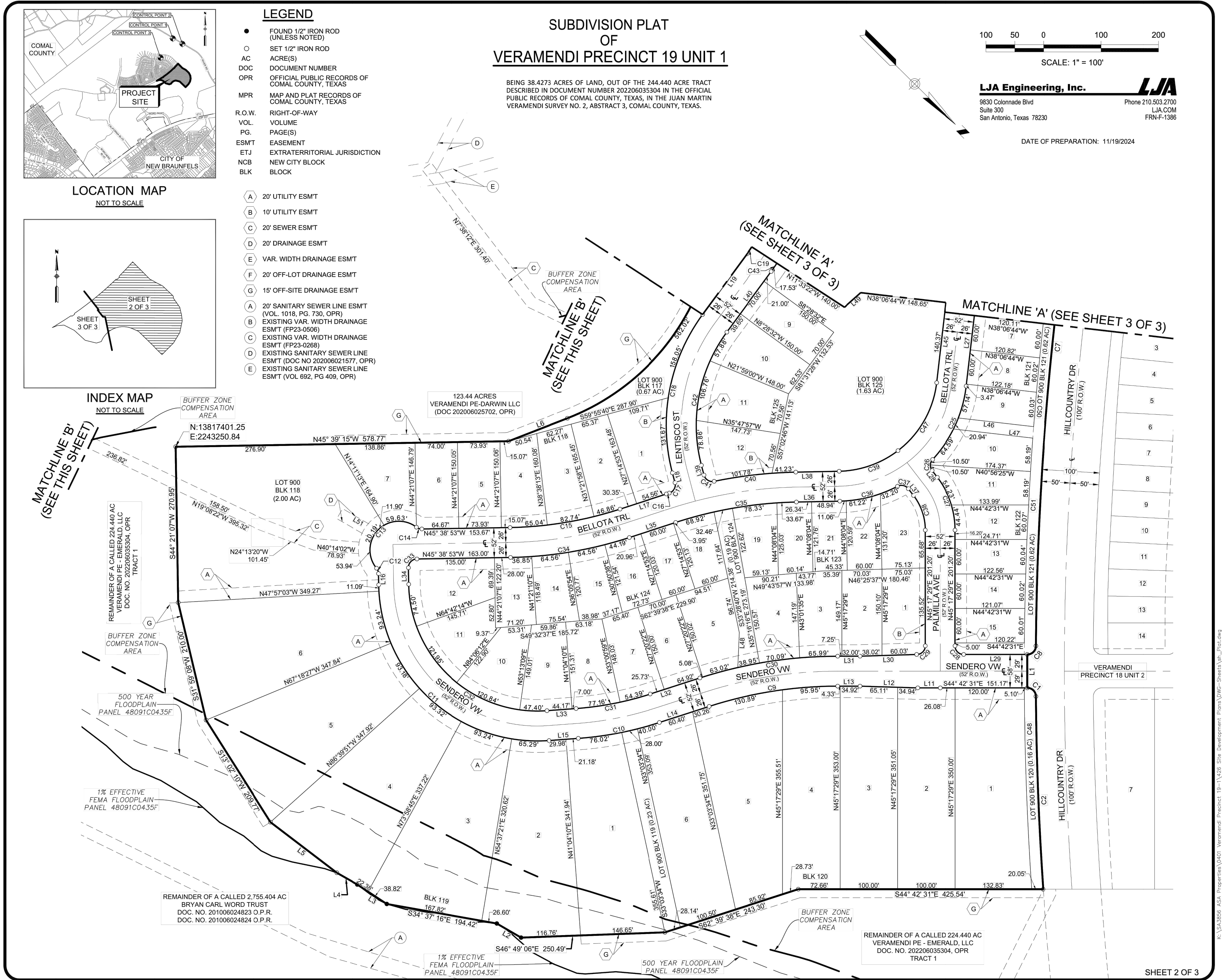
3

OF 60

SHEETS

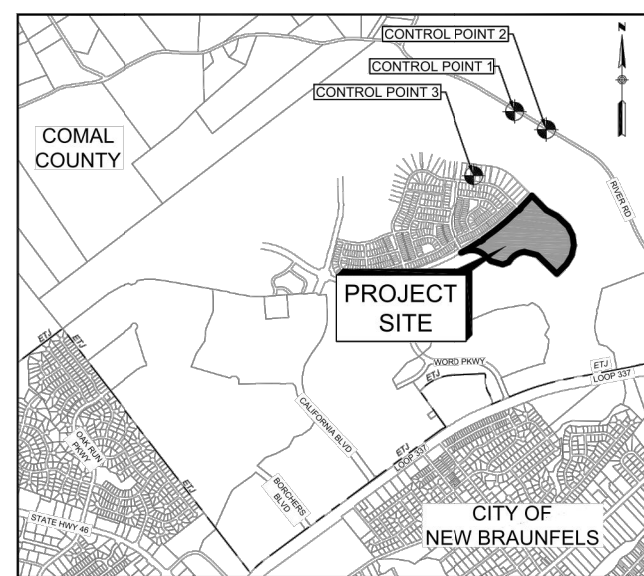
FOR PERMIT

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Last Modified: Sep 19, 24 - 12:21
Plot Date/Time: Nov 20, 24 - 09:48:03

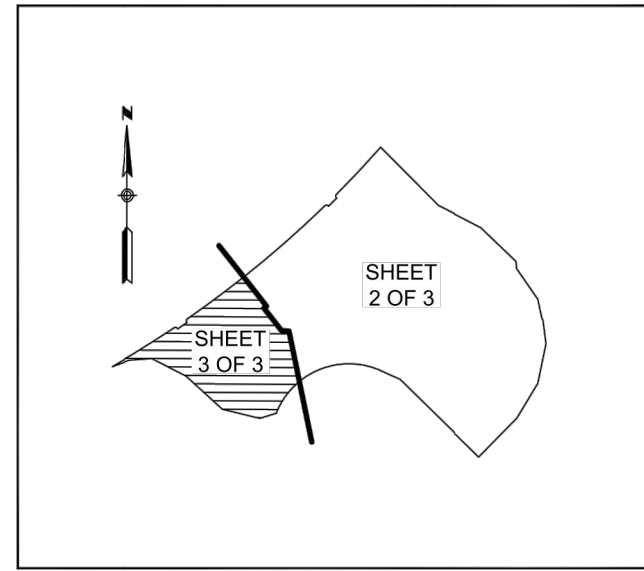


DATE	DESIGNED BY	DRAWN BY	CHECKED BY	DRAWING NAME
11/20/2024	NG	MAP	PGF	sh_Plat CD.dwg





LOCATION MAP
NOT TO SCALE



INDEX MAP

NOT TO SCALE

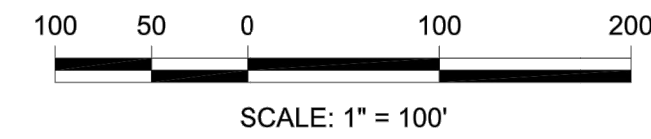
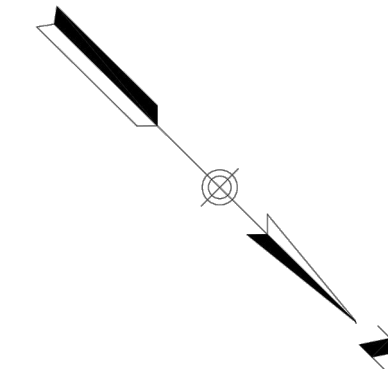
LEGEND

- | | |
|--------|---|
| ● | FOUND 1/2" IRON ROD
(UNLESS NOTED) |
| ○ | SET 1/2" IRON ROD |
| AC | ACRE(S) |
| DOC | DOCUMENT NUMBER |
| OPR | OFFICIAL PUBLIC RECORDS OF
COMAL COUNTY, TEXAS |
| MPR | MAP AND PLAT RECORDS OF
COMAL COUNTY, TEXAS |
| R.O.W. | RIGHT-OF-WAY |
| VOL. | VOLUME |
| PG. | PAGE(S) |
| ESMT | EASEMENT |
| ETJ | EXTRATERRITORIAL JURISDICTION |
| NCB | NEW CITY BLOCK |
| BLK | BLOCK |

- | | |
|---|---|
| A | 20' UTILITY ESMST |
| B | 10' UTILITY ESMST |
| C | 20' SEWER ESMST |
| D | 20' DRAINAGE ESMST |
| E | VAR. WIDTH DRAINAGE ESMST |
| F | 20' OFF-LOT DRAINAGE ESMST |
| G | 15' OFF-SITE DRAINAGE ESMST |
| A | 20' SEWER SEWER LINE ESMST
(VOL. 1018, PG. 730, OPR) |
| B | EXISTING VAR. WIDTH DRAINAGE
ESMST (FP23-0506) |
| C | EXISTING VAR. WIDTH DRAINAGE
ESMST (FP23-0268) |
| D | EXISTING SANITARY SEWER LINE ESMST
(DOC NO. 2002062157, OPR) |
| E | EXISTING SANITARY SEWER LINE
ESMST (VOL. 692, PG. 409, OPR) |

SUBDIVISION PLAT
OF
VERAMENDI PRECINCT 19 UNIT 1

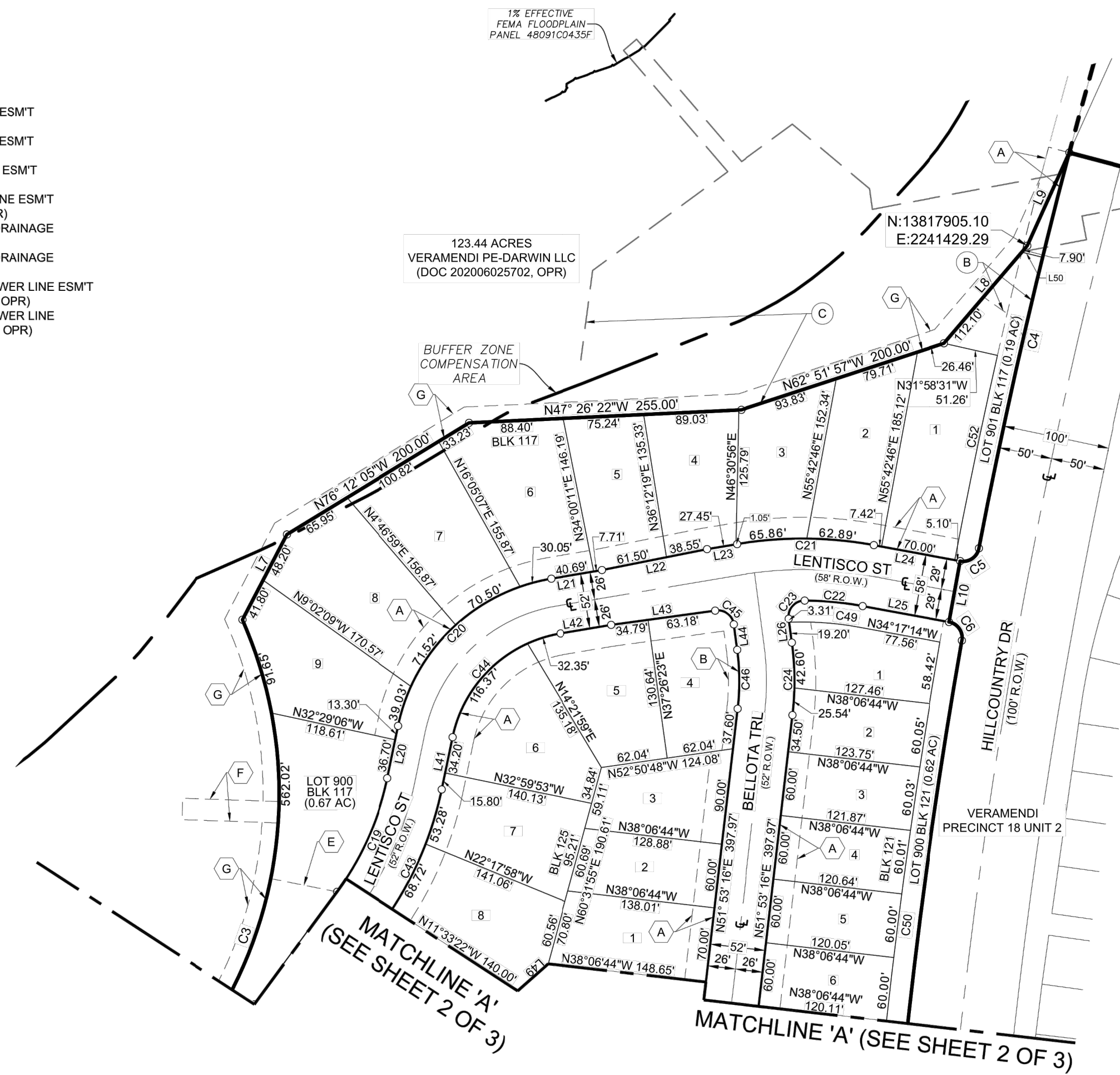
BEING 38.4273 ACRES OF LAND, OUT OF THE 244.440 ACRE TRACT DESCRIBED IN DOCUMENT NUMBER 202206035304 IN THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, IN THE JUAN MARTIN VERAMENDI SURVEY NO. 2, ABSTRACT 3, COMAL COUNTY, TEXAS.



LJA Engineering, Inc.

Phone 210.503.2700
LJA.COM
FRN-F-1386

DATE OF PREPARATION: 11/19/2024



SHEET 3 OF 3

NOTE

THE VERAMENDI PRECINCT 19 UNIT 1 PLAT WAS APPROVED WITH CONDITIONS
AT THE CITY OF NEW BRAUNFELS PLANNING COMMISSION ON XX/XX/XX.

VERAMENDI PRECINCT 19 UNIT 1

PLAT (SHEET 3 OF 3)

REVISIONS		DATE
NO.	DESCRIPTION	BY
	DESIGNED BY: NG	
	DRAWN BY: MAP	
	CHECKED BY: PGF	
DRAWING NAME:		
sh_Pini.Co.dwg		



LJA Engineering, Inc.
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San Antonio, Texas 78230
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TBPE No. F-1386

JOB NUMBER:
SA3856.0401

SHEET NO.

5
OF 60 SHEETS

K:\348566_ACSA Properties\0401_Veramendi Precinct\19-1\426 Site Development\Plans\DWG-Street's Plan_General Notes.dwg
User: Mj00000000 Date: 2/2/2024 11:43:43
Plot Date: 2/2/2024 11:43:43
Plot User: Mj00000000

CONSTRUCTION PLAN NOTES

Revised 03/2020

These notes must appear on the cover and/or "notes" sheet of all subdivision construction plans and on commercial plans where applicable:

If construction has not commenced within one-year of City approval for construction inspection, that approval is no longer valid.

The most current editions of the City of San Antonio Standard Specifications and the Texas Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges shall be followed for all construction except as amended by the City of New Braunfels Standard Details.

All responsibility for the adequacy of these plans remains with the engineer of record. In accepting these plans, the City of New Braunfels must rely upon the adequacy of the work of the engineer of record.

Prior to the start of construction, the contractor shall contact the City of New Braunfels to schedule a preconstruction meeting.

For Public Infrastructure Permit or Grading Permit Projects:

- For inspections, you must call before 12:00 p.m., 48 hours prior to your inspection request.
- Each inspection will be allotted 1 hour unless you request for more time.
- Once your request has been accepted, you will receive a call from the City of New Braunfels Inspector.

For Commercial Permit (CP) Projects:

- All inspections are to be called in at 830-221-4068 or,
- Faxed in at 830-608-2117 or,
- E-mailed at inspections@nbtexas.org.

It is the Contractor's responsibility to see that all temporary and permanent traffic control devices are properly installed and maintained in accordance with the plans and latest edition of the Texas Manual on Uniform Traffic Control Devices. If, in the opinion of the 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 temporary traffic control devices may be ordered by the Engineering representative at the Contractor's expense.

A TxDOT Type II B-B blue reflective raised pavement marker shall be installed in the center of the roadway adjacent to all fire hydrants. In locations where hydrants are situated on corners, blue reflective raised pavement markers shall be installed on both approaches which front the hydrant. The raised pavement marker shall meet TxDOT material, epoxy and adhesive specifications.

CHANNEL MAINTENANCE PLAN

The following are guidelines for the overall maintenance of the channel system and drainage easement by the designated maintenance entity as defined by the executed drainage agreement. The designated maintenance entity will be responsible for the operation, maintenance, and repair of the system and easement to ensure that it operates as designed.

- Inspections.** The channel should be inspected to assure proper operation at least 4 times annually. One of these inspections should occur during or immediately following wet weather.

- Mowing.** The side slopes and bottom of the channel that are covered with grass must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around the channel must be mowed at least four times annually to limit vegetation height to 12 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing is performed, a mulching mower should be used, or grass clippings should be caught and removed. Vegetation shall be maintained so as to match the intent of the original design of the channel and preserve the flow conveyance capacity. Any woody vegetation which becomes established shall be periodically removed or mulched to ground level. Any removal of brush which results in disturbance of established grades shall be repaired/re-graded and revegetated.

- Debris, Litter, and Obstruction Removal.** Debris and litter may accumulate in the channel and/or near the drop structure and outfall and should be removed during regular mowing operations and inspections or after large rainfall events. Any other obstructions that impede flow as intended by the original design shall be removed in a timely manner.

- Erosion Control.** The channel side slopes and embankment may periodically suffer from slumping and erosion. Regrading and re-establishment of vegetation may be required to correct the problems. Vegetation should be re-established to the original design standards. Inspection of sediment deposits along the length of the channel should occur during the stated intervals. All sediment deposits exceeding 12" in depth or which are preventing positive drainage should be removed from the channel at least once annually. All sediment should be removed and disposed of properly.

DRAINAGE MAINTENANCE PLAN

The storm drain pipe shall be checked for accumulation of silt, debris or other obstructions which could block flow. When silt deposits have accumulated to the point of reducing the drain capacity then the pipes can be flushed with a high-pressure water flushing process. Soil accumulations, vegetative overgrowth and other blockages should be cleared from the pipe discharge point. Erosion at the point of discharge shall be monitored. If erosion occurs, the addition of rock rubble to disperse the flow should be accomplished.

PROPOSED CONSTRUCTION SEQUENCE

- INSTALL TEMPORARY STORMWATER EROSION CONTROL MEASURES IN AFFECTED CONSTRUCTION AREAS AND STABILIZED CONSTRUCTION ENTRANCES/EXITS.
- INSTALL TREE PRESERVATION MEASURES, IF REQUIRED.
- EXCAVATE STREETS.
- CONSTRUCT DRAINAGE.
- CONSTRUCT WASTEWATER SYSTEM.
- CONSTRUCT WATER SYSTEM.
- CONSTRUCT SUBGRADE AND BASE FOR STREETS.
- CONSTRUCT CURBS FOR STREETS.
- CONSTRUCT ASPHALT PAVEMENT FOR STREETS.
- ESTABLISH SITE STABILIZATION.
- REMOVE ALL TEMPORARY STORMWATER EROSION CONTROL MEASURES.

NOTES:

- SOME ITEMS ABOVE WILL OCCUR SIMULTANEOUSLY OR MAY OCCUR OUT OF SEQUENCE INDICATED.
- ALL SEQUENCES SUBJECT TO CHANGE.
- COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR.

Groundwater

It shall be the responsibility of the developer, contractor, subcontractors, builders, Geo-technical engineer, and project engineer to immediately notify the Office of the City Engineer and project engineer if the presence of groundwater within the site is evident. Upon notification the project engineer shall respond with plan revisions for the mitigation of the groundwater issue. The City Engineer shall respond within two (2) business days upon receipt of the mitigation plan. All construction activity, impacted by the discovery of groundwater, shall be suspended until the City Engineer grants a written approval of the groundwater mitigation plan.

Record Drawings

As per Platting Ordinance Section 118-38m.: When all of the improvements are found to be constructed and completed in accordance with the approved plans and specifications and with the City's standards, and upon receipt of one set of "Record Drawing" plans, and a digital copy of all plans (PDF copy) the City Engineer shall accept such improvements for the City of New Braunfels, subject to the guaranty of material and workmanship provisions in this Section.

Construction Note

Engineer of Record is responsible to ensure that erosion control measures and stormwater control sufficient to mitigate off site impacts are in place at all stages of construction.

Drainage Note

Drainage improvements sufficient to mitigate the impact of construction shall be installed prior to adding impervious cover.

Finished Floor Elevations

The elevation of the lowest floor shall be at least 10 inches above the finished grade of the surrounding ground, which shall be sloped in a fashion so as to direct stormwater away from the structure. Properties adjacent to stormwater conveyance structures must have floor slab elevation or bottom of floor joists a minimum of one foot above the 100-year water flow elevation in the structure. Driveways serving houses on the downhill side of the street shall have a properly sized cross swale preventing runoff from entering the garage.

Soils Testing

Proctors shall be sampled from on-site material (on-site is defined as limits of construction for this -plan set) and a copy of the proctor results shall be delivered to the City of New Braunfels Street Inspector prior to any density tests.

Roadway

All roadway compaction tests shall be the responsibility of the developer's Geotechnical Engineer. Flexible base or fill/embankment material shall be placed in uniform layers not to exceed eight inches (8") loose. The required density for the fill/embankment material shall meet the requirements of TxDOT's Specification Item 132. The required density for the flexible base material shall meet the requirements of TxDOT's Specification Item 247. Each layer of material, inclusive of subgrade, shall be compacted as specified and tested for density and moisture in accordance with Test Methods TEX-113-E, TEX-114-E, TEX-115-E. The number and location of required tests shall be determined by the Geotechnical Engineer and approved by the City of New Braunfels Street Inspector. At a minimum, tests shall be taken every 200 LF for each lift. Upon completion of testing, the Geotechnical Engineer will provide the City of New Braunfels Street Inspector with all testing documentation and a certification stating that the placement of flexible

base, and fill material, and subgrade, has been completed in accordance with the plans. Additional density tests may be requested by the City of New Braunfels Inspector.

Item 340

Asphaltic concrete pavement shall be the type of hot mix asphalt as defined in TxDOT's standard specifications for current TxDOT Standard Specifications for Construction of Highways, Street and Bridges.

The City of New Braunfels will not accept the use of Recycled Asphalt Pavement (RAP) or Recycled Asphalt Shingles (RAS) in asphalt mixtures for new roadways. Any debris inclusions within new asphalt pavements will result in asphalt removal and replacement from curb to curb for limits to be determined by the City of New Braunfels.

The asphaltic concrete pavement surface course shall be plant mixed, hot laid type "D" meeting the specification requirements of TxDOT Item 340. The asphaltic concrete pavement sub-surface courses shall be plant mixed, hot laid type "B" meeting the specification requirements of TxDOT Item 340. The mixture shall be designed per the design requirements specified in TxDOT Item 340 and shall be compacted to between 91 and 95 percent of the maximum theoretical density as determined by TxDOT test method TEX-227-F. Place the mixture when the roadway surface temperature is at or above 60°F. Complete all compaction operations before the pavement temperature drops below 160°F. The asphalt cement content by percent of total mixture weight shall fall within a tolerance of ± 0.5 percent from a specific mix design.

Utility Trench Compaction (added to the construction plans on All Utility Plan Sheets).

All utility trench compaction tests within the street pavement/sidewalk section shall be the responsibility of the developer's Geotechnical Engineer. Fill material shall be placed in uniform layers not to exceed twelve inches (12") loose. Determine the maximum lift thickness based on the ability of the compacting operation and equipment used to meet the required density. Each layer of material shall be compacted to a minimum 95% density and tested for density and moisture in accordance with Test Methods TEX-113-E, TEX-114-E, TEX-115-E. The number and location of required tests shall be determined by the Geotechnical Engineer and approved by the City of New Braunfels Street Inspector. At a minimum, tests shall be taken every 200 LF for each lift and every other service line. Upon completion of testing the Geotechnical Engineer shall provide the City of New Braunfels Street Inspector with all testing documentation and a certification stating that the placement of fill material has been completed in accordance with the plans. Additional density tests may be requested by the City of New Braunfels Inspector.

Curb Cut Due to Construction of New Right-Of-Way Construction

(Indicate the 2 Options on the construction plans).

- Sawcut existing street and match to new construction.
- Sawcut existing curb to tie into existing construction.

Construction Stabilized Entrance

Sawcut curb for construction entrance.

Stabilized construction area shall be constructed of 3"x5" rock to be placed a minimum length of 25-ft. and maintained so that construction debris does not fall within the city right-of-way. Right-of-way must be cleared from mud, rocks, etc. at all times.

(Notes to Be Placed on All WW Plan & Detail Sheets)

Ensure all driveway approaches are built in general accordance with A.D.A. specifications.

No valves, hydrants, etc. shall be constructed within curbs, sidewalks, or driveways.

Signing and Pavement Marking Plan Notes

The Contractor shall furnish and install all regulatory and warning signs, streets name signs and sign mounts in accordance with approved engineering plans. The City will inspect all signs at final inspection.

The Contractor shall install all pavement markings in accordance with approved engineering plans. The Contractor shall notify the City at least twenty-four (24 hours prior to the installation of all sealer and final markings. The City will inspect all markings at final application.

Seeding and Establishment of Vegetation within Earthen Channels, Stormwater Basins and Disturbed Areas

Seeding for the purpose of establishing vegetation within constructed earthen channels, basins and disturbed areas shall be conducted in accordance with Item 164 (Seeding for Erosion Control of TxDOT's Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges manual. Only seed types and mixes specified for the San Antonio District (District 15 in Tables 1 and 2 under Item 164 shall be utilized. During the Cool Season (Sept 1-Nov 30, Cereal Rye and seed species specified for the San Antonio District in Table 3 may be used. For Cool Season seeding applications, cool season seed mixes shall be used in conjunction with seed mixes for the San Antonio District as specified in Table 1 and 2 under Item 164.

It may be deemed necessary to incorporate topsoil and soil amendments (i.e. compost/ fertilizer into existing soil in order to facilitate vegetation growth. Topsoil, compost and fertilizer additions shall be conducted according to Items 160, 161 and 166 of TxDOT's Standard Specifications manual, respectively.

Areas requiring permanent vegetation (earthen channels, ponds, etc.) are required to meet TxDOT Specifications for Item 160 Topsoil. Testing per Tex-128-E will be required at the City's request.

Watering may also be necessary to facilitate and expedite the sprouting and growth of vegetation. Item 168 of TxDOT's Standard Specifications manual shall be adhered to for vegetative watering.

If extended drought conditions exist that hinder or prohibit the growth and establishment of vegetation, the contractor/ developer shall provide a plan to the City of New Braunfels describing the measures that will be taken to stabilize earthen drainage infrastructure until a time when growing conditions become more favorable.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

- A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
 - THE NAME OF THE APPROVED PROJECT;
 - THE ACTIVITY START DATE; AND
 - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
- ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL DURING THE COURSE OF THESE REGULATED ACTIVITIES. THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

- IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
- NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.

- BEFORE BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.

- SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
- LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

- ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
- IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

- THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
 - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
 - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
 - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
 - ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO POND, DAMS, BERMS, SEWAGE TREATMENT PLANTS AND DIVERSIONARY STRUCTURES;
 - ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
 - ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

INSPECTION AND MAINTENANCE SCHEDULE
FOR
PERMANENT POLLUTION ABATEMENT MEASURES

Recommended Frequency	Task to be Performed		
Annually*	1	2	3
	✓	✓	✓

*Inspections to occur quarterly during the first year of operation.
✓Indicates maintenance procedure that applies to this specific site.

See description of maintenance task to be performed on the following pages. Frequency of maintenance tasks may vary depending on amount of rainfall and other weather-related conditions but may not be altered without TCEQ approval. Inspection frequency in subsequent years is based on the maintenance plan developed in the first year but must occur annually at a minimum.

A written record will be kept of inspection results and maintenance performed.

Task No. & Description	Included in this project.		
1. Cleaning	Yes	No	
2. Manual Backfill / Flow Rate Test	Yes	No	
3. External Rinsing	Yes	No	

INSPECTION AND MAINTENANCE SCHEDULE – BATCH DETENTION BASIN
FOR
PERMANENT POLLUTION ABATEMENT MEASURES

Recommended Frequency	Task to be Performed												
	1	2	3	4	5	6	7	8	9	10	11	12	13
After Rainfall	✓							✓			✓		✓
Biannually*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*At least one biannual inspection must occur during or immediately after a rainfall event.
✓Indicates maintenance procedure that applies to this specific site.

See description of maintenance task to be performed on the following pages. Frequency of maintenance tasks may vary depending on amount of rainfall and other weather related conditions but may not be altered without TCEQ approval.

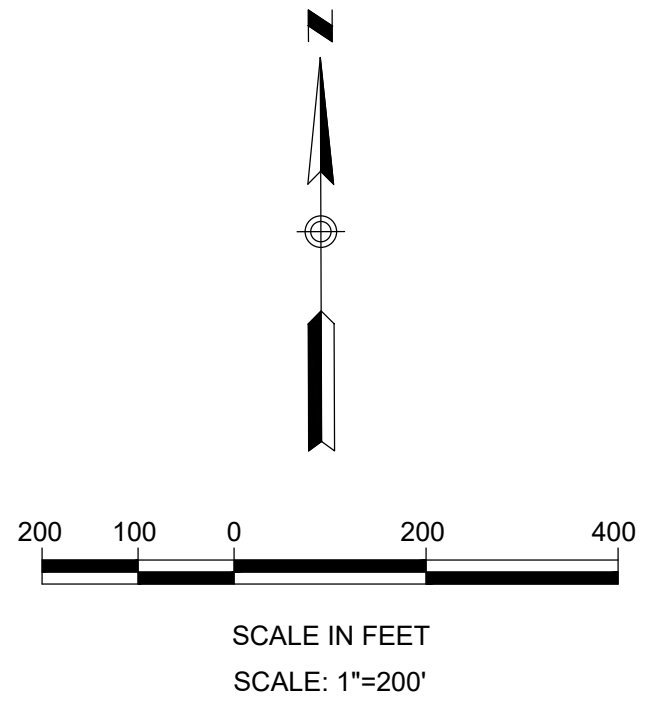
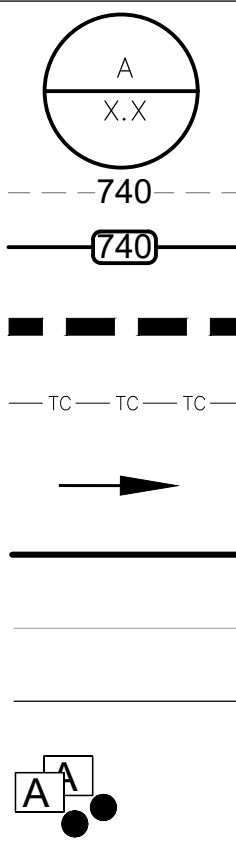
A written record should be kept of inspection results and maintenance performed.

Task No. & Description	Included in this project	
1. Mowing	Yes	No
2. Litter and Debris Removal	Yes	No
3. Erosion Control	Yes	No
4. Level Sensor	Yes	No
5. Nuisance Control	Yes	No
6. Structural Repairs and Replacement	Yes	No
7. Discharge Pipe	Yes	No
8. Detention and Drawdown Time	Yes	No
9. Sediment Removal	Yes	No
10. Logic Controller	Yes	No
11. Vegetated Filter Strips	Yes	No
12. Visually Inspect Security Fencing for Damage or Breach	Yes	No
13. Recordkeeping for Inspections, Maintenance, and Repairs	Yes	No

VERAMENDI PRECINCT 19 UNIT 1

GENERAL NOTES

DATE	BY	REVISIONS	DESCRIPTION
NO.	DATE	DESCRIPTION	
1	7/11/2024	NG	
2		PF	
3		TM	
4		PF	
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9		PF	
10		PF	
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137		PF	

Eq. 5.4.1

Eq 5.3.1

REVISIONS		
NO.	DESCRIPTION	DATE

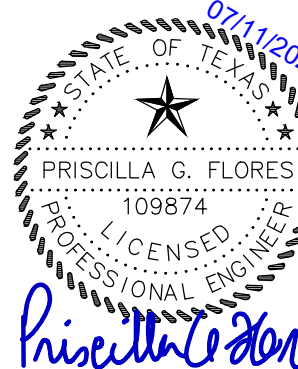
DATE: 7/11/2024

DESIGNED BY: NG

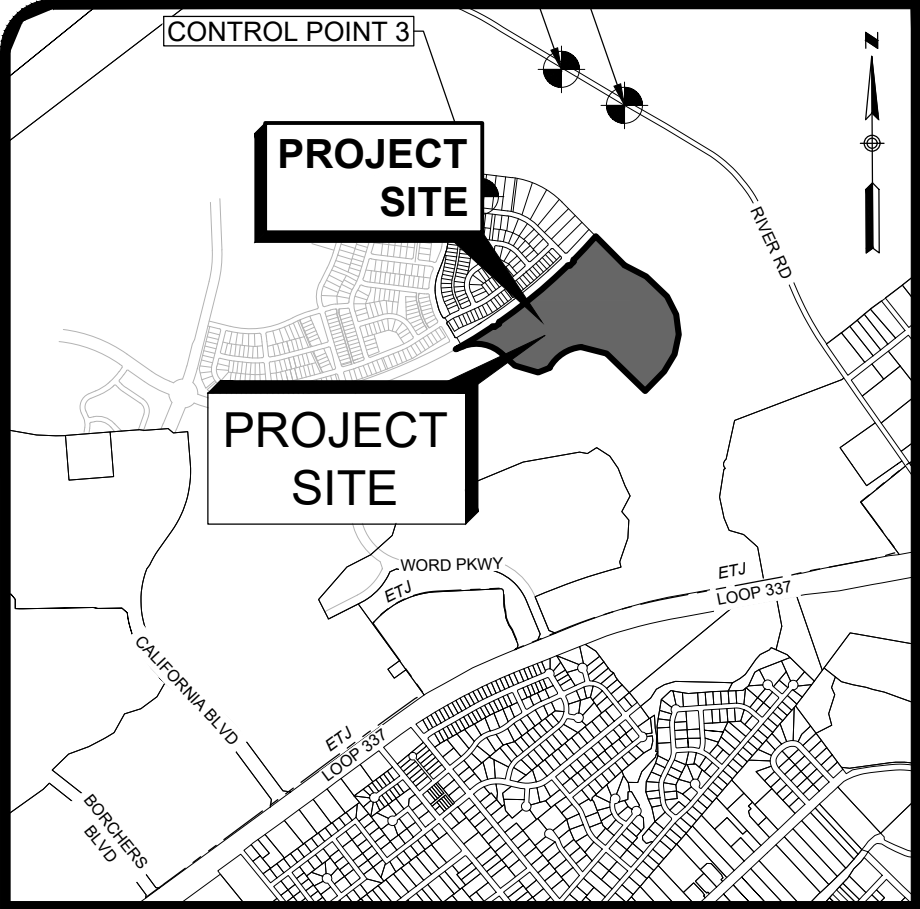
DRAWN BY: NG

CHECKED BY: NG

DRAWING NAME:
Sh. DAM Existing & Ultimate.dwg



Veramendi Precinct 18- & 19-1 Atlas14 Ultimate Q Flow Table PA_NB																	
Study Point	Drainage Area		Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Intensity					Flow				
	Area(s)	A (ac.)	C ₂	C ₁₀	C ₂₅	C ₅₀	C ₁₀₀	I ₂ (in/hr)	I ₁₀ (in/hr)	I ₂₅ (in/hr)	I ₅₀ (in/hr)	I ₁₀₀ (in/hr)	Q ₂ (ft ³ /s)	Q ₁₀	Q ₂₅ (ft ³ /s)	Q ₅₀ (ft ³ /s)	Q ₁₀₀ (ft ³ /s)
	A1	1.93	SEE VERAMENDI PRECINCT 18-1 DRAINAGE REPORT DRAINAGE AREA UW										8.0	13.0	17.0	N/A	24.0
1	A2	2.37	0.44	0.51	0.55	0.58	0.63	3.61	5.30	6.37	7.22	8.12	3.8	6.3	8.3	10.0	12.0
2	A3	0.74	0.62	0.69	0.74	0.77	0.82	5.05	7.50	9.12	10.38	11.70	2.3	3.8	5.0	6.0	7.1
	A4	1.51	0.53	0.60	0.65	0.68	0.73	3.93	5.76	6.94	7.88	8.87	3.1	5.2	6.8	8.1	9.7
	18-1 FLOWS												0.0	3.0	9.0	N/A	22.0
3	18-1+A3												2.3	6.8	14.0	N/A	29.1
4	A1-A5+18-1	7.71	0.50	0.57	0.61	0.65	0.69	3.49	5.11	6.16	6.97	7.84	13.4	25.4	38.1	N/A	63.8
5	B1	6.49	0.51	0.58	0.62	0.66	0.70	3.21	4.70	5.65	6.38	7.19	10.6	17.6	22.8	27.2	32.7
	B2	5.53	SEE VERAMENDI PRECINCT 18-1 DRAINAGE REPORT DRAINAGE AREA US										17.0	29.0	37.0	N/A	54.0
6	C1	4.00	0.54	0.61	0.66	0.69	0.74	3.96	5.81	7.00	7.96	8.95	8.5	14.2	18.3	22.0	26.4
7	C1 + C2	6.96	0.55	0.63	0.67	0.71	0.75	3.96	5.81	7.00	7.96	8.95	15.3	25.3	32.7	39.2	46.9
8	D1	4.33	0.52	0.59	0.64	0.67	0.72	3.52	5.15	6.20	7.02	7.90	7.9	13.2	17.1	20.4	24.5
	D1 BYPASS												0.0	1.3	3.3	5.5	8.6
	D2	5.77	0.54	0.61	0.66	0.70	0.74	3.45	5.06	6.08	6.89	7.75	10.8	17.9	23.2	27.6	33.1
9	D2+ D1 BYPASS												10.8	19.3	26.5	33.2	41.8
10	D3	2.71	0.54	0.61	0.66	0.69	0.74	4.54	6.72	8.13	9.25	10.42	6.7	11.1	14.5	17.4	20.9
11	D4	3.04	0.49	0.56	0.60	0.64	0.68	4.30	6.33	7.64	8.70	9.80	6.4	10.8	14.0	16.9	20.3
12	D5	1.99	0.47	0.54	0.58	0.61	0.66	3.63	5.32	6.40	7.25	8.16	3.4	5.7	7.4	8.9	10.7
13	D6	0.82	0.61	0.69	0.73	0.77	0.82	5.05	7.50	9.12	10.38	11.70	2.5	4.2	5.5	6.6	7.8
	D3 BYPASS												0.0	0.0	0.0	0.4	1.6
	D6 BYPASS												0.0	0.2	0.5	1.0	1.7
	D7	0.90	0.50	0.57	0.61	0.65	0.69	5.05	7.50	9.12	10.38	11.70	2.3	3.8	5.0	6.0	7.3
14	D1 THRU D7												40.0	66.7	86.7	103.8	124.6
15	D1 THRU D8	23.15	0.52	0.59	0.63	0.67	0.71	3.45	5.06	6.08	6.89	7.75	41.5	68.9	89.3	106.6	128.1
	E1	0.80	0.47	0.53	0.58	0.61	0.66	5.05	7.50	9.12	10.38	11.70	1.9	3.2	4.2	5.1	6.1
16	E1+D3 BYPASS												1.9	3.2	4.2	5.5	7.8
17	F1	4.40	0.67	0.74	0.79	0.83	0.88	4.45	6.57	7.94	9.04	10.19	13.0	21.4	27.6	32.9	39.3
18	F2	2.81	0.47	0.53	0.58	0.61	0.66	3.77	5.53	6.66	7.56	8.51	4.9	8.3	10.8	13.0	15.7
	F2 BYPASS												0.0	0.5	1.3	2.3	3.8
	F3	0.79	0.53	0.60	0.64	0.68	0.73	4.70	6.97	8.45	9.61	10.83	2.0	3.3	4.3	5.2	6.2
19	F3+ F2 BYPASS												2.0	3.8	5.6	7.5	10.0
20	F1 THRU F3	8.00	0.58	0.65	0.70	0.74	0.78	3.77	5.53	6.66	7.56	8.51	17.6	29.0	37.3	44.6	53.4
21	G1	5.04	0.52	0.59	0.64	0.67	0.72	4.26	6.26	7.55	8.59	9.68	11.2	18.6	24.2	29.0	34.9
22	G1+G2	6.65	0.47	0.54	0.58	0.62	0.66	4.26	6.26	7.55	8.59	9.68	13.4	22.5	29.3	35.3	42.6
Eq 5.3.1																	
Q=CIA																	



LOCATION MAP
SCALE: 1" = 2000'

LEGEND

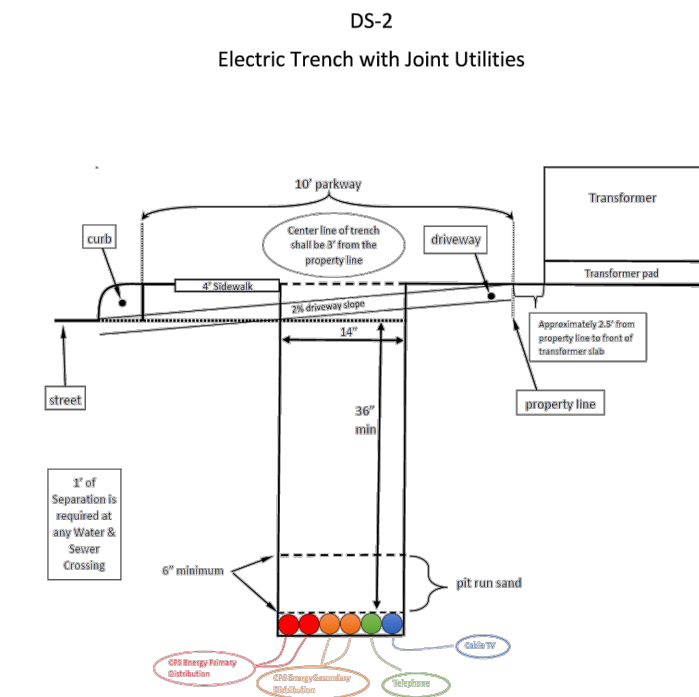
PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PROPOSED SIDEWALK BY DEVELOPER
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

NEW BRAUNFELS UTILITIES NOTES

- R/P BACKFLOW PREVENTION ASSEMBLY TO BE INSTALLED WITH IRRIGATION METERS.

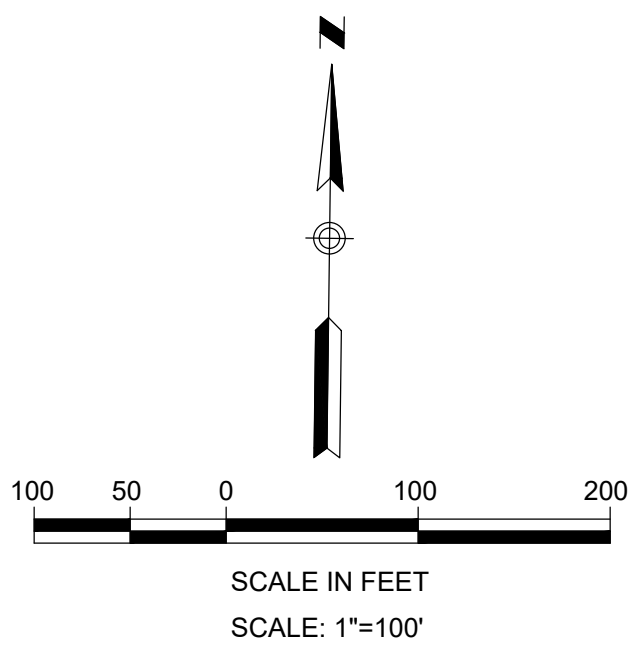
CITY OF NEW BRAUNFELS NOTES

- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5'-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AN CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- UTILITY TRENCH COMPACTION ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12) LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 90% DENSITY TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE TEX-114-E, TEX-115-E, THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 FT FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

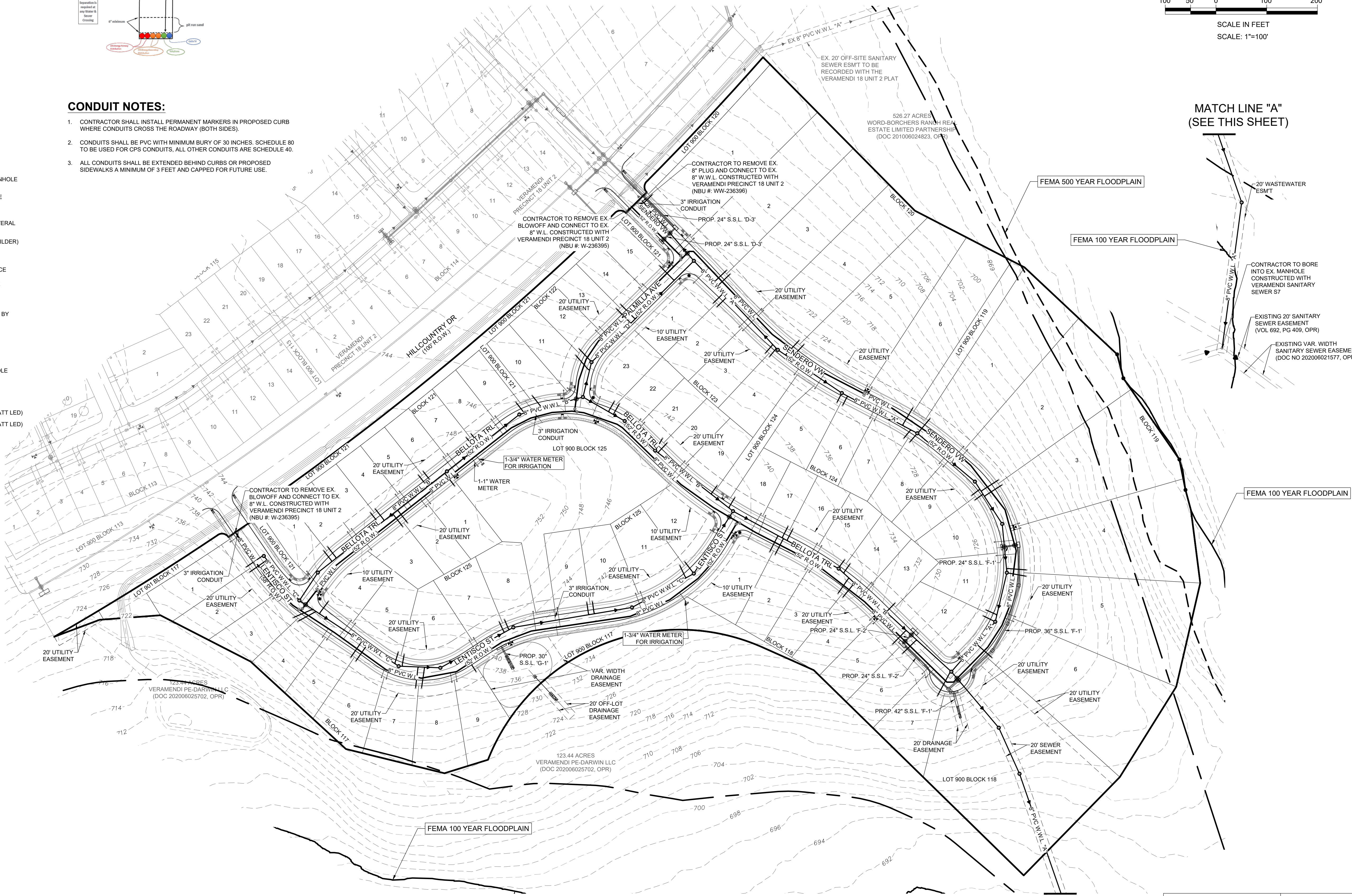


TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. 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: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.



MATCH LINE "A"
(SEE THIS SHEET)



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



VERAMENDI PRECINCT 19 UNIT 1

OVERALL UTILITY LAYOUT

DATE	BY	REVISIONS	DESCRIPTION
7/8/2024	NG	DESIGNED BY	
	TM	DRAWN BY	
	PF	CHECKED BY	
		DRAWING NAME	Overall Utility Layout.dwg

DATE: 7/8/2024
DESIGNED BY: NG
DRAWN BY: TM
CHECKED BY: PF
DRAWING NAME: Overall Utility Layout.dwg

PRISCILLA G. FLORES
109874
LICENSED PROFESSIONAL ENGINEER

Priscilla Flores

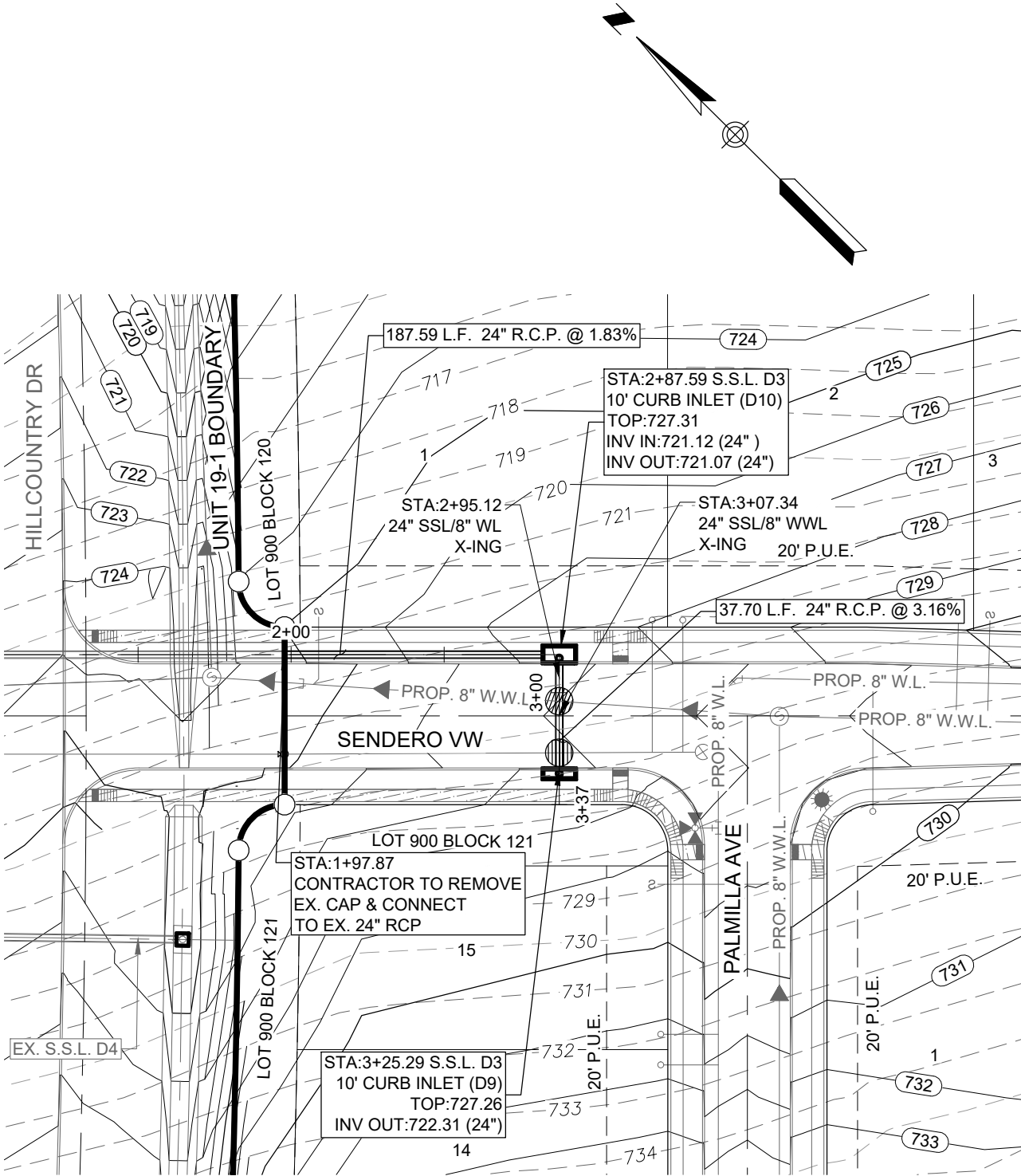
LJA Engineering, Inc.
9830 Colomade Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1306

JOB NUMBER: SA3856.0401
SHEET NO. 8 OF 60 SHEETS

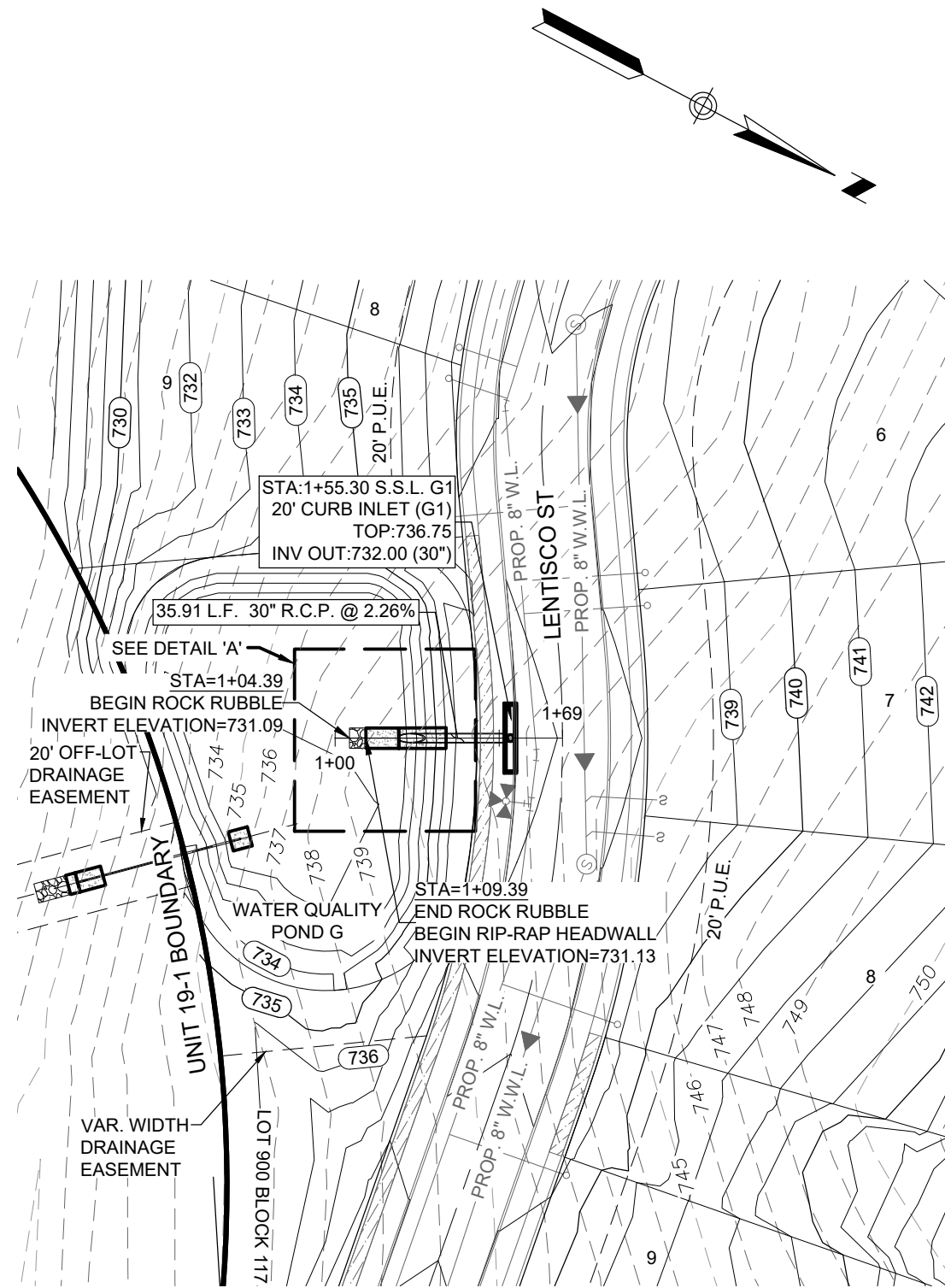
DRAINAGE & GRADING NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATION FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
2. ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" CONCRETE AND MEET MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.
3. REFERENCE DRAINAGE DETAILS (SHEET 13-15) FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
4. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
5. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF NEW BRAUNFELS WILL ACCEPT.
6. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH "D" AS SHOWN IN THE PROFILE.
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8. ALL WORK SHALL BE PERFORMED WITHIN SITE LIMITS OF CONSTRUCTION.
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11. THE CONTRACTOR WILL BE RESPONSIBLE FOR POSITIVE DRAINAGE IN BASIN AREA.
12. ALL DISTURBED AREAS TO BE STABILIZED WITH HYDROMULCH IMMEDIATELY AFTER ESTABLISHING FINAL GRADES UNLESS OTHERWISE NOTED.
13. UPON COMPLETION OF THE PROPOSED STORMWATER DETENTION, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED STRUCTURAL CONTROL(S) WAS INSPECTED (INCLUDING DATE AND TIME OF THE INSPECTION) AND CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.
14. ALL CONCRETE LINING SHALL BE A MINIMUM OF SIX (6) INCHES THICK AND REINFORCED WITH NO. 4 ROUND BARS @ 18 INCHES ON CENTER EACH WAY OR WELDED WIRE FABRIC OF 6" x 6"-W/D6 x W/D6. THE DEPTH OF ALL TOEDOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES.
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17. ALL BENDS AND FITTINGS SHALL BE PREFABRICATED BY MANUFACTURER. NO FIELD FABRICATION OF FITTINGS IS ALLOWED.

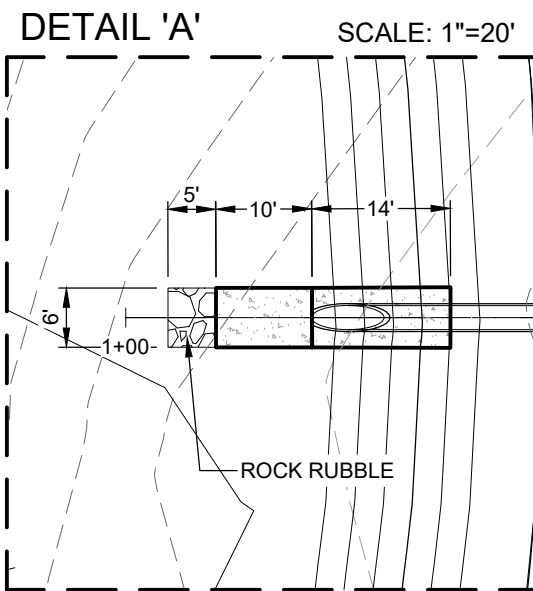
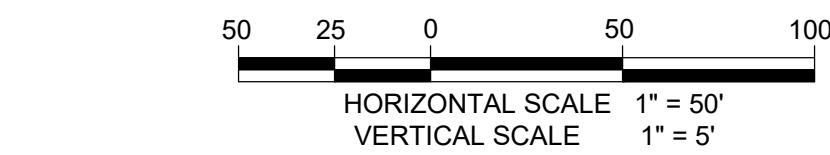
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S.S.L. 'D3' STA. 1+00 TO END



S.S.L. 'G1' STA. 1+00 TO END



CAUTION:

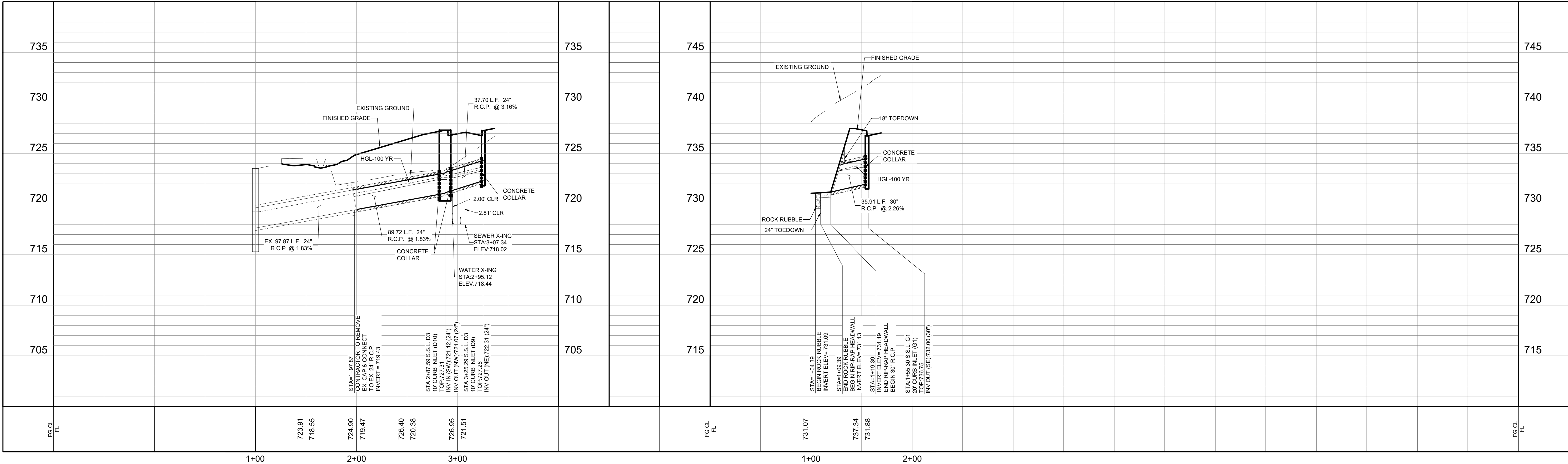
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LEGEND

PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PROPOSED SIDEWALK BY DEVELOPER
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING
		PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		25 YEAR ENERGY GRADE LINE
		25 YEAR HYDRAULIC GRADE LINE

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 SITE(S) 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 THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. 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.



VERAMENDI PRECINCT 19 UNIT 1

S.S.L. 'D3' & S.S.L. 'G1' PLAN & PROFILE

STA. 1+00 TO END

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	DESIGNED BY: NG		7/11/2024
	DRAWN BY: MP		
	CHECKED BY: PGF		
DRAWING NAME: sal_ssl_03'x31' P&P.dwg			



LJA

LJA Engineering, Inc.

9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER:
SA3856.0401

SHEET NO.

9

OF 60 SHEETS

FOR PERMIT

DRAINAGE & GRADING NOTES:

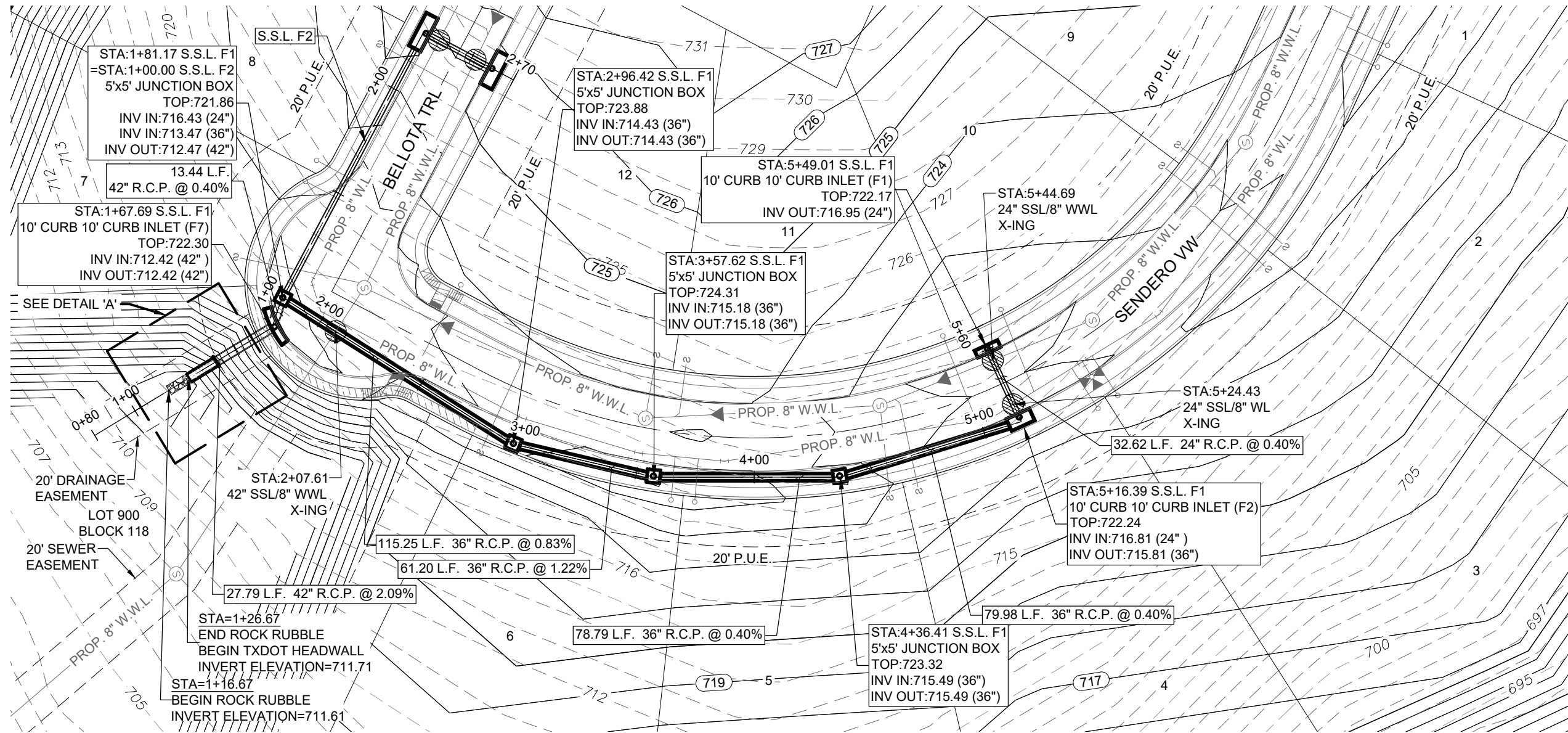
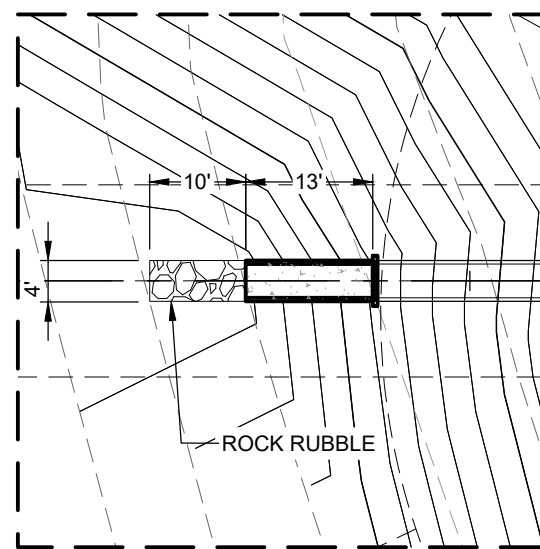
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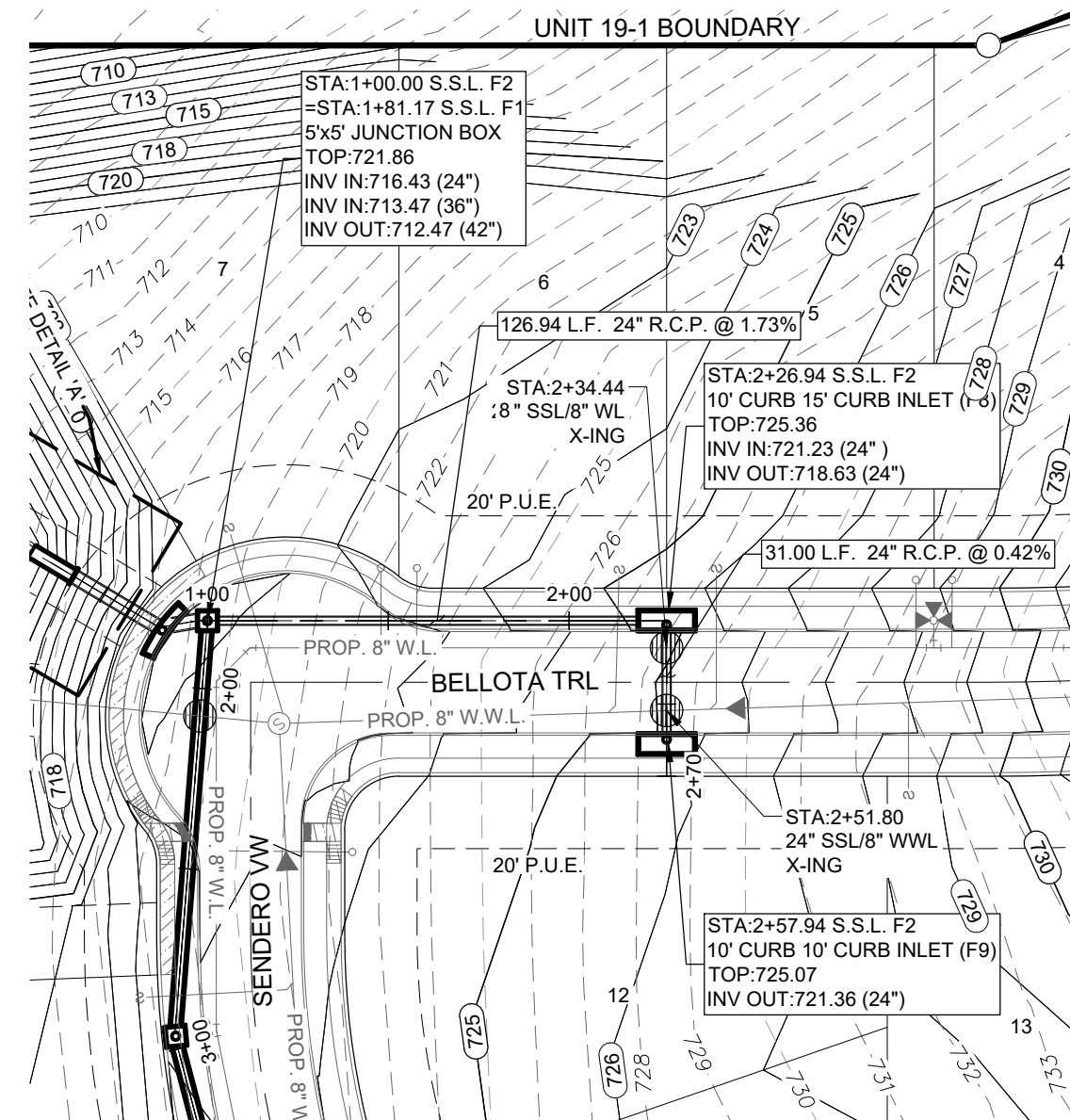
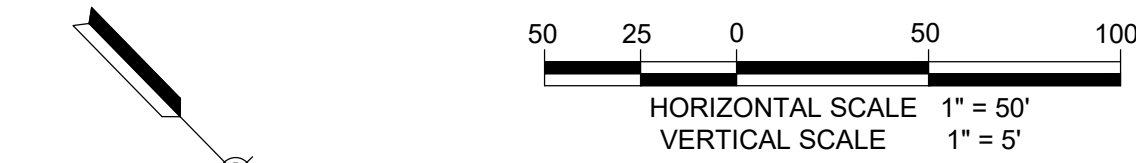
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DETAIL 'B' SCALE: 1"=20'



S.S.L. 'F1' STA. 1+00 TO END



S.S.L. 'F2' STA. 1+00 TO END

LEGEND

PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
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		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
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		GUY WIRE
		OVERHEAD ELECTRIC
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		TOP OF MANHOLE
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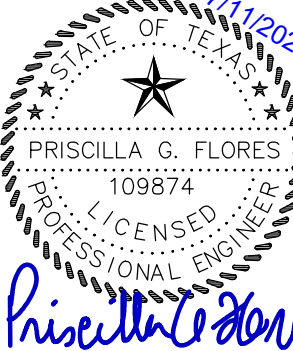
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VERAMENDI PRECINCT 19 UNIT 1

S.S.L. 'F1' & S.S.L. 'F2' PLAN & PROFILE
STA. 1+00 TO END

REVISIONS		DATE	BY	DATE
NO.	DESCRIPTION			
	DESIGNED BY:	NG		
	DRAWN BY:	MAP		
	CHECKED BY:	PGF		
DRAWING NAME: slt_SSI F1 & F2 P&P.dwg				



LJA Engineering, Inc.
9830 Colomade Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1386

JOB NUMBER:
SA3856.0401

SHEET NO.

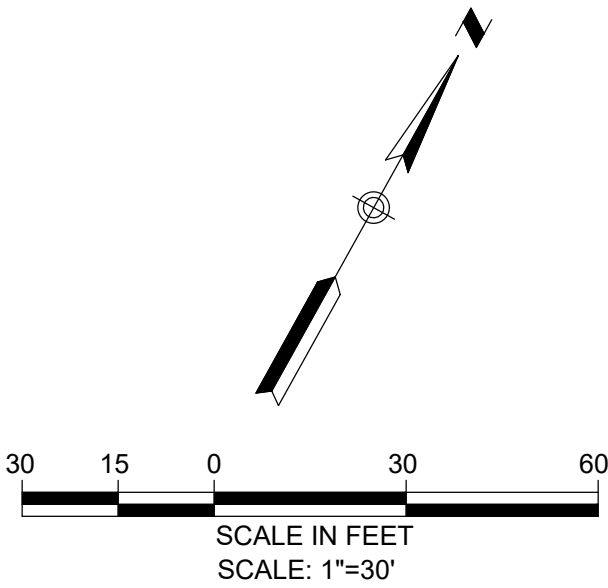
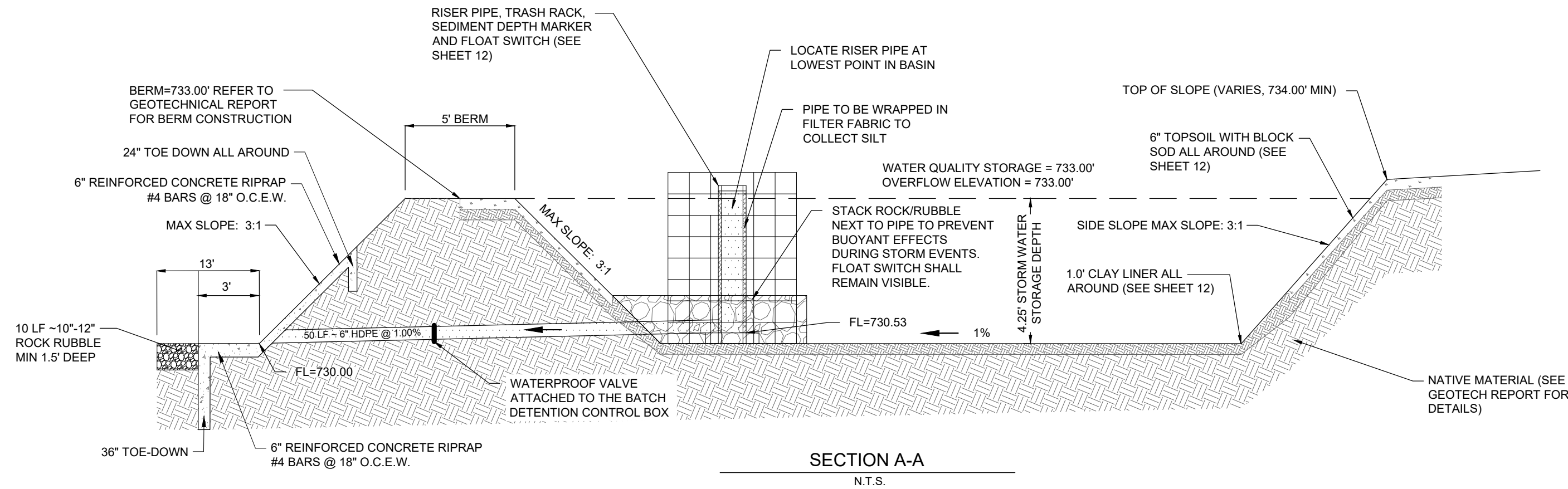
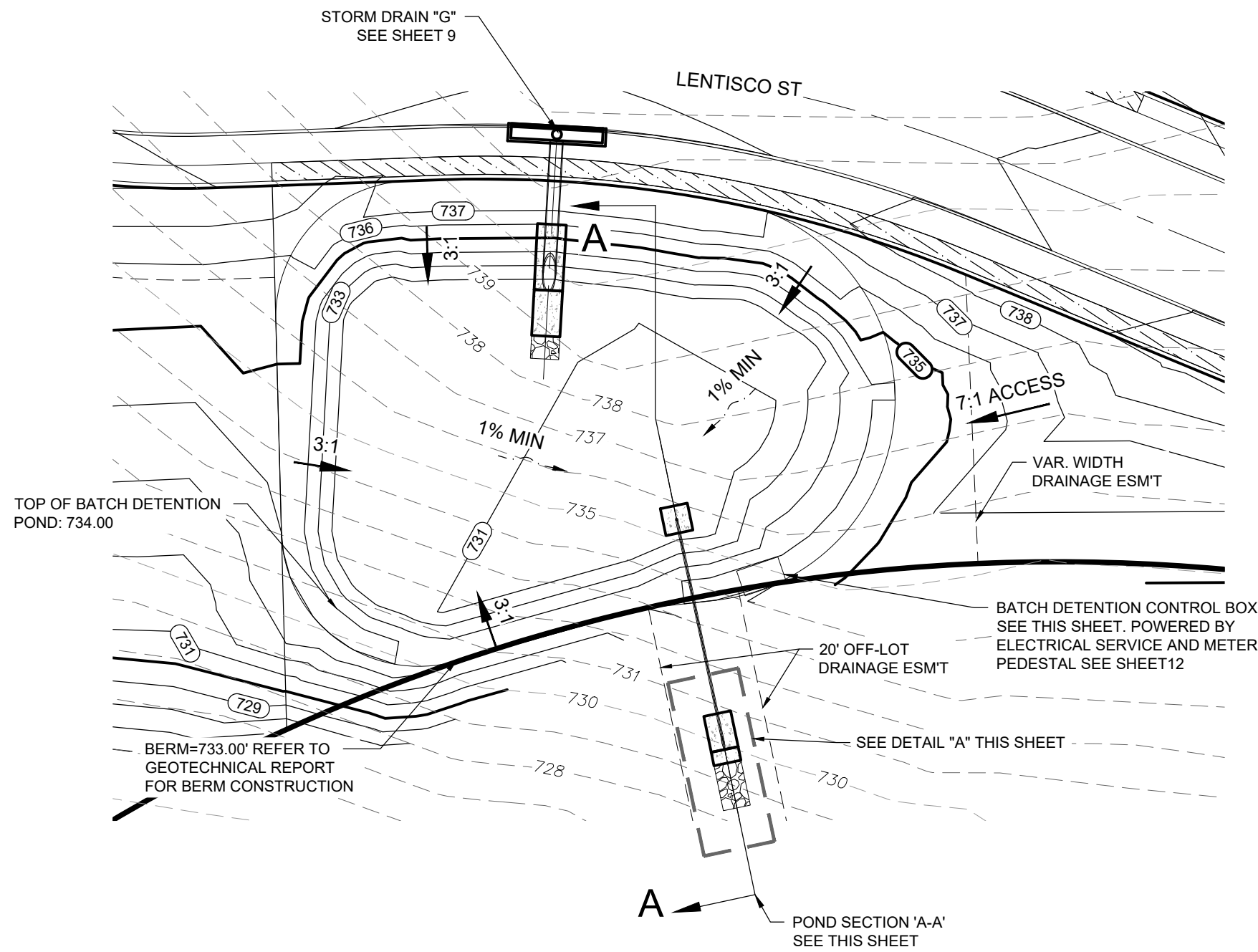
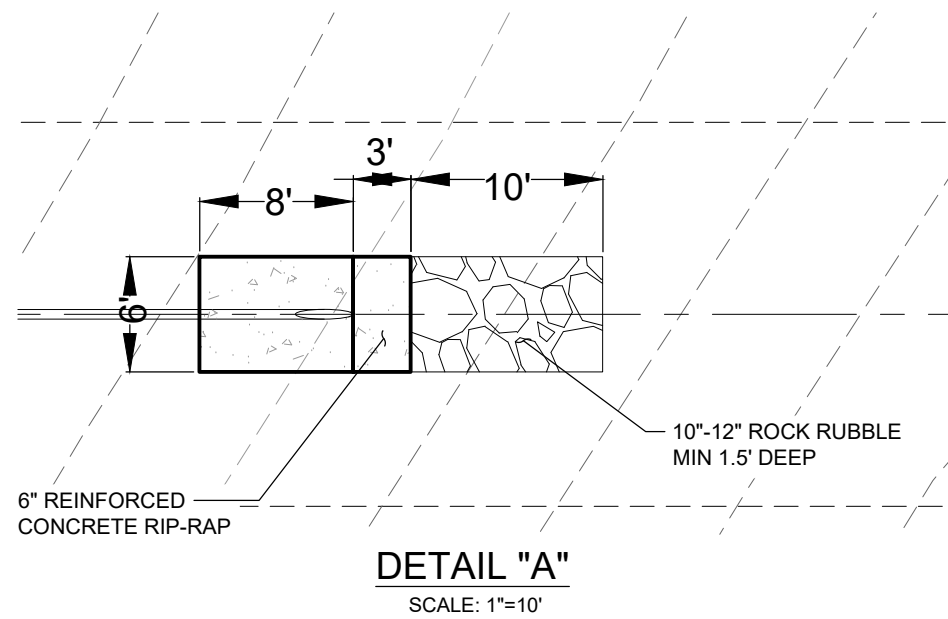
10

OF 60 SHEETS

FOR PERMIT

DRAINAGE & GRADING NOTES:

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LEGEND

PROPOSED	EXISTING	
		CONTOUR
		FLOW ARROW
		GRASSED DRAIN FLOW
		GROUND ELEVATION

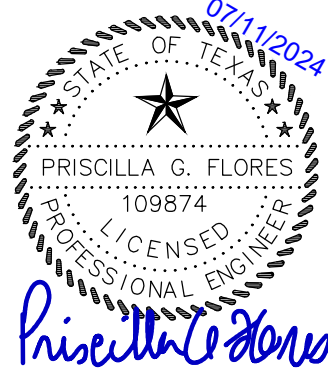
EMERGENCY OVERFLOW
WEIR CALCULATION

$$Q_{weir} = C \cdot L \cdot H^{3/2}$$
$$L = 40'$$
$$H = 1.0'$$
$$C = 2.6$$
$$Q_{weir} = 2.6 \cdot 40' \cdot 1.0'^{3/2}$$
$$Q_{weir} = 104 \text{ CFS}$$
$$Q_{100} = 34.9 \text{ CFS}$$
$$104.0 \text{ CFS} > 34.9 \text{ CFS} = \text{OK}$$

VERAMENDI PRECINCT 19 UNIT 1

WATER QUALITY POND G

REVISIONS	DATE	BY	DESCRIPTION
NO.			
1	7/11/2024	NG	DESIGNED BY
2		TM	DRAWN BY
3		PF	CHECKED BY
4			DRAWING NAME



LJA Engineering, Inc.
Phone 210.503.2700
Suite 300
San Antonio, Texas 78230
LJA.COM
TBP# No. F-1306

JOB NUMBER:
SA3856.0401

SHEET NO.
11

OF 60 SHEETS

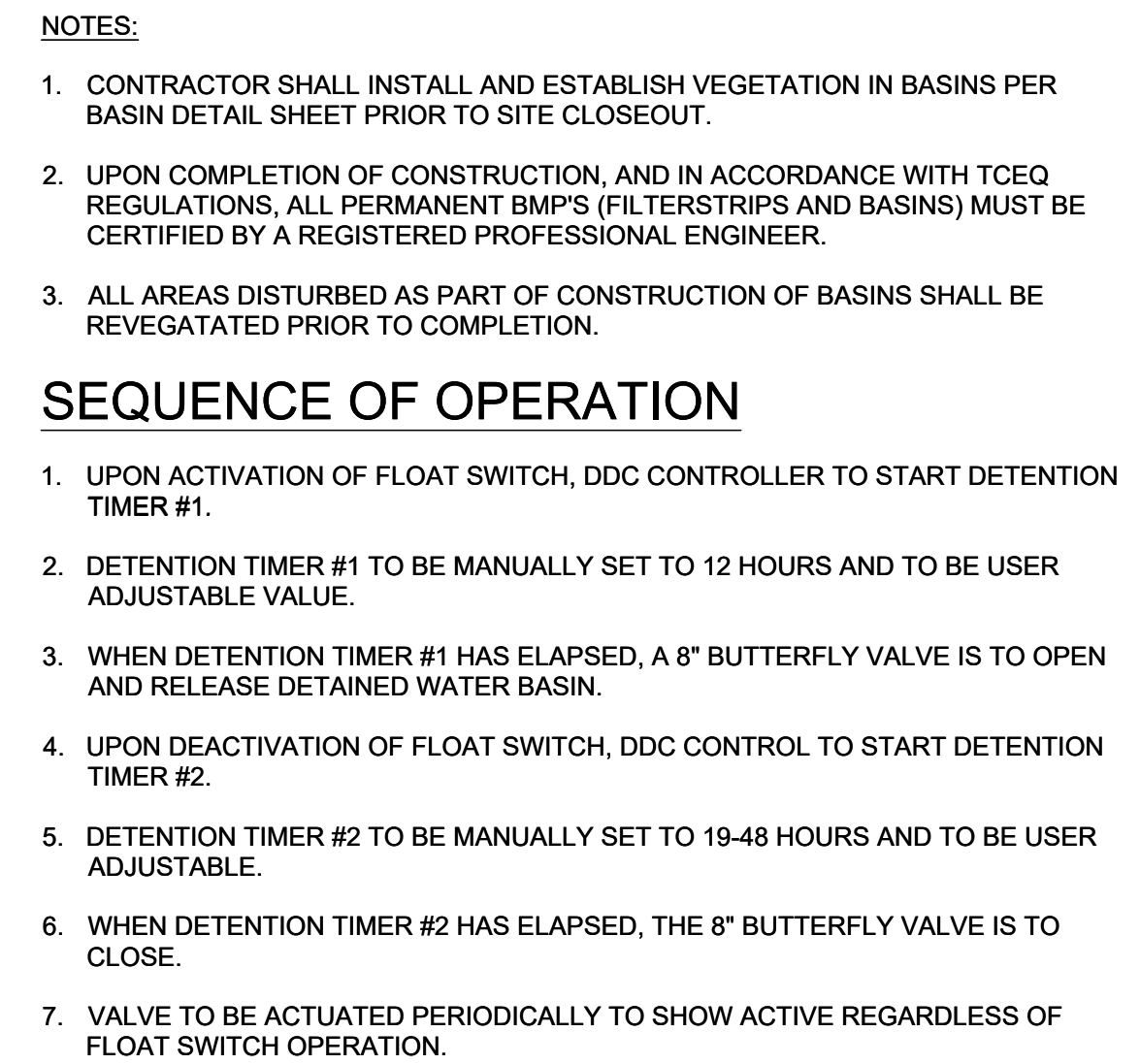
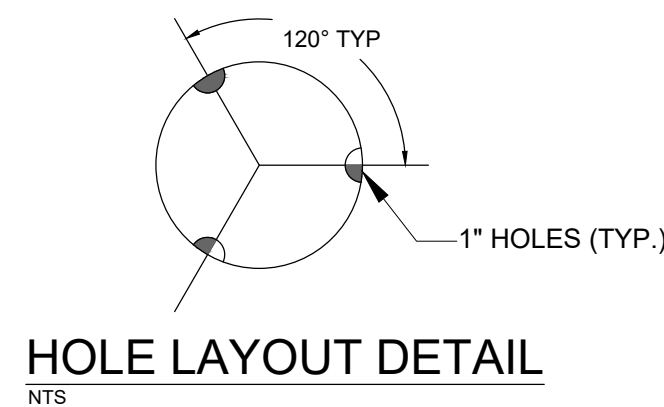
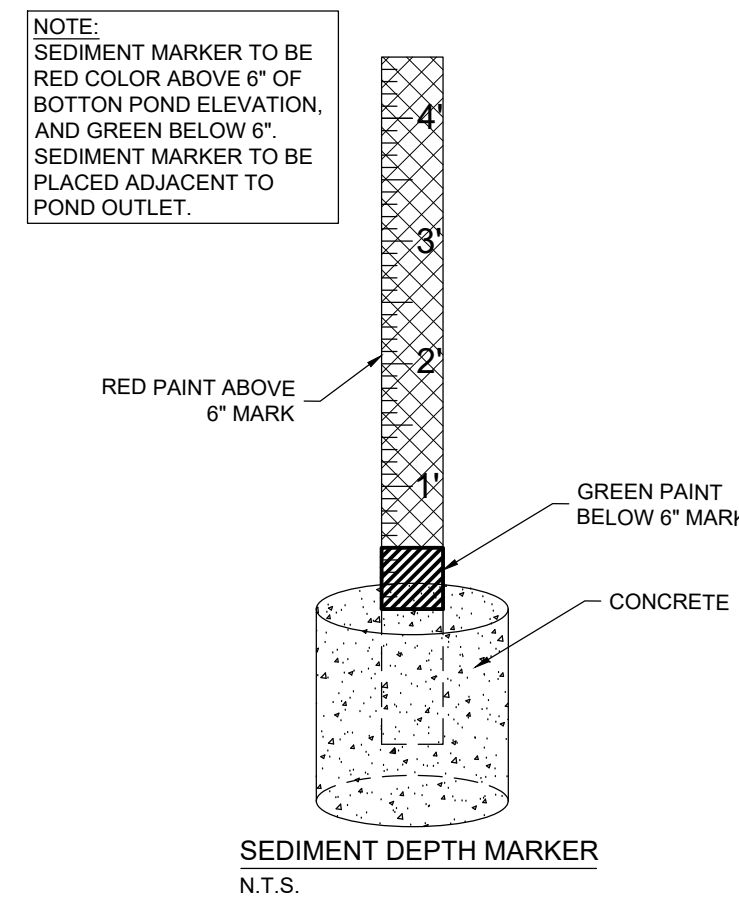
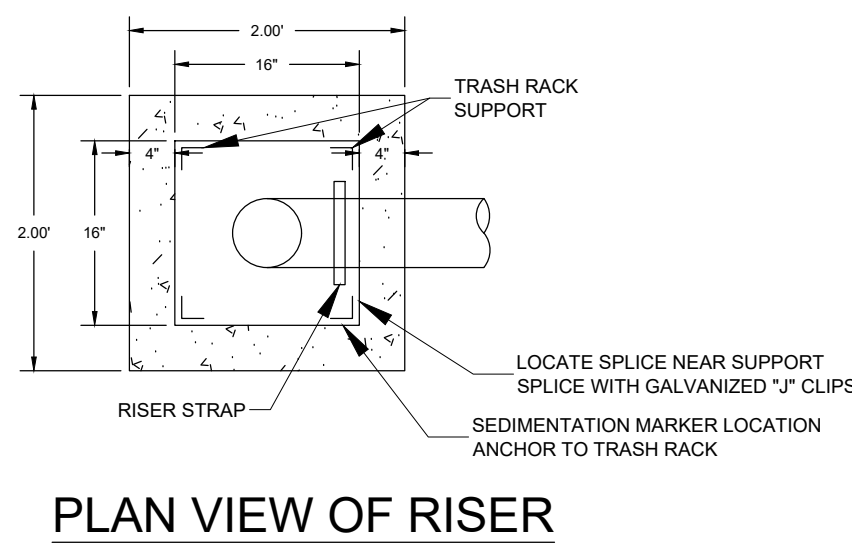
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Know what's below.
Call before you dig.

FOR PERMIT



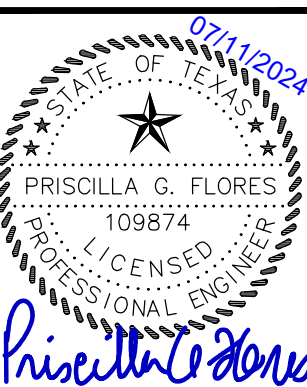
Dimensions when flanges:													
◆ ANSI/ASME B16.5 CLASS150													
◆ ANSI/ASME B16.1 CLASS125													
Pipe Size	A	B	C	D	E	F	G	H	J	K	M	ISO	Weight (AC/D)
2	inch 6.4	6.2	4.7	2.0	3.7	4i 5/8-11	4.7	11.1	14.1	1.8	1.0	F05	12.7 / 133 lbs
	mm 162.0	157.0	118.5	50.0	95.0	—	120.0	283.0	359.0	46.0	25.0		5.8 / 6.0 kg
2-1/2	inch 6.4	6.2	4.7	2.6	4.1	4i 5/8-11	5.5	11.5	14.7	1.9	1.0	F05	14.5 / 150 lbs
	mm 162.0	157.0	118.5	65.0	105.0	—	138.7	291.0	373.0	49.0	25.0		6.6 / 6.8 kg
3	inch 8.4	6.2	4.7	3.2	4.7	4i 5/8-11	6.0	12.4	16.1	1.9	1.0	F05	17.3 / 178 lbs
	mm 162.0	157.0	118.5	80.0	120.0	—	152.4	314.0	410.0	49.0	25.0		7.8 / 8.1 kg
4	inch 6.4	6.2	4.7	3.9	5.8	8i 5/8-11	7.5	12.8	17.2	2.2	1.0	F05/F07	22.1 / 226 lbs
	mm 162.0	157.0	118.5	100.0	147.0	—	190.5	324.0	438.0	56.0	25.0		10.0 / 10.3 kg
6	inch 10.1	8.5	6.3	5.9	8.1	8i 3/4-10	9.5	14.2	19.8	2.3	1.0	F07	50.0 / 51.0 lbs
	mm 256.0	216.0	160.0	150.0	205.0	—	241.3	360.0	502.0	59.0	25.0		22.7 / 23.1 kg

NOTES TO CONTRACTOR

(EACH PHASE OF BASIN CONSTRUCTION)

1. CONTRACTOR IS ADVISED THAT TCEQ DOES NOT ALLOW CHANGES TO PERMANENT POLLUTION ABATEMENT MEASURES WITHOUT THEIR PRIOR APPROVAL.
2. CONTRACTOR SHALL NOTIFY CERTIFYING ENGINEER WHEN:
 - REINFORCING STEEL FOR BASIN WALL OR RIPRAP LINER HAS BEEN SET. CONCRETE HAS NOT BEEN PLACED AND DRAIN PIPE AND RISER PIPE IS IN PLACE.
3. WORK SHALL NOT CONTINUE ON THE BASIN UNTIL THE ENGINEER HAS HAD AN OPPORTUNITY TO OBSERVE THE STATUS OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE ENGINEER A MINIMUM OF 24 HOURS ADVANCE NOTICE PRIOR TO TURN THE BASIN WILL BE AT THE REQUIRED STAGE.
4. UPON SUBSTANTIAL COMPLETION, OR AS REQUESTED BY ENGINEER, CONTRACTOR TO PROVIDE CERTIFYING ENGINEER WITH FIELD SHOTS VERIFYING ELEVATIONS OF THE FOLLOWING:
 - TOP OF BANK/WALL AT EACH CORNER OF BASIN
 - TOE OF SLOPE AT EACH CORNER OF BASIN (INSIDE BASIN TOE)
 - SPLASH PAD/INLET PIPES
 - OVERFLOW WEIRS
5. BEFORE FINAL ACCEPTANCE OF CONSTRUCTION BY THE OWNER, THE CONTRACTOR WILL REMOVE ALL TRASH, DEBRIS, AND ACCUMULATED SILT FROM THE BASINS AND REESTABLISH THEM TO THE PROPER OPERATING CONDITION.

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CHECKED BY:	PF		
DRAWING NAME:		sit - Basin Details.dwg	



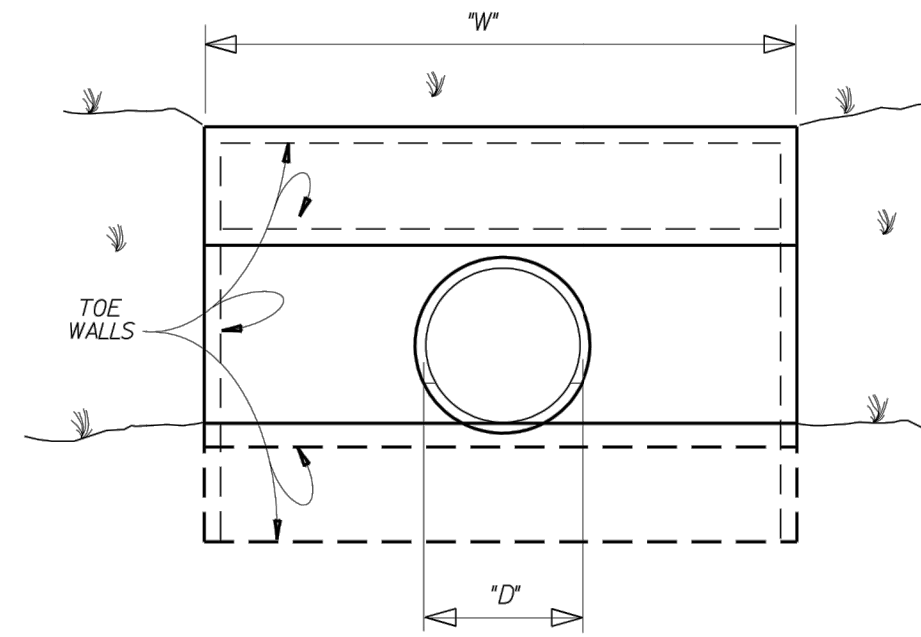
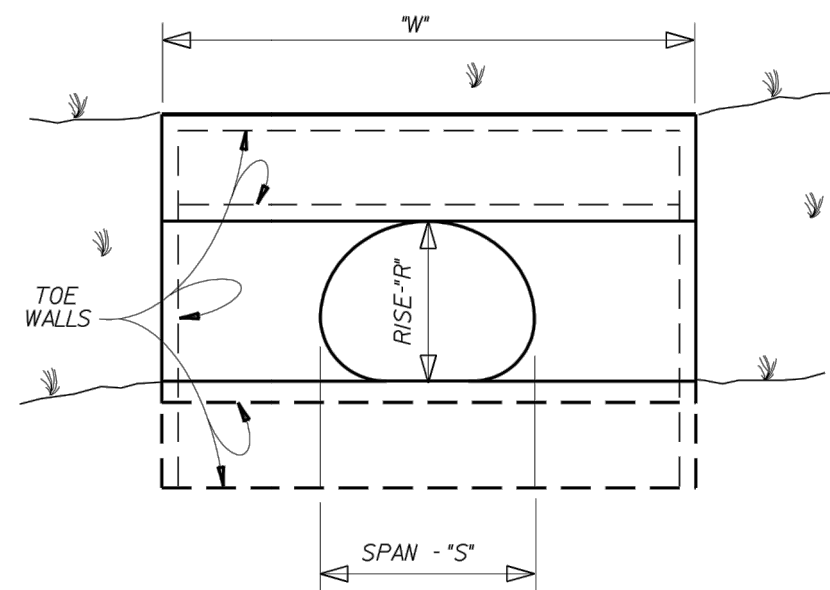
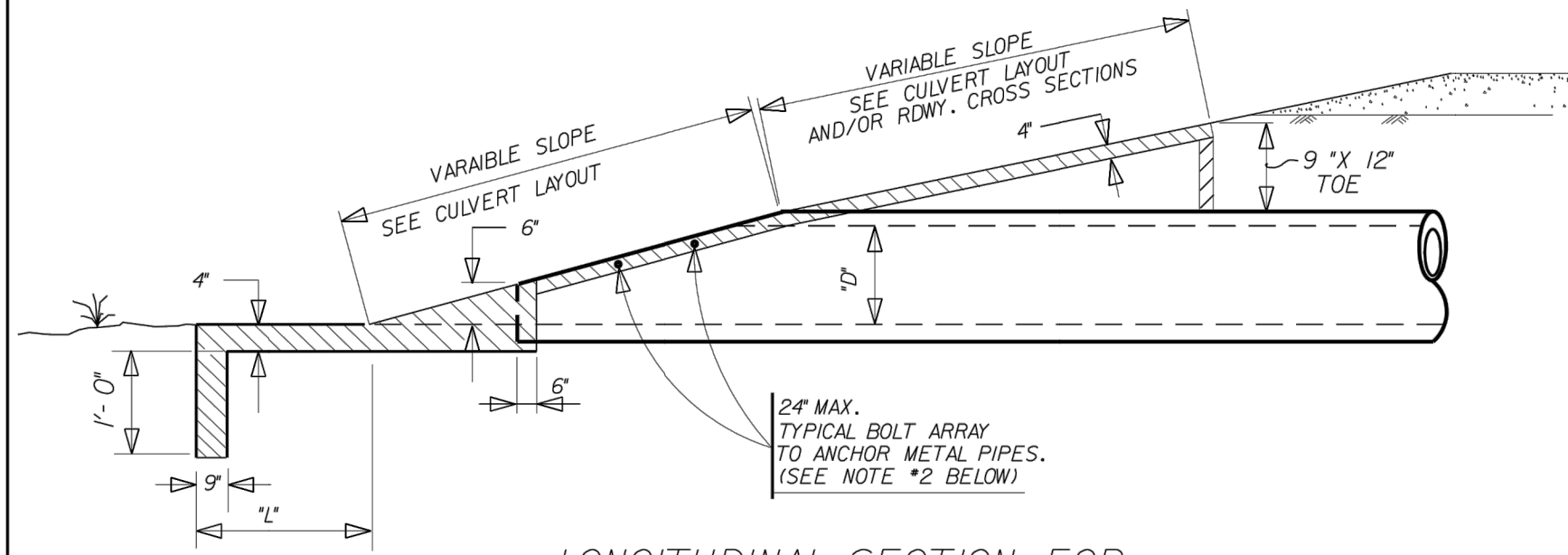
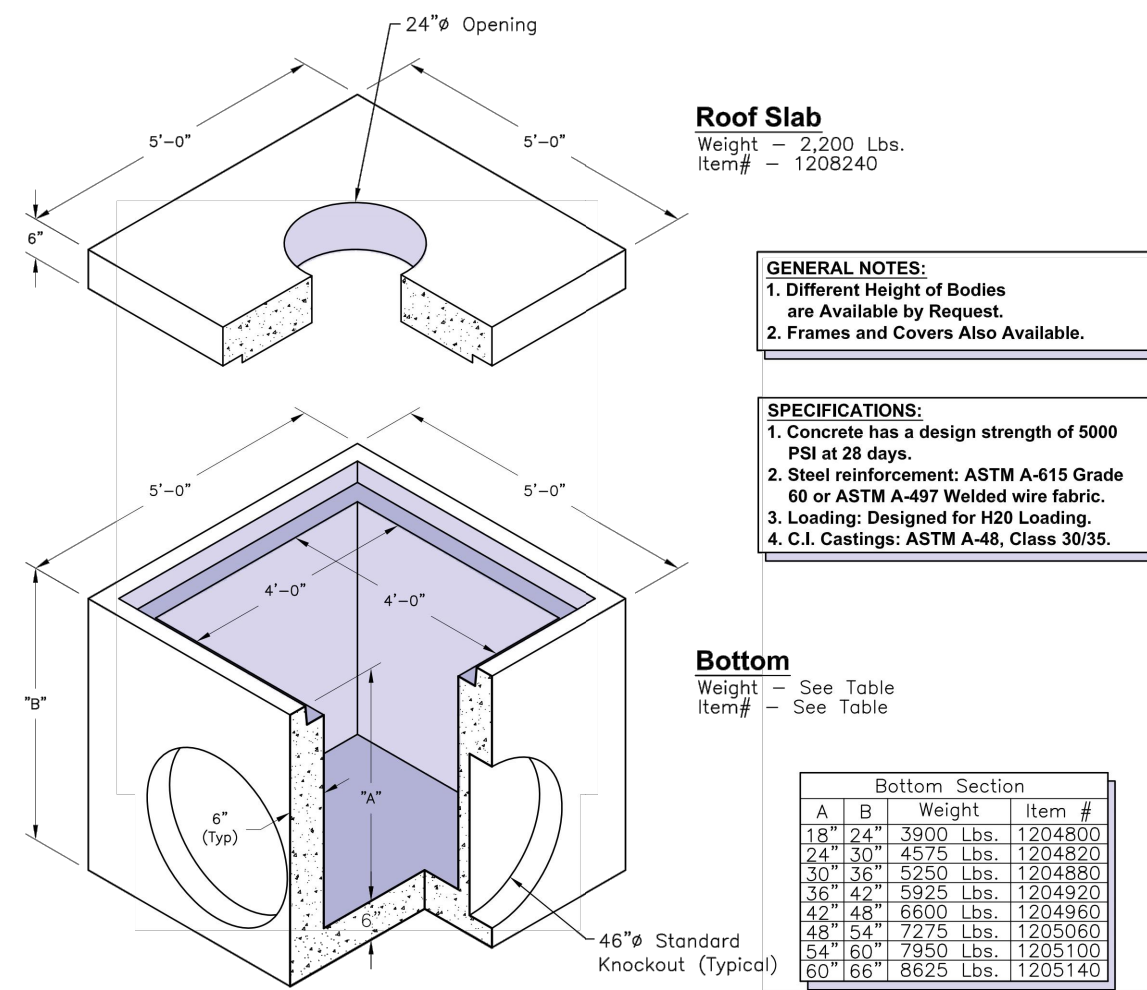
LJA Engineering, Inc.
9830 Colomade Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TEPE No. F-1386

JOB NUMBER:
SA3856.0401

SHEET NO.

12

OF 60 SHEETS



DIMENSIONS FOR CIRCULAR (CMP and RCP) PIPE CULVERTS

"D" INSIDE DIA. of PIPE	"L"	"G"		SINGLE	DOUBLE	TRIPLE	QUADRUPLE
		CGM	RCP				
18"	2'-0"	1'-2"	0'-9"	4'-6"	7'-2"	9'-10"	12'-6"
21"	2'-6"	1'-3"	0'-10"	5'-3"	8'-4"	11'-4"	13'-4"
24"	3'-0"	1'-5"	0'-11"	6'-0"	9'-5"	12'-10"	16'-3"
30"	4'-0"	1'-8"	1'-1"	7'-6"	11'-8"	15'-10"	20'-0"
36"	5'-0"	1'-11"	1'-3"	9'-0"	13'-11"	18'-10"	23'-9"
42"	6'-0"	2'-2"	1'-5"	10'-6"	16'-2"	21'-10"	27'-6"
48"	7'-0"	2'-5"	1'-7"	12'-0"	18'-5"	24'-10"	31'-3"
54"	8'-0"	2'-10"	1'-11"	13'-6"	20'-10"	28'-2"	35'-6"
60"	9'-0"	3'-2"	2'-0"	15'-0"	23'-2"	31'-4"	39'-6"

"G" IS MEASURED BETWEEN THE OUTER SURFACES OF THE PIPES.

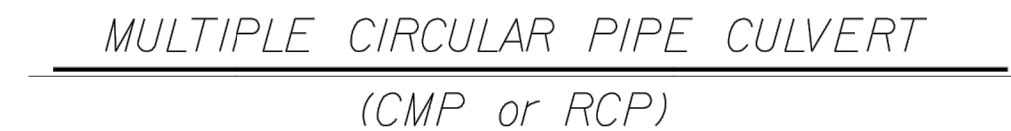
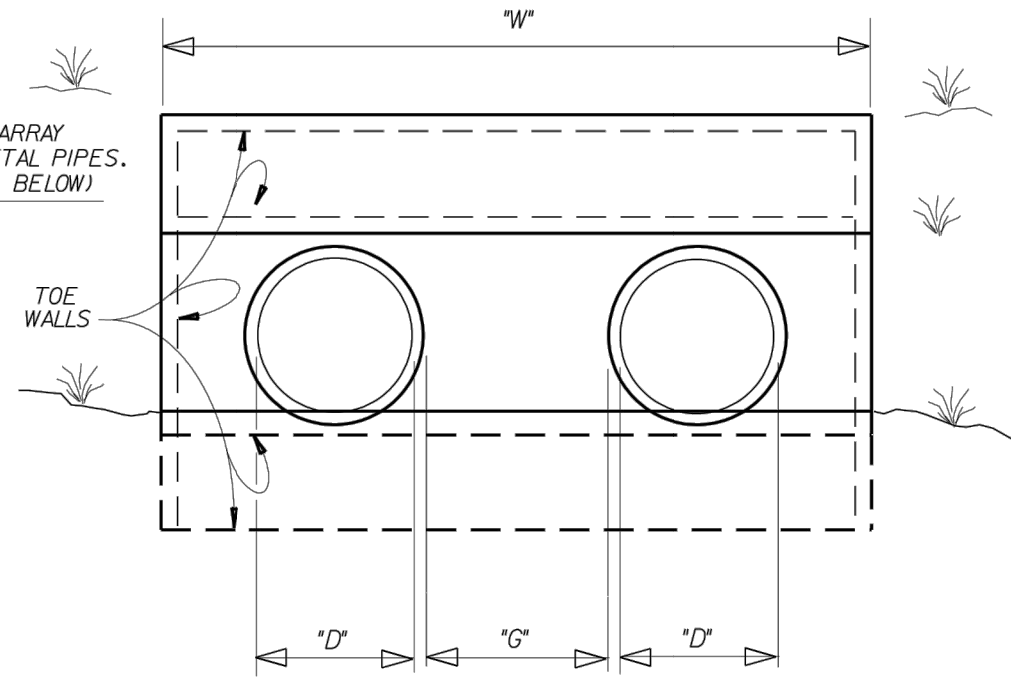
DIMENSIONS FOR C.M.P. ARCH PIPE CULVERTS

DESIGN SIZE	APPROX. ARCH DIM. SPAN	RISE	"L"	"G"	SINGLE	DOUBLE	TRIPLE	QUADRUPLE
2	21"	15"	2'-0"	1'-2"	4'-3"	7'-2"	10'-1"	13'-0"
3	28"	20"	3'-0"	1'-5"	5'-8"	9'-5"	13'-2"	16'-11"
4	35"	24"	4'-0"	1'-8"	6'-11"	11'-6"	16'-1"	20'-8"
5	42"	29"	5'-0"	1'-11"	8'-4"	13'-9"	19'-2"	24'-7"
6	49"	33"	6'-0"	2'-2"	9'-7"	15'-10"	22'-1"	28'-4"
7	57"	38"	7'-0"	2'-5"	11'-1"	18'-3"	25'-5"	32'-7"
8	64"	43"	8'-0"	2'-10"	12'-5"	20'-8"	28'-10"	37'-0"
9	71"	47"	9'-0"	3'-2"	13'-9"	22'-10"	31'-11"	41'-0"

BASED ON 2-2/3" X 1/2" CORRUGATION
"G" IS MEASURED BETWEEN THE OUTER SURFACES OF THE PIPES.

NOTES:

- FOR RIPRAP QUANTITIES AND SLOPES, SEE CULVERT LAYOUT SHEET. CONCRETE SHALL BE CLASS B UNLESS OTHERWISE SHOWN IN THE PLANS.
- ALL METAL PIPES (CIRCULAR AND/OR ARCH) SHALL HAVE 5/8" X 6" GALVANIZED BOLTS WITH 2 HEX NUTS AT 24" CENTERS TO ANCHOR THE PIPE TO THE CONCRETE. THIS WORK WILL BE SUBSIDIARY TO THE RIPRAP HEADWALL.
- FOR CONCRETE ARCH PIPES, THE CMP ARCH PIPE CULVERT DIMENSIONS WILL HAVE TO BE ADJUSTED FOR THE PIPE WALL THICKNESS.
- FOR PIPES LARGER THAN SHOWN, USE THE CLEAR DISTANCE BETWEEN PIPES SHOWN IN ITEMS 460 AND/OR 464.
- IF THE SIDES OF THE HEADWALL IS ADJACENT TO A RIPRAP SLOPE AND IF THE TOP OF THE HEADWALL IS ADJACENT TO THE ROADWAY FOUNDATION OR RIPRAP SLOPE, THE SIDE AND TOP TOE WALLS MAY BE ELIMINATED IF APPROVED BY THE ENGINEER.



SAN ANTONIO DISTRICT STANDARD RIPRAP HEADWALL

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PROJECT NO. _____ SHEET NO. _____

STATE OF TEXAS COUNTY _____

DATE _____

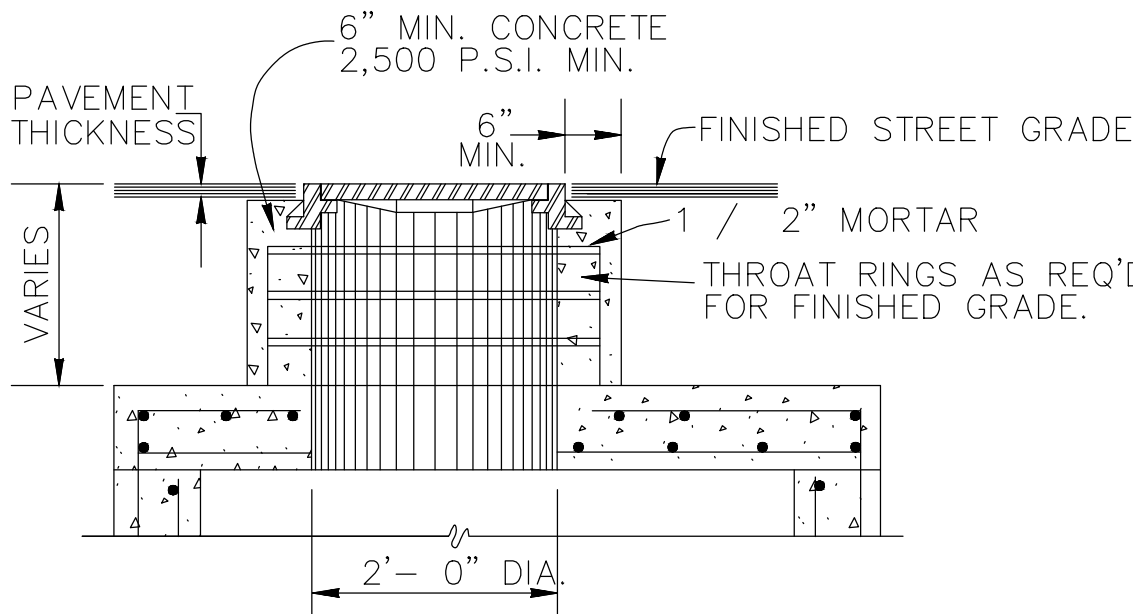
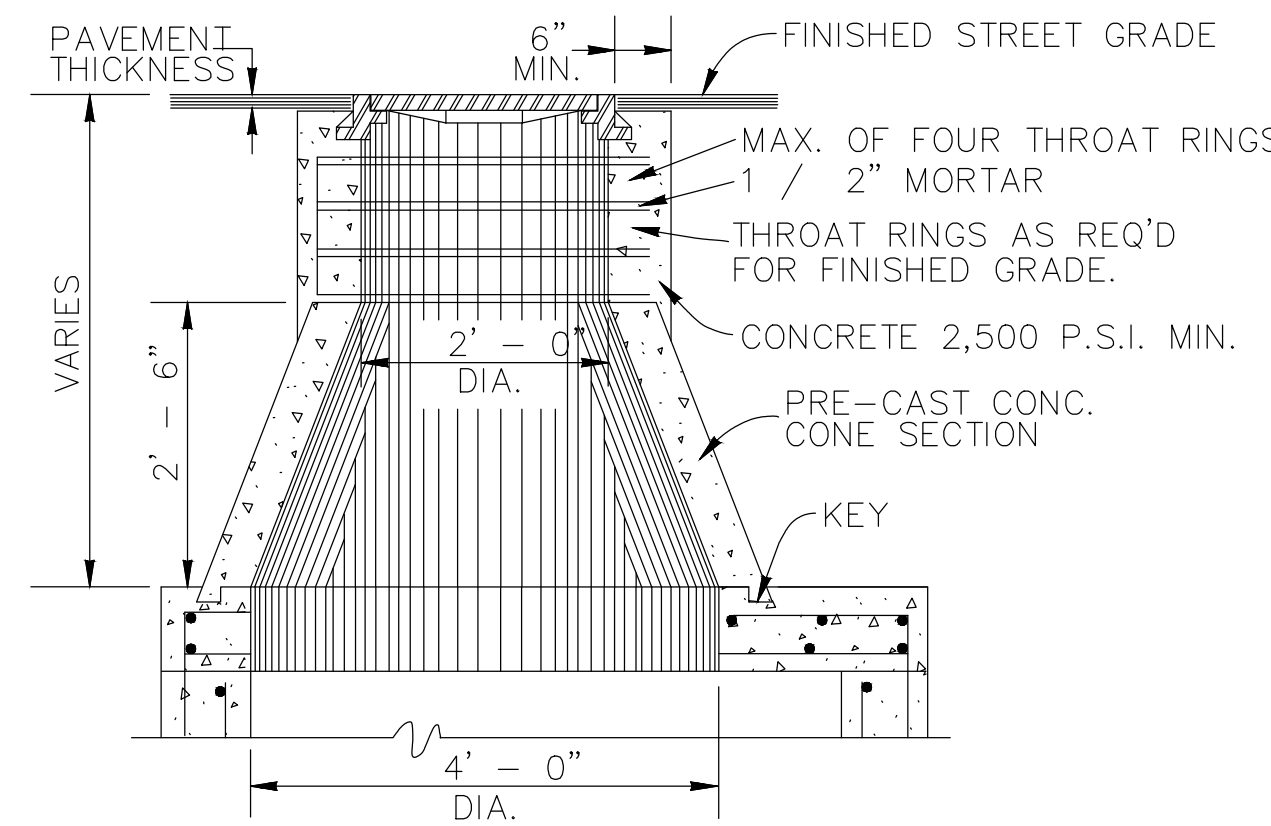
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CONTRACT NO. _____

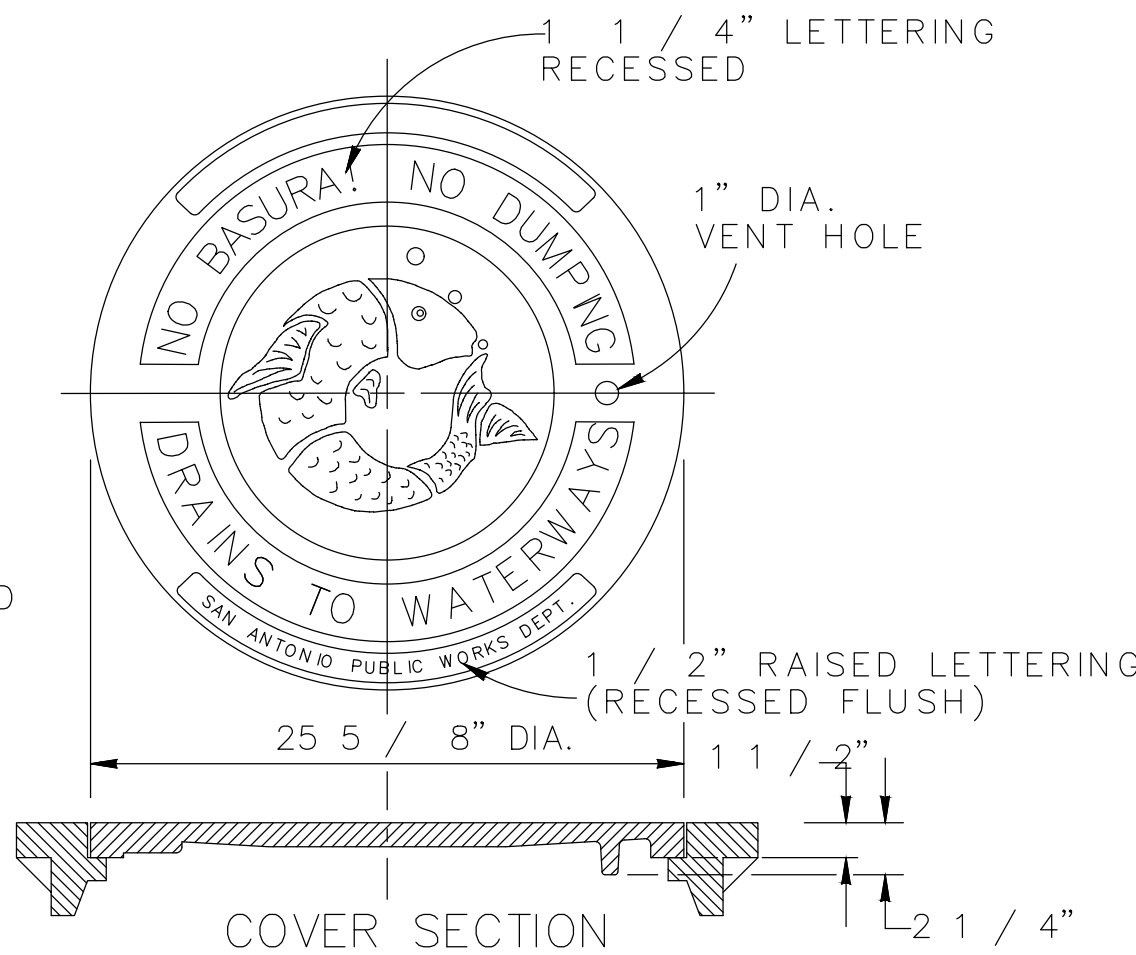
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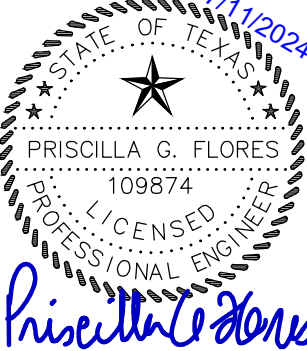


MANHOLE LID & RING DETAIL



- NOTES FOR MANHOLE LID AND RING
- FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT." AND USE CITY OF NEW BRAUNFELS STANDARDS.
 - CASTING NUMBER AND MANUFACTURE'S I.D. ON LID AND RING.
 - LOAD BEARING CAPABILITY OF H-20 MINIMUM.
 - THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
 - THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.

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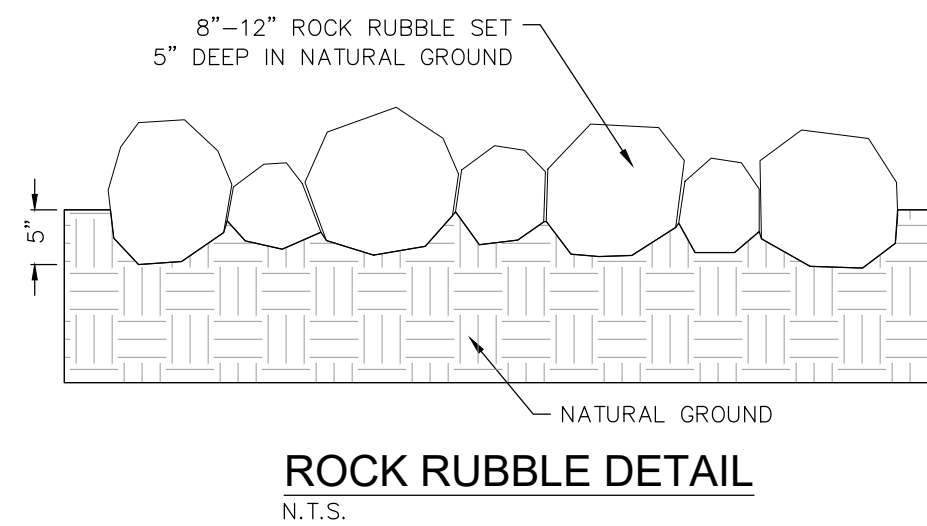
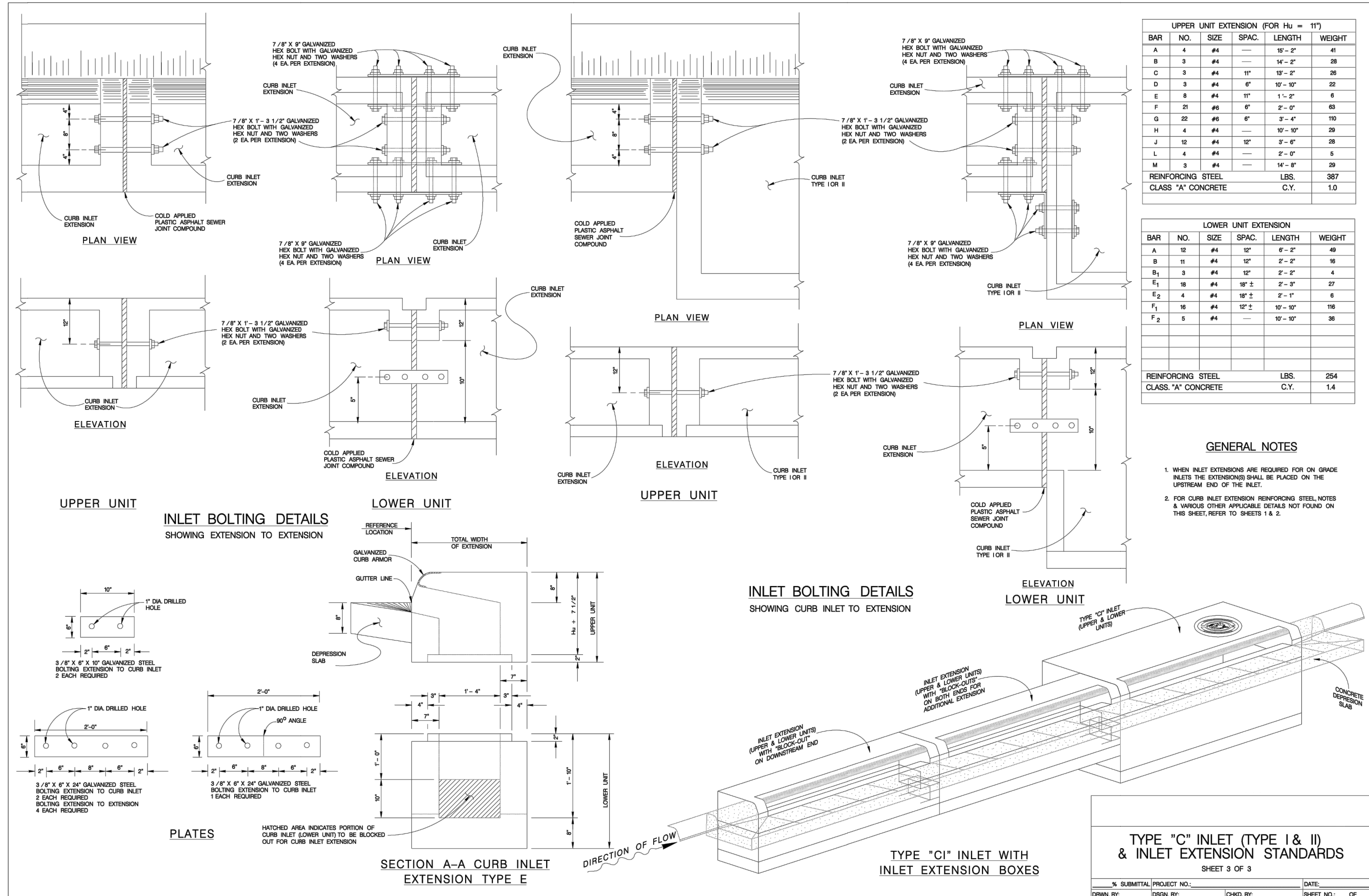
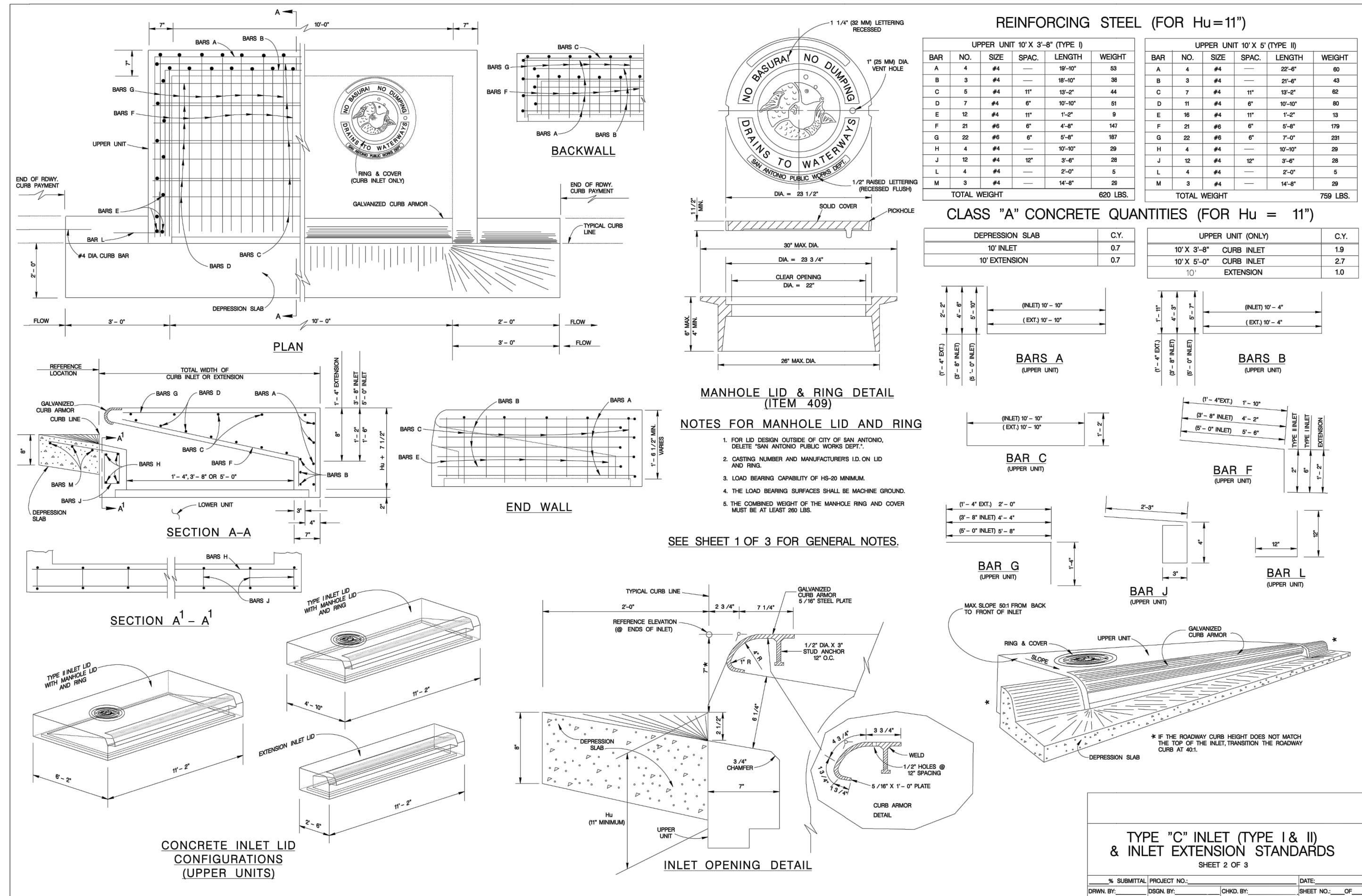
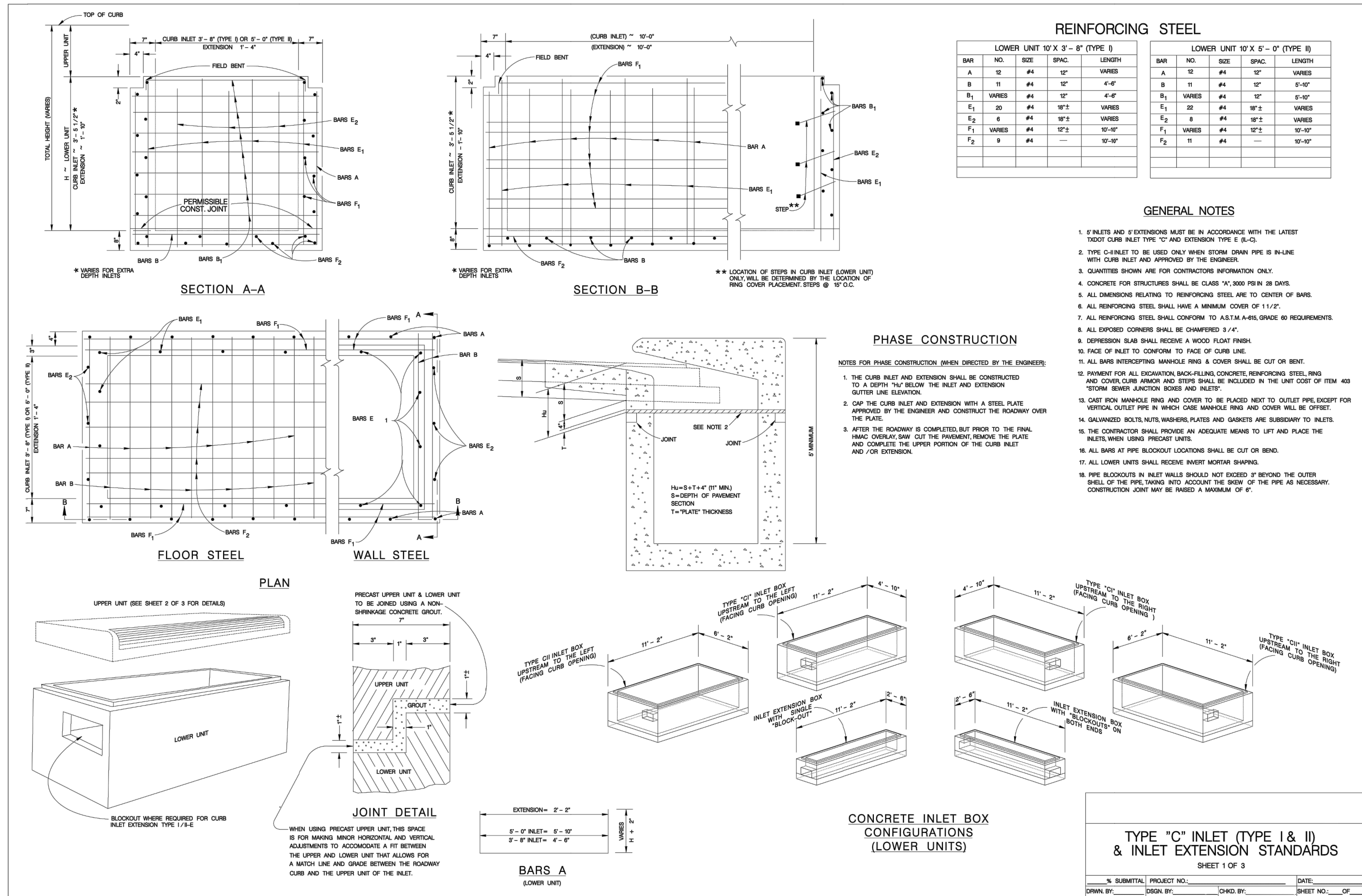
Priscilla G. Flores
Professional Engineer
Phone 210.503.2700
LJA.COM
Suite 300
San Antonio, Texas 78230
TBPE No. F-1306

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LJA.COM
TBPE No. F-1306

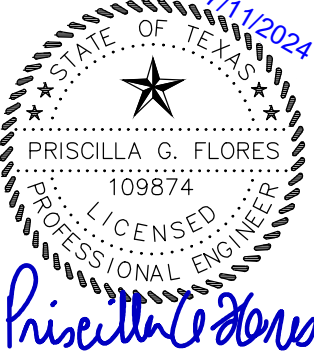
JOB NUMBER:
SA3856.0401

SHEET NO.

13
OF 60 SHEETS

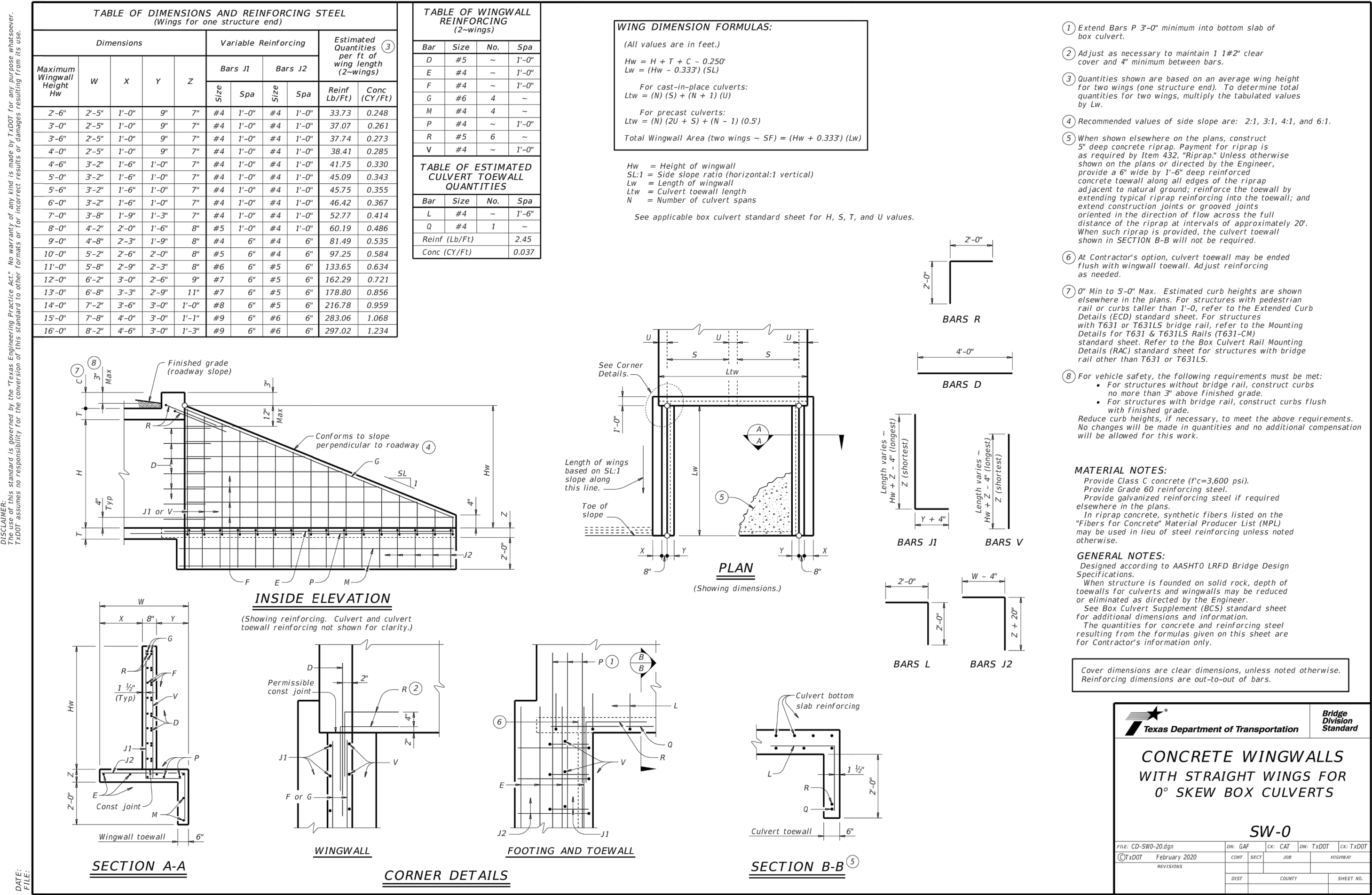


NO.	DATE	BY	REVISIONS
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2	7/11/2024	TM	DRAWN BY
3	7/11/2024	PF	CHECKED BY
4	7/11/2024	PF	DRAWING NAME
5	7/11/2024	PF	DRG. Details.dwg



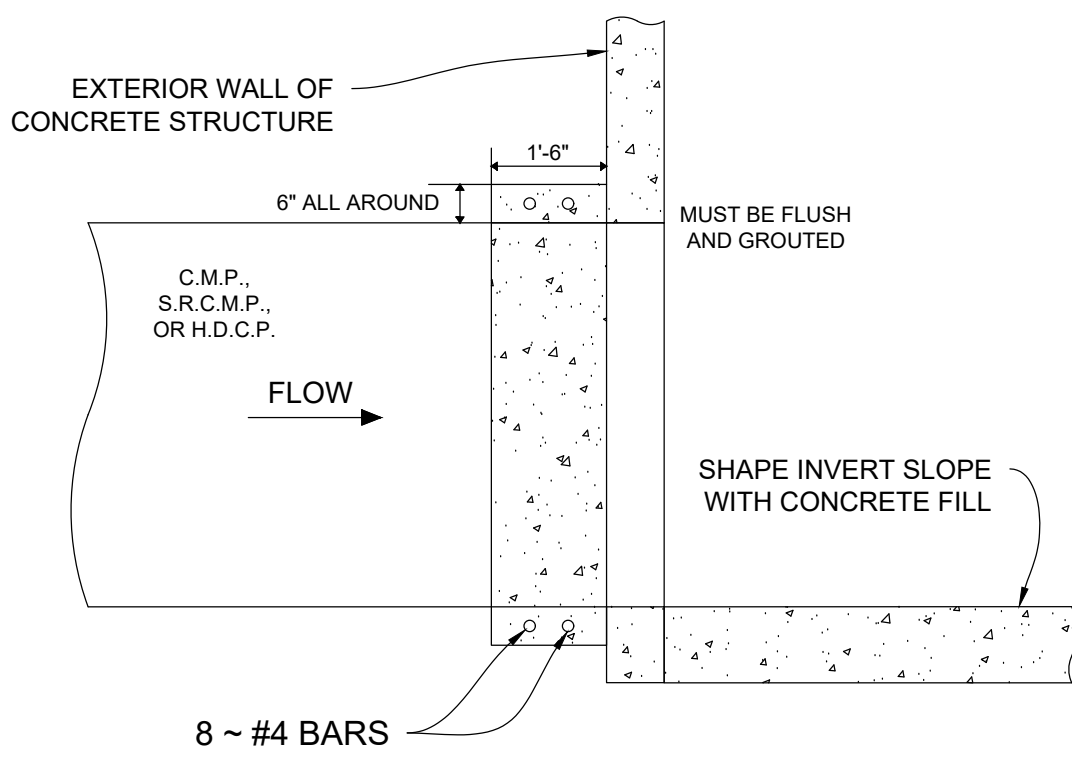
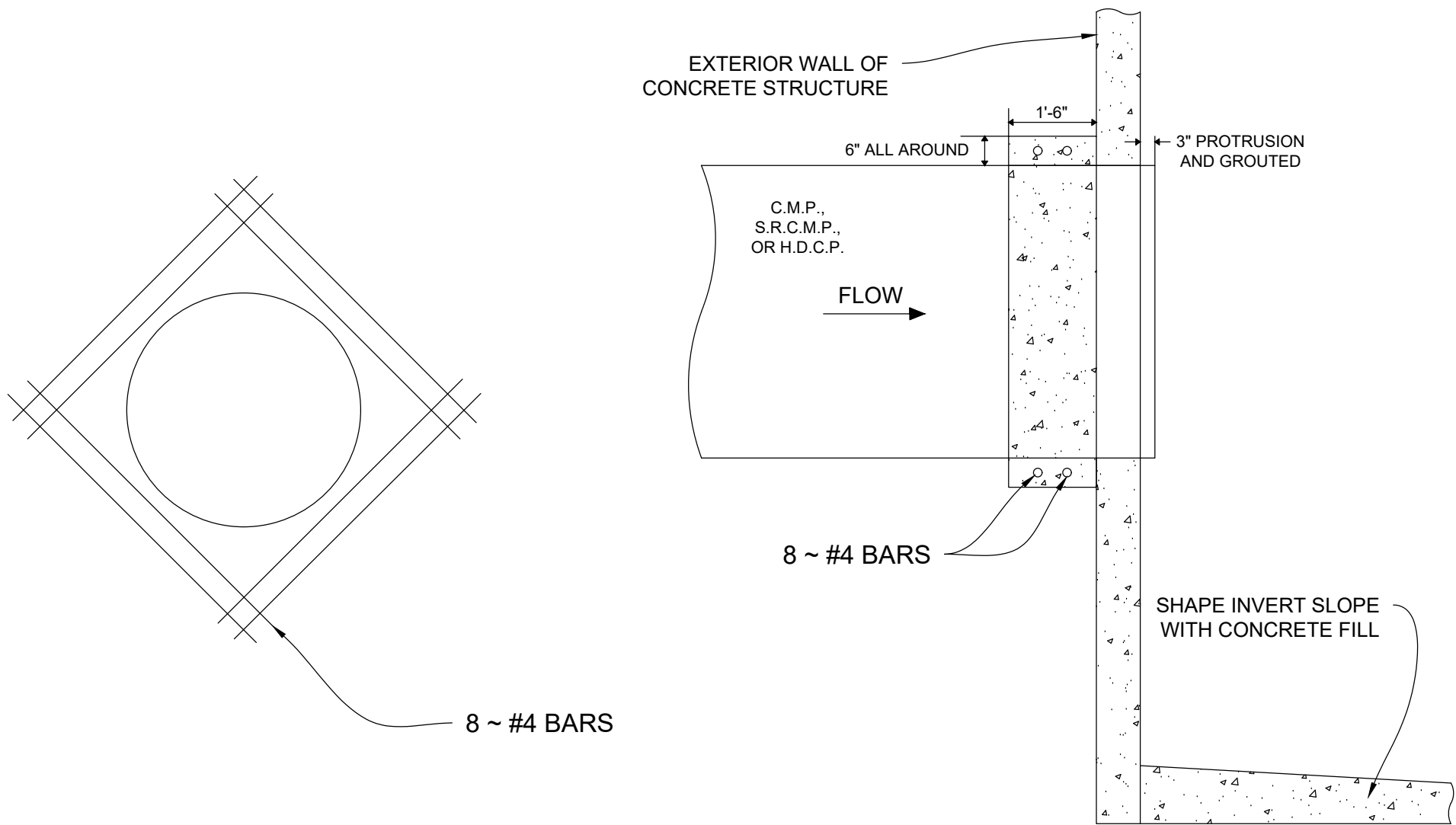
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Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1386

JOB NUMBER:	SA3856.0401
SHEET NO.	14



NOTES:

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A", 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM. A-15, THE DEFORMATION SHALL CONFORM TO ASTM. A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 0.33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).



REVISIONS	DESCRIPTION	DATE	BY
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DATE:	7/11/2024
DESIGNED BY:	NG
DRAWN BY:	TM
CHECKED BY:	PF
DRAWING NAME:	Drainage Details.dwg



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TBP# No. F-1386

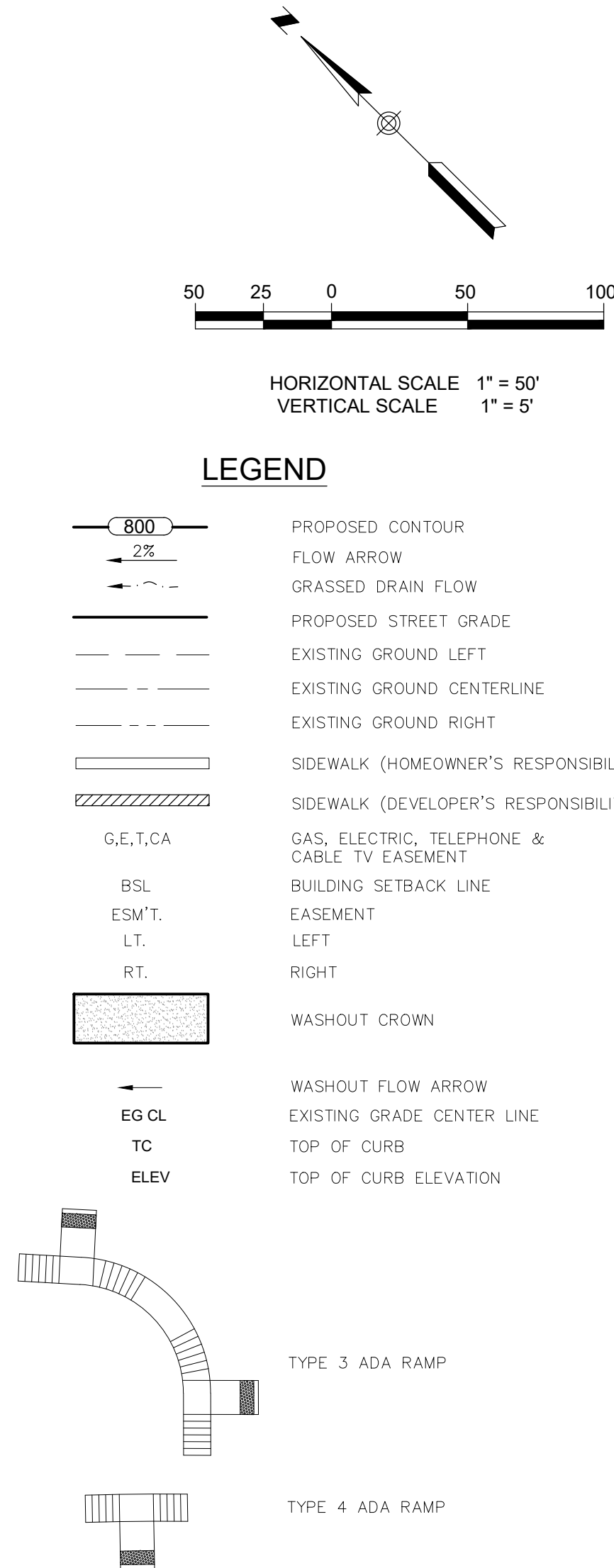
JOB NUMBER:
SA3856.0401

SHEET NO.

15

OF 60 SHEETS

1. ALL HANDICAP RAMPS TO BE TYPE III UNLESS OTHERWISE NOTED, REFER TO SHEET 23.
2. ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
3. WHERE SIDEWALK IS SEPARATED FROM THE CURB, THE SEPARATION DISTANCE SHALL BE A MINIMUM 6' BETWEEN THE BACK OF CURB AND EDGE OF SIDEWALK.
4. REFER TO SHEETS 23 & 24 FOR STREET AND PAVEMENT SECTION DETAIL, CONCRETE CURB DETAIL, AND SIDEWALK DETAIL.
5. CONTRACTOR TO FIELD VERIFY ALL MATCH EXISTING ELEVATIONS, SEWER MANHOLE INVERTS, STORM DRAIN INVERTS, AND ALL OTHER UTILITIES PRIOR TO UTILITY WORK AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
6. CONTRACTOR IS TO MATCH EXISTING PAVEMENT, SIDEWALK, AND CURB ELEVATIONS.
7. NO GRADING OR OTHER CONSTRUCTION IS PERMITTED OUTSIDE OF LIMITS OF CONSTRUCTION.
8. SIDEWALK INFRASTRUCTURE SHALL BE INSTALLED ALONG THE STREET FRONT OF ALL LOTS AT THE TIME OF LOT IMPROVEMENT. FOR LOTS WHERE NO BUILDING IMPROVEMENT IS PROPOSED, ALL SIDEWALKS AND PEDESTRIAN CROSSING RAMPS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.
9. VERTICAL CURVE DESIGN SPEED ARE IN COMPLIANCE WITH THE APPROVED DEVELOPMENT CODE TABLE 13-2 FOR LOCAL A (25 MPH) AND MINOR COLLECTOR (40MPH).



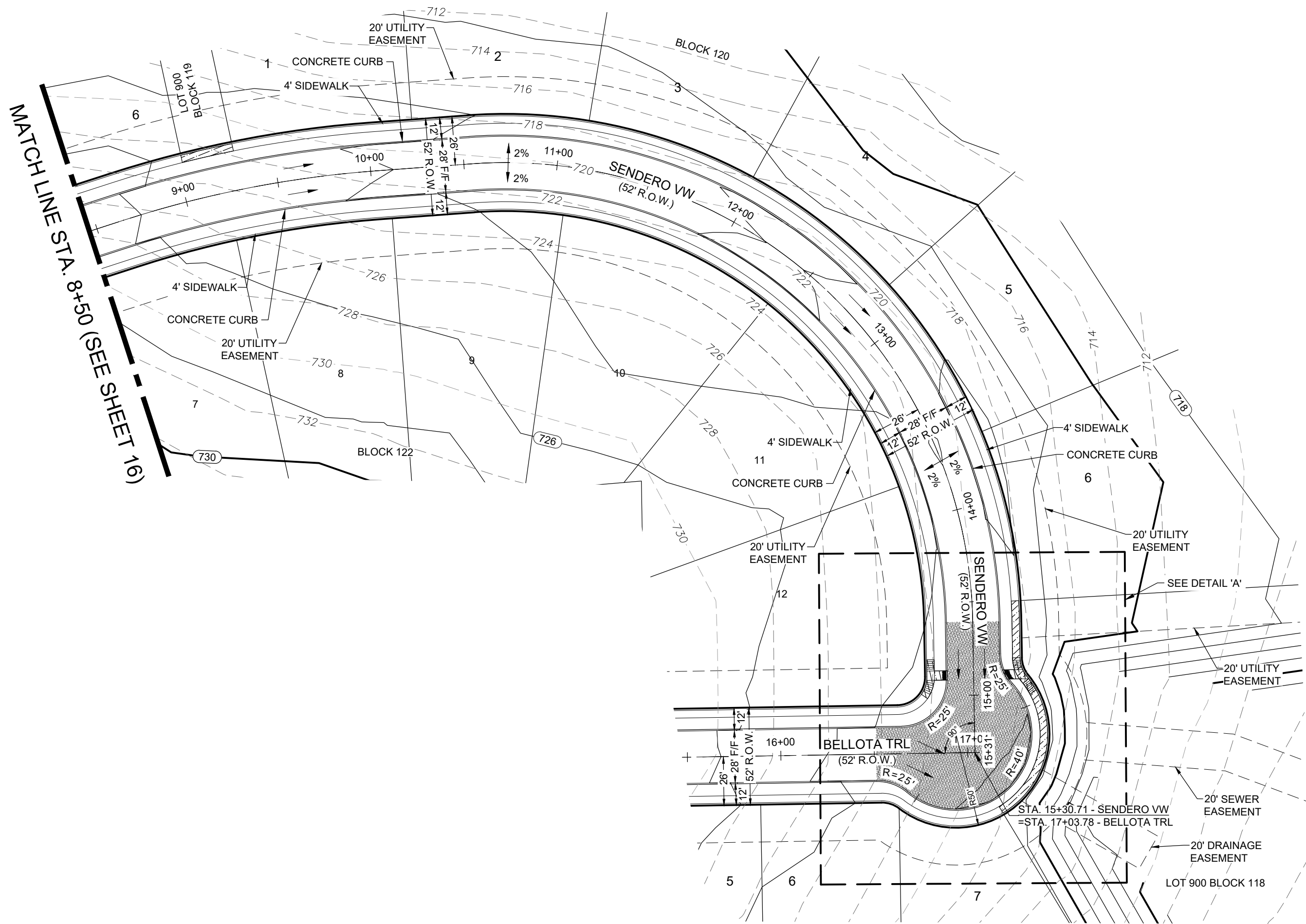
SENDERO VW STA. 1+00 TO STA. 8+50



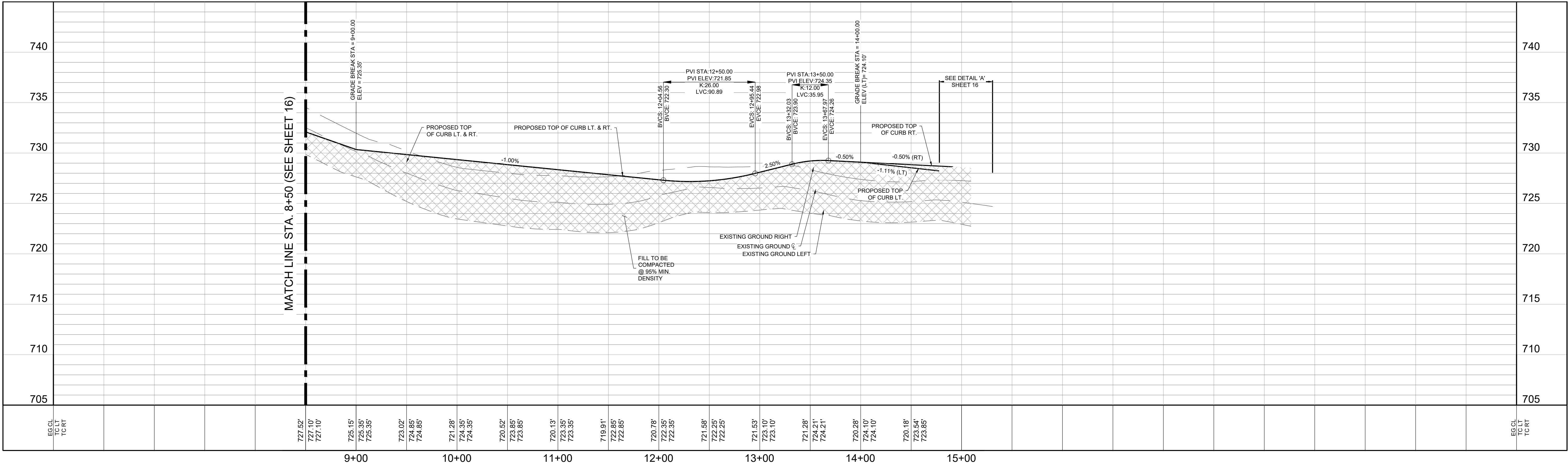
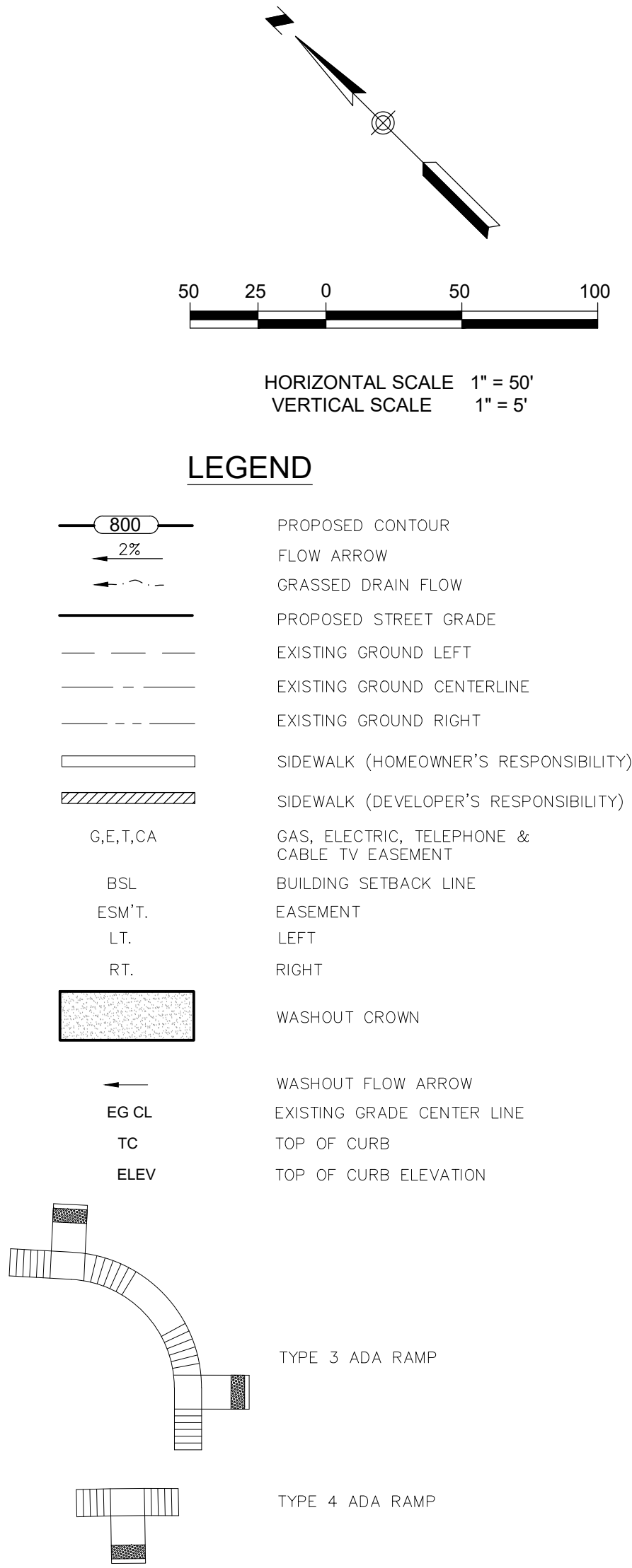
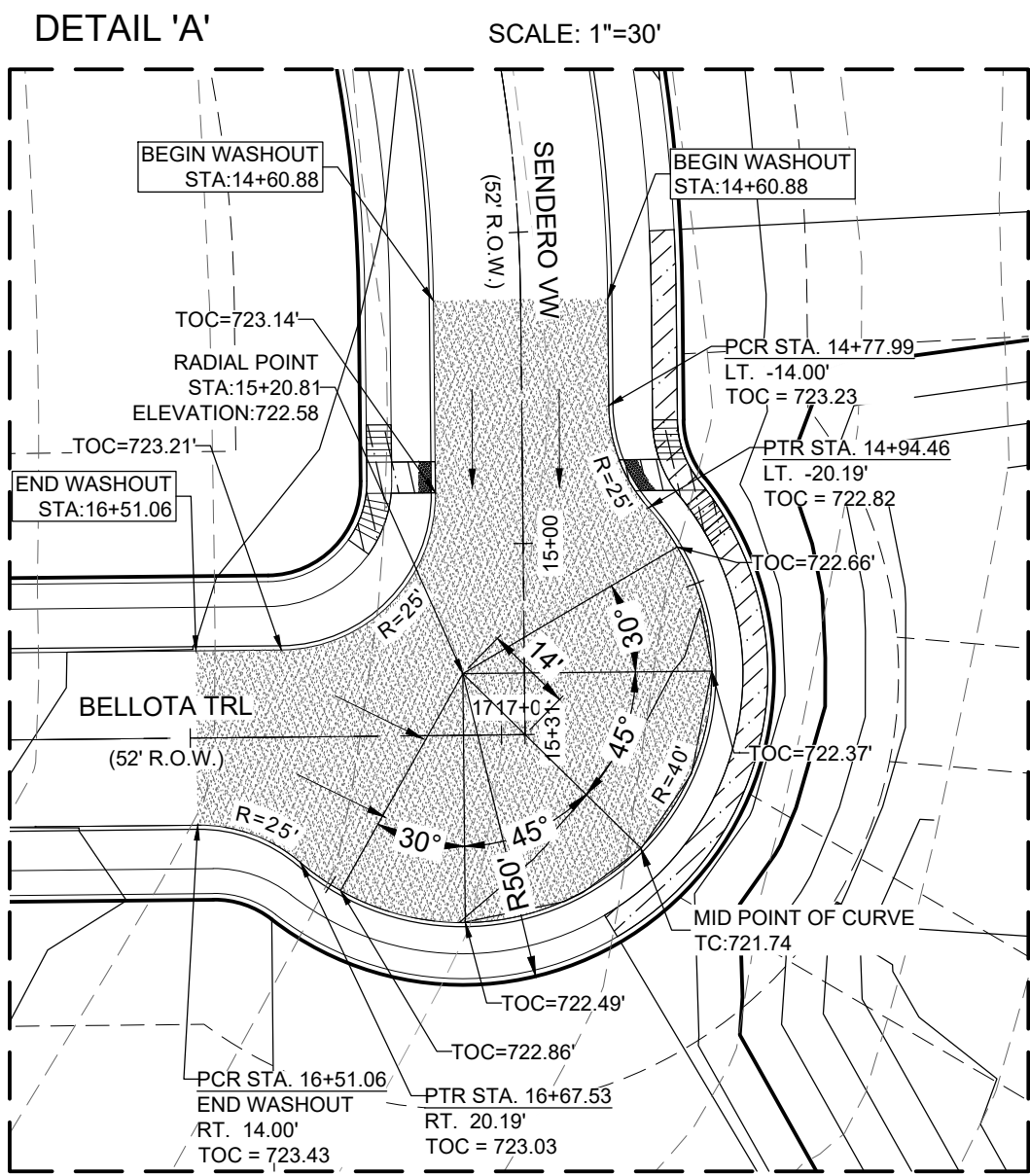
16
OF 60 SHEETS

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CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

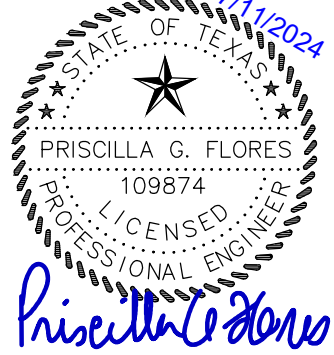


SENDERO VW STA. 8+50 TO END



VERAMENDI PRECINCT 19 UNIT 1
SENDERO VW PLAN & PROFILE
STA. 8+50 TO END

NO.	REVISIONS	DESCRIPTION	BY	DATE
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TBPE No. F-1386

JOB NUMBER:
SA3856.0401

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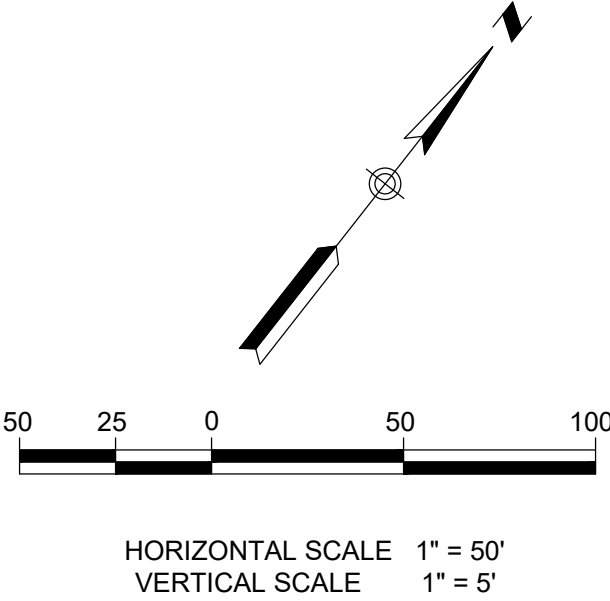
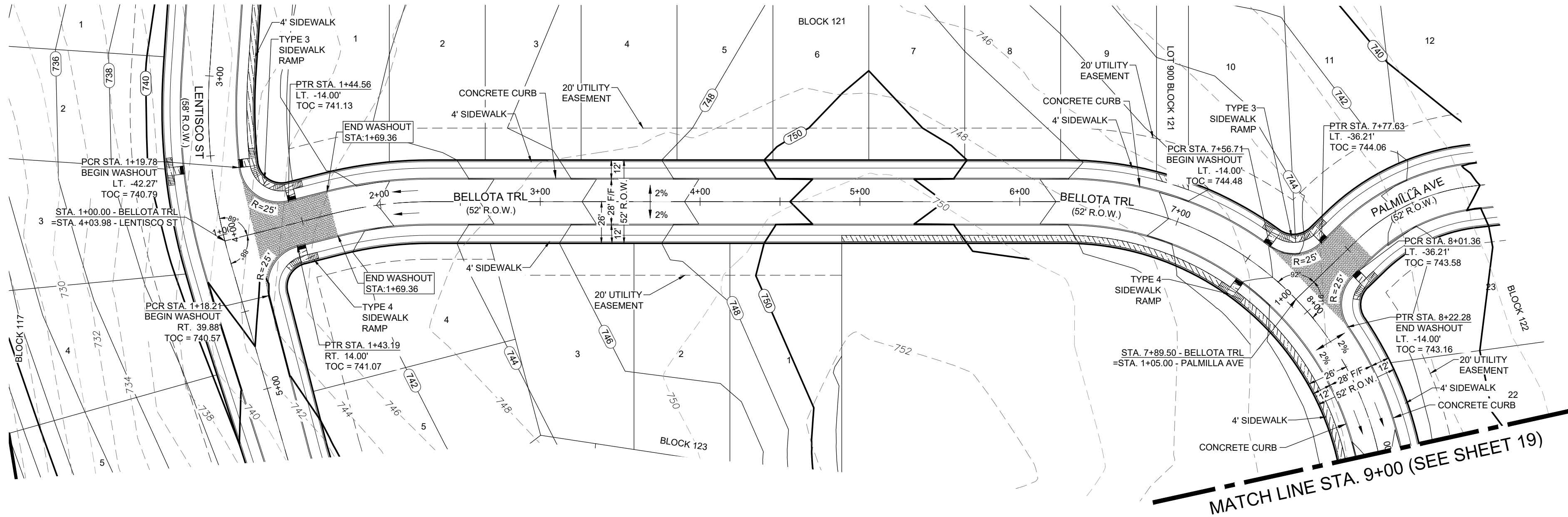
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OF 60 SHEETS

FOR PERMIT

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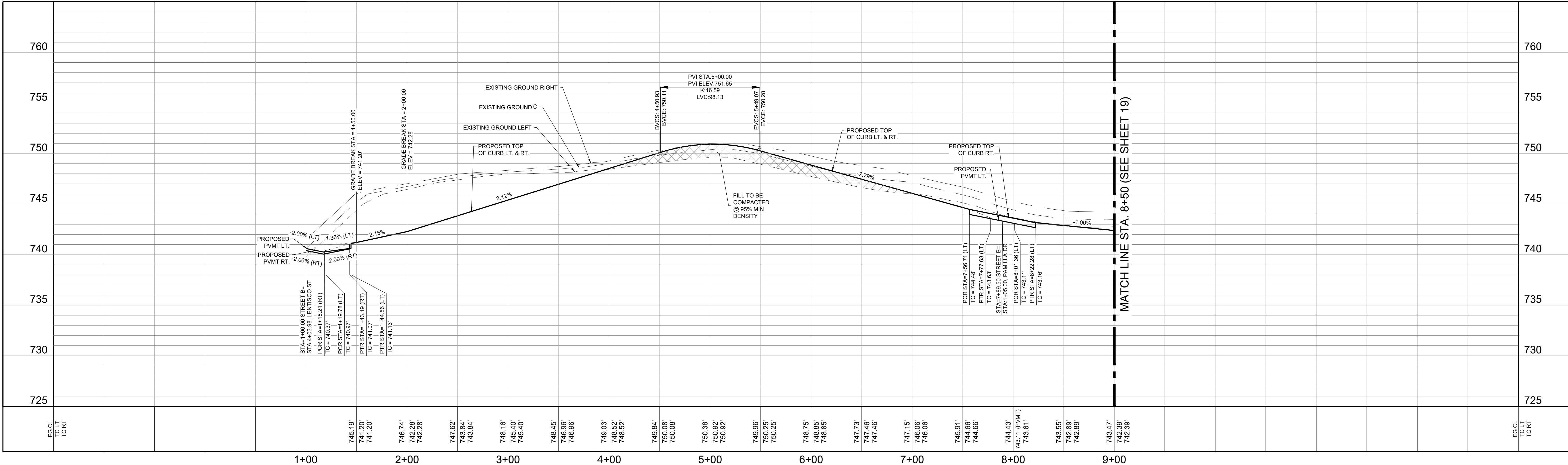


LEGEND

- 800 PROPOSED CONTOUR
- 2% FLOW ARROW
- GRASSED DRAIN FLOW
- PROPOSED STREET GRADE
- EXISTING GROUND LEFT
- EXISTING GROUND CENTERLINE
- EXISTING GROUND RIGHT
- SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- G,E,T,CA GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
- BSL BUILDING SETBACK LINE
- ESM'T. EASEMENT
- LT. LEFT
- RT. RIGHT
- WASHOUT CROWN
- WASHOUT FLOW ARROW
- EG CL EXISTING GRADE CENTER LINE
- TC TOP OF CURB
- ELEV PAVEMENT ELEVATION
- TYPE I ADA RAMPS
- TYPE II ADA RAMPS

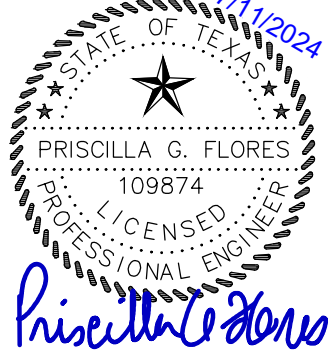
CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

BELLOTA TRL STA. 1+00 TO 9+00



VERAMENDI PRECINCT 19 UNIT 1
BELLOTA TRL PLAN & PROFILE
STA. 1+00 TO 9+00

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TBPE No. F-1306

JOB NUMBER:
SA3856.0401

SHEET NO.

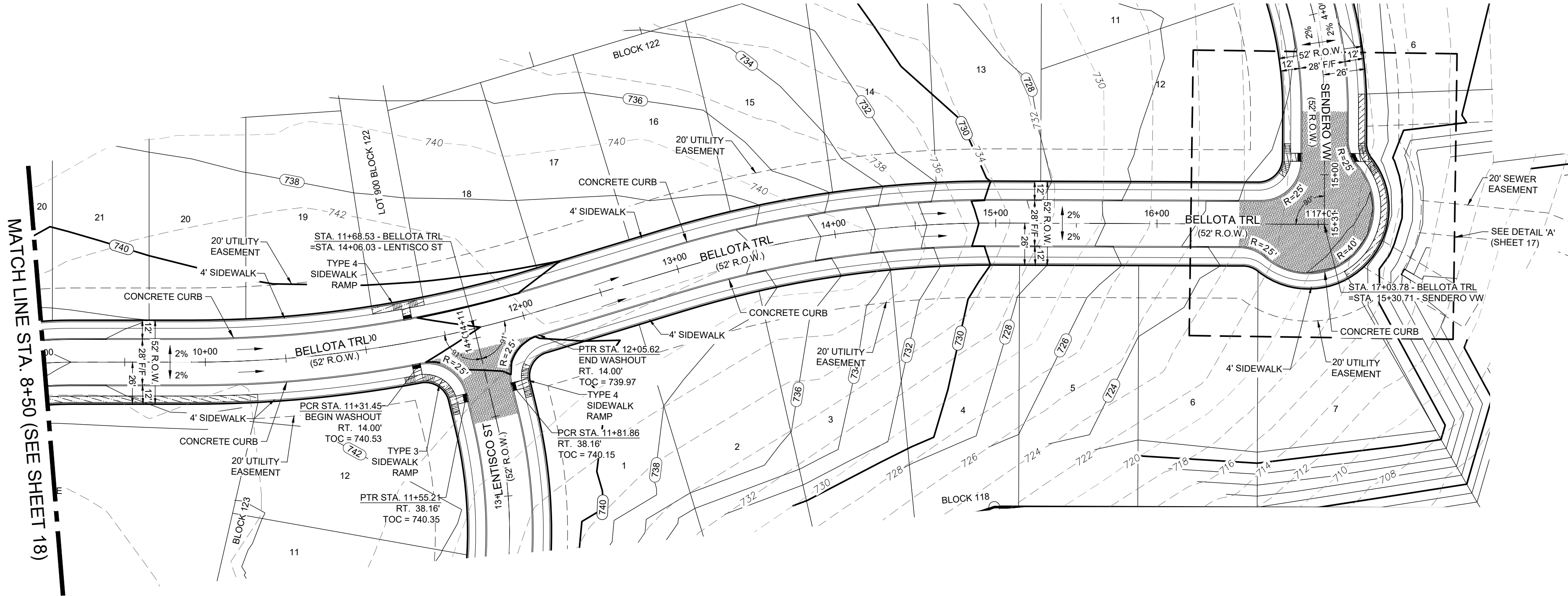
18

OF 60 SHEETS

FOR PERMIT

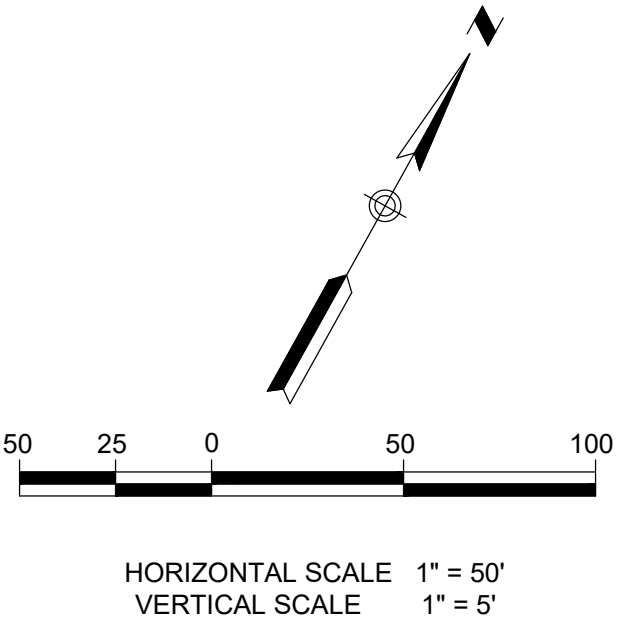
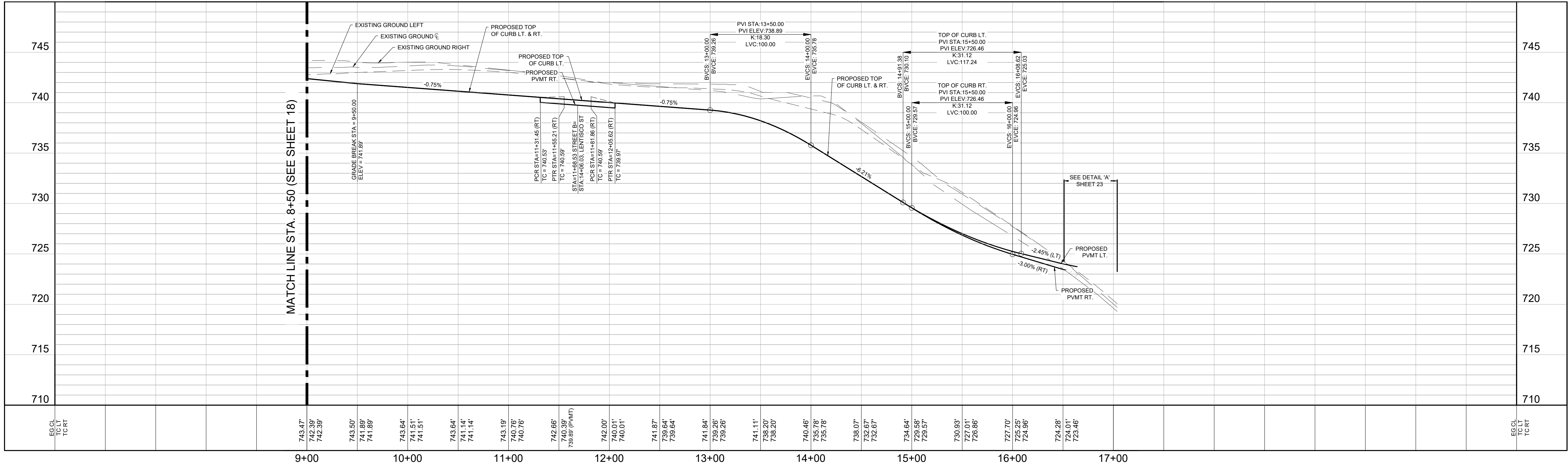
GENERAL NOTES:

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- SIDEWALK INFRASTRUCTURE SHALL BE INSTALLED ALONG THE STREET FRONT OF ALL LOTS AT THE TIME OF LOT IMPROVEMENT. FOR LOTS WHERE NO BUILDING IMPROVEMENT IS PROPOSED, ALL SIDEWALKS AND PEDESTRIAN CROSSING RAMPS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.
- VERTICAL CURVE DESIGN SPEED ARE IN COMPLIANCE WITH THE APPROVED DEVELOPMENT CODE TABLE 13-2 FOR LOCAL A (25 MPH) AND MINOR COLLECTOR (40MPH).



BELLOTA TRL STA. 9+00 TO END

CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

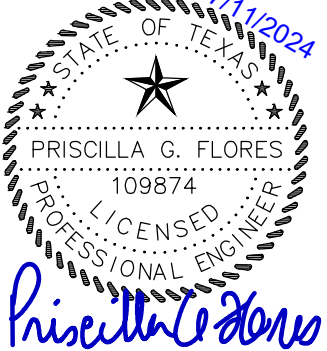


LEGEND

- PROPOSED CONTOUR
- FLOW ARROW
- GRASSED DRAIN FLOW
- PROPOSED STREET GRADE
- EXISTING GROUND LEFT
- EXISTING GROUND RIGHT
- SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- G, E, T, CA
- BSL
- ESM'T
- LT
- RT
- WASHOUT CROWN
- WASHOUT FLOW ARROW
- EXISTING GRADE CENTER LINE
- TOP OF CURB
- PAVEMENT ELEVATION
- TYPE I ADA RAMPS
- TYPE II ADA RAMPS

VERAMENDI PRECINCT 19 UNIT 1
BELLOTA TRL PLAN & PROFILE
STA. 9+00 TO END

NO.	REVISIONS	DESCRIPTION	DATE
1	DESIGNED BY: NG	7/11/2024	
2	DRAWN BY: TM		
3	CHECKED BY: PF		
4	DRAWING NAME: 19-Street P&P - Belleta TRL.dwg		



LJA Engineering, Inc.
9830 Colonside Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1306

JOB NUMBER:
SA3856.0401

SHEET NO.

19

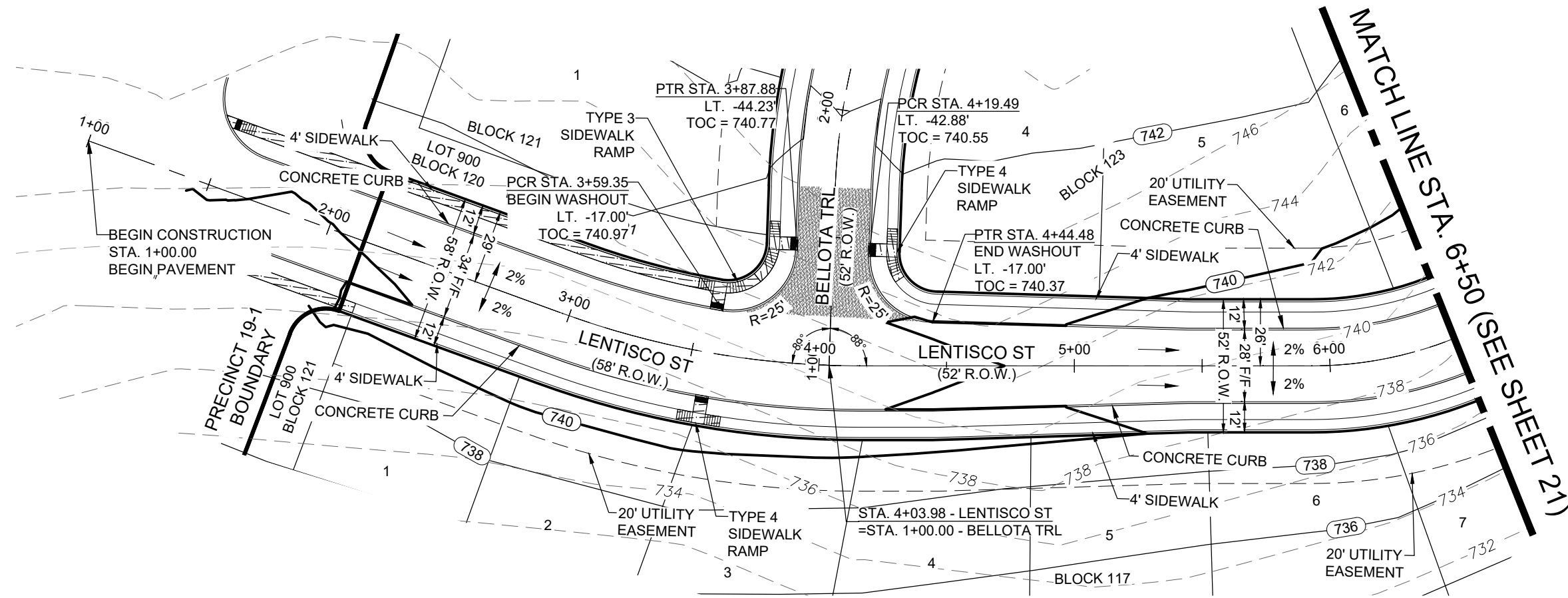
OF 60 SHEETS

FOR PERMIT

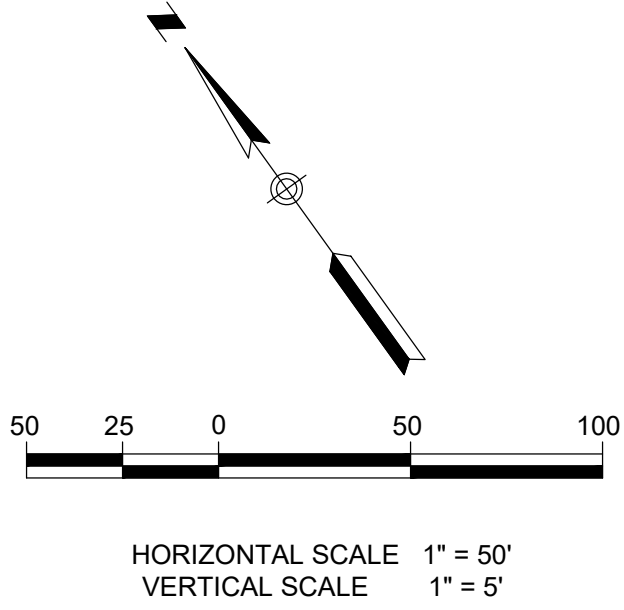
GENERAL NOTES:

- ALL HANDICAP RAMPS TO BE TYPE III UNLESS OTHERWISE NOTED, REFER TO SHEET 23.
- ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
- WHERE SIDEWALK IS SEPARATED FROM THE CURB, THE SEPARATION DISTANCE SHALL BE A MINIMUM 6' BETWEEN THE BACK OF CURB AND EDGE OF SIDEWALK.
- REFER TO SHEETS 23 & 24 FOR STREET AND PAVEMENT SECTION DETAIL, CONCRETE CURB DETAIL, AND SIDEWALK DETAIL.
- CONTRACTOR TO FIELD VERIFY ALL MATCH EXISTING ELEVATIONS, SEWER MANHOLE INVERTS, STORM DRAIN INVERTS, AND ALL OTHER UTILITIES PRIOR TO UTILITY WORK AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
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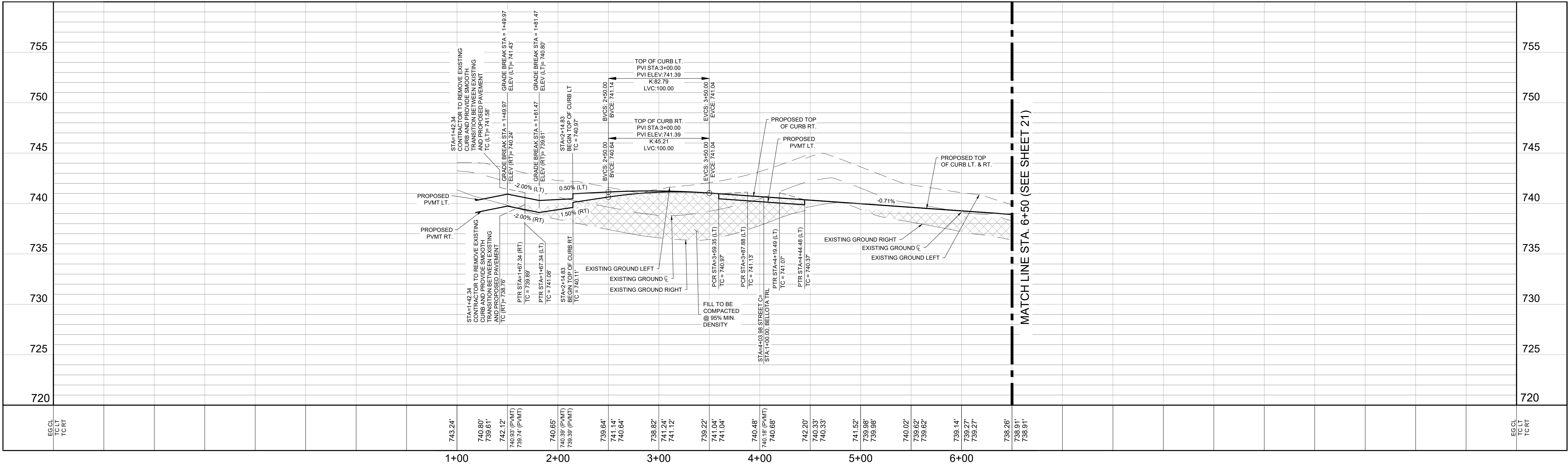


LENTISCO ST STA. 1+00 TO 6+50



LEGEND

- 800 PROPOSED CONTOUR
- Flow Arrow FLOW ARROW
- Grassed Drain Flow GRASSED DRAIN FLOW
- Proposed Street Grade PROPOSED STREET GRADE
- Existing Ground Left EXISTING GROUND LEFT
- Existing Ground Centerline EXISTING GROUND CENTERLINE
- Existing Ground Right EXISTING GROUND RIGHT
- Sidewalk (Homeowner's Responsibility) SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
- Sidewalk (Developer's Responsibility) SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- G,E,T,CA GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT
- BSL BUILDING SETBACK LINE
- ESM'T. EASEMENT
- LT. LEFT
- RT. RIGHT
- Washout Crown WASHOUT CROWN
- Washout Flow Arrow WASHOUT FLOW ARROW
- EG CL EXISTING GRADE CENTER LINE
- TC TOP OF CURB
- ELEV PAVEMENT ELEVATION
- Type I ADA Ramps TYPE I ADA RAMPS
- Type II ADA Ramps TYPE II ADA RAMPS



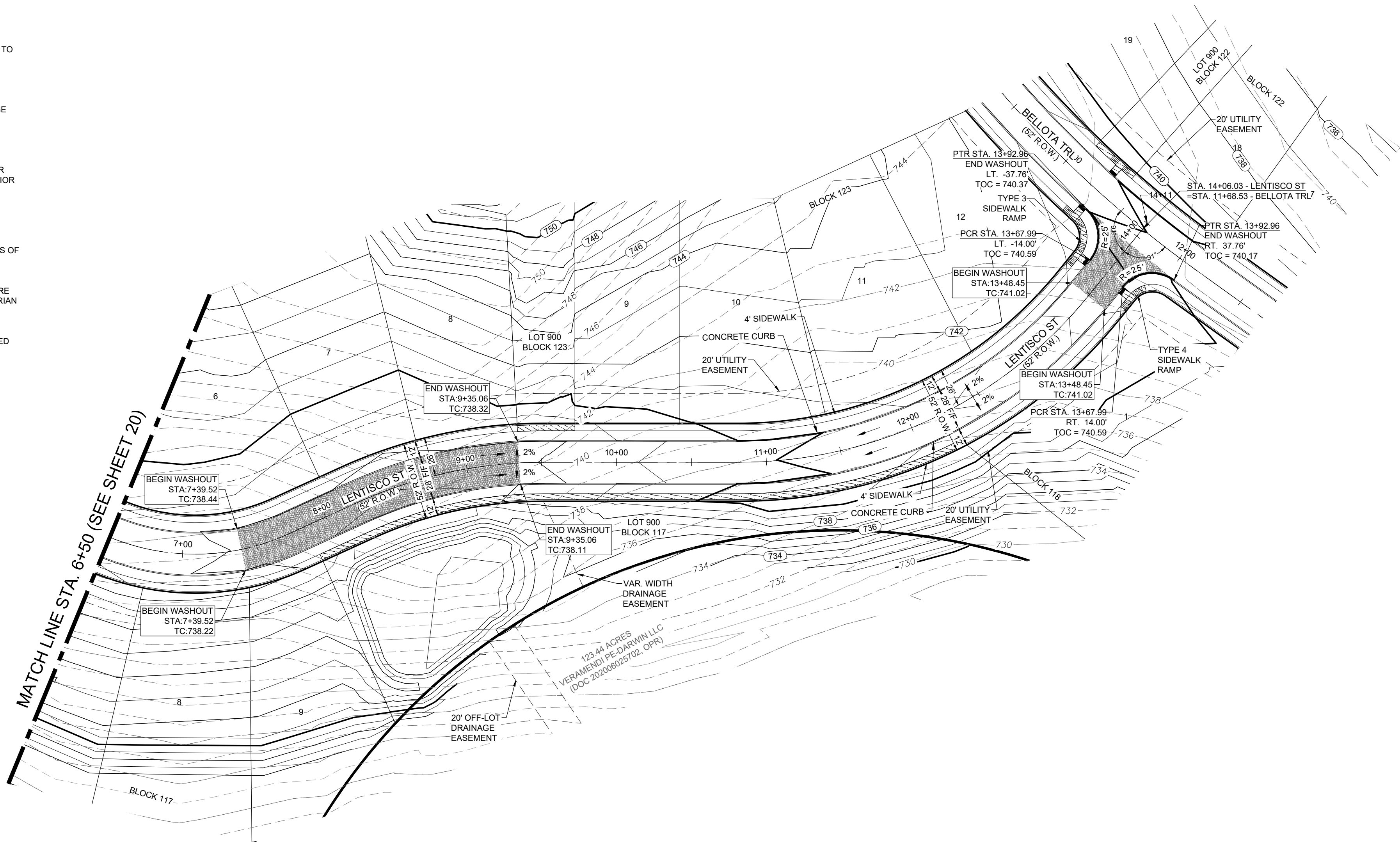
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3	DRAWN BY	PF	DRAWN BY
4	CHECKED BY		CHECKED BY
5	DRAWING NAME		DRAWING NAME
6	Sheet P&P - Lentisco ST.dwg		Sheet P&P - Lentisco ST.dwg



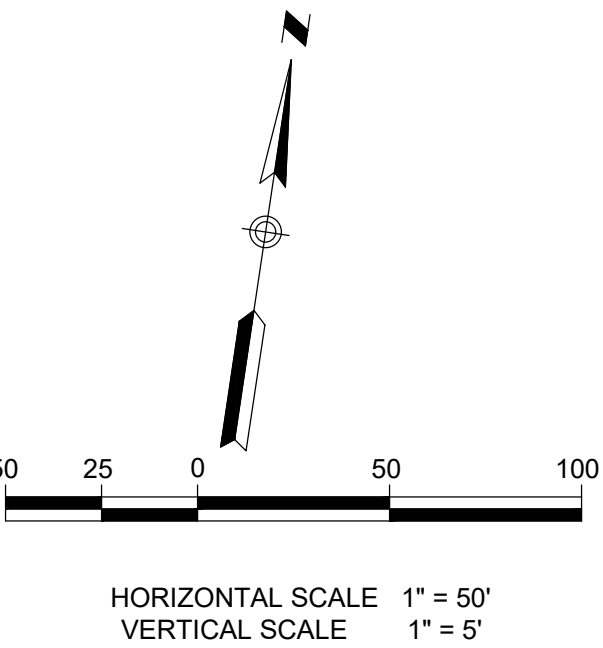
GENERAL NOTES:

1. ALL HANDICAP RAMPS TO BE TYPE III UNLESS OTHERWISE NOTED, REFER TO SHEET 23.
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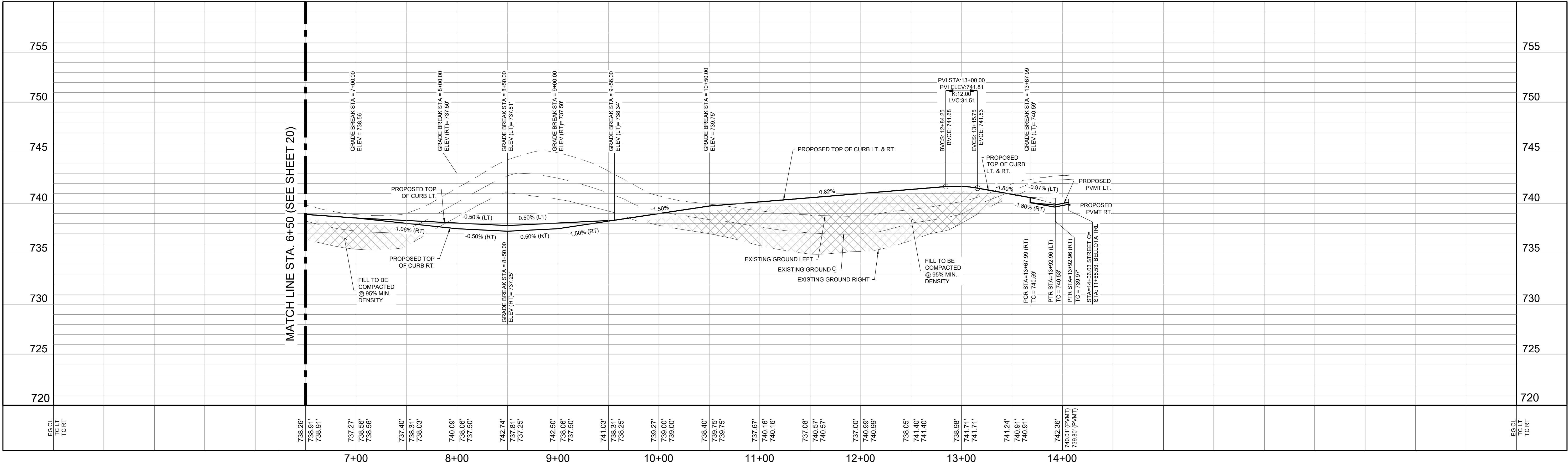


LENTISCO ST STA. 6+50 TO END



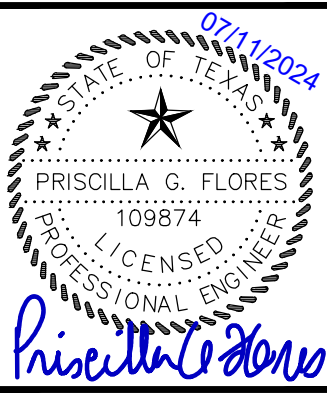
LEGEND

- 800 PROPOSED CONTOUR
- Flow Arrow FLOW ARROW
- Grassed Drain Flow GRASSED DRAIN FLOW
- Proposed Street Grade PROPOSED STREET GRADE
- Existing Ground Left EXISTING GROUND LEFT
- Existing Ground Centerline EXISTING GROUND CENTERLINE
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- BSL BUILDING SETBACK LINE
- ESM'T. EASEMENT
- LT. LEFT
- RT. RIGHT
- Washout Crown WASHOUT CROWN
- Washout Flow Arrow WASHOUT FLOW ARROW
- Existing Grade Center Line EXISTING GRADE CENTER LINE
- Top of Curb TOP OF CURB
- Pavement Elevation PAVEMENT ELEVATION
- Type I ADA Ramps TYPE I ADA RAMPS
- Type II ADA Ramps TYPE II ADA RAMPS



VERAMENDI PRECINCT 19 UNIT 1
LENTISCO ST PLAN & PROFILE
STA. 6+50 TO END

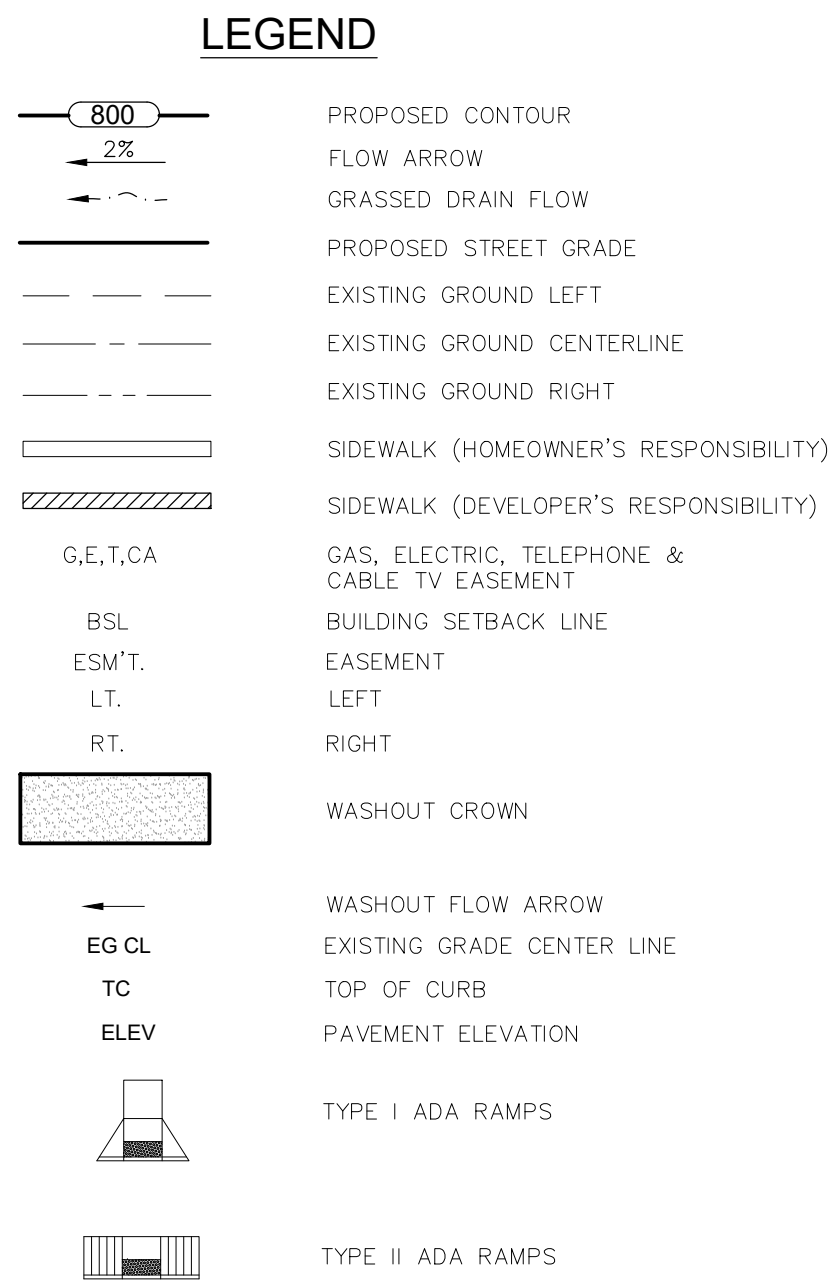
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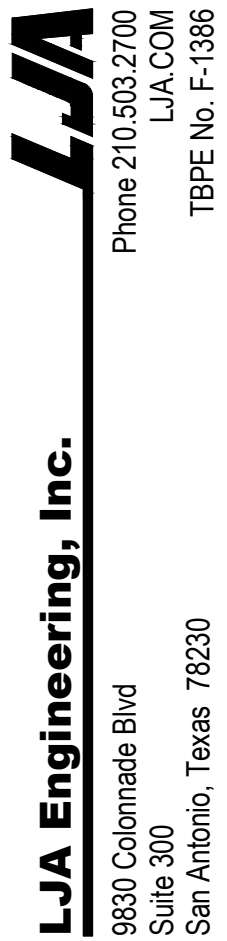
LJA Engineering, Inc.
9830 Colonside Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1386

JOB NUMBER: SA3856.0401
SHEET NO. 21 OF 60 SHEETS

1. ALL HANDICAP RAMPS TO BE TYPE II UNLESS OTHERWISE NOTED, REFER TO SHEET 23.
2. ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
3. WHERE SIDEWALK IS SEPARATED FROM THE CURB, THE SEPARATION DISTANCE SHALL BE A MINIMUM 6' BETWEEN THE BACK OF CURB AND EDGE OF SIDEWALK.
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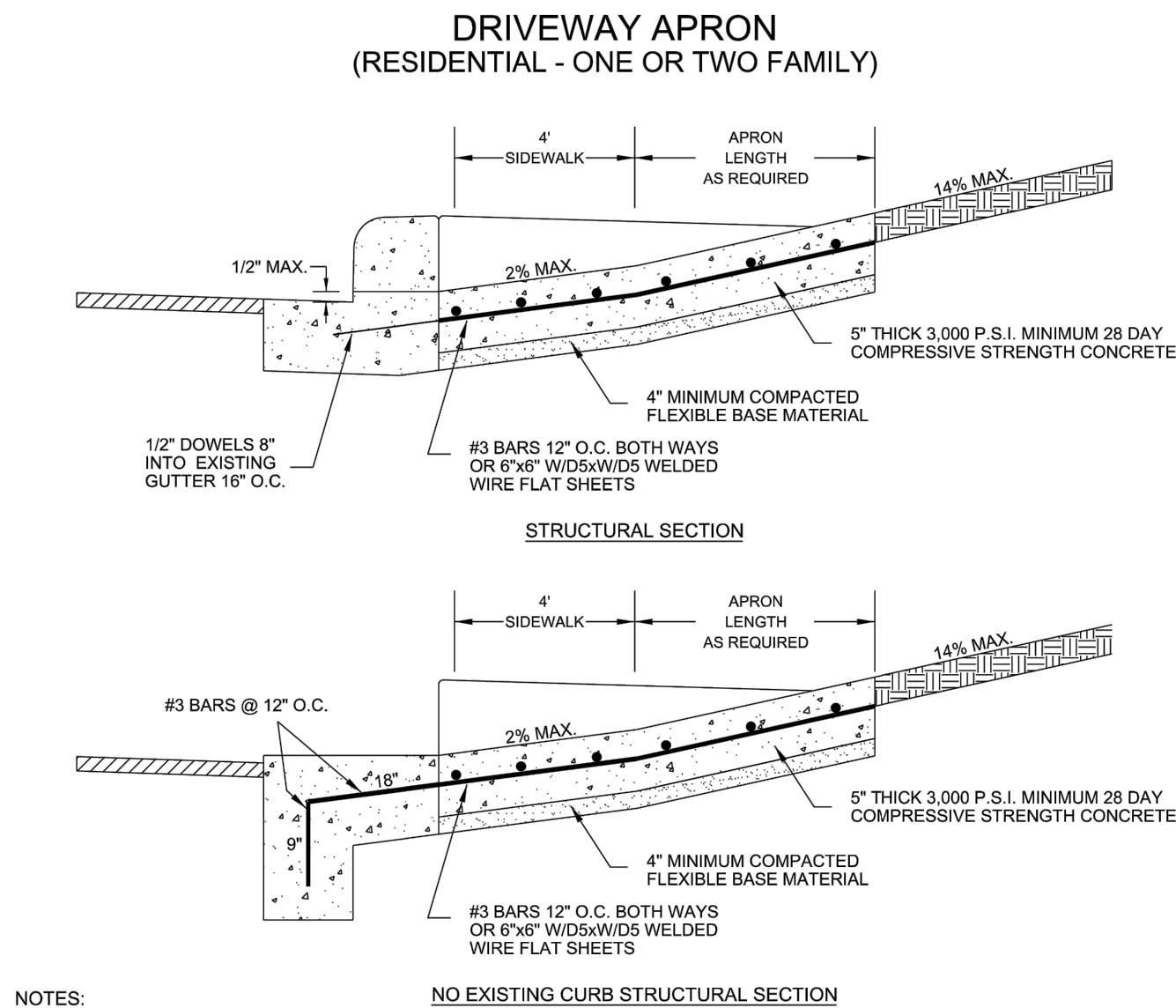
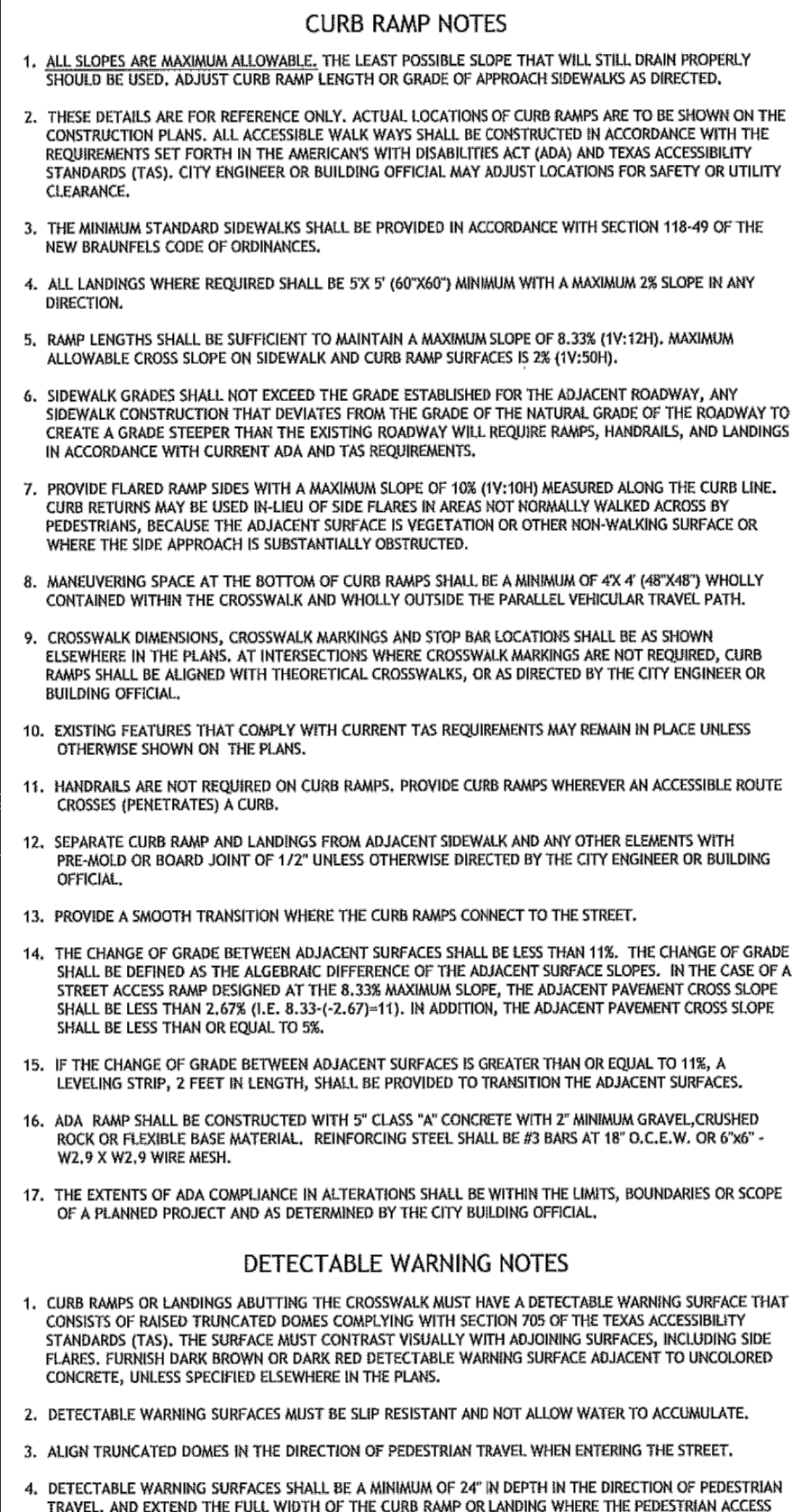
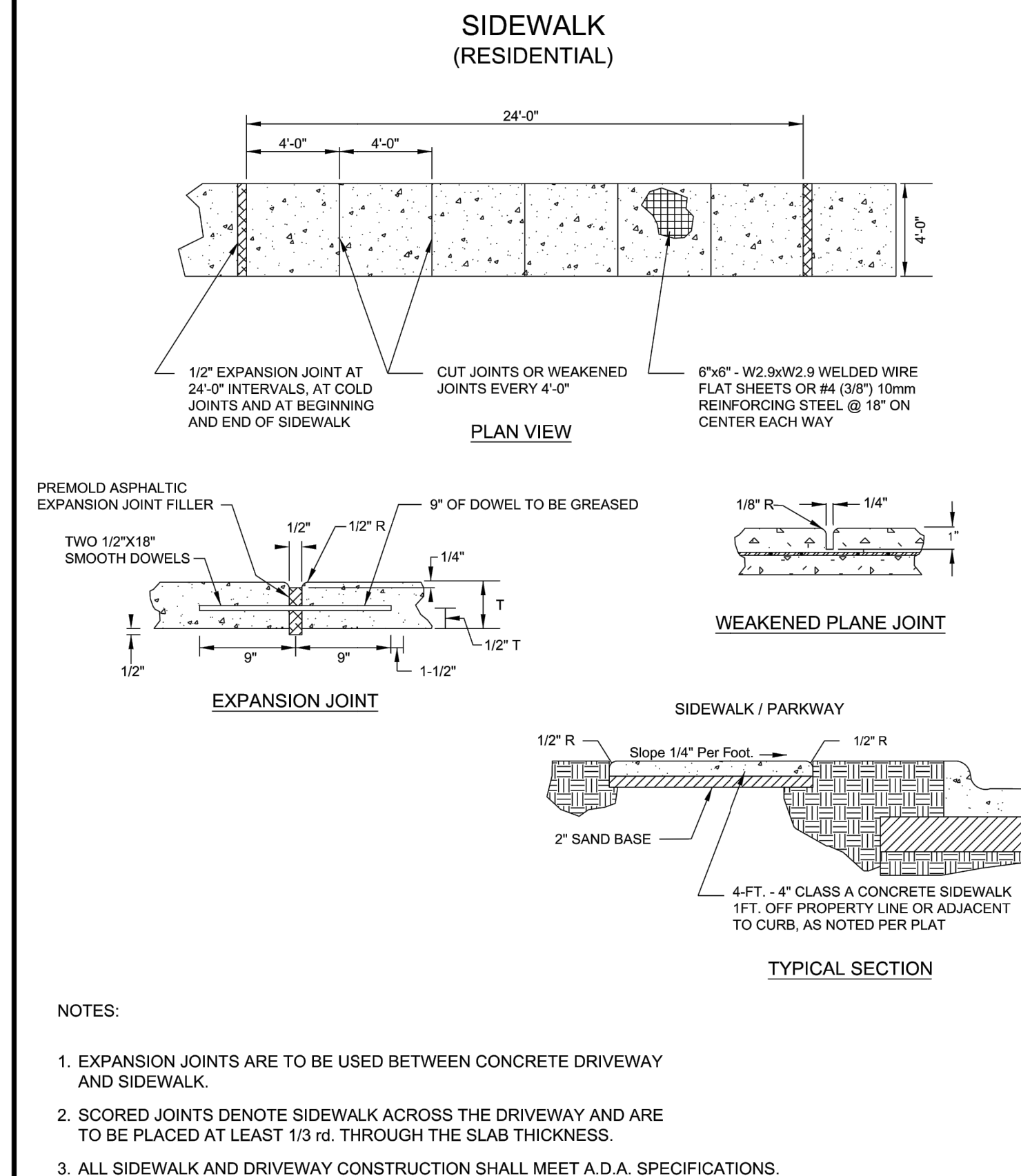
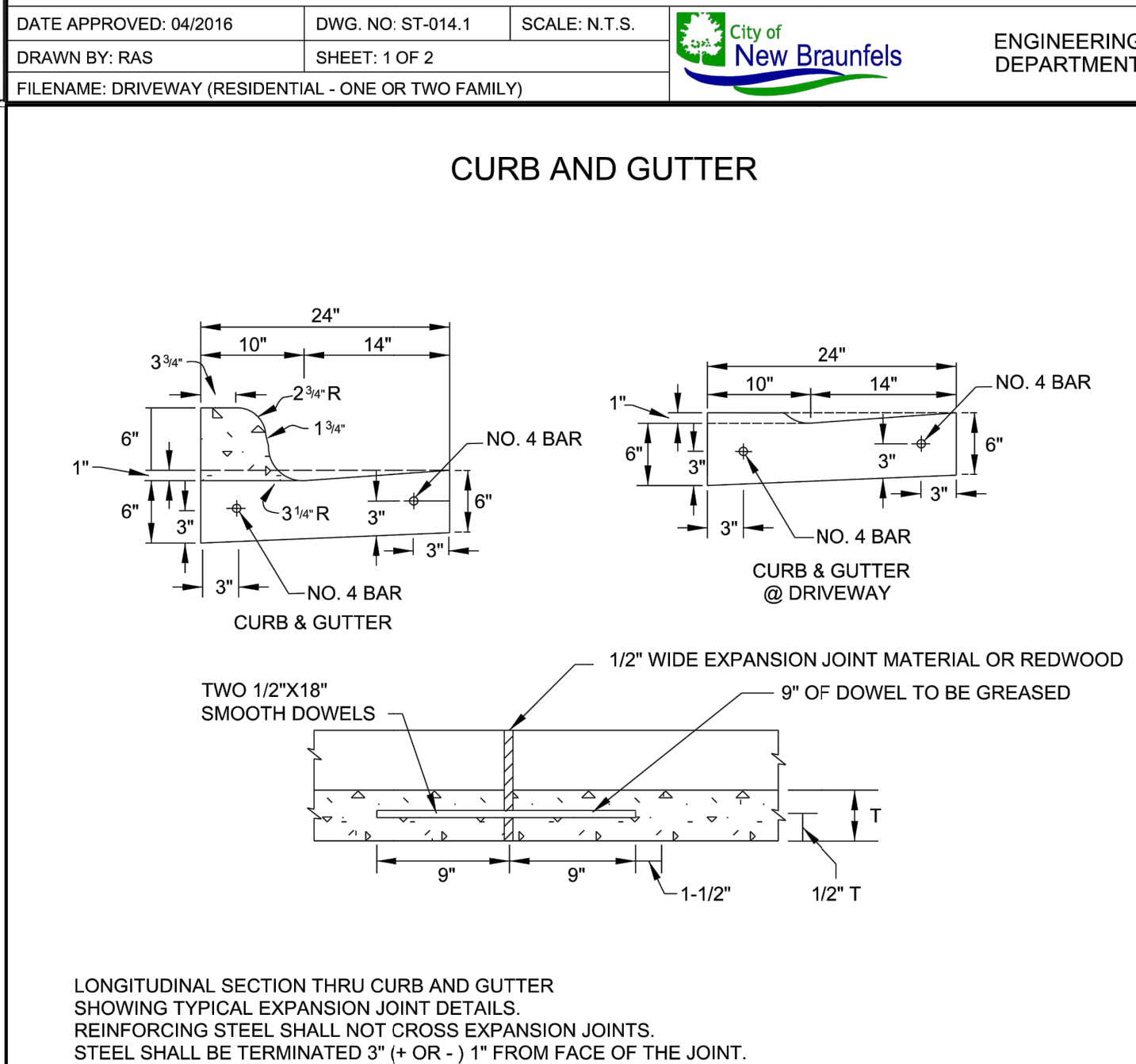
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	NO.	DESCRIPTION	BY	DATE
DESIGNED BY:	NG			
DRAWN BY:	TM			
CHECKED BY:	PF			
DRAWINGS MADE AT: 10-28926 P&W Palmdale AVE dwg				

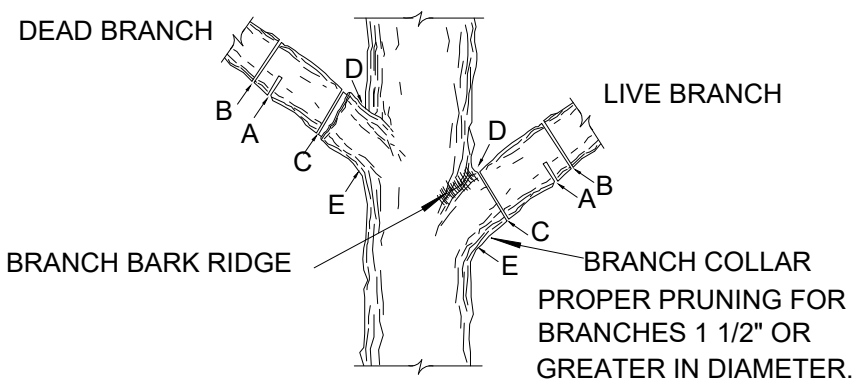
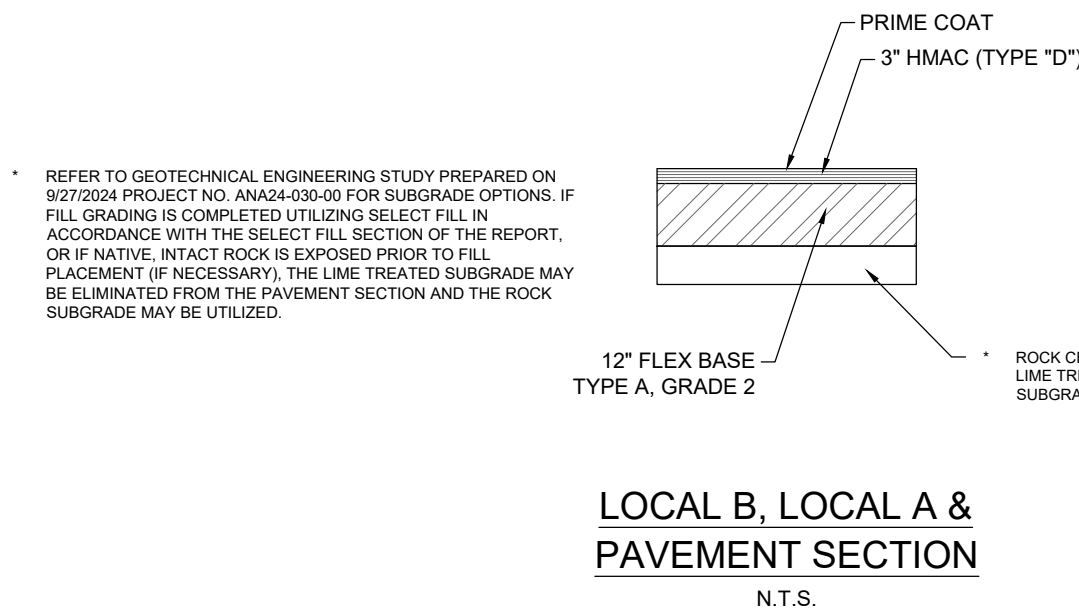
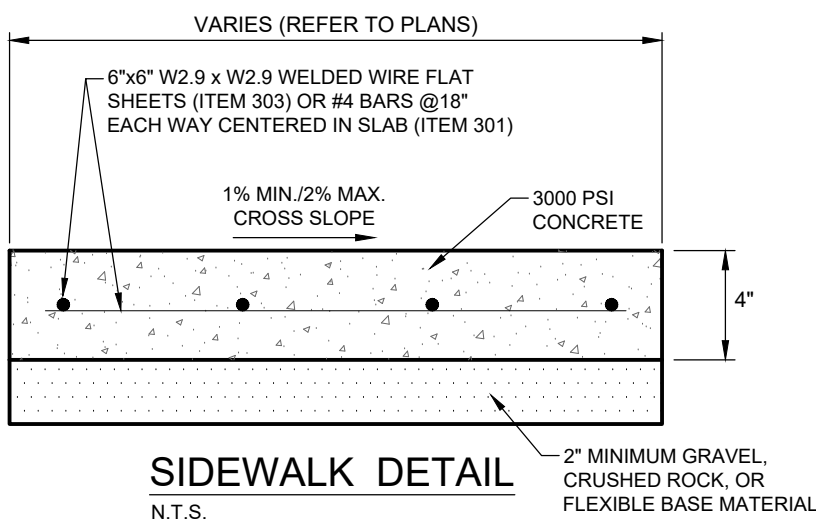
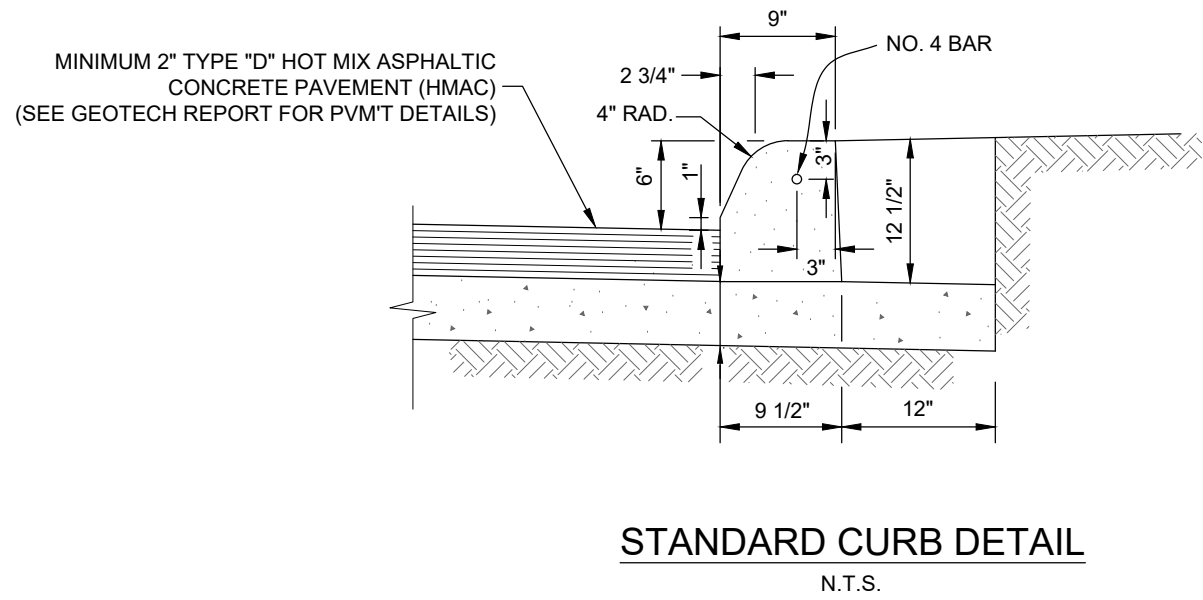
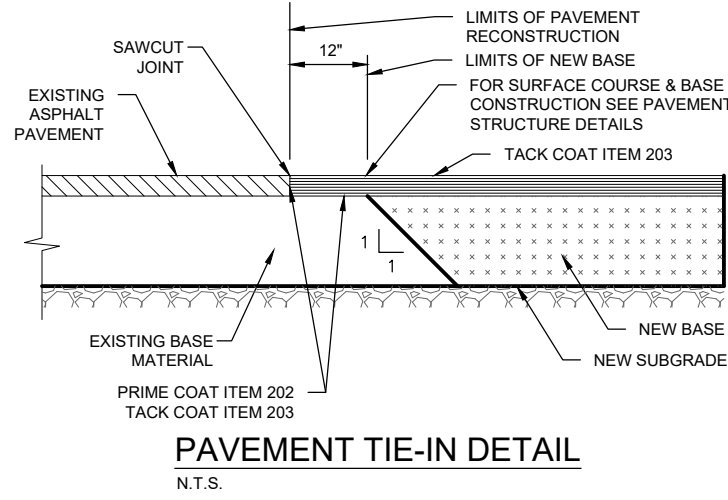


SHEET NO

OF 60 SHEETS

[illegible]

K:\ASB56 ASA Properties\0401 Veramendi Precinct 19-1\425 Site Development Plans\JWG-Sheets\m-Street Details.dwg
Last Modified: Nov 19, 24 - 15:42
Plot Date: Nov 20, 24 - 09:45:53



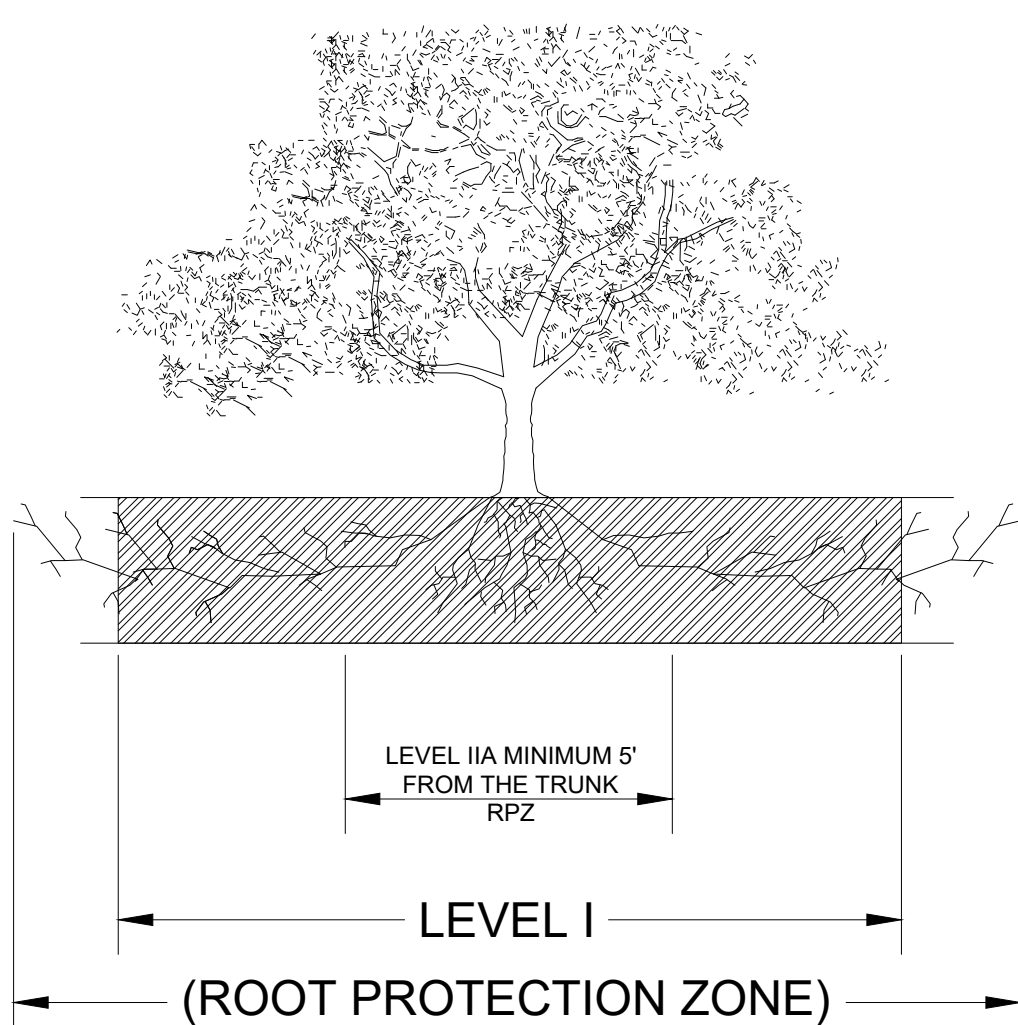
NOTE: DO NOT CUT FROM D to E.

- FIRST CUT - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
- SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
- FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
- BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 20 MIN TO PREVENT THE SPREAD OF OAK WILT.

1.4 BRANCH PRUNING DETAIL

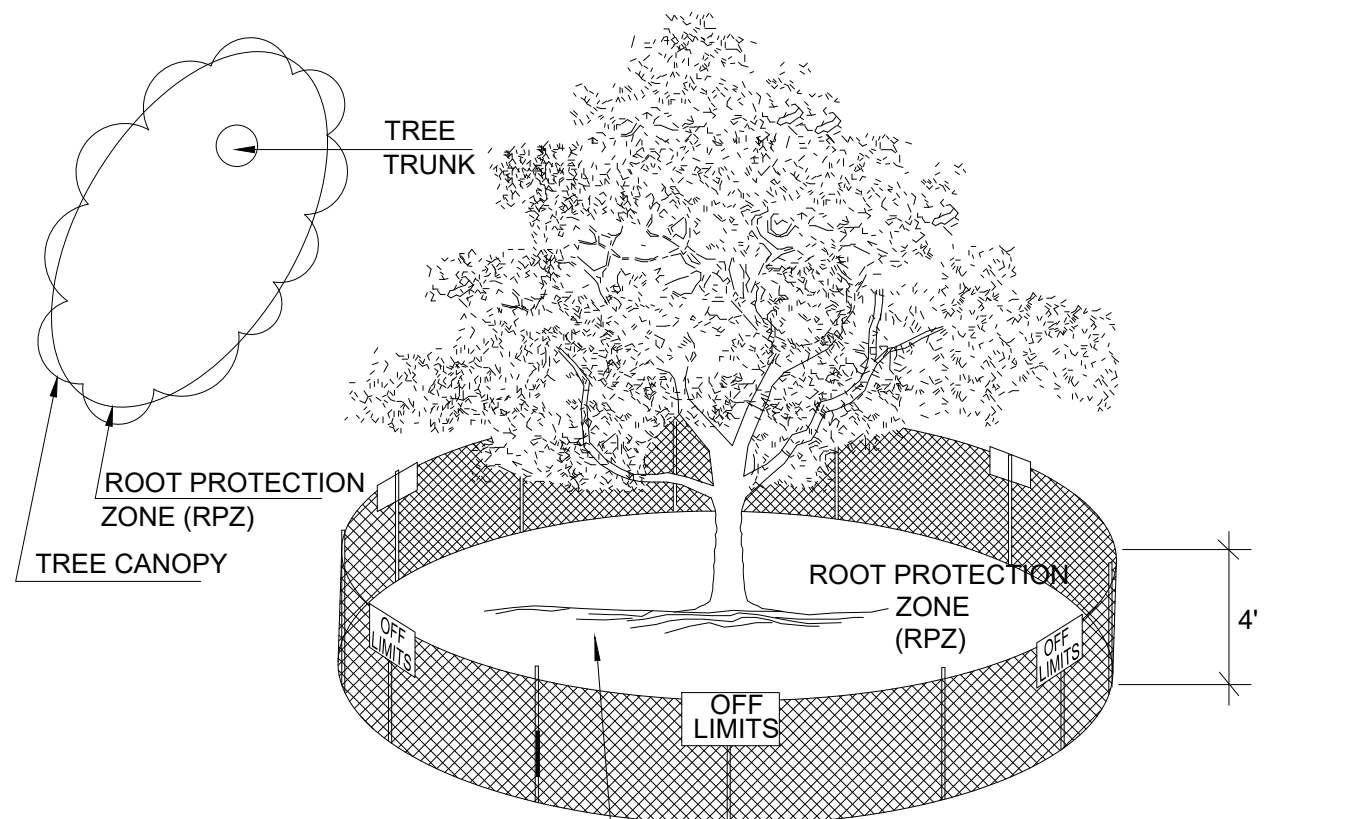
N. T. S.



ROOT PROTECTION ZONE-THE ROOT PROTECTION ZONE IS A CIRCULAR AREA AROUND A TREE THAT IS BASED ON THE DIAMETER OF THE TREE. EACH 1 INCH DIAMETER OF THE TREE EQUALS 1 FOOT RADIUS FOR ROOT PROTECTION ZONE.

ELEVATION

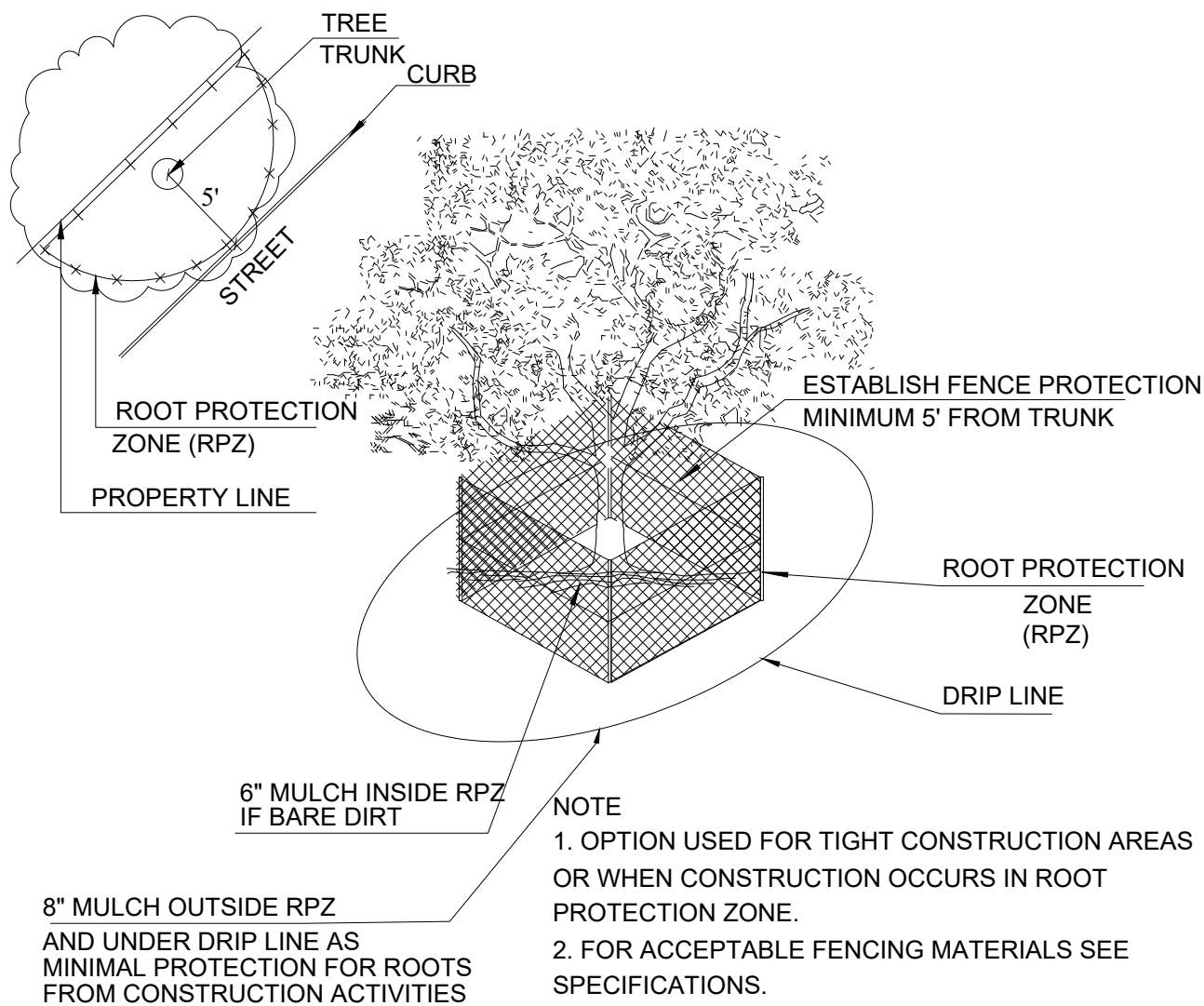
N. T. S.



- NOTE:
- THE FENCING SHOWN ABOVE IS DIAGRAMATIC ONLY AND WILL CONFORM TO THE DRIP LINE AND LIMITED TO PROJECT BOUNDARY.
 - FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

LEVEL I & FENCE PROTECTION

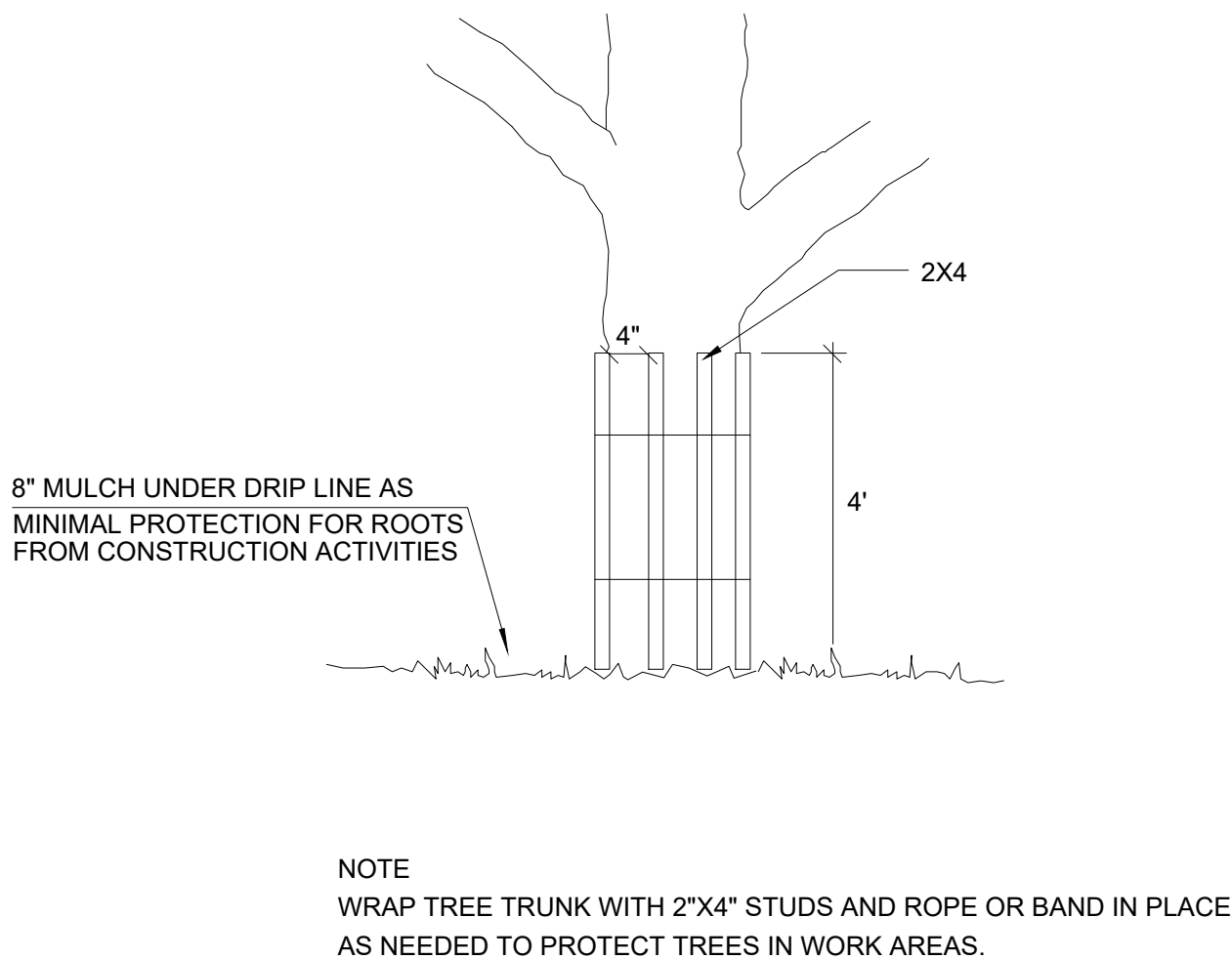
N. T. S.



- NOTE
- OPTION USED FOR TIGHT CONSTRUCTION AREAS OR WHEN CONSTRUCTION OCCURS IN ROOT PROTECTION ZONE.
 - FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

LEVEL II A FENCE PROTECTION

N. T. S.



- NOTE
- WRAP TREE TRUNK WITH 2\"/>

1.1.4 LEVEL II B FENCE PROTECTION

N. T. S.

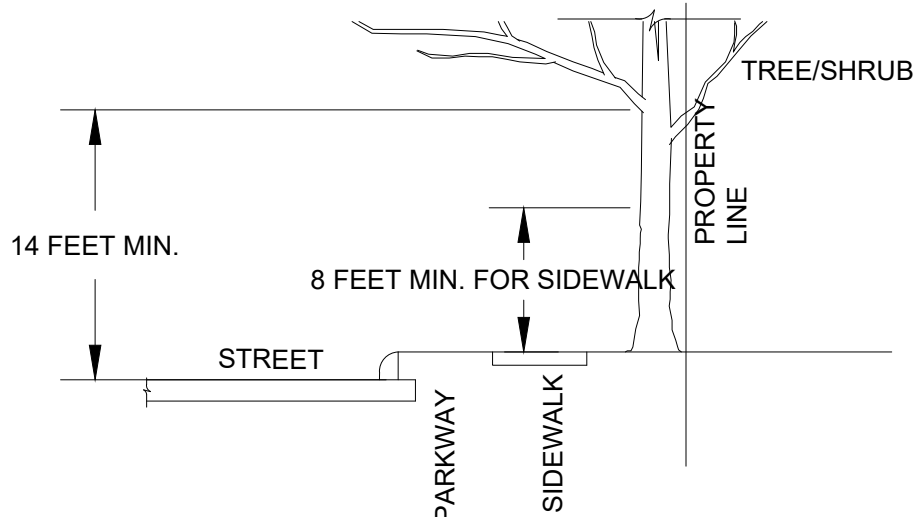
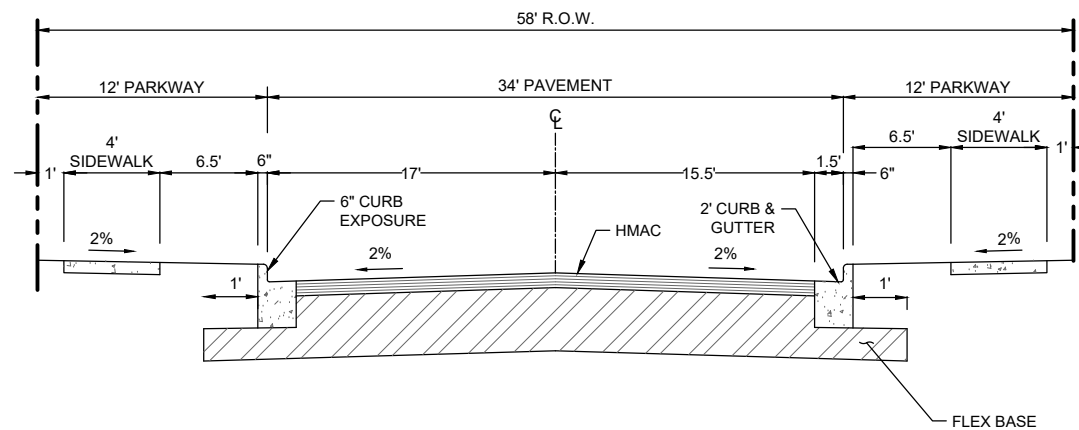


FIGURE No.2:

A MINIMUM BRANCH CLEARANCE OF 14 FEET ABOVE STREET ELEVATION MUST BE MAINTAINED FROM THE PROPERTY LINE TO THE CURB LINE AS PRESCRIBED BY PROJECT MANAGER.

BRANCH CLEARANCE DETAIL

N. T. S.



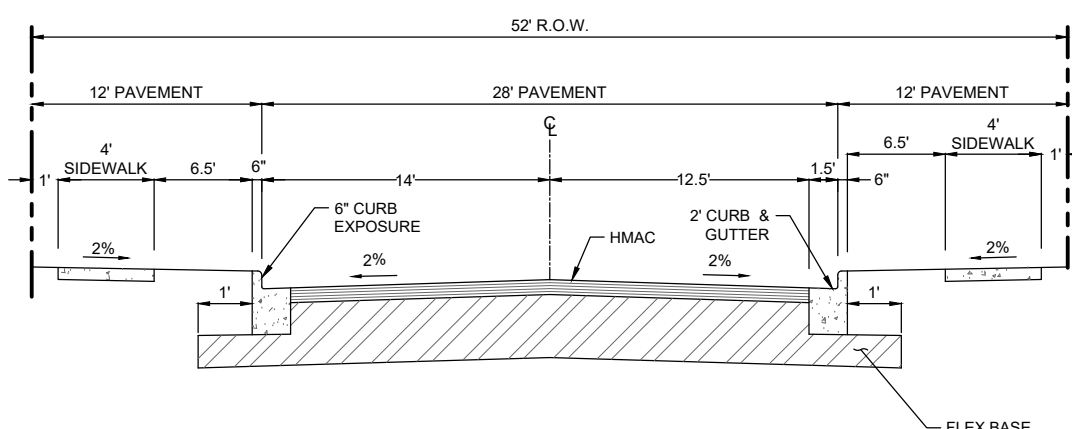
LOCAL B TYPICAL STREET SECTION

N.T.S.

LOCAL STREET WITH INFORMAL ON-STREET PARKING
NEIGHBORHOOD CENTER, RESORT, NEIGHBORHOOD
(MIXED DENSITY) RESIDENTIAL AND PARK PLANNING
AREAS

SENDERO VW
LENTISCO ST

NOTE: SUBGRADE SOILS SHOULD BE TESTED FOR
SOLUBLE SULFATE CONTENT PRIOR TO LIME
TREATMENT.



LOCAL A TYPICAL STREET SECTION

N.T.S.

LOCAL STREET WITH INFORMAL ON-STREET PARKING
NEIGHBORHOOD CENTER, RESORT, NEIGHBORHOOD
(MIXED DENSITY) RESIDENTIAL AND PARK PLANNING
AREAS

SENDERO VW
BELLOTA TRL
PALMILLA AVE
LENTISCO ST

NOTE: SUBGRADE SOILS SHOULD BE TESTED FOR
SOLUBLE SULFATE CONTENT PRIOR TO LIME
TREATMENT.

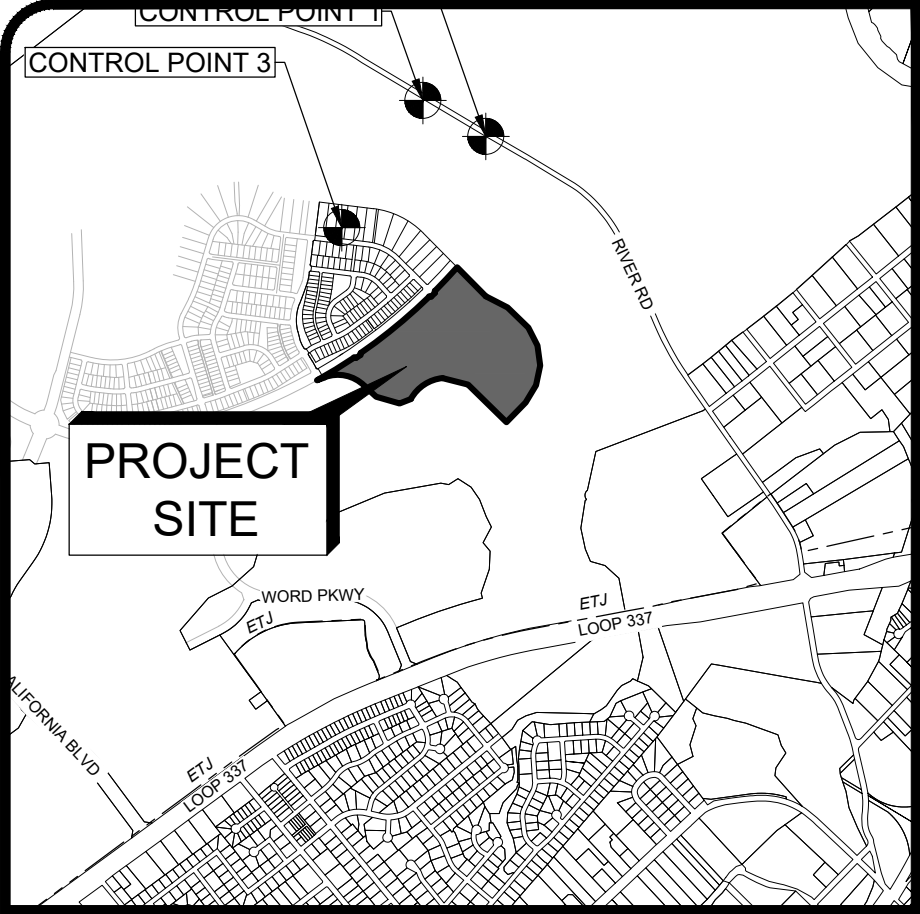
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CHECKED BY:	PF
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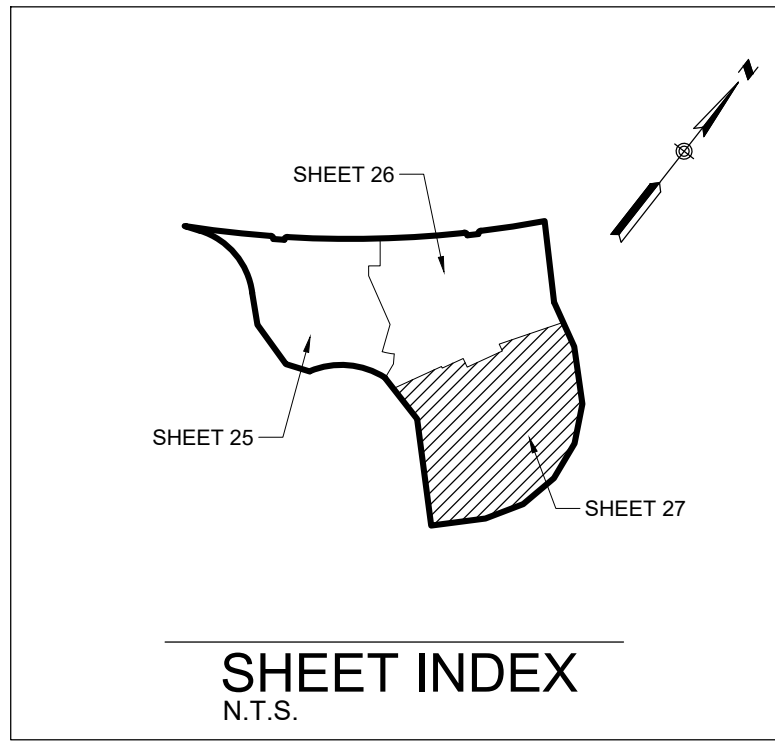


LJA Engineering, Inc.
9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.603.2700
LJA.COM
TBPE No. F-1306

JOB NUMBER:
SA3856.0401
SHEET NO.



LOCATION MAP
SCALE: 1" = 2000'



SHEET INDEX
N.T.S.



SIGNAGE NOTES:

- UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT. CONTRACTOR SHALL HAVE THE UTILITIES MARKED PRIOR TO INSTALLATION OF THE SIGN POST. SIGN LOCATIONS ILLUSTRATED ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL LOCATE SIGNS TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
- IN ACCORDANCE WITH THE UNDERGROUND FACILITY DAMAGE PREVENTION ACT THE TELEPHONE NUMBER FOR A UTILITY LOCATOR IS 1-800-545-6005. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS FOR UTILITY LOCATORS, AS NEEDED.
- WHEN PREPARING HOLES FOR POSTS, CARE SHALL BE TAKEN SO AS NOT TO RUPTURE EXISTING DRAINAGE STRUCTURES, SPRINKLER SYSTEMS, TELECOMMUNICATIONS FACILITIES, ELECTRICAL CONDUITS AND PUBLIC UTILITIES.
- ALL SIGNS SHALL COMPLY WITH THE SIGN DESIGNS PRESENTED IN STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS OR THE MILLENNIUM STANDARD HIGHWAY SIGN DESIGNS, IF A MILLENNIUM SIGN IS SPECIFIED ON THE PLANS.
- SIGN LOCATIONS ILLUSTRATED ON THE PLANS ARE APPROXIMATE. SIGNS SHALL BE LOCATED IN THE FIELD TO PROVIDE APPROPRIATE FUNCTIONALITY. SIGN LOCATIONS SHALL COMPLY WITH GUIDELINES AND REQUIREMENTS PRESENTED IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL TRAFFIC CONTROL DEVICES, LIGHTING, OR WARNING DEVICES REQUIRED TO COMPLETE THE WORK. ALL CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE NEW, UN-DEPRECIATED STOCK. ALL EQUIPMENT SHALL BE NEW, UNLESS NOTED OTHERWISE ON THE PLANS.
- ALL SIGNS WITH A WHITE BACKGROUND SHALL BE FABRICATED WITH ENGINEER GRADE REFLECTIVE SHEETING (TXDOT TYPE A). ALL SIGNS WITH NON-WHITE BACKGROUNDS SHALL BE FABRICATED WITH HIGH SPECIFIC INTENSITY REFLECTIVE SHEETING (ALL TYPE C TXDOT TSP-(4)-08).
- CONTRACTING SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION, OR BETTER, ANY DAMAGE DONE TO EXISTING BUILDINGS, RETAINING WALLS, UTILITIES, FENCES, PAVEMENT, CURBS OR DRIVEWAYS (NO SEPARATE PAY ITEM). CONTRACTOR SHALL RESTORE THE CONSTRUCTION AREA TO ORIGINAL CONDITION OR BETTER, PRIOR TO FINAL INSPECTION.
- ANY CONFLICT BETWEEN ANY DEFINITION, MATERIAL SPECIFICATION, CONSTRUCTION SPECIFICATION, MEASUREMENT AND PAYMENT PROCEDURE, ETC., SHOWN IN THIS PLAN SET AND ANY TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SHALL BE RESOLVED ONLY BY THE ENGINEER AND THE ENGINEER'S DECISION SHALL BE FINAL AND BINDING.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AS PER TXDOT ITEM NO. 666.
- COMAL COUNTY WILL INSTALL COUNTY ROAD SIGNS AND INVOICE THE OWNER. THE CONTRACTOR IS TO INSTALL PAVEMENT MARKINGS. ALL ROAD SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS. THE COUNTY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.
- THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE COUNTY AT LEAST 24 HOUR PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE COUNTY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

526.27 ACRES
WORD-BORCHERS RANCH REAL
ESTATE LIMITED PARTNERSHIP
(DOC 201006024823, OPR)

D3 - 9" (229 mm) BELLOTA TRL
D3 - 9" (229 mm) SENDERO VW
SEE NBU STREET DESIGN DETAILS

526.27 ACRES
WORD-BORCHERS RANCH REAL
ESTATE LIMITED PARTNERSHIP
(DOC 201006024823, OPR)

526.27 ACRES
WORD-BORCHERS RANCH REAL
ESTATE LIMITED PARTNERSHIP
(DOC 201006024823, OPR)

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.

SIDEWALK NOTES:

- FOUR (4) FOOT WIDE SIDEWALK WILL BE CONSTRUCTED BY THE HOME BUILDER PER CITY STANDARDS AT THE TIME OF BUILDING CONSTRUCTION ALONG:
A. SENDERO VW
B. BELLOTA TRL
C. LENTISCO ST
D. PALMILLA AVE
- FOUR (4) FOOT WIDE SIDEWALK WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:
A. SENDERO VW - LOT 900, BLOCK 121; LOT 900, BLK 120; LOT 900, BLK 122; LOT 900, BLK 119; LOT 900, BLK 118.
B. BELLOTA TRL - LOT 900, BLOCK 123; LOT 900, BLK 121; LOT 900, BLK 122.
C. LENTISCO ST - LOT 901, BLOCK 117; LOT 900, BLK 121; LOT 900, BLK 117; LOT 900, BLK 123.
- SIDEWALK INFRASTRUCTURE SHALL BE INSTALLED ALONG THE STREET FRONT OF ALL LOTS AT THE TIME OF LOT IMPROVEMENT. FOR LOTS WHERE NO BUILDING IMPROVEMENT IS PROPOSED, ALL SIDEWALKS AND PEDESTRIAN CROSSING RAMPS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.

LOCATION OF EXISTING
UNDERGROUND AND OVERHEAD
UTILITIES ARE APPROXIMATE
LOCATIONS ONLY. THE
CONTRACTOR SHALL DETERMINE
THE EXACT LOCATION OF ALL
EXISTING UTILITIES PRIOR TO
BEGINNING WORK AND SHALL BE
FULLY RESPONSIBLE FOR ANY AND
ALL DAMAGES WHICH MIGHT OCCUR.



VERAMENDI PRECINCT 19 UNIT 1
SIGNAGE LAYOUT (SHEET 3 OF 3)

NO.	REVISIONS	DESCRIPTION	BY	DATE
1	DATE: 12/23/2024	DESIGNED BY: NG		
2	DRAWN BY: TM			
3	CHECKED BY: PF			
4	DRAWING NAME: 19-1 Signage Layout.dwg			



LJA Engineering, Inc.
9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1386

JOB NUMBER:
SA3856.0401

SHEET NO.

27

OF 60 SHEETS

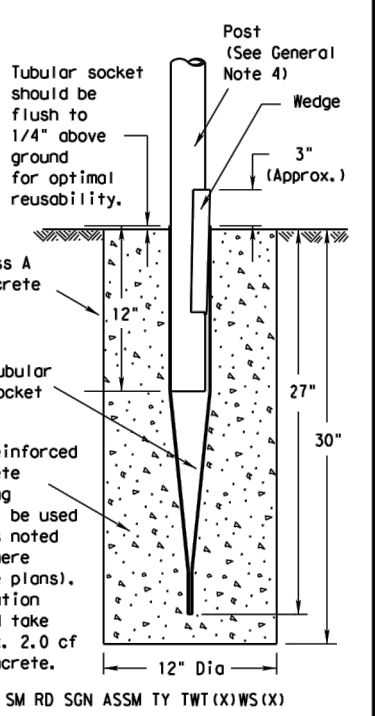
FOR PERMIT

K:\A3856 ASX Properties\0401 Veramendi Precinct\19-1\426 Site Development\Plans\0401-Veramendi Precinct\Signage\Details.dwg
User: JLM
Date: 11/11/2024
Time: 11:24:11 AM
Plot Date: 11/11/2024
Time: 11:24:11 AM

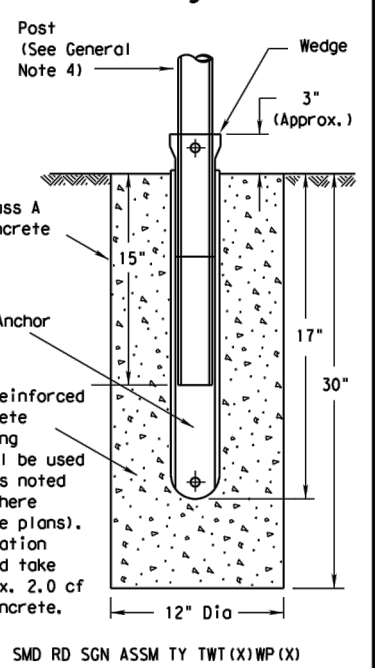
DATE: 11/11/2024
FILE: 11/11/2024

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the State of Texas for the use of this standard or for the results or consequences resulting from its use.

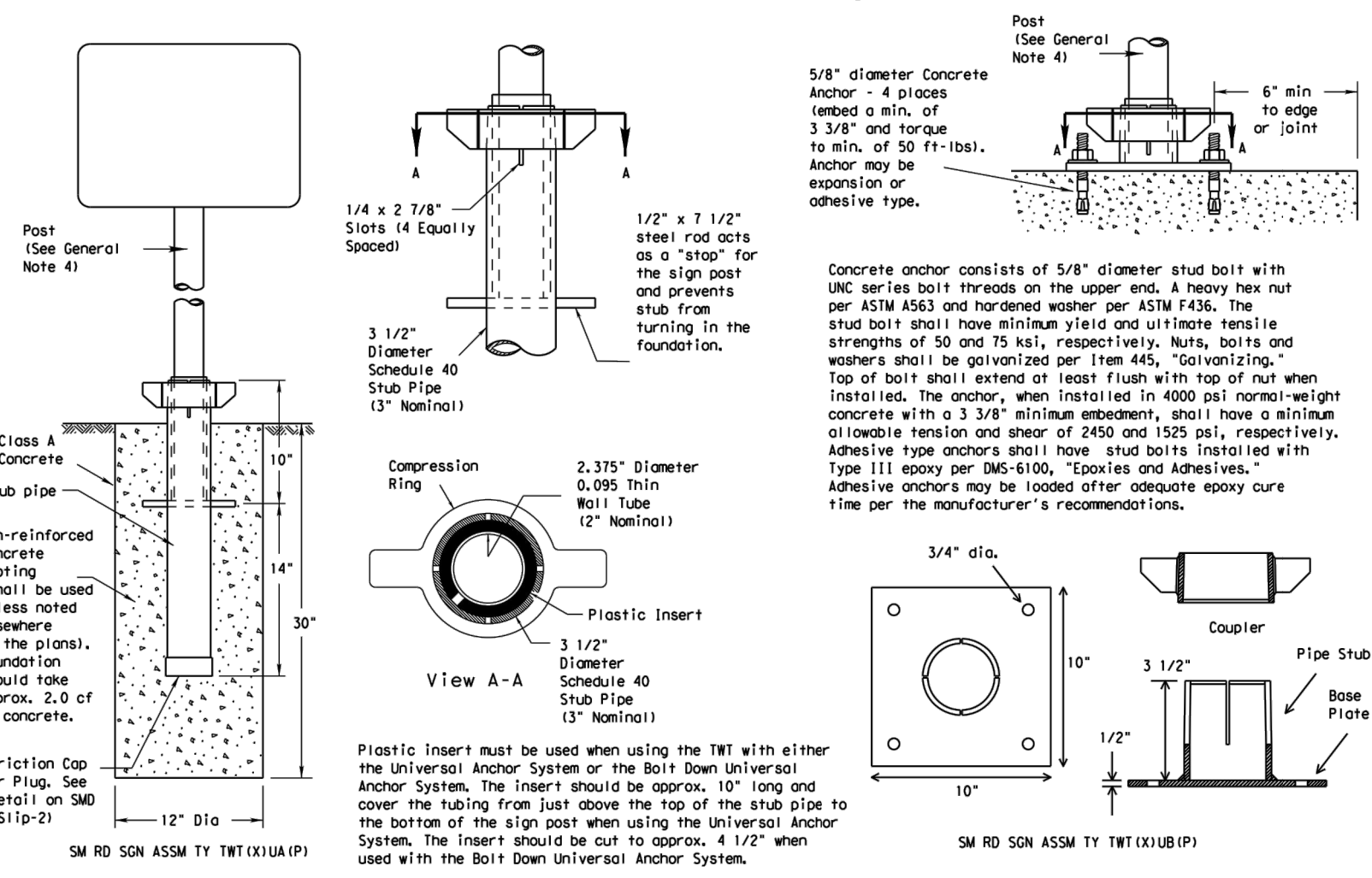
Wedge Anchor Steel System



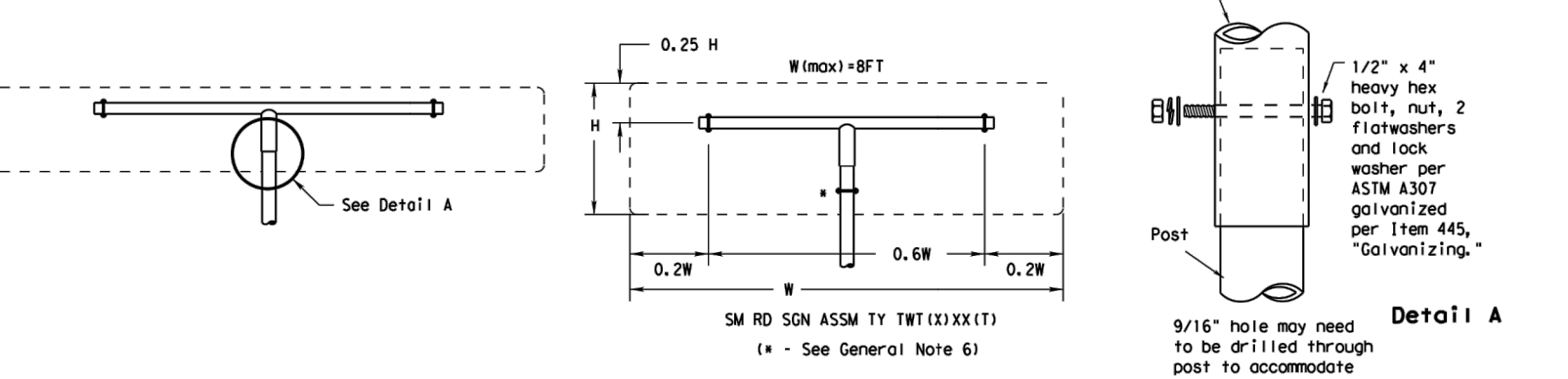
Wedge Anchor High Density Polyethylene (HDPE) System



Universal Anchor System with Thin-Walled Tubing Post



Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post



NOTE
The devices shall be installed per manufacturer's recommendations.
Installation procedures shall be provided to the Engineer by Contractor.

- GENERAL NOTES:
- The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
 - The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer, method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
 - Except for posts (13 BNC tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: https://www.txdot.gov/business/producer_list.htm
 - Material used as post with this system shall conform to the following specifications:
 - 3 BNC tubing (2.375" outside diameter) (TWT)
 - 0.095" nominal wall thickness
 - 55,000 PSI minimum yield strength
 - 70,000 PSI minimum tensile strength
 - 185 minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of .083" to .095"
 - Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
 - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recast tube outside diameter weld seam by metalizing with zinc wire per ASTM B633.
 - Sign blanks shall be the sizes and shapes shown on the plans.
 - Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
 - Sign supports shall not be applied except where shown. Sign support posts shall not be applied.
 - See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: <https://www.txdot.gov/publications/traffic.htm>

- WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE:
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
 - Insert tubular socket into concrete until top of socket is approximately 1/4" above the concrete footing.
 - Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
 - Attach the sign to the sign post.
 - Insert the sign post into socket and sign sign face with roadway.
 - Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

- UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE:
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - Insert base post into hole to depths shown and backfill hole with concrete.
 - Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
 - Attach the sign to the sign post.
 - Install plastic insert around bottom of post.
 - Insert sign post into base post. Lower until the post comes to rest on steel rod.
 - Seat compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
 - Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

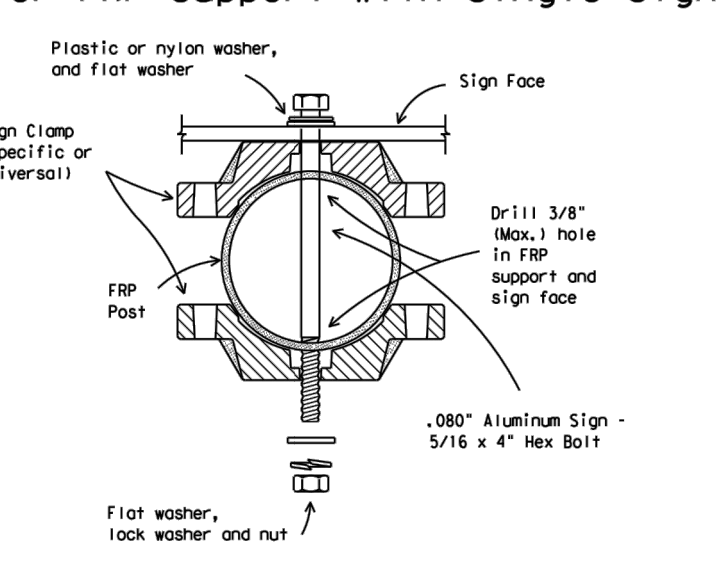
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS WEDGE & UNIVERSAL ANCHOR WITH THIN WALL TUBING POST

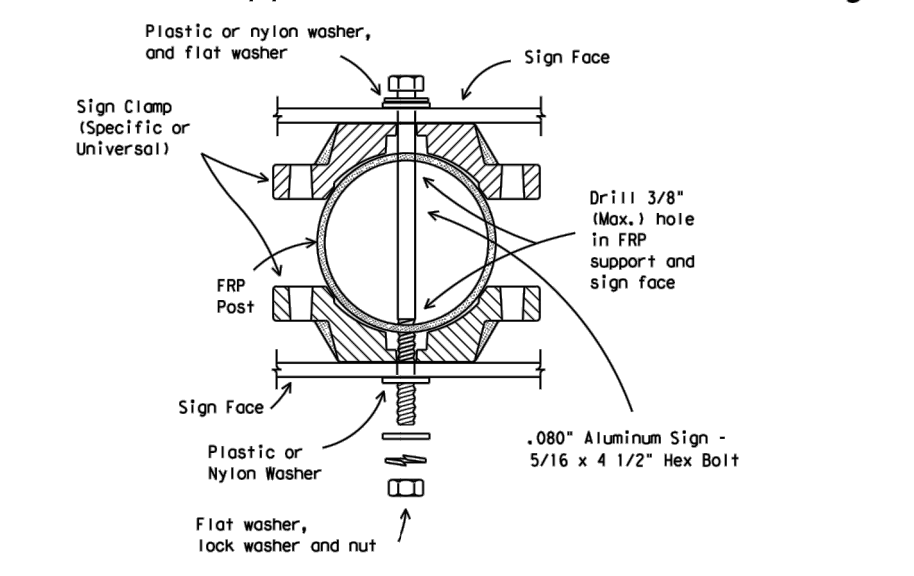
SMD (TWT) -08

© TxDOT July 2002		DWI TXDOT		CKI TXDOT		DWI TXDOT		CKI TXDOT	
08	REVISIONS	CONT SECT		JOB		HIGHWAY			
		DIST		COUNTY			SHEET		
6E									

Typical Sign Mounting Detail for FRP Support with Single Sign



Typical Sign Mounting Detail for FRP Support with Back-to-Back Signs



- GENERAL NOTES:
- FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
 - All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing."
 - See the Traffic Operations Division website for detailed drawings of sign clamps. The website address is: <https://www.txdot.gov/publications/traffic.htm>

FRP POST REQUIREMENTS

- Materials shall conform to the requirements of Departmental Material Specification DMS-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
- Thickness of FRP sign support is 0.125" x 0.031" - 0.0".
- FRP sign supports are prequalified by the Traffic Operations Division. Prequalification procedures are controlled by writing Texas Department of Transportation Traffic Operations Division 125 East 11th Street Austin, Texas 78701-2483

- UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE:
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
 - Insert base post in foundation hole to depths shown and fill hole with concrete. Cut base post from bottom and ensure a minimum of 18" embedment if installed in solid rock.
 - Level and plumb the base post with coupler using a torpedo level and let concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post slots shall be above the concrete footing.
 - Attach sign to FRP post.
 - Insert sign post into base post. Lower until the post comes to rest on the steel rod.
 - Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
 - Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

BOLT DOWN SIGN SUPPORT

- Position base plate with coupler an existing concrete.
- Drill holes into concrete and insert the 5/8" diameter bolts with wedge anchors, and tighten nuts.
- Attach sign to FRP post.
- Insert bottom of sign post into pipe stub.
- Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
- Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

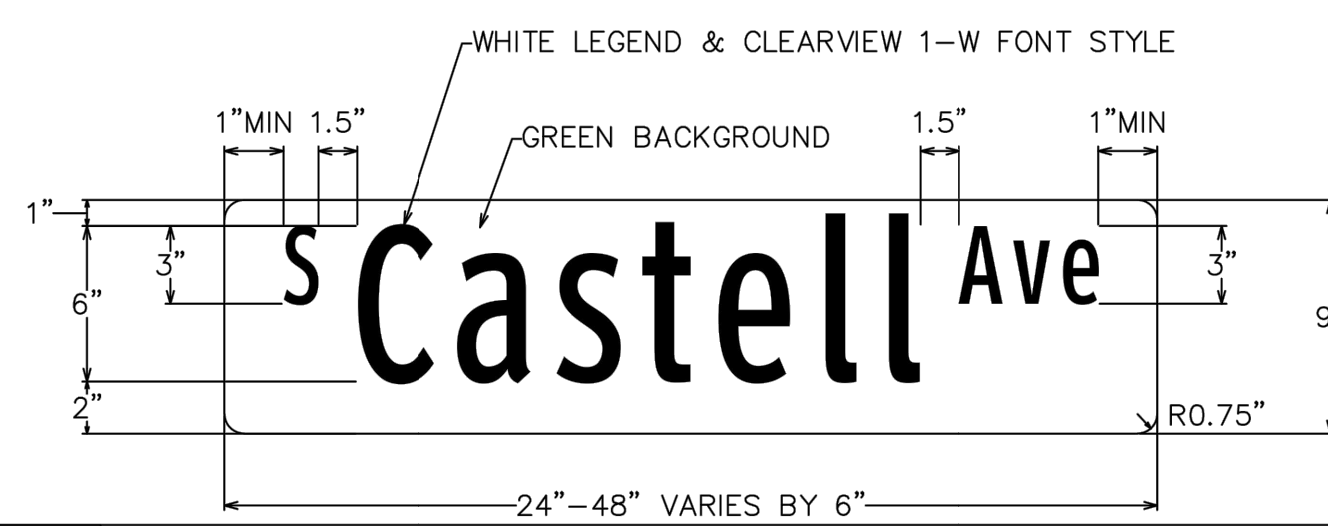
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS UNIVERSAL ANCHOR SYSTEM WITH FRP POST

SMD (FRP) -08

© TxDOT July 2002		DN: TXDOT	CK: TXDOT	DN: TXDOT	CK: T
-08	REVISIONS	CONT	SECT	JOB	HIGHWAY
		DIST	COUNTY		SHEET
6F					

STREET SIGN DETAIL - GROUND MOUNT



Height	9"
Length	24" min 48" max 6" increments in length
Thickness	0.080"
Substrate	Flat aluminum sheeting with 3/4" radius circular fillets at corners conforming to the requirements of ASTM B 209, Alloys 6061-T6, or 5052-H38.
Sign Face Materials	Green film over High Intensity Prismatic sheeting
Legend	Legends shall be Clearview 1-W font style. Reduced spacing between the letters or words should not be used as a means of reducing the overall size of a street name sign unless approved by the City Traffic Engineer.
Color	White legend on green background

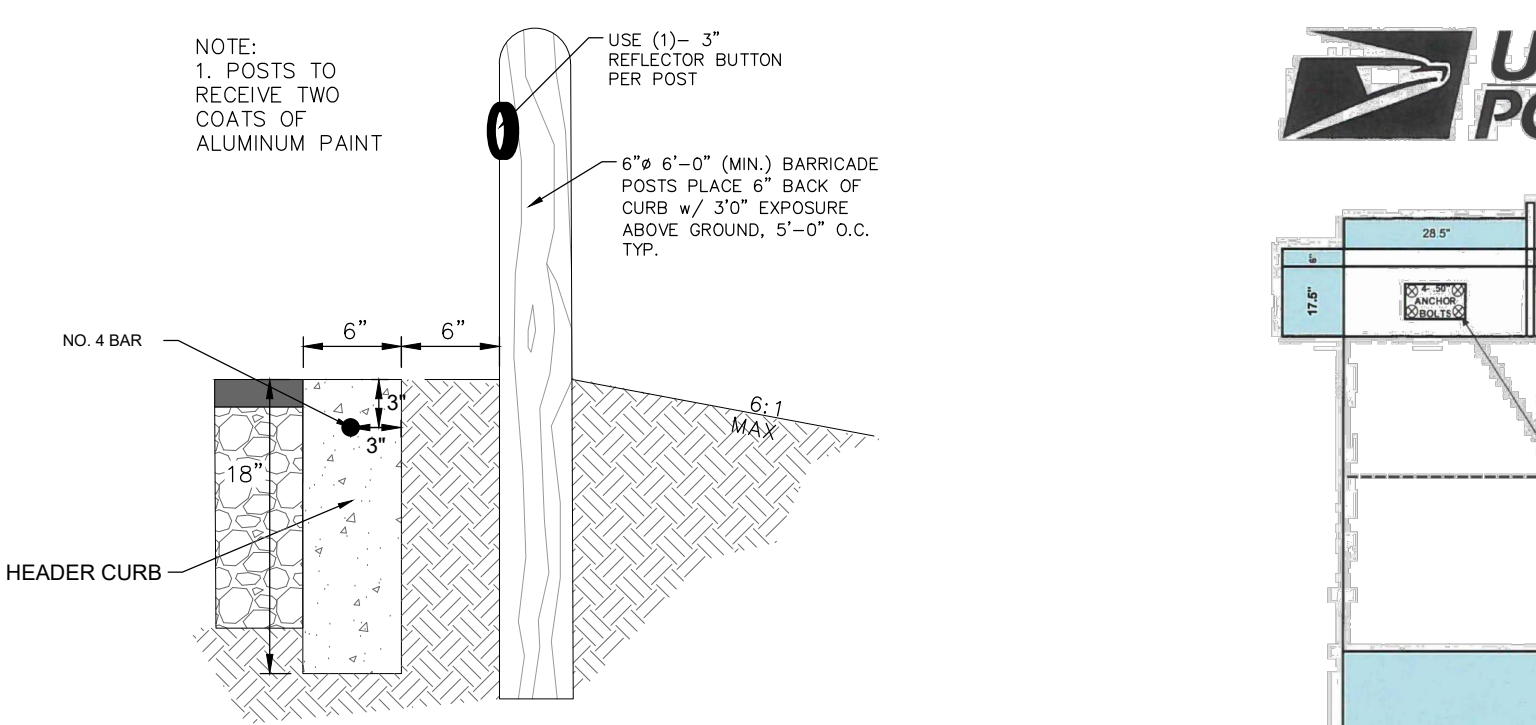
- Notes:
- Street name signs shall be double sided when center mounted on top of sign post. Only one street name sign should be installed on top of sign post with STOP or YIELD sign.
 - When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign should be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.
 - Street name signs greater than 36" long and center mounted on top of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on top of sign post shall be mounted on post top bracket with 5 1/2" slot.
 - Street name signs mounted on sign post shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the 9" street name sign blank 1" from edge of the blank with 7" spacing between holes.
 - The lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.
 - Red background (red film over High Intensity Prismatic) should be used for private street name signs.

Street Sign Detail - Ground Mount		ENGINEERING DIVISION	
ISSUE DATE:	February 2013	DWG. NO:	ST-024
DRAWN BY:	RAS	SCALE:	N.T.S.
CONTACT:	GF	SHEET:	1 OF 1

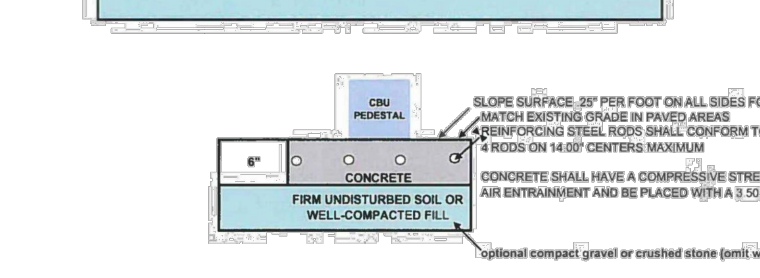
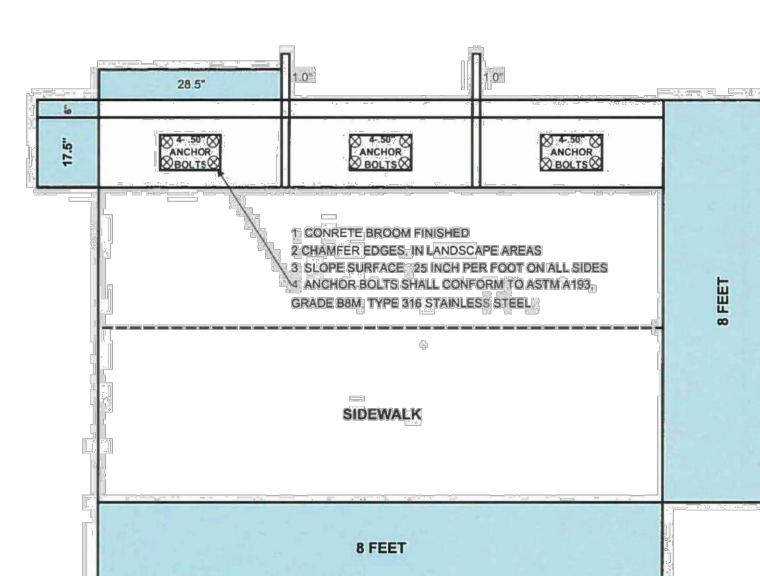


424 S. CASTELL AVE.
NEW BRAUNFELS, TEXAS 78130
PHONE: 830.221.4020
FAX: 830.626.3600

P192101 ENGINEERING-AUTOCADDETAILSINB-PUBLIC WORKS DETAILSINB-UNAPPROVED DETAILS-2013ST-2013.024 STREET SIGN DETAIL - GROUND MOUNT DWG



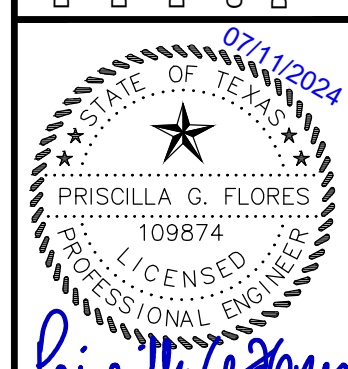
HEADER CURB & BARRICADE POST DETAIL N.T.S.



VERAMENDI PRECINCT 19 UNIT 1
SIGNAGE DETAILS (SHEET 2 OF 2)

REVISIONS	DATE	DESCRIPTION
1	11/11/2024	NG
2	11/11/2024	TM
3	11/11/2024	PF

NO.	DATE	DESIGNED BY	CHECKED BY	DRAWING NAME
1	11/11/2024	NG	TM	Signage Details.dwg



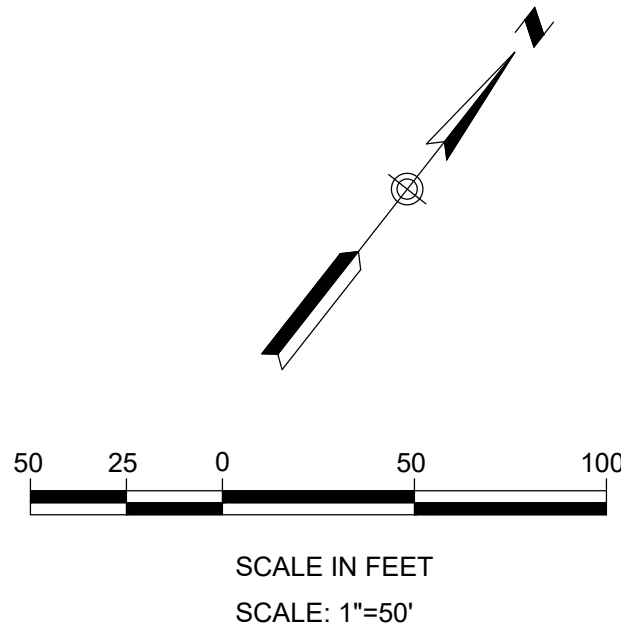
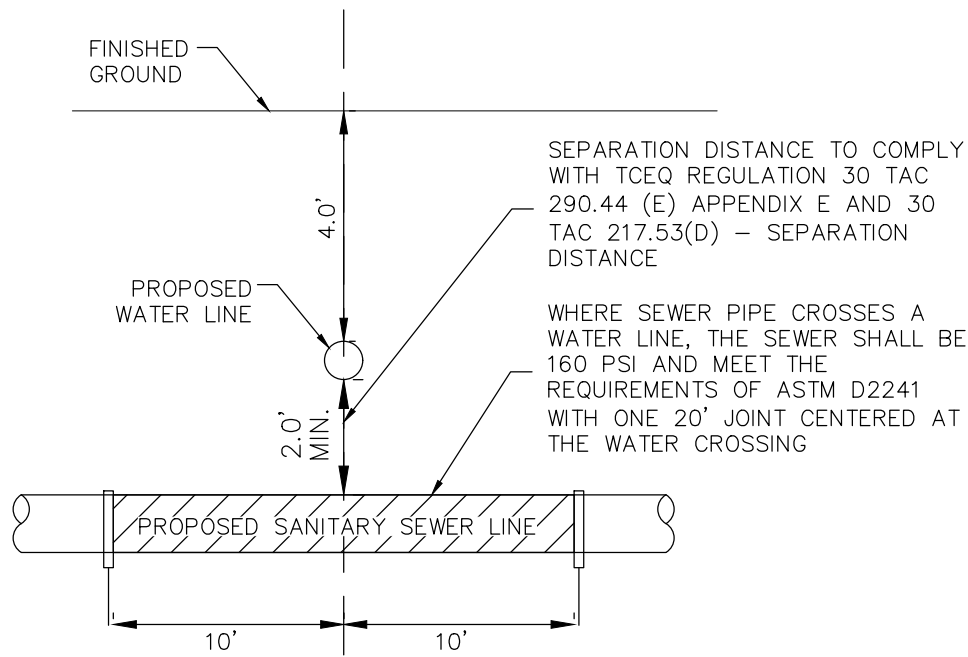
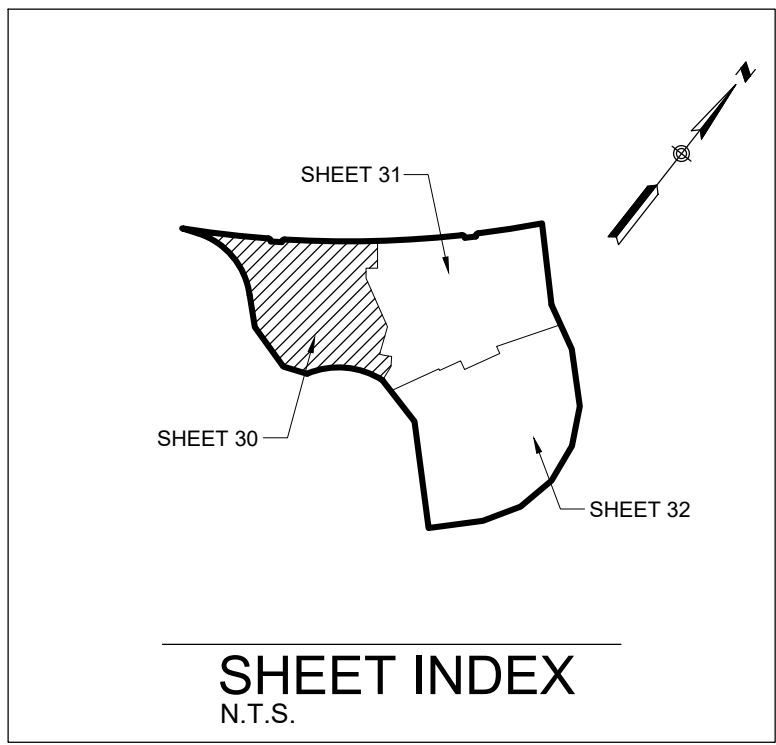
Priscilla G. Flores
Professional Engineer
State of Texas
License No. 109874

LJA Engineering, Inc.
9830 Calomarde Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBP# No. F-1306

JOB NUMBER:
SA3856.0401

SHEET NO.
29
OF 60 SHEETS

FOR PERMIT



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

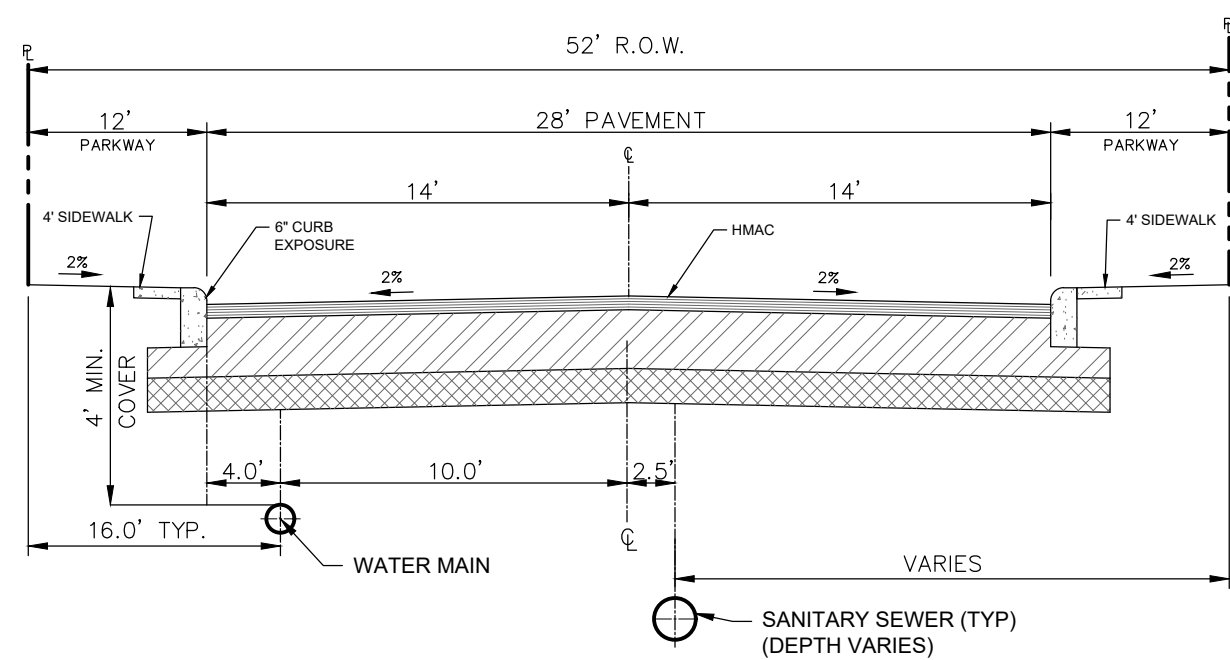
LOCATION MAP
SCALE: 1" = 2000'

CITY OF NEW BRAUNFELS NOTES

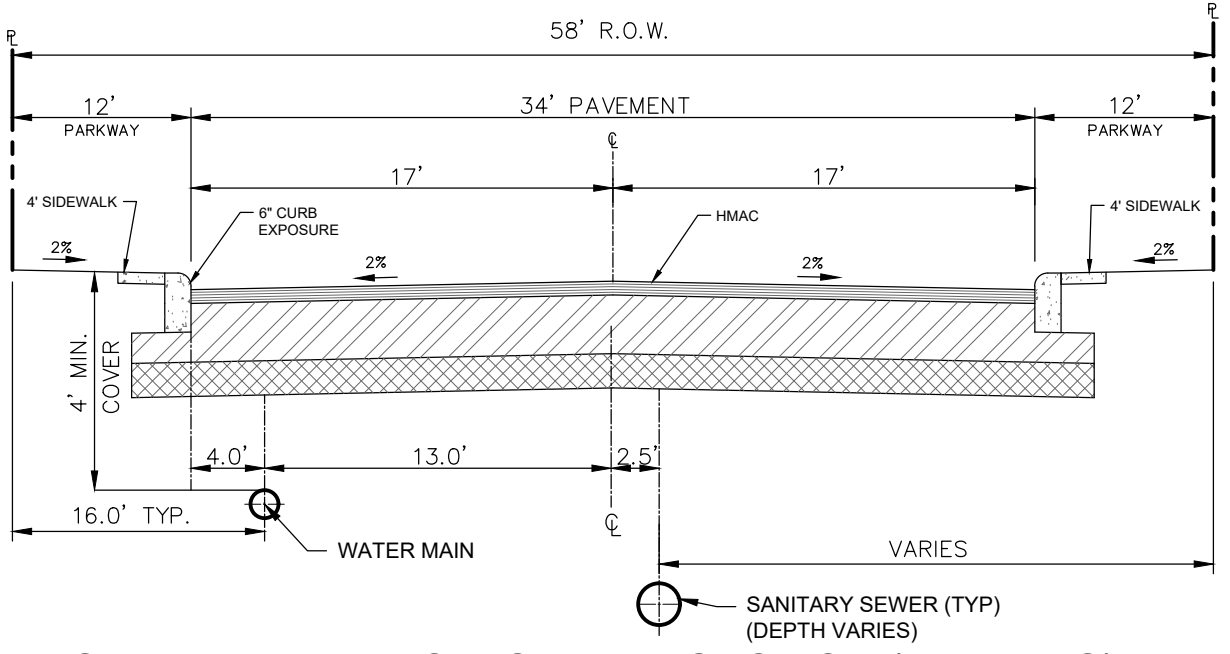
1. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AN CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY CONTRACTOR AND AN ENGINEER REQUIRED MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
4. UTILITY TRENCH COMPACTION ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED 12 INCHES (12) LONG AND 12 INCHES (12) HIGH. THE COMPRESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 90% DENSITY TESTED TO DENSITY AND MOISTURE ACCORDANCE TEST-114-E, TEST-115-E, THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE CITY OF NEW BRUNSWICK STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 FT FOR EACH LIFT AND EVERY 100 FT FOR EACH LIFT WITHIN THE CITY OF NEW BRUNSWICK STREET INSPECTOR. THE CITY OF NEW BRUNSWICK STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED TO THE CITY OF NEW BRUNSWICK STREET INSPECTOR. DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRUNSWICK STREET INSPECTOR.

GENERAL NOTES

1. FIRE HYDRANT SHALL BE LOCATED BEHIND SIDEWALK IN ACCORDANCE WITH THE FIRE HYDRANT INSTALLATION DETAIL DD-834-01.
2. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
3. ALL VALVES SHALL READ "OPEN RIGHT".
4. ALL FIRE HYDRANTS SHALL BE PAINTED APPROPRIATE NCU COLORS.
5. FIRE HYDRANTS AND VALVE BOXES TO BE RAISED TO THE PROPOSED TOP OF PAVEMENT OR GROUND ELEVATION.
6. ALL WATER PIPE TO BE C-900, DR-18, CLASS 150 UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL VERIFY GRAVITY INVERTS PRIOR TO CONSTRUCTION AND NOTIFY CIVIL ENGINEER IN WRITING OF ANY DISCREPANCIES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 95% COMPACTION ON ALL UTILITY 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. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHIN THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
9. CONTRACTOR TO REFERENCE MOST CURRENT NCU DETAILS & SPECIFICATIONS. FOR SEWER MANHOLES REFERENCE NCU STANDARD SPECIFICATION ITEM NO. 852.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING NCU STANDARD SPECIFICATION 804 FOR EXCAVATION, TRENCHING AND BACKFILLING REQUIREMENTS AND STANDARD SPECIFICATION 812 FOR WATER/SEWER SEPARATION REQUIREMENTS.



STANDARD 52' ROW STREET SECTION (UTILITIES)



STANDARD 58' ROW STREET SECTION (UTILITIES)
N.T.S.

NEW BRAUNFELS UTILITIES NOTES

1. R/P BACKFLOW PREVENTION ASSEMBLY TO BE INSTALLED WITH IRRIGATION METERS.

LEGEND		
PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PROPOSED SIDEWALK BY DEVELOPER
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
	TMH	EXISTING
	EX.	PUBLIC UTILITY EASEMENT
	ESMT	EASEMENT
	VOL	VOLUME
	PG	PAGE
		UTILITY X-ING

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 SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IDENTIFY AND ADDRESS ANY SPECIAL SAFETY CONCERNS, TRENCH PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ANY 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:

CONTRACTOR TO NOTIFY TEXAS
ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION
FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY
FOR HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES
PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED
IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED
DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR
INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO
RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



811
Know what's below.
Call before you dig.

VERAMENDI PRECINCT 19 UNIT 1

UTILITY LAYOUT (SHEET 1 OF 3)

DATE: 3/28/2024	REVISED		
DESIGNED BY: TM	DESCRIPTION	BY	DATE
DRAWN BY: NG			
CHECKED BY: PF			
DRAWING NAME: 20240328_01.dwg			
DRAWING PATH: \\server\Utility Layout.dwg			

09/27/2024

STATE OF TEXAS

★ ★ ★ ★ ★

PRISCILLA G. FLORES

109874

LICENSED PROFESSIONAL ENGINEER

Priscilla G. Flores

A 7700 COM 386

LJA Engineering, Inc. **LJA**

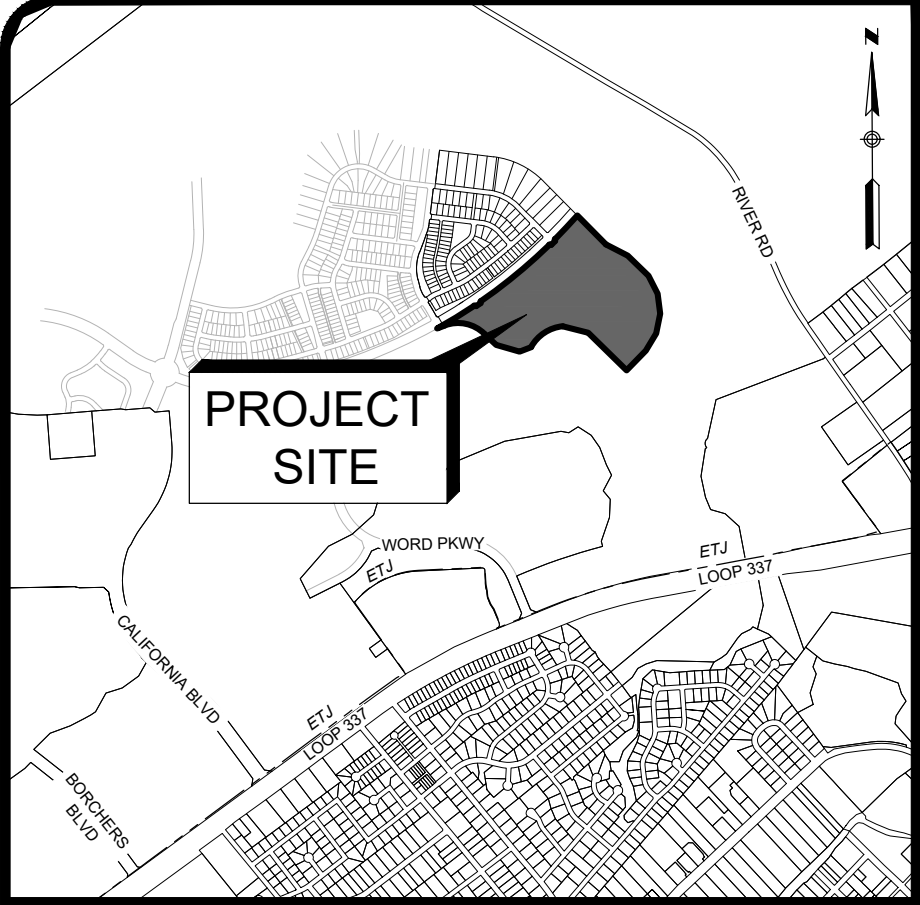
9830 Colomade Blvd
Suite 300
San Antonio, Texas 78230

Phone 210-503-2700
LJA.COM
TBPE No. F-1386

JOB NUMBER:
SA3856.0401

SHEET NO.

30
OF 60 SHEETS



LOCATION MAP
SCALE: 1" = 2000'

CITY OF NEW BRAUNFELS NOTES

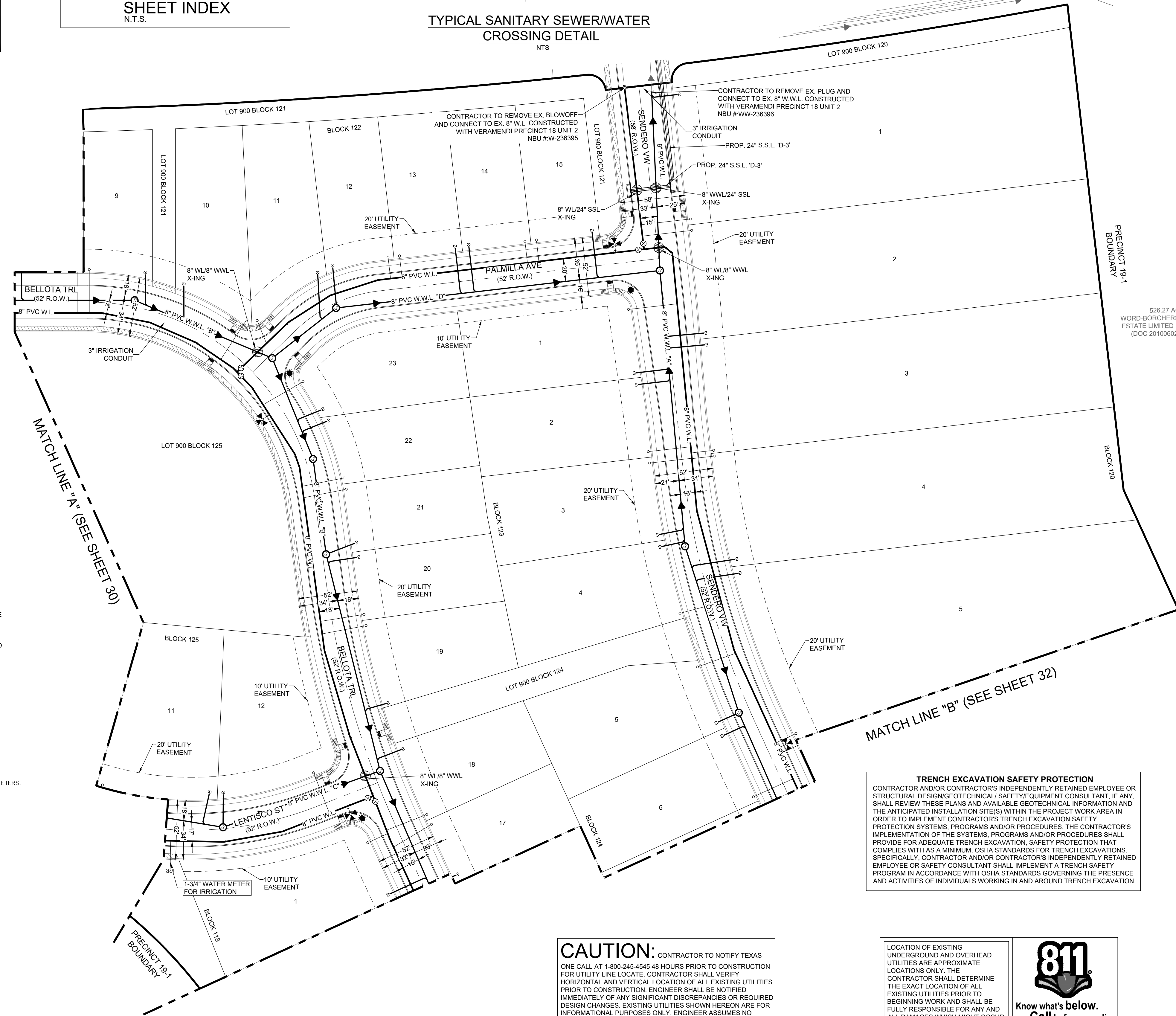
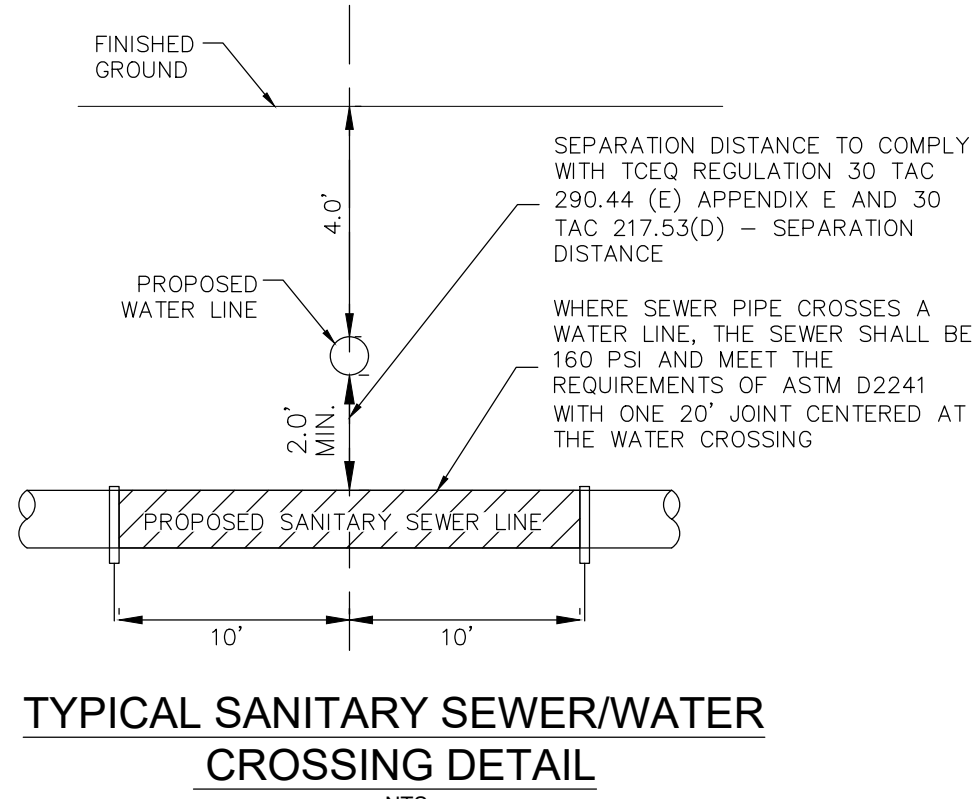
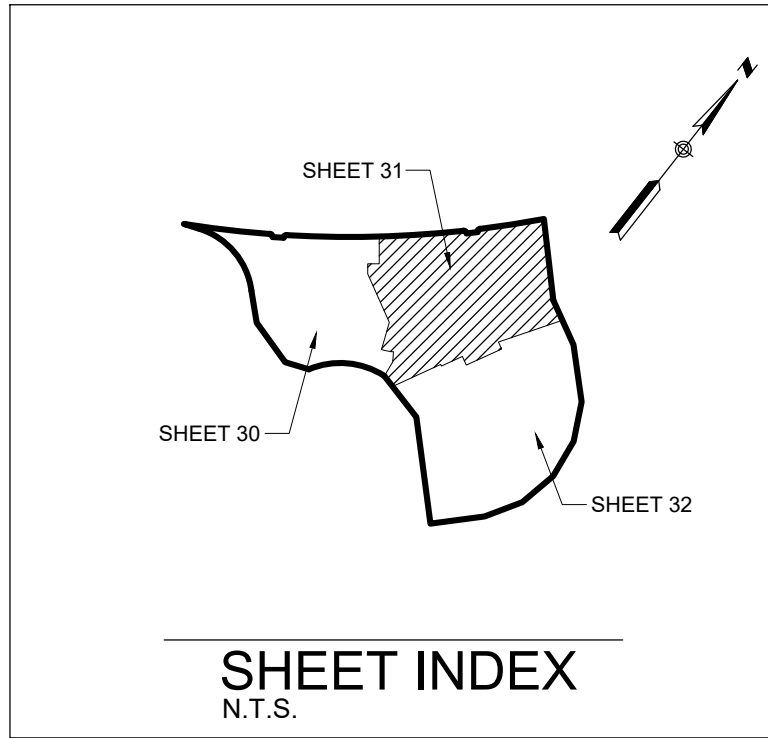
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5'-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AN CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- UTILITY TRENCH COMPACTION ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12) LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE TEX-114-E. TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 FT FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

GENERAL NOTES

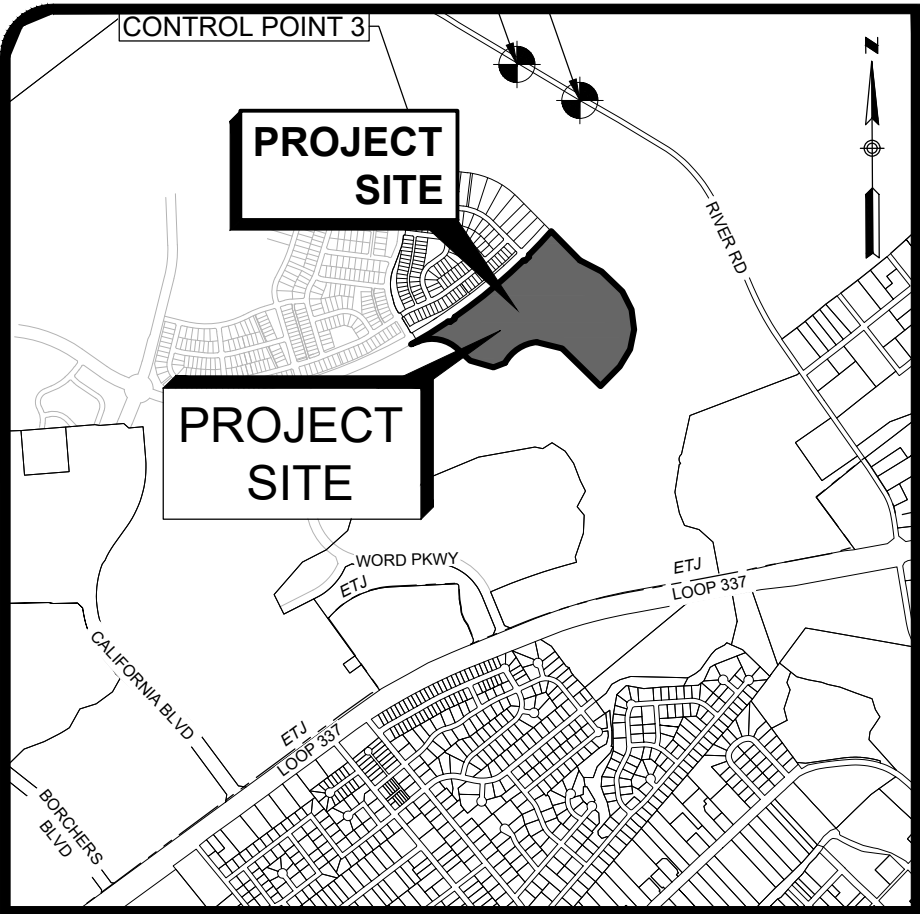
- FIRE HYDRANT SHALL BE LOCATED BEHIND SIDEWALK IN ACCORDANCE WITH THE FIRE HYDRANT INSTALLATION DETAIL DD-534-01.
- CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
- ALL VALVES SHALL READ "OPEN RIGHT".
- ALL FIRE HYDRANTS SHALL BE PAINTED APPROPRIATE NBU COLORS.
- FIRE HYDRANTS AND VALVE BOXES TO BE RAISED TO THE PROPOSED TOP OF PAVEMENT OR GROUND ELEVATION.
- ALL WATER PIPE TO BE C-900, DR-18, CLASS 150 UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY GRAVITY INVERTS PRIOR TO CONSTRUCTION AND NOTIFY CIVIL ENGINEER IN WRITING OF ANY DISCREPANCIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 95% COMPACTION ON ALL UTILITY 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 SAVS INSPECTOR/TEST ADMINISTER, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAVS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
- CONTRACTOR TO REFERENCE MOST CURRENT NBU DETAILS & SPECIFICATIONS. FOR SEWER MANHOLES REFERENCE NBU STANDARD SPECIFICATION ITEM NO. 852.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING NBU STANDARD SPECIFICATION 804 FOR EXCAVATION, TRENCHING AND BACKFILLING REQUIREMENTS AND STANDARD SPECIFICATION 812 FOR WATER/SEWER SEPARATION REQUIREMENTS.

NEW BRAUNFELS UTILITIES NOTES

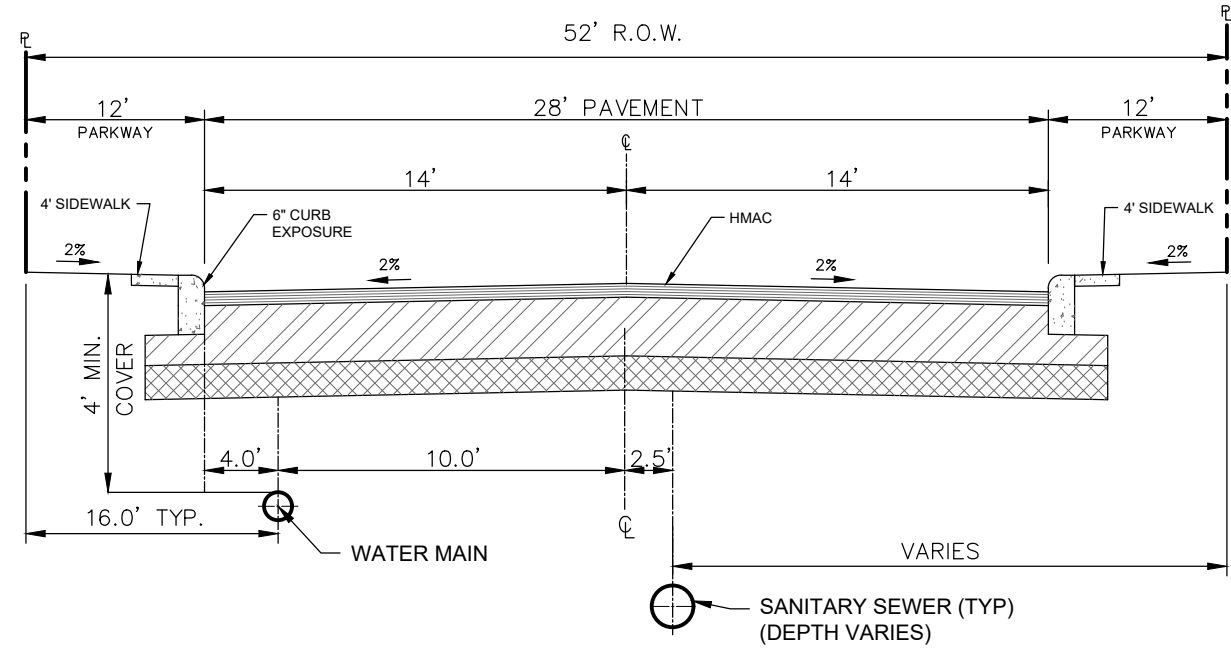
- R/P BACKFLOW PREVENTION ASSEMBLY TO BE INSTALLED WITH IRRIGATION METERS.



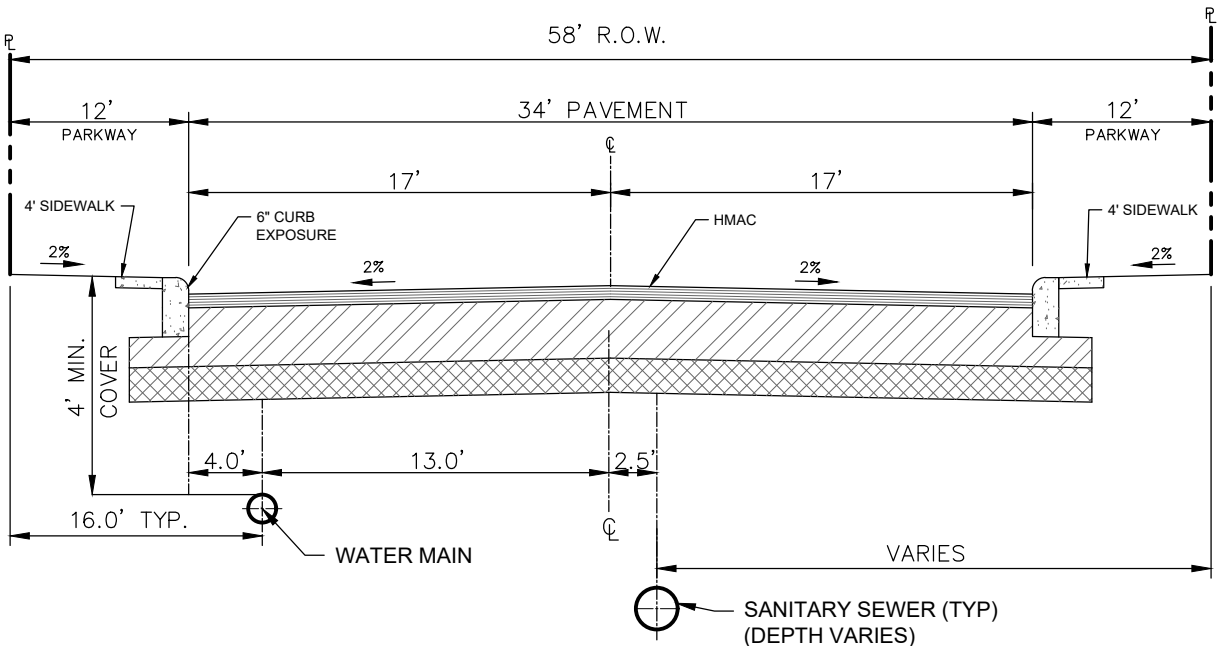
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Plot Size: 11.0 x 17.0
Plot Scale: 1"=50'



LOCATION MAP
SCALE: 1" = 2000'



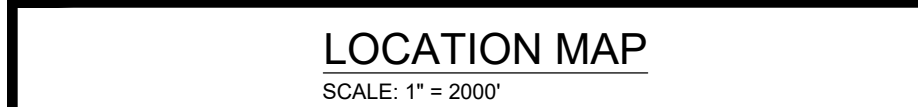
STANDARD 52' ROW STREET SECTION (UTILITIES)

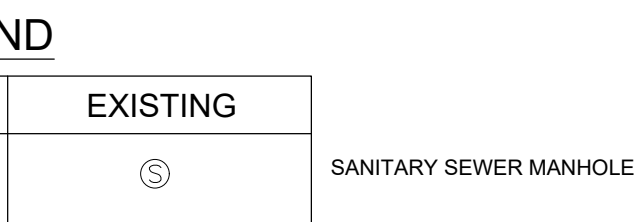


STANDARD 58' ROW STREET SECTION (UTILITIES)

LEGEND

PROPOSED	EXISTING



[illegible]

USED	

CITY OF NEW BRAUNFELS NOTES

1. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITH CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 8" FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AN CONSTRUCTION CHALLENGES AND CITY METHODS FOR DEPTH AND COMPACTION TESTING WILL NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
4. UTILITY TRENCH COMPACTION ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LONGER THAN THE MAXIMUM LAYER THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM PER SOIL DENSITY TESTING FOR DENSITY AND MOISTURE IN ACCORDANCE TENS-114-E, TENS-115-E, THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 FT FOR EACH LOT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH PLANS. GEOTECHNICAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

1. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITH CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5'-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AN OBSTACLES TO FIELD UTILITY METHODS FOR TESTING AND COMPACTION. THEREFORE, A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
4. UTILITY TRENCH COMPACTION SHALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT THICKER THAN 12" AND SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE THICKNESS BASED ON THE ABILITY OF THE COMPACTING EQUIPMENT AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% RELATIVE DENSITY FOR DENSITY AND MOISTURE IN ACCORDANCE T5X-114-E, T5X-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE CITY OF NEW BRUNSWICK STREET INSPECTOR. AT A MINIMUM TESTS SHALL BE TAKEN EVERY 200 FT FOR EACH LOT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRUNSWICK STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED TO THE CITY OF NEW BRUNSWICK STREET DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRUNSWICK STREET INSPECTOR.

1. ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS SHALL HAVE A REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY (R/P) INSTALLED PRIOR TO PLACEMENT OF METER. ALL NEW FACILITIES ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE LATEST NBU BACKFLOW POLICY.
2. ALL GATE VALVES 16" AND SMALLER SHALL BE RESILIENT SEATED GATE VALVES.
3. FOR PAVEMENT DESIGN SEE GEOTECHNICAL ENGINEERING REPORT.
4. MINIMUM DEPTH OF COVER FOR WATER LINES SHALL BE 42".

PROPOSED WATER MAIN IS WITHIN NBU PRESSURE ZONE 4.



NTS



NTS

NOTE:

1. 18" MINIMUM WATER PIPE SEGMENT TO BE CENTERED UNDER WASTEWATER LINE.
2. WASTEWATER PIPE WITHIN NINE FEET OF WATER PIPE ON EITHER SIDE SHALL BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE RATED PIPE.
3. STEEL CASING TO BE USED UNDER STORM DRAIN.
4. ALL AMENITY CENTERS SHALL HAVE R/P BACKFLOW PREVENTION ASSEMBLY CALLED OUT AND DETAILED ON DOMESTIC SERVICES.

ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

CAUTION:

CONTRACTOR TO NOTIFY TEXAS

ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

REVENUE			
NO.	DESCRIPTION	BY	DATE
DESIGNED BY: NG			
DATE: 10/28/2024			

CHECKED BY: PF			

10/28/2024

STATE OF TEXAS

PRISCILLA G. FLORES

109874

LICENSED PROFESSIONAL ENGINEER

Priscilla G. Flores

LJA

one 210.503.2700

LJA.COM

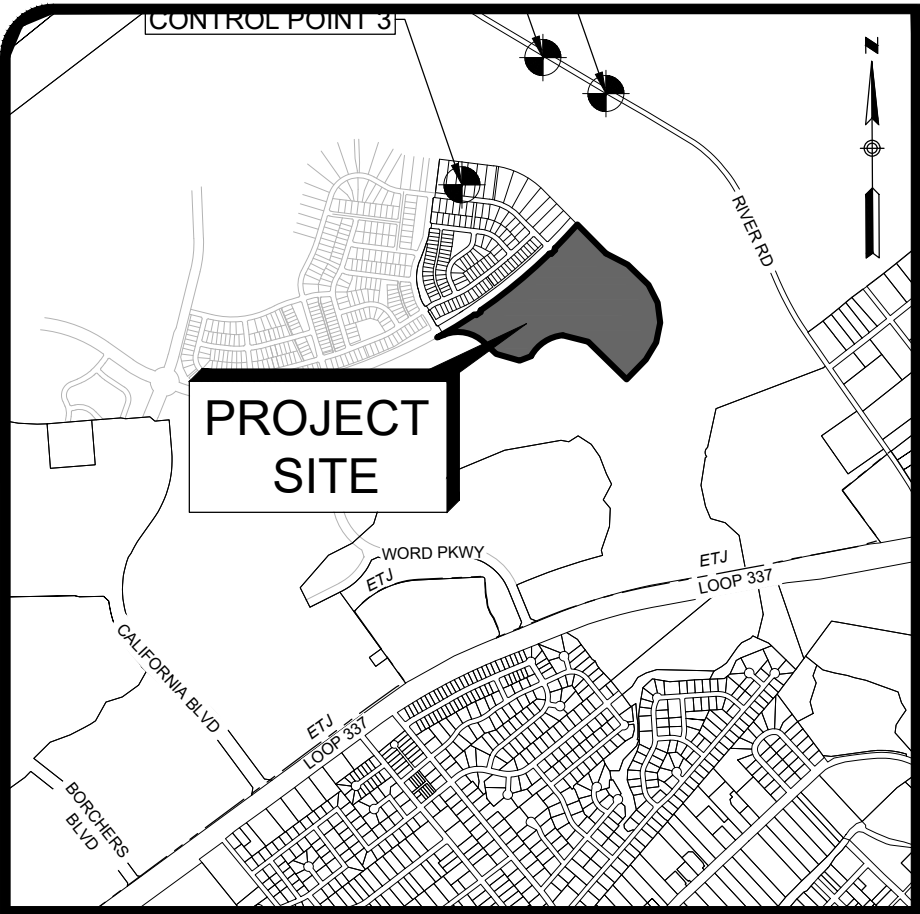
TBPE No. F-1386

LJA Engineering, Inc.
9830 Colomade Blvd
Suite 300
San Antonio, Texas 78230

33
OF 60 SH

SHEE

Know what's below.
Call before you dig



LOCATION MAP
SCALE: 1" = 2000'

NOTE:

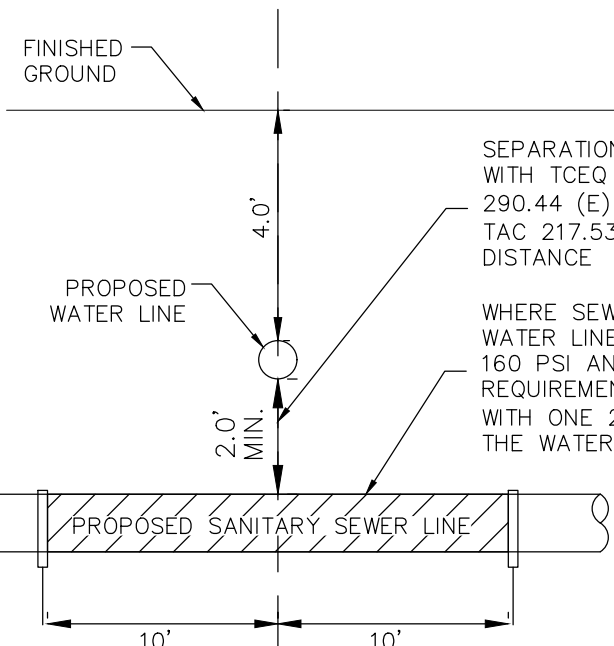
- ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS SHALL HAVE A REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY (RBP) INSTALLED PRIOR TO PLACEMENT OF METER. ALL NEW FACILITIES ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE LATEST NBU BACKFLOW POLICY.
- ALL GATE VALVES 16" AND SMALLER SHALL BE RESILIENT SEATED GATE VALVES.
- FOR PAVEMENT DESIGN SEE GEOTECHNICAL ENGINEERING REPORT.
- MINIMUM DEPTH OF COVER FOR WATER LINES SHALL BE 42".

NBU PRESSURE ZONE:

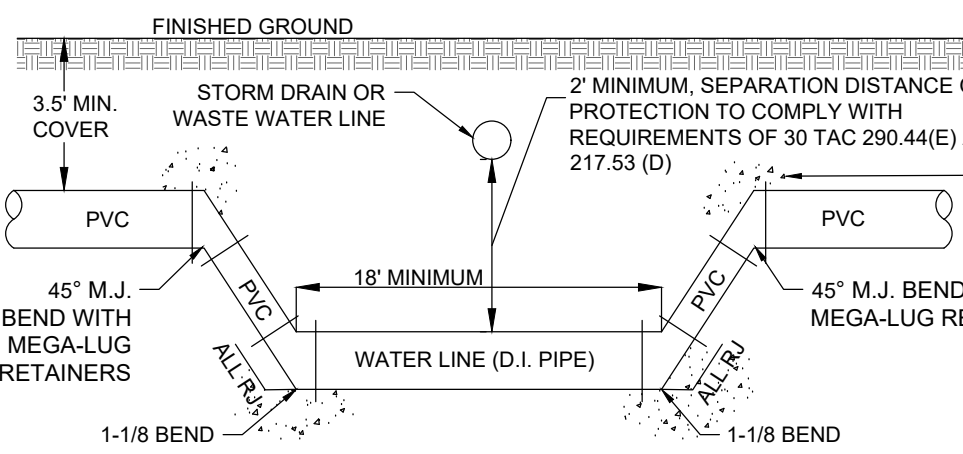
PROPOSED WATER MAIN IS WITHIN NBU PRESSURE ZONE 4.

NEW BRAUNFELS UTILITIES NOTES

- R/P BACKFLOW PREVENTION ASSEMBLY TO BE INSTALLED WITH IRRIGATION METERS.

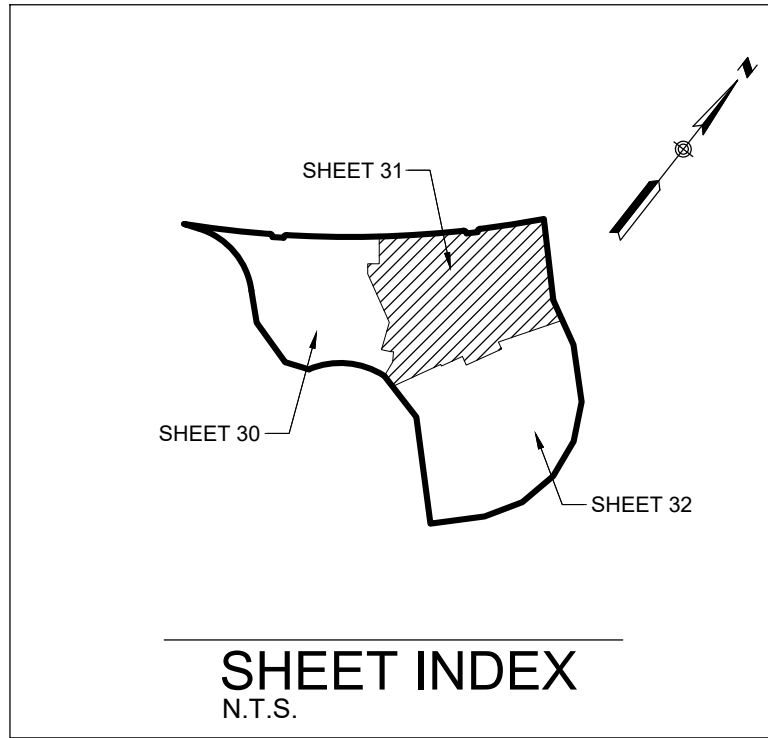


TYPICAL SANITARY SEWER/WATER
CROSSING DETAIL
NTS



TYPICAL WATER/ STORM DRAIN CROSSING DETAIL
NTS

- NOTE:
- 18" MINIMUM WATER PIPE SEGMENT TO BE CENTERED UNDER WASTEWATER LINE.
 - WASTEWATER PIPE WITHIN NINE FEET OF WATER PIPE ON EITHER SIDE SHALL BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE RATED PIPE.
 - STEEL CASING TO BE USED UNDER STORM DRAIN.
 - ALL AMENITY CENTERS SHALL HAVE R/P BACKFLOW PREVENTION ASSEMBLY CALLED OUT AND DETAILED ON DOMESTIC SERVICES.



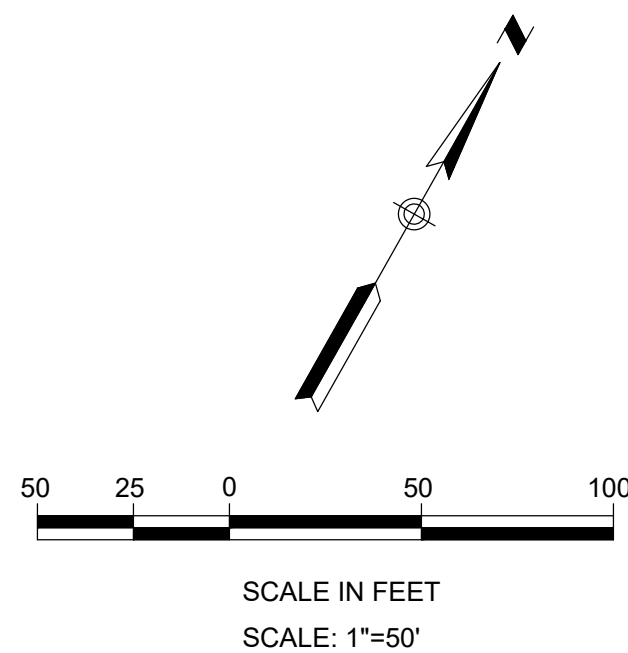
JOINT RESTRAINT TABLE				
JOINT (TYPE)	PIPE MATERIAL	PIPE SIZE	RESTRAINT DISTANCE	LENGTH ALONG RUN
11.25° BEND	PVC	8"	3'	NA
22.5° BEND	PVC	8"	5'	NA
45° BEND	PVC	8"	10'	NA
TEE	PVC	8"x8"x8"	36'	5'
VERTICAL OFFSET SYSTEM RETURN	DI	8"	4' LOWER BENDS 21' UPPER BENDS	NA
GATE VALVE	PVC	8"	NA	NA

RESTRAINT LENGTH VALUES:

PROGRAM: **EBAA IRON SALES INC.**
SOIL TYPE: **CL**
SAFETY FACTOR: **1.5**
TRENCH TYPE: **5**
DEPTH OF BURY: **4 FT.**
TEST PRESSURE: **200 PSI**

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) 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 THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. 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.



LEGEND

PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PROPOSED SIDEWALK BY DEVELOPER
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING
		PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

CITY OF NEW BRAUNFELS NOTES

- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- UTILITY TRENCH COMPACTION ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12) LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEX-114-E, TEX-115-E, THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 10 FT FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL ENSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5' OF PIPE WITH NO JOINTS AT EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY THE DEVELOPER'S ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE JOINT RESTRAINTS WITH THE DEVELOPER'S ENGINEER.

CAUTION:

CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



VERAMENDI PRECINCT 19 UNIT 1

WATER LAYOUT (SHEET 2 OF 3)

REVISIONS
DATE DESCRIPTION
BY

NO.



LJA

LJA Engineering, Inc.
9830 Calumate Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER: SA3856.0401

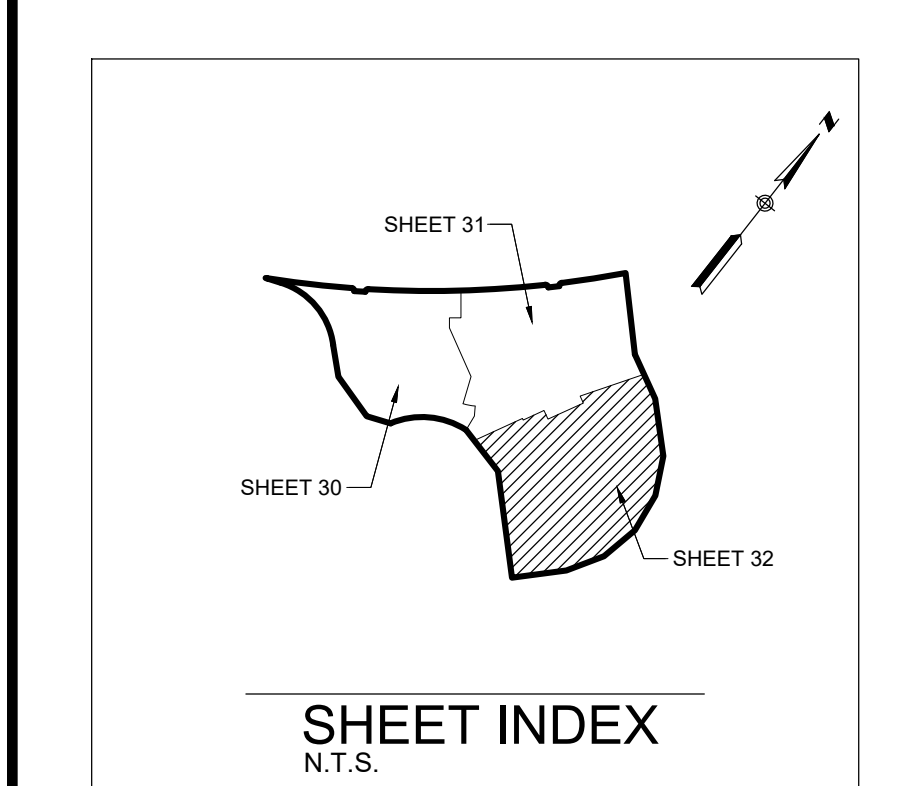
SHEET NO.

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OF 60

SHEETS

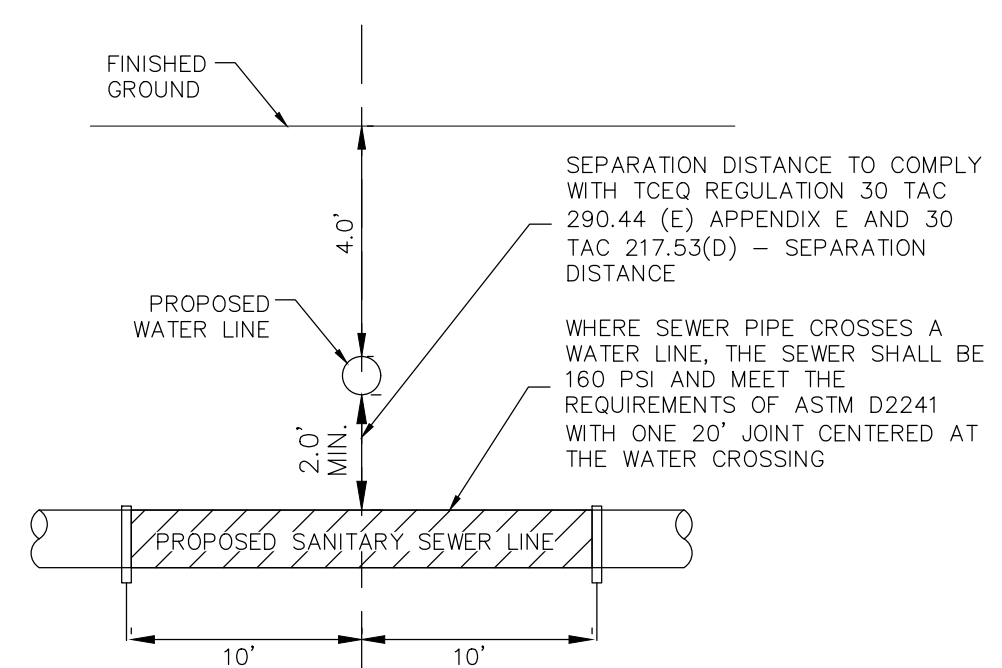
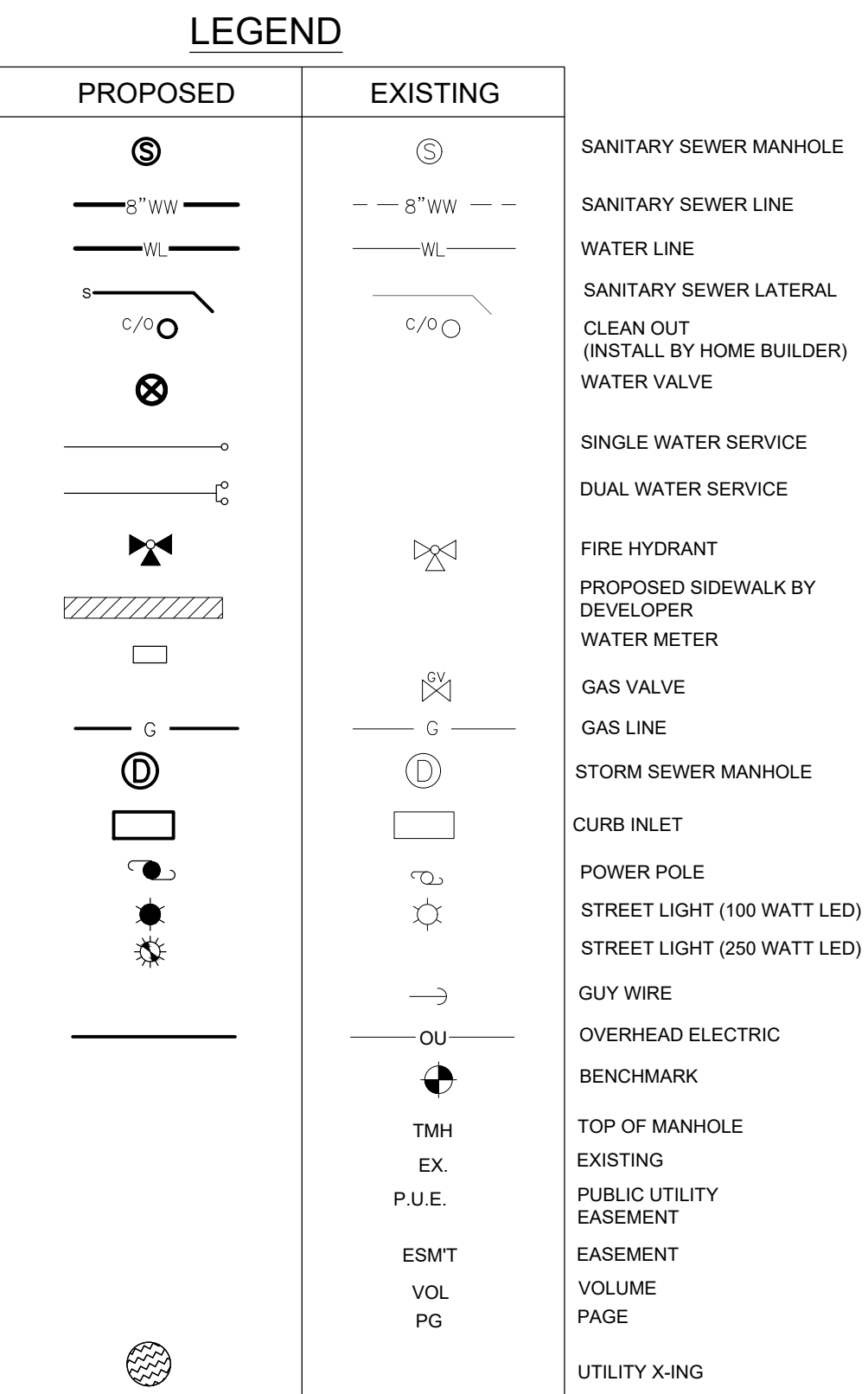
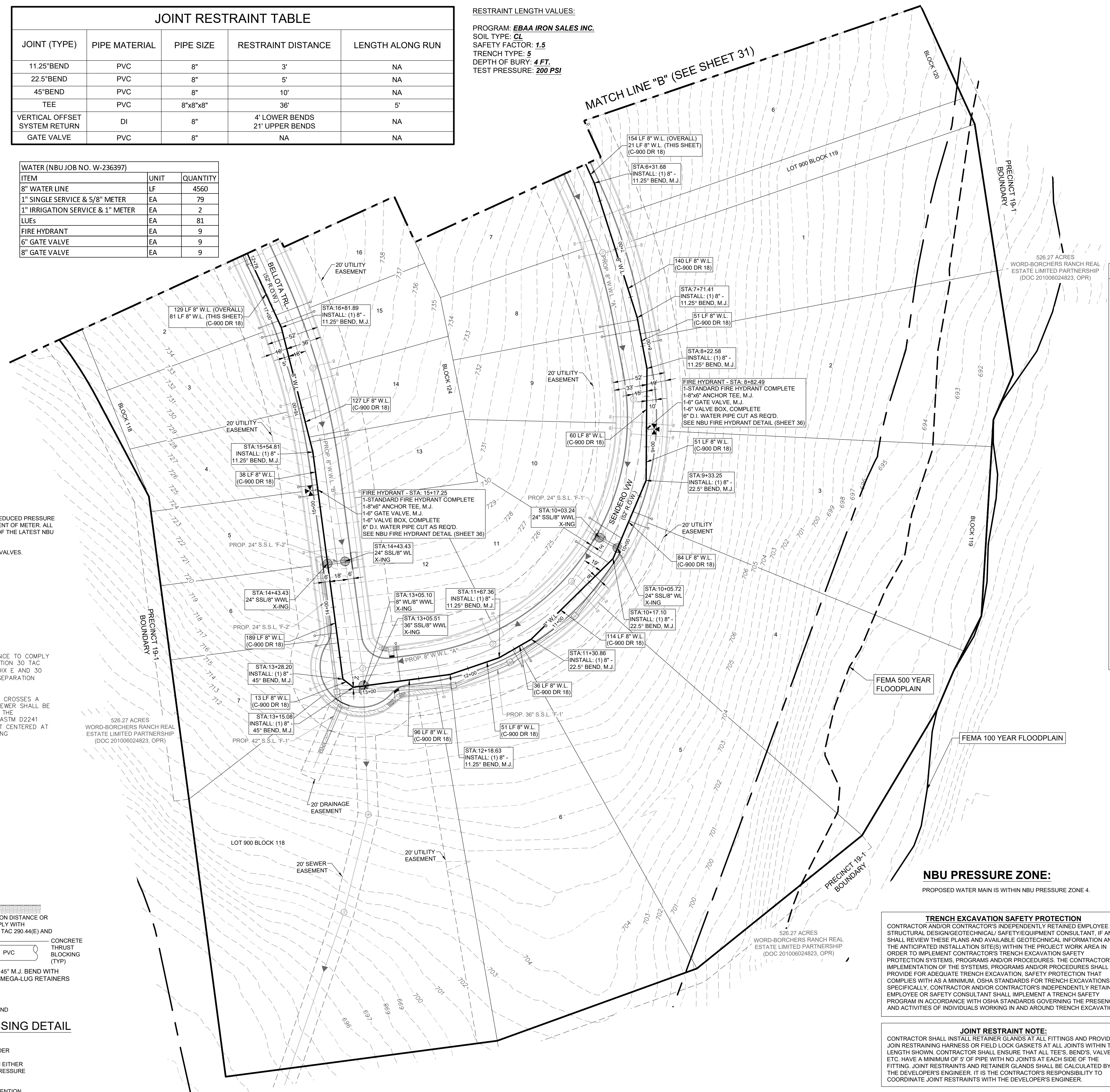
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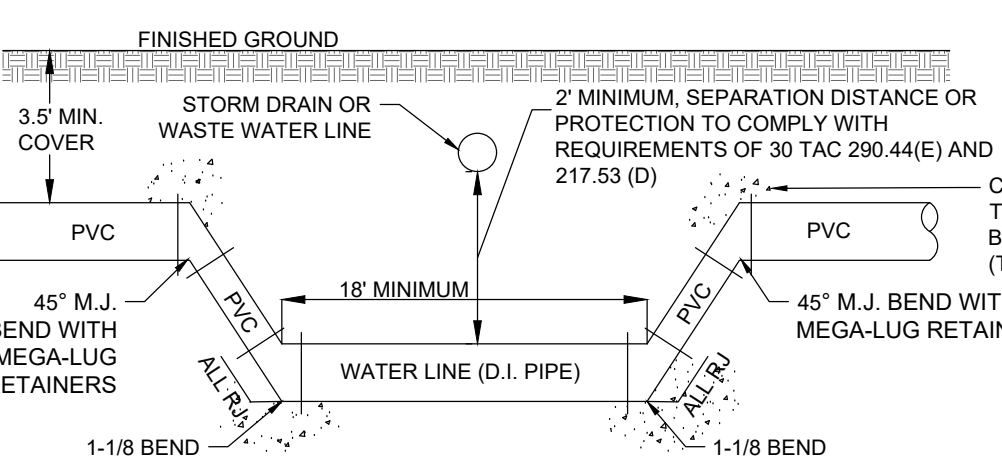
JOINT RESTRAINT TABLE				
JOINT (TYPE)	PIPE MATERIAL	PIPE SIZE	RESTRAINT DISTANCE	LENGTH ALONG RUN
11.25"BEND	PVC	8"	3'	NA
22.5"BEND	PVC	8"	5'	NA
45"BEND	PVC	8"	10'	NA
TEE	PVC	8"x8"x8"	36'	5'
VERTICAL OFFSET SYSTEM RETURN	DI	8"	4' LOWER BENDS 21' UPPER BENDS	NA
GATE VALVE	PVC	8"	NA	NA

WATER (NBU JOB NO. W-236397)		
ITEM	UNIT	QUANTITY
8" WATER LINE	LF	4560
1" SINGLE SERVICE & 5/8" METER	EA	79
1" IRRIGATION SERVICE & 1" METER	EA	2
LUES	EA	81
FIRE HYDRANT	EA	9
6" GATE VALVE	EA	9
8" GATE VALVE	EA	9

RESTRAINT LENGTH VALUES:
PROGRAM: **EBAA IRON SALES INC**
SOIL TYPE: **CL**
SAFETY FACTOR: **1.5**
TRENCH TYPE: **5**
DEPTH OF BURY: **4 FT.**
TEST PRESSURE: **200 PSI**



TYPICAL SANITARY SEWER/WATER
CROSSING DETAIL
NTS



TYPICAL WATER/ STORM DRAIN CROSSING DET

- NOTE:
1. 18" MINIMUM WATER PIPE SEGMENT TO BE CENTERED UNDER WASTEWATER LINE.
 2. WASTEWATER PIPE WITHIN NINE FEET OF WATER PIPE ON EITHER SIDE SHALL BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE RATED PIPE.
 3. STEEL CASING TO BE USED UNDER STORM DRAIN.
 4. ALL SANITARY CENTERS SHALL HAVE UPD BACKFLOW PREVENTION ASSEMBLY CALLED ENDS AND SERVICE OF BACKFLOW PREVENTER.

NBU PRESSURE ZONE:
PROPOSED WATER MAIN IS WITHIN NBU PRESSURE ZONE 4.

TRENCH EXCAVATION SAFETY PROTECTION
FOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, ARCHITECT/ENGINEER/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, NEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE INSTALLED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ACCORDANCE WITH THE OSHA STANDARDS GOVERNING THE PRESENCE OF SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR SHALL MAINTAIN THE PRESENCE OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL BE ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT SHALL BE WITH A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESENCE OF THE SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

JOINT RESTRAINT NOTE:
OR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE RAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE OWN. CONTRACTOR SHALL ENSURE THAT ALL TEES, BENDS, VALVES, A MINIMUM OF 5' OF PIPE WITH NO JOINTS AT EACH SIDE OF THE JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY THE OPER'S ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE JOINT RESTRAINTS WITH THE DEVELOPER'S ENGINEER.

CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

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NEW BRAUNFELS UTILITIES NOTES

1. R/P BACKFLOW PREVENTION ASSEMBLY TO BE INSTALLED WITH IRRIGATION METERS.

VERAMENDI PRECINCT 19 UNIT 1

WATER LAYOUT (SHEET 3 OF 3)

REVISIONS		NO.	DESCRIPTION	BY	DATE
DATE:	10/26/2024				
DESIGNED BY:	TM				
DRAWN BY:	TM				
CHECKED BY:	PF				
DRAWING NAME: <u>2024 Winter Layout.dwg</u>					

10282024



LJA
Phone 210.503.2700
LJA.COM
TBPE No. F-1386

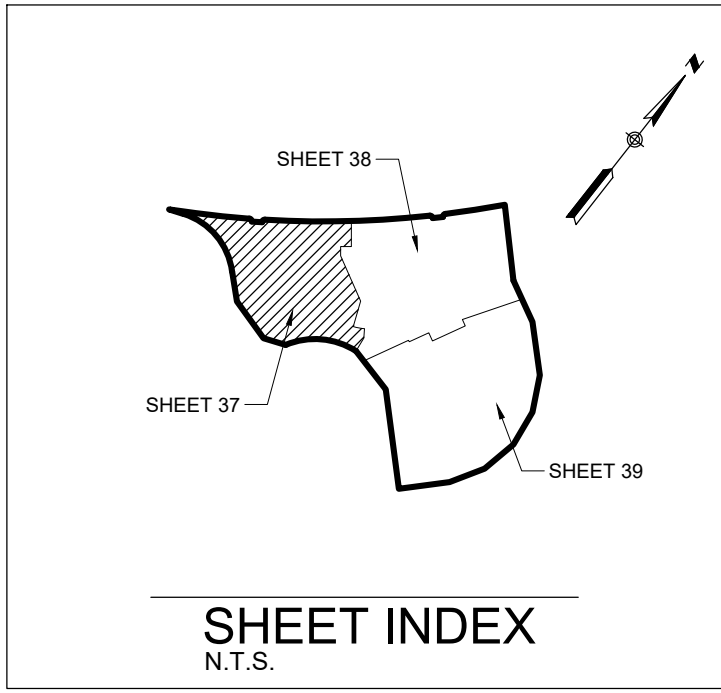
LJA Engineering, Inc.
 9830 Colonnade Blvd
 Suite 300
 San Antonio, Texas 78230

JOB NUMBER:

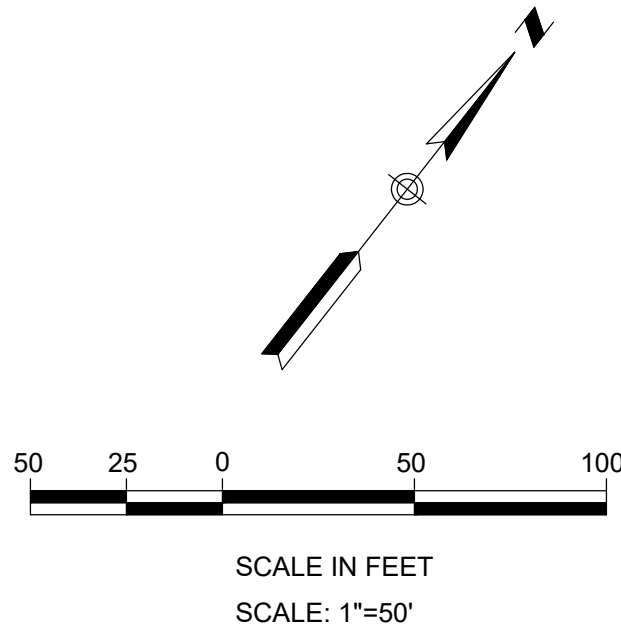
SHEET NO.

35
OF 60 SHEETS

OF 60 SHEETS



WASTEWATER (NBU JOB NO. WW-236398)		
ITEM	UNIT	QUANTITY
8" SANITARY SEWER PIPE	LF	5299
LUES	EA	78
6" WASTEWATER SERVICE	EA	78
48" MANHOLE	EA	28



LEGEND

PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PROPOSED SIDEWALK BY DEVELOPER
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING
		PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

NOTES:

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
2. MANHOLE TESTING WILL BE REQUIRED ON ALL FLEXIBLE GRAVITY WASTEWATER PIPE AS PRE TCEQ RULES.
3. ALL GRAVITY WASTEWATER LINES SHALL BE SDR-26 WWL/ASTM D3034 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER WASTEWATER LINES. 2.0"(MIN.) COVER OVER WATER PRIOR TO CONSTRUCTION.
5. ALL SERVICES SHALL TERMINATE WITH A 2-WAY CLEANOUT.
6. ALL ON-SITE UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS REQUIRED BY THE UTILITY TO BE OTHERWISE LOCATED (SECTION 25-2-1125).
7. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC § 217.53 (D) (3) (A) (I).
8. MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH CORROSION RESISTANT MATERIAL. WHERE NEW CONSTRUCTION CONNECTS TO AN EXISTING MANHOLE THAT IS NOT CONSTRUCTED OF A CORROSION RESISTANT MATERIAL, THE EXISTING MANHOLE MUST BE LINED WITH OR REPLACED WITH A CORROSION RESISTANT MATERIAL..
9. ALL PROPOSED MANHOLES SHALL BE 48" DIAMETER.
10. WASTEWATER LATERALS SHALL BE LAID WITH AT LEAST 36" OF COVER.

CAUTION:

CAUTION. CONTRACTOR TO NOTIFY TEXAS
ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

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 PROPOSED TRENCH EXCAVATION AND SHIELDING AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL BE SUBJECT TO THE PROTECTOR'S REVIEW AND APPROVAL. THE CONTRACTOR 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 THAT INCLUDES, BUT IS NOT LIMITED TO, THE IDENTIFICATION AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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Know what's below.
Call before you dig

VERAMENDI PRECINCT 19 UNIT 1

WASTEWATER LAYOUT (SHEET 1 OF 3)

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	DESIGNED BY: NG		
	DRAWN BY: TM		
	CHECKED BY: PF		
	DRAWING NAME		
	C:\Users\miller.Layout.dwg		



L'A

LJA Engineering, Inc.

9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER:

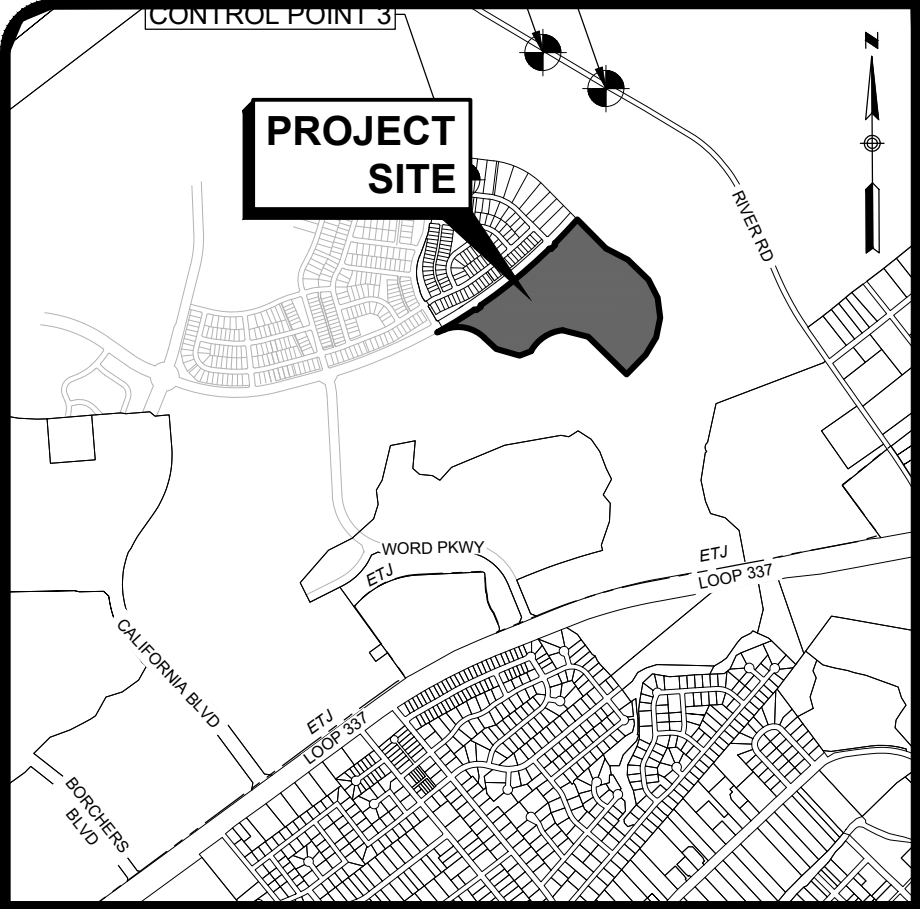
SA3856.0401

SHEET NO.

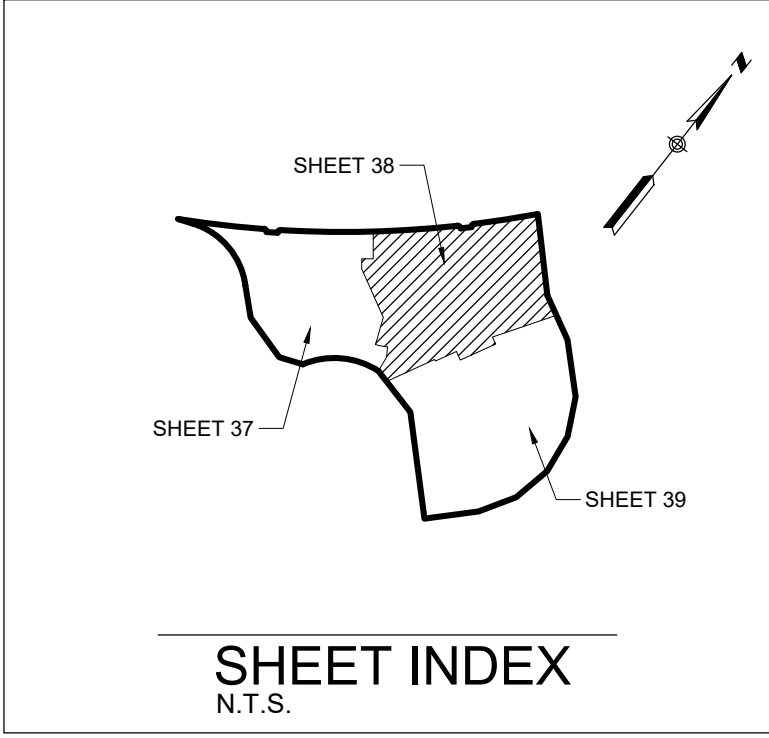
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OF 60

SHEETS

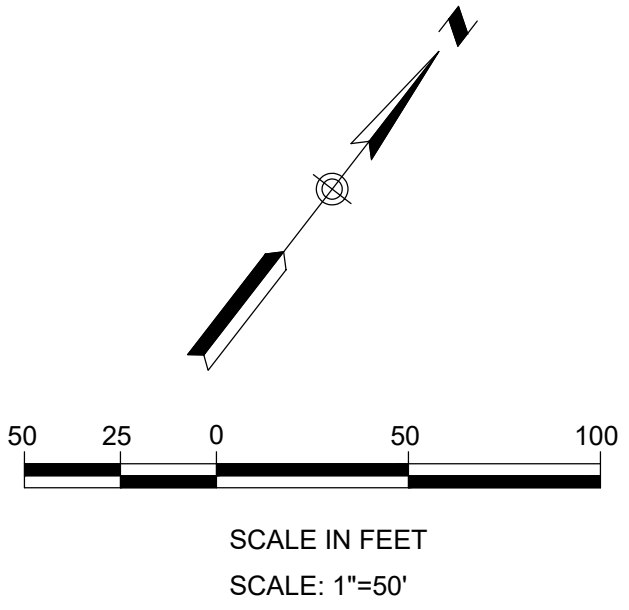


LOCATION MAP
SCALE: 1" = 2000'



HORIZONTAL AND VERTICAL CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
1	13,820,751.12	2,242,380.08	732.75'	SET 5/8" IRON ROD W/ ALUMINUM CAP STAMPED "LJA SURVEYING"
2	13,820,380.93	2,243,004.12	738.93'	SET 5/8" IRON ROD W/ ALUMINUM CAP STAMPED "LJA SURVEYING"
3	13,819,426.13	2,241,536.34	723.80'	SET 5/8" IRON ROD W/ ALUMINUM CAP STAMPED "LJA SURVEYING"

WASTEWATER (NBU JOB NO. WW-236398)		
ITEM	UNIT	QUANTITY
8" SANITARY SEWER PIPE	LF	5299
LUES	EA	78
6" WASTEWATER SERVICE	EA	78
48" MANHOLE	EA	28



NOTES:

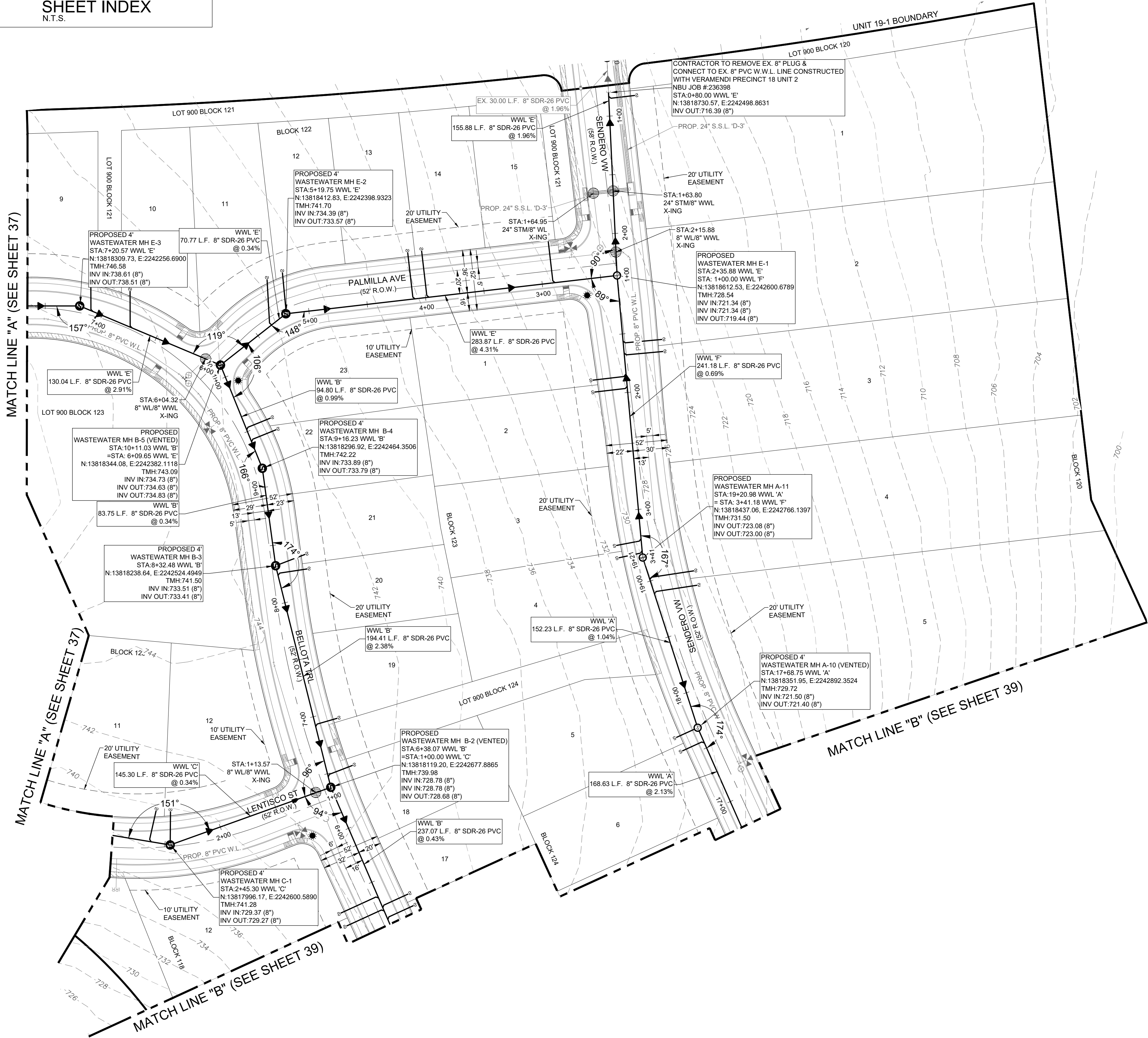
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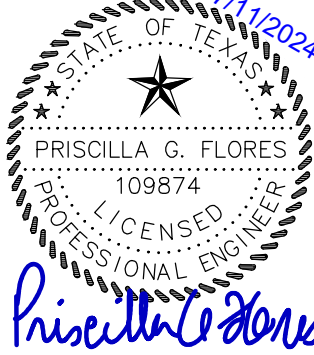
LEGEND

PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		PROPOSED SIDEWALK BY DEVELOPER
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING
		PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

VERAMENDI PRECINCT 19 UNIT 1

WASTEWATER LAYOUT (SHEET 2 OF 3)

NO.	REVISIONS	DESCRIPTION	DATE
1	DESIGNED BY: NG		7/18/2024
2	DRAWN BY: TM		
3	CHECKED BY: PF		
4	DRAWING NAME: at Wastewater Layout.dwg		



LJA

LJA Engineering, Inc.
9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER: SA3856.0401

SHEET NO.

38

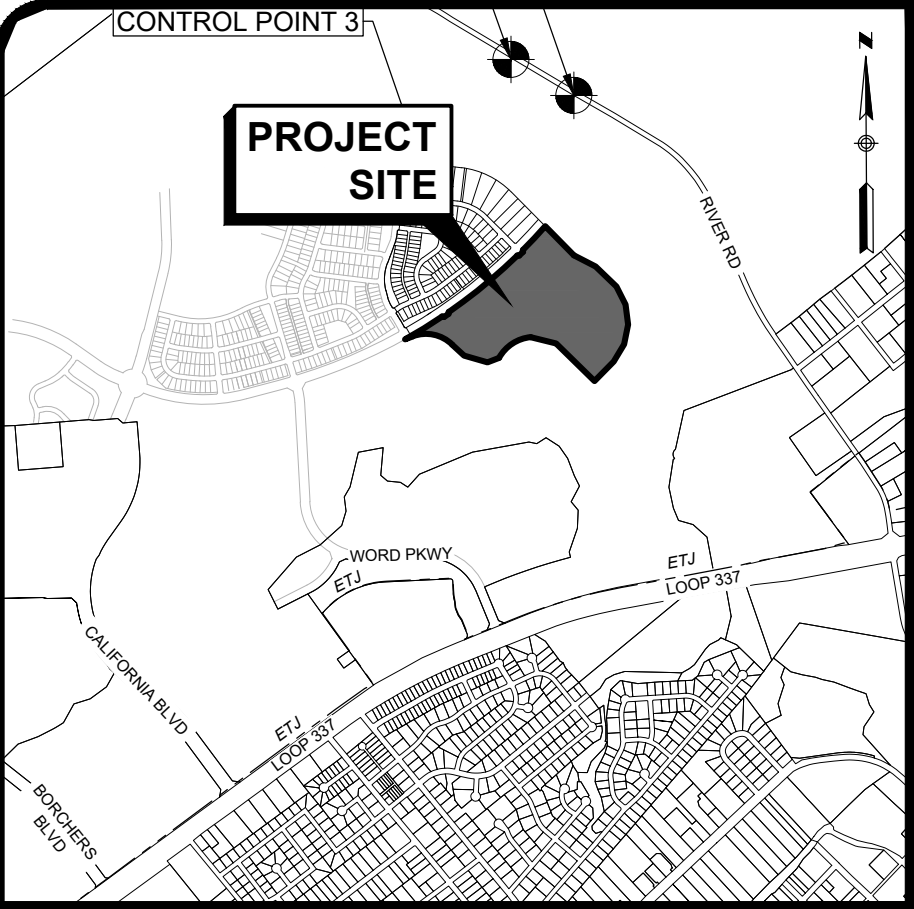
OF 60

SHEETS

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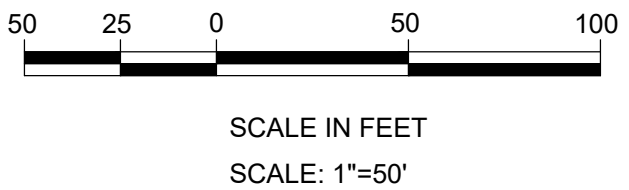
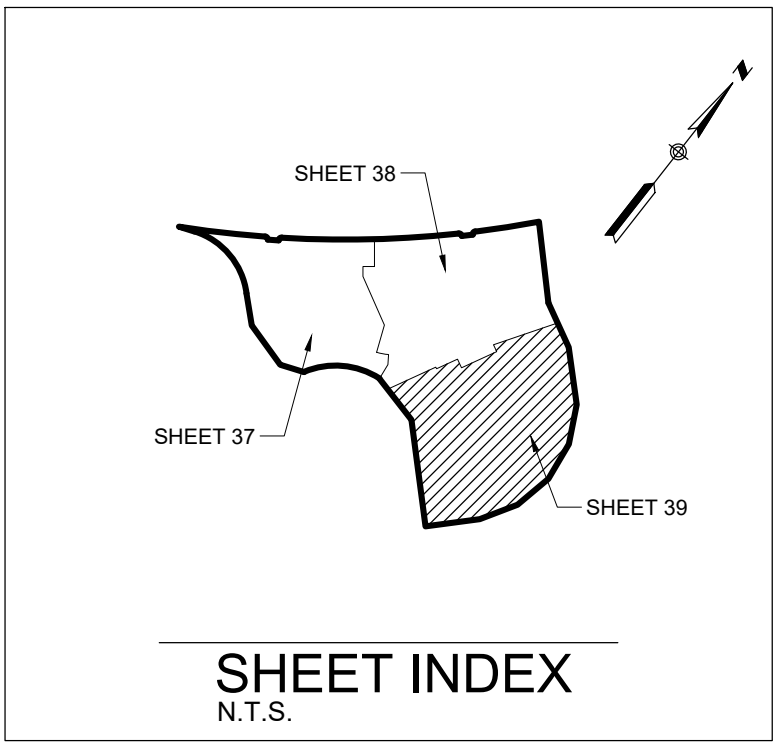


FOR PERMIT



LOCATION MAP
SCALE: 1" = 200'

HORIZONTAL AND VERTICAL CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
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MATCH LINE "C" (SEE THIS SHEET)

MATCH LINE "C" (SEE THIS SHEET)

LEGEND

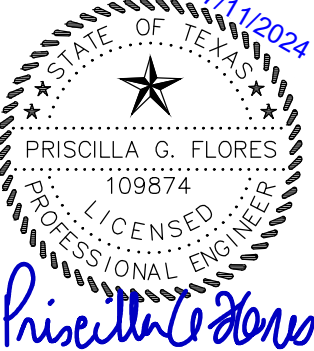
PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT (INSTALL BY HOME BUILDER)
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		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
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		PUBLIC UTILITY
		EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

WASTEWATER (NBU JOB NO. WW-236398)		
ITEM	UNIT	QUANTITY
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LUES	EA	78
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48" MANHOLE	EA	28

VERAMENDI PRECINCT 19 UNIT 1

WASTEWATER LAYOUT (SHEET 3 OF 3)

DATE	BY	REVISIONS
NO.	DESCRIPTION	
7/8/2024	DESIGNED BY: NG	
	DRAWN BY: TM	
	CHECKED BY: PF	
	DRAWING NAME: Wastewater Layout.dwg	



LJA Engineering, Inc.
9830 Calomarde Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER: SA3856.0401

SHEET NO.

39

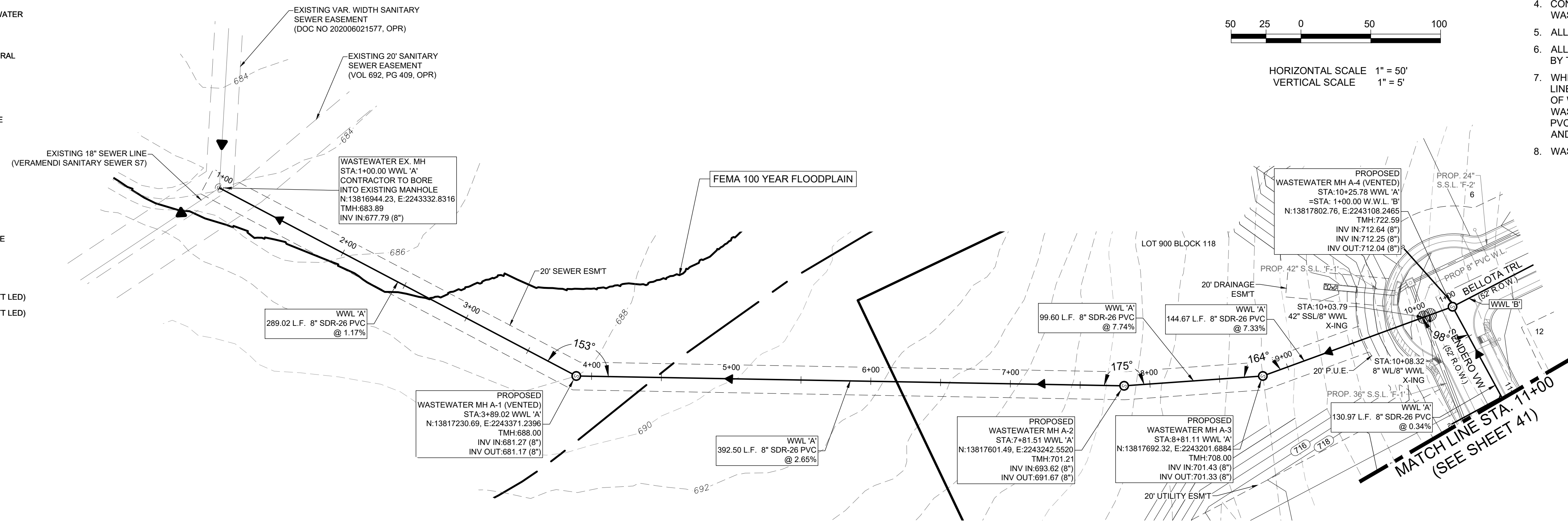
OF 60 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



FOR PERMIT

PROPOSED	EXISTING
	TMH EX. P.U.E.
	ESM'T. VOL PG



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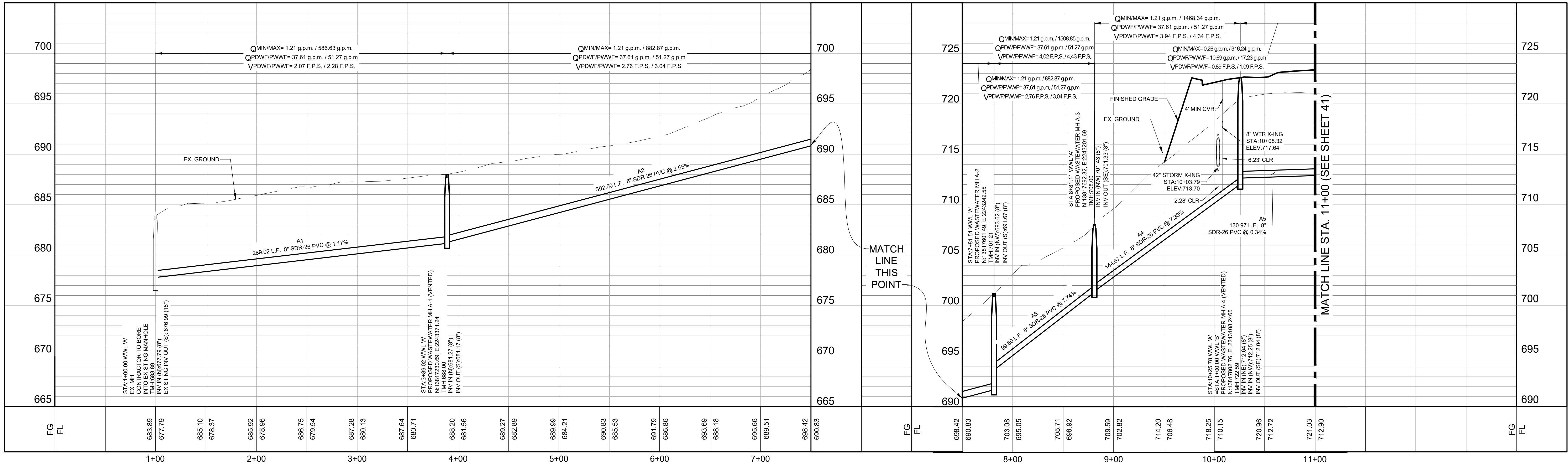


WASTEWATER LINE 'A' STA. 1+00 TO STA. 11+00

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRENCH EXCAVATION 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. THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE OR 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 PROTECTION SYSTEM, PROGRAM AND/OR PROCEDURE THAT PROVIDES PREVENTENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION:

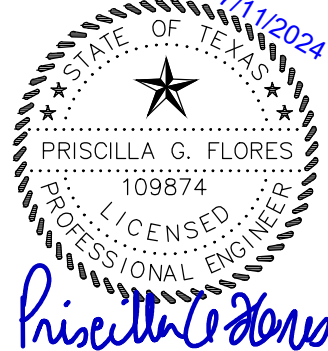
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FOR PERMIT

VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER LINE 'A' PLAN & PROFILE
STA. 1+00 TO STA. 11+00

DATE:		7/11/2024		REVISIONS	
DESIGNED BY:		NG		DESCRIPTION	
DRAWN BY:		TM		BY	
CHECKED BY:		PF			
DRAWING NAME:		SIL VIAL X1 P&P.dwg			



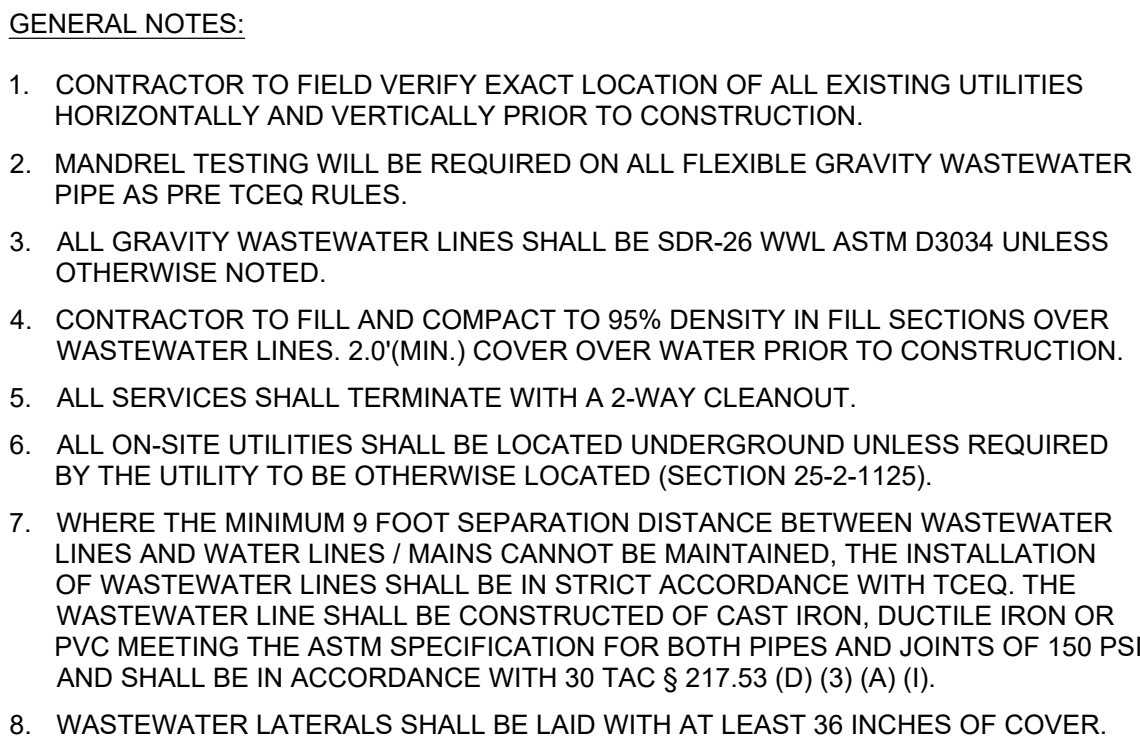
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Suite 300
San Antonio, Texas 78220
Phone 210.503.2700
LJA.COM
Tape No. E-1386

JOB NUMBER:
SA3856.0401

SHEET NO.

40
OF 60 SHE

PROPOSED	EXISTING



CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, MAINTENANCE, INSPECTION 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. THE CONTRACTOR'S EMPLOYEES SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE TRENCHES. THE CONTRACTOR SHALL PROVIDE OR 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 PROTECTION PROGRAM THAT SHALL BE IN ACCORDANCE WITH THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION:

CONTRACTOR TO NOTIFY TEXAS
ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION
FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY
HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES
PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED
IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED
DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR
INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO
RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR

[illegible]

VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER LINE 'A' PLAN & PROFILE
STA. 11+00 TO END

DATE:	7/11/2024
DESIGNED BY:	NG
DRAWN BY:	TM
CHECKED BY:	PF
DRAWING NAME:	sa_WW1_A P&P.dwg



LJA Engineering, Inc.
9830 Colomade Blvd
Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.COM
TBE No. F-1386

JOB NUMBER:

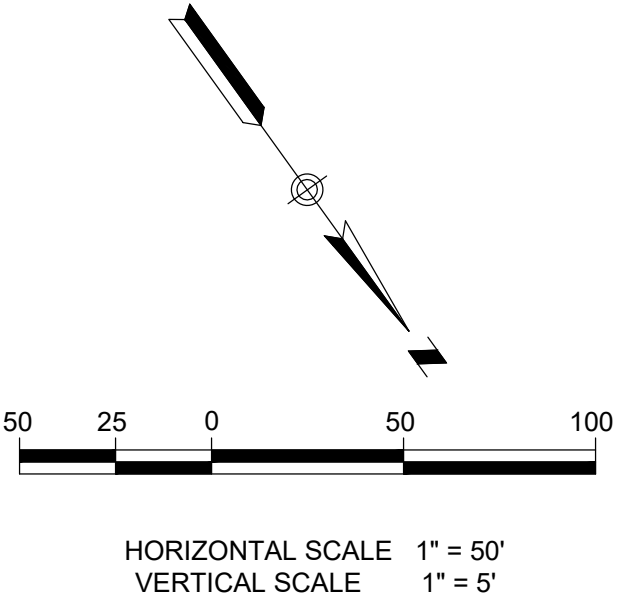
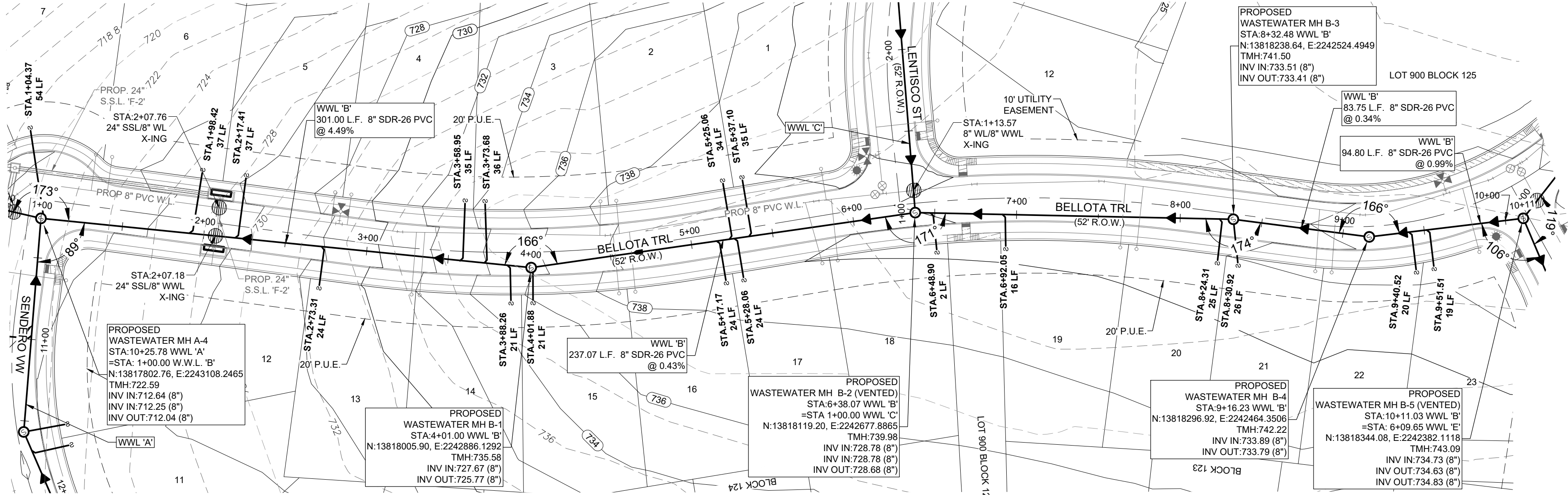
SHEET NO

41
OF 60 SHEETS

K:\3856 ACA Properties\3856 Veramendi Precinct 19 Unit 1\425 Site Development\Plan\WWS\WWS_B' 7807.dwg
User: Mofid, Jul 08, 24 - 15:01
Plot Date: 2024-07-24 11:05:17

LEGEND	
PROPOSED	EXISTING

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

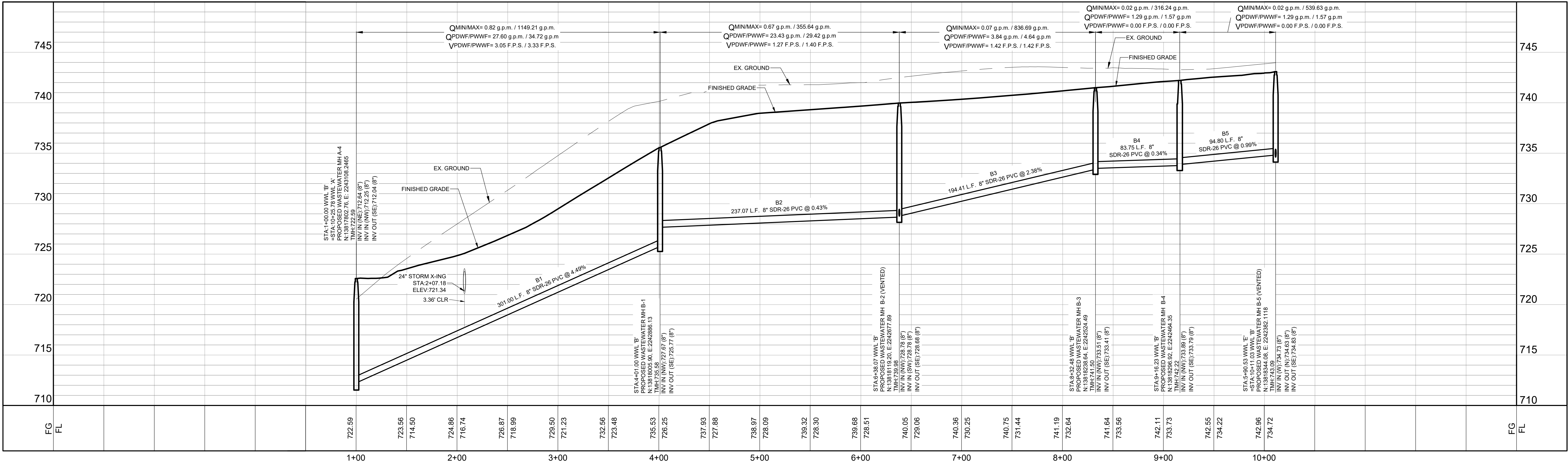


WASTEWATER LINE 'B' STA. 1+00 TO END

TRENCH EXCAVATION SAFETY PROTECTION

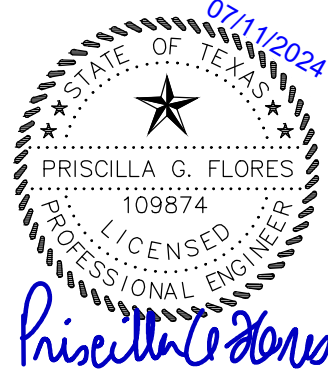
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. 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: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.



VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER LINE 'B' PLAN & PROFILE
STA. 1+00 TO END

REVISIONS		DATE	BY	DESCRIPTION
NO.	DESCRIPTION	DATE	BY	DESCRIPTION
1	7/11/2024	NG	DESIGNED BY	
2	7/11/2024	TM	DRAWN BY	
3	7/11/2024	PF	CHECKED BY	
4	7/11/2024	sh	DRAWING NAME	sh: WWS_B' P&P.dwg



LJA
Phone 210.503.2700
LJA.COM

LJA Engineering, Inc.
9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER:
SA3856.0401

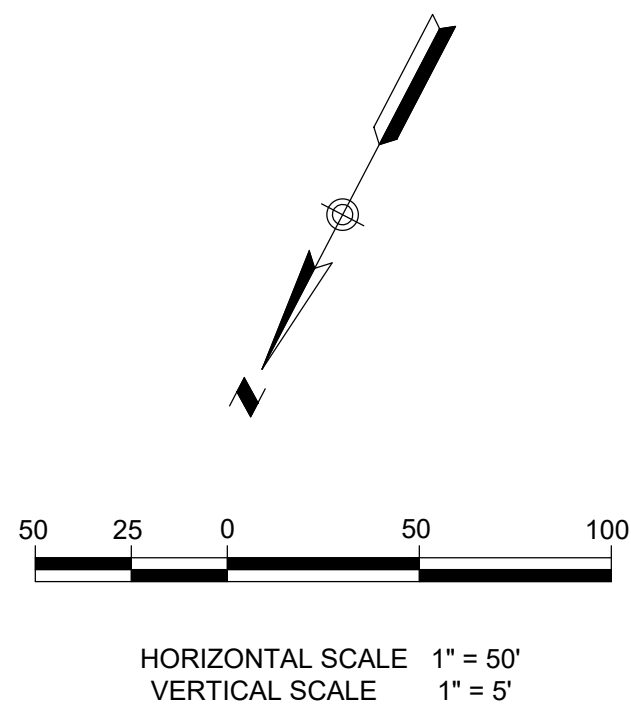
SHEET NO.

42

OF 60 SHEETS

FOR PERMIT

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
2. MANDEREL TESTING WILL BE REQUIRED ON ALL FLEXIBLE GRAVITY WASTEWATER PIPE AS PRE TCEQ RULES.
3. ALL GRAVITY WASTEWATER LINES SHALL BE SDR-26 WWL ASTM D3034 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER WASTEWATER LINES. 2.0"(MIN.) COVER OVER WATER PRIOR TO CONSTRUCTION.
5. ALL SERVICES SHALL TERMINATE WITH A 2-WAY CLEANOUT.
6. ALL ON-SITE UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS REQUIRED BY THE UTILITY TO BE OTHERWISE LOCATED (SECTION 25-2-1125).
7. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PS AND SHALL BE IN ACCORDANCE WITH 30 TAC § 217.53 (D) (3) (a) (i).
8. WASTEWATER LATERALS SHALL BE LAID WITH AT LEAST 36 INCHES OF COVER.



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 GEOLOGICAL INFORMATION, AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IDENTIFY AND EVALUATE ALL POTENTIAL HAZARDS TO THE TRENCH PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL DEVELOP AND IMPLEMENT A TRENCH EXCAVATION SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

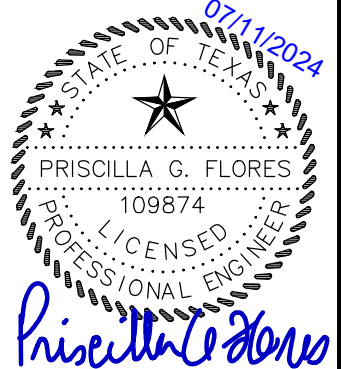
CAUTION: CONTRACTOR TO NOTIFY TEXAS
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RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

811
 w what's below.
 Call before you dig.

[illegible]

VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER LINE 'C' PLAN & PROFILE
STA. 1+00 TO STA. 6+00

DATE:		7/11/2024		REVISED	
				DESCRIPTION	
DESIGNED BY:	NG			BY	DATE
DRAWN BY:	TM				
CHECKED BY:	PF				
DRAWING NAME:					
en_WWL C PAP.dwg					



LJA Engineering, Inc.
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San Antonio, Texas 78230
Phone 210.503.2700
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TBE No. F-1386

JOB NUMBER:

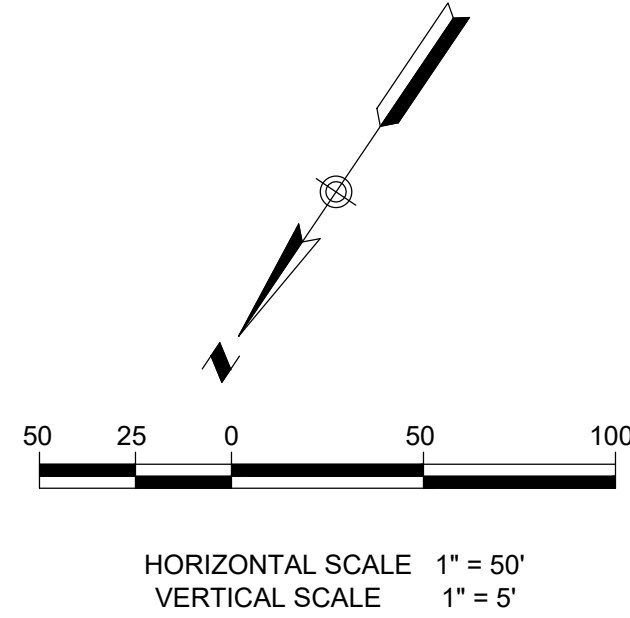
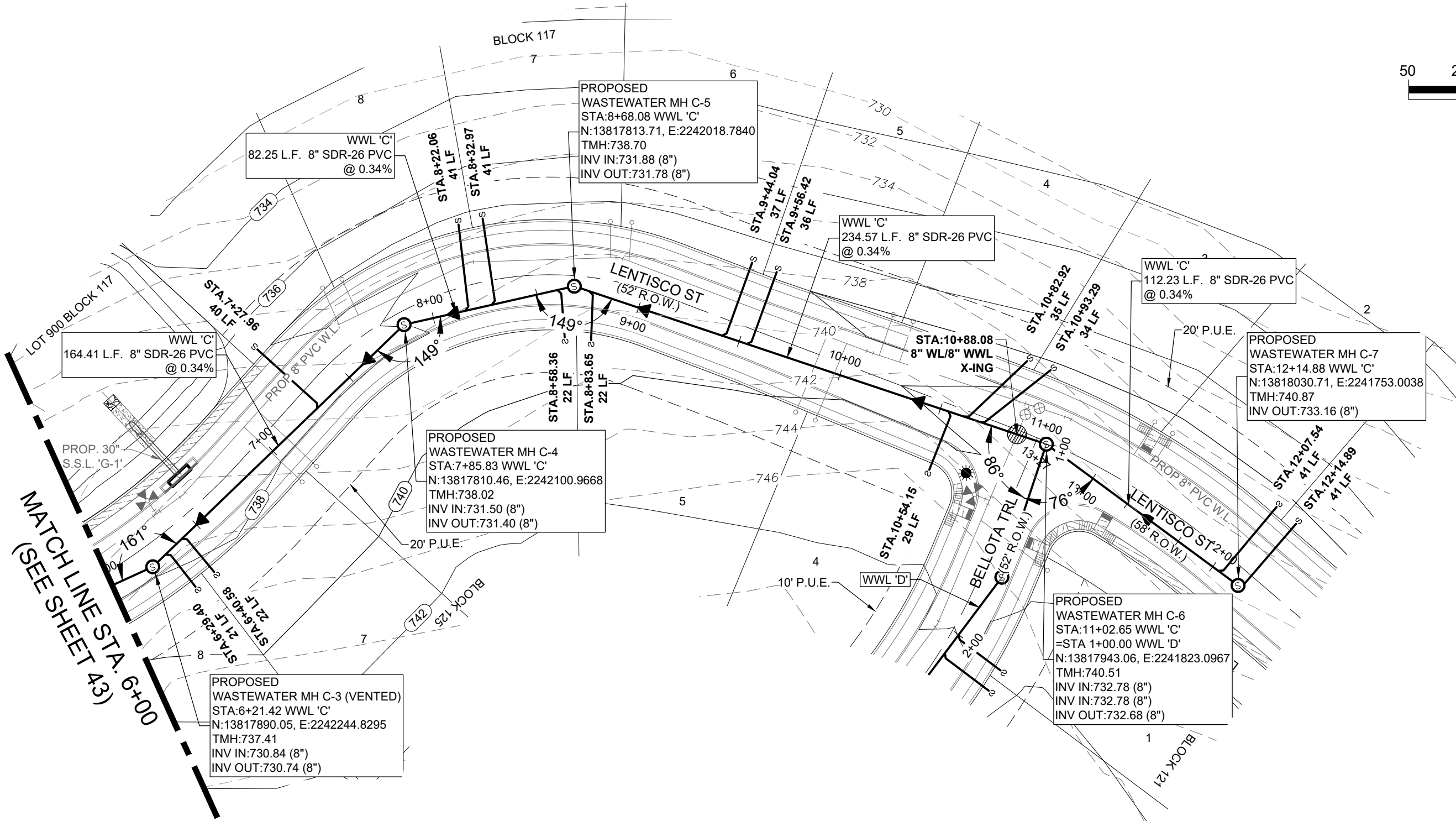
SHEET NO



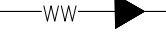
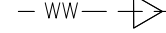

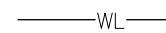
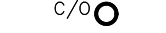
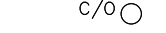







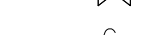




















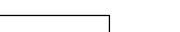



















43

OF 60 SHEETS

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
2. MANDREL TESTING WILL BE REQUIRED ON ALL FLEXIBLE GRAVITY WASTEWATER PIPE AS PRE TCEQ RULES.
3. ALL GRAVITY WASTEWATER LINES SHALL BE SDR-26 WWL ASTM D3034 UNLESS OTHERWISE NOTED.
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8. WASTEWATER LATERALS SHALL BE LAID WITH AT LEAST 36 INCHES OF COVER.



LEGEND		
PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		4" CONDUIT FOR WATER SERVICE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING
		PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



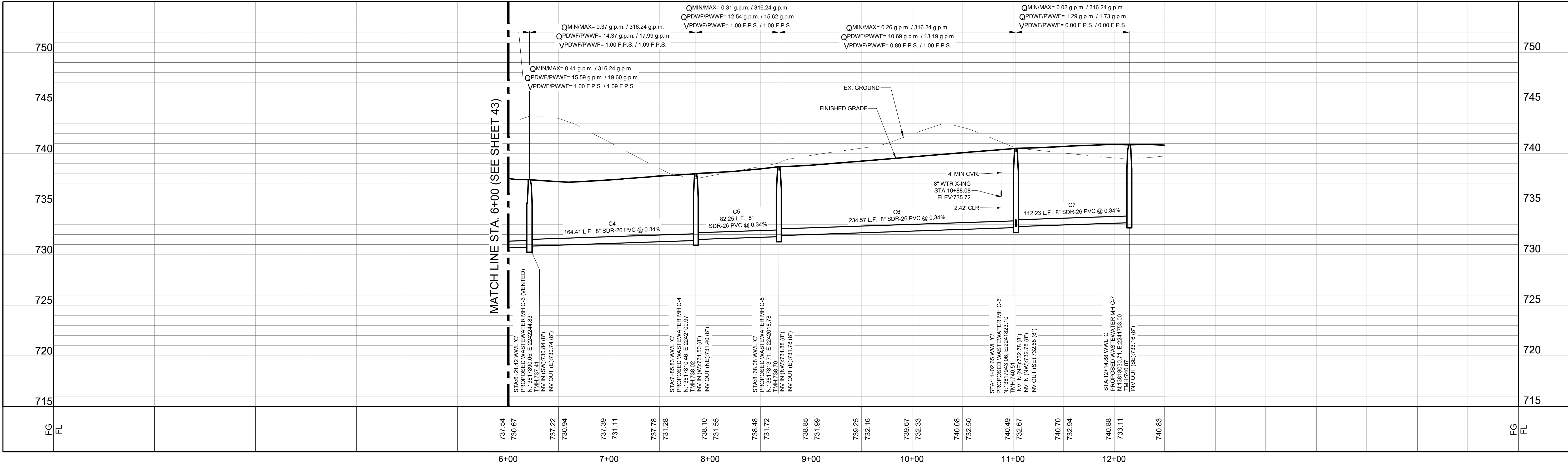
Know what's below.
Call before you dig.

WASTEWATER LINE 'C' STA. 6+00 TO END

TRENCH EXCAVATION SAFETY PROTECTION

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CAUTION: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.



VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER LINE 'C' PLAN & PROFILE
STA. 6+00 TO END

REVISIONS		DATE	BY	DESCRIPTION
NO.	DESCRIPTION	DATE	BY	DESCRIPTION
1		7/11/2024	NG	
2			TM	
3			PF	
4				



LJA
Phone 210.503.2700
LJA.COM
TBPE No. F-1306

LJA Engineering, Inc.
9830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER:
SA3856.0401

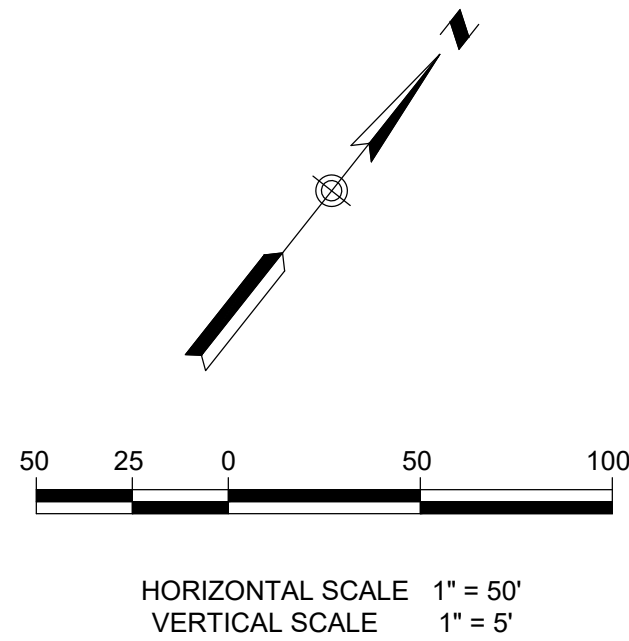
SHEET NO.

44

OF 60 SHEETS

FOR PERMIT

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
2. MANHOLE TESTING WILL BE REQUIRED ON ALL FLEXIBLE GRAVITY WASTEWATER PIPE AS PRE TCEQ RULES.
3. ALL GRAVITY WASTEWATER LINES SHALL BE SDR-26 WWL ASTM D3034 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER WASTEWATER LINES. 2.0"(MIN.) COVER OVER WATER PRIOR TO CONSTRUCTION.
5. ALL SERVICES SHALL TERMINATE WITH A 2-WAY CLEANOUT.
6. ALL ON-SITE UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS REQUIRED BY THE UTILITY TO BE OTHERWISE LOCATED (SECTION 25-2.1125).
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LEGEND		
PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		4" CONDUIT FOR WATER SERVICE
		WATER LINE
		SANITARY SEWER LATERAL CLEAN OUT
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING
		PUBLIC UTILITY EASEMENT
		EASEMENT
		VOLUME
		PAGE
		UTILITY X-ING

VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER LINE 'D' PLAN & PROFILE
STA. 1+00 TO END

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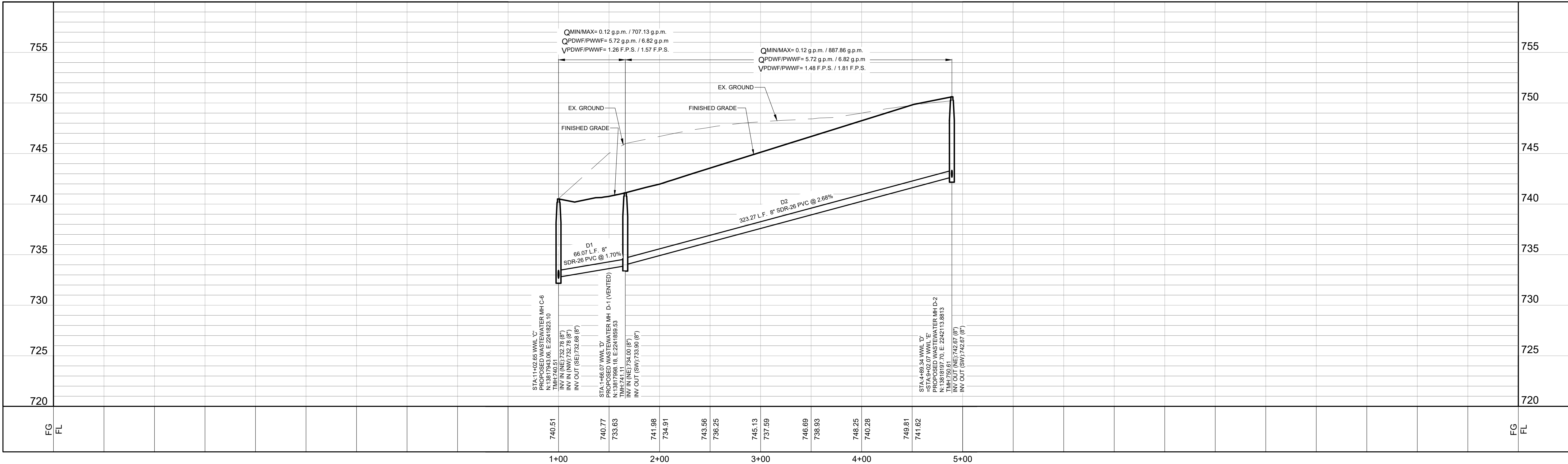
Know what's **below**.
Call before you dig.

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CAUTION:

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WASTEWATER LINE 'D' STA. 1+00 TO END



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San Antonio, Texas 78230

LJA

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LJA.COM
TBPE No. F-1386

JOB NUMBER:
SA3856.0401

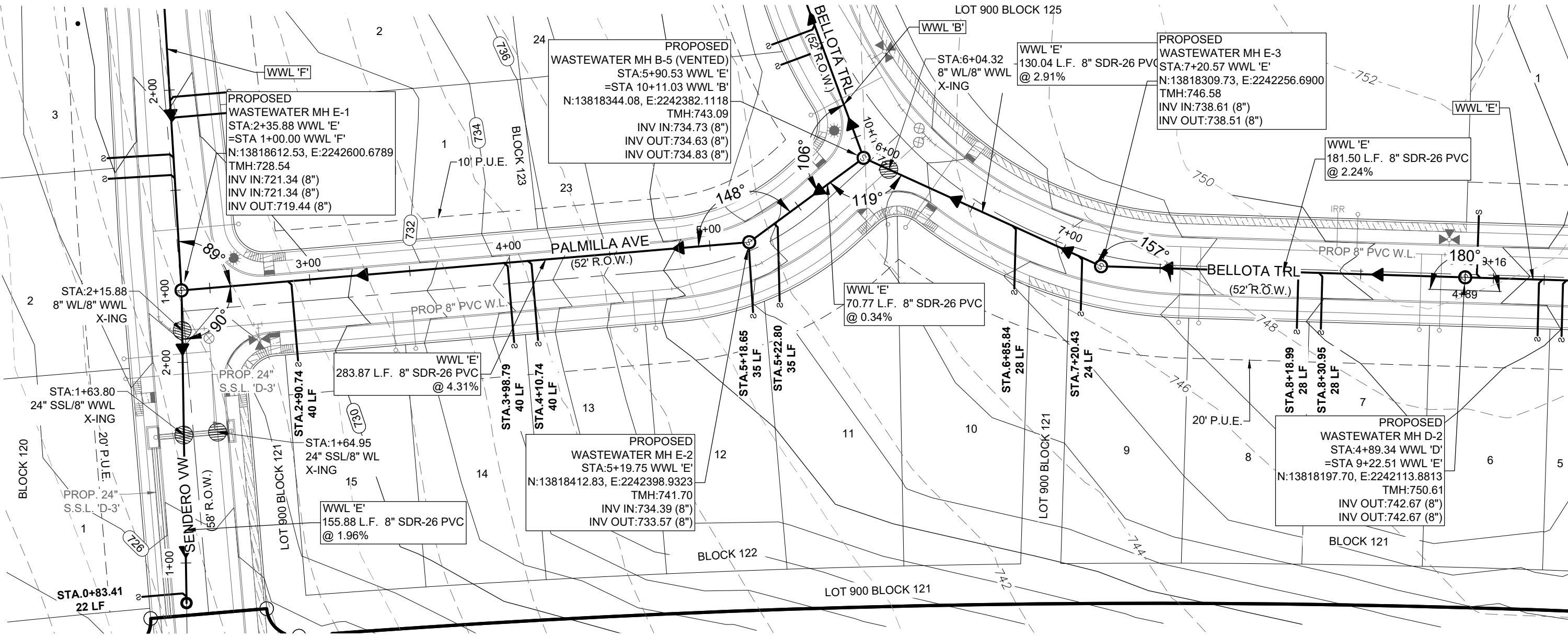
SHEET NO

45

OF 60 SHEETS

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
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LEGEND		
PROPOSED	EXISTING	
		SANITARY SEWER MANHOLE
		SANITARY SEWER LINE
		4" CONDUIT FOR WATER SERVICE
		WATER LINE
		SANITARY SEWER LATERAL
		CLEAN OUT
		WATER VALVE
		SINGLE WATER SERVICE
		DUAL WATER SERVICE
		FIRE HYDRANT
		WATER METER
		GAS VALVE
		GAS LINE
		STORM SEWER MANHOLE
		CURB INLET
		POWER POLE
		STREET LIGHT (100 WATT LED)
		STREET LIGHT (250 WATT LED)
		GUY WIRE
		OVERHEAD ELECTRIC
		BENCHMARK
		TOP OF MANHOLE
		EXISTING PUBLIC UTILITY
		EASEMENT
		VOLUME
		UTILITY X-ING

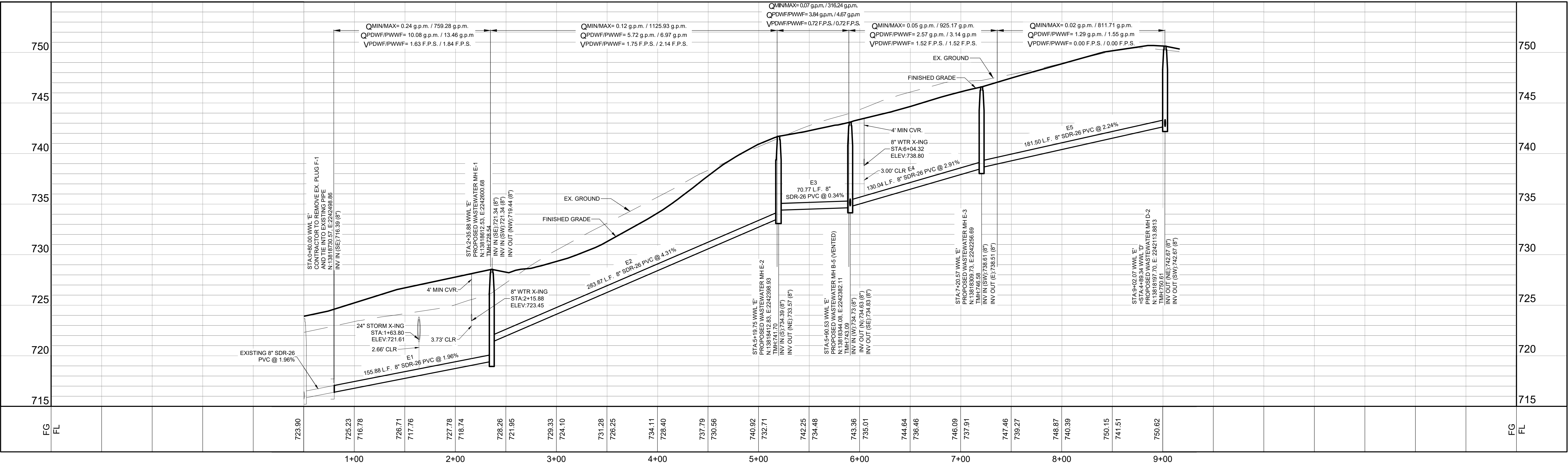
LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



WASTEWATER LINE 'E' STA. 1+00 TO END

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 SITE(S) 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 THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. 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: CONTRACTOR TO NOTIFY TEXAS ONE CALL AT 1-800-245-4545 48 HOURS PRIOR TO CONSTRUCTION FOR UTILITY LINE LOCATE. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.



VERAMENDI PRECINCT 19 UNIT 1

WASTEWATER LINE 'E' PLAN & PROFILE

STA. 1+00 TO END

REVISIONS	DATE	DESCRIPTION
NO.	DATE	DESCRIPTION
1	7/11/2024	DESIGNED BY: NG
2	7/11/2024	DRAWN BY: TM
3	7/11/2024	CHECKED BY: PF
4	7/11/2024	DRAWING NAME: ch. WWL 'E' P&P.dwg

STATE OF TEXAS

PRISCILLA G. FLORES

109874

PROFESSIONAL ENGINEER

LJA Engineering, Inc.

9830 Colonnade Blvd

Suite 300

San Antonio, Texas 78230

JOB NUMBER:

SA3856.0401

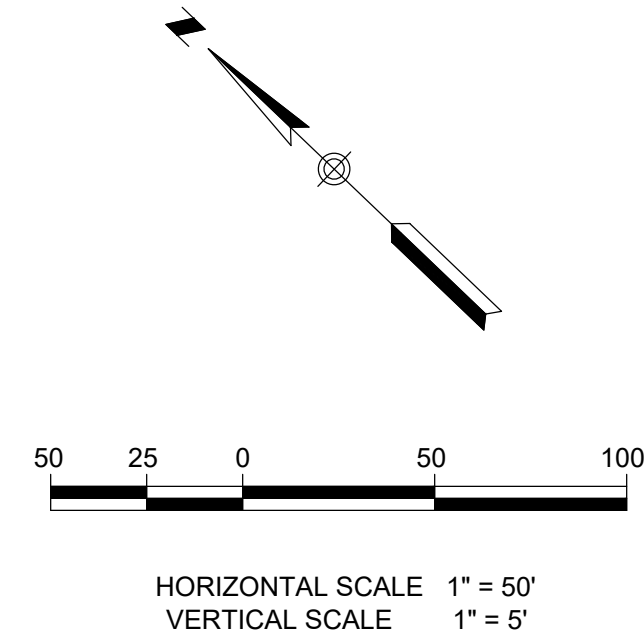
SHEET NO.

46

OF 60

SHEETS

1. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
2. MANHOLE TESTING WILL BE REQUIRED ON ALL FLEXIBLE GRAVITY WASTEWATER PIPE AS PRE TCEQ RULES.
3. ALL GRAVITY WASTEWATER LINES SHALL BE SDR-26 WWL ASTM D3034 UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER WASTEWATER LINES. 2.0(MIN.) COVER OVER WATER PRIOR TO CONSTRUCTION.
5. ALL SERVICES SHALL TERMINATE WITH A 2-WAY CLEANOUT.
6. ALL ON-SITE UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS REQUIRED BY THE UTILITY TO BE OTHERWISE LOCATED (SECTION 25-2-1125).
7. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PS AND SHALL BE IN ACCORDANCE WITH 30 TAC § 217.53 (D) (3) AND (J).
8. WASTEWATER LATERALS SHALL BE LAID WITH AT LEAST 36 INCHES OF COVER.



TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTORS' INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTI-COLLAPSE INSTABILITY STATE(S) WITHIN THE PROJECT WORK AREA PRIOR TO IMPLEMENTING CONTRACTOR TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. THE CONTRACTOR AND/OR CONTRACTORS' INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY/EQUIPMENT CONSULTANT SHALL IMPLEMENT THE TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

[illegible]

JJA Engineering, Inc.

9630 Colomate Blvd
 Suite 300
 San Antonio, Texas 78230

Phone 210.503.2700
 JJA.COM
 TBP# No. F-1586

VERAMENDI PRECINCT 19 UNIT 1

WASTEWATER LINE 'F' PLAN & PROFILE

STA. 1+00 TO END

REVISIONS		DATE	BY	DATE
	DESCRIPTION	7/11/2024		


DATE: 7/11/2024

DESIGNED BY: NG

DRAWN BY: TM

CHECKED BY: PF

DRAWING NAME: sh_WWL 'F' P&P.dwg



Priscilla G. Flores

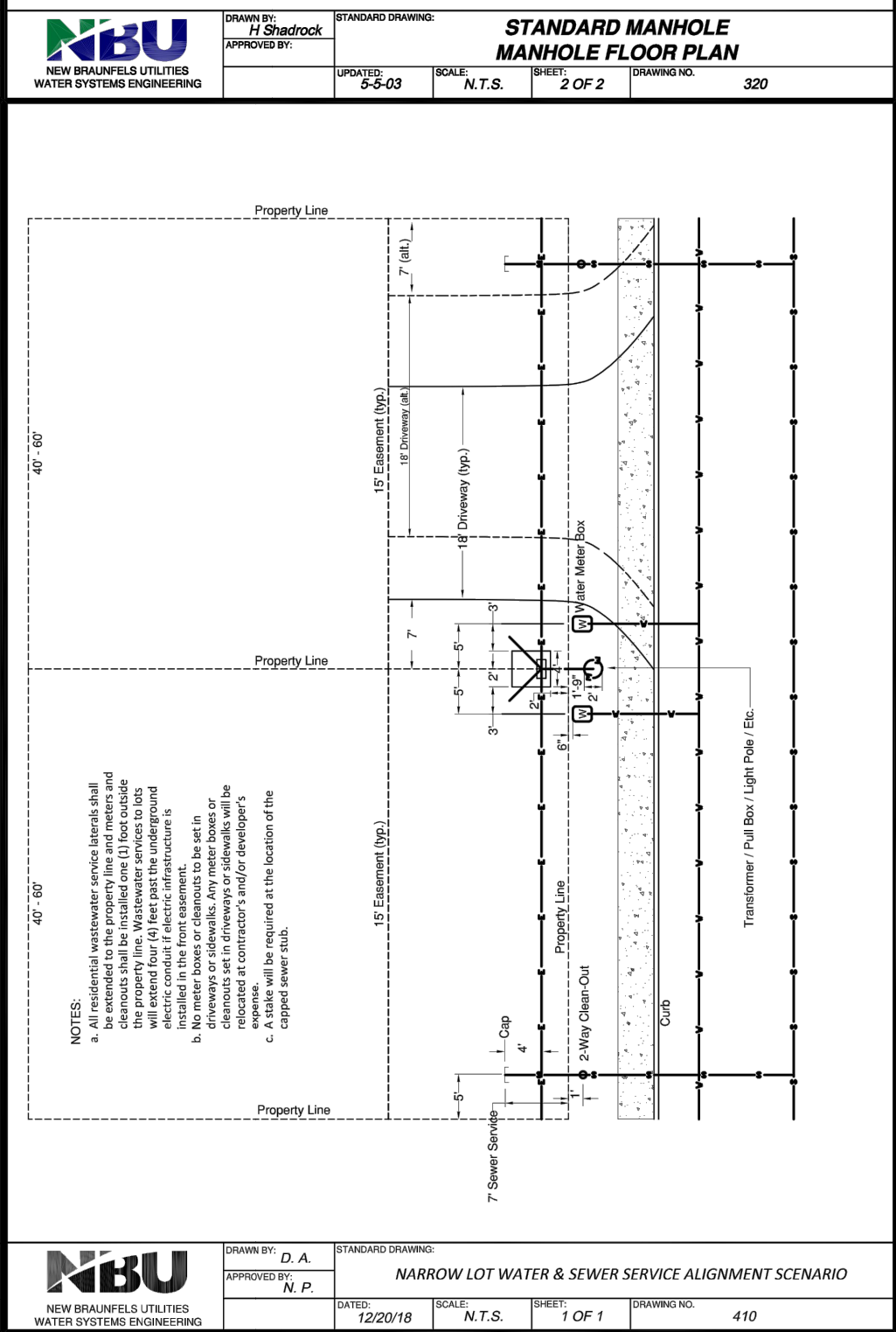
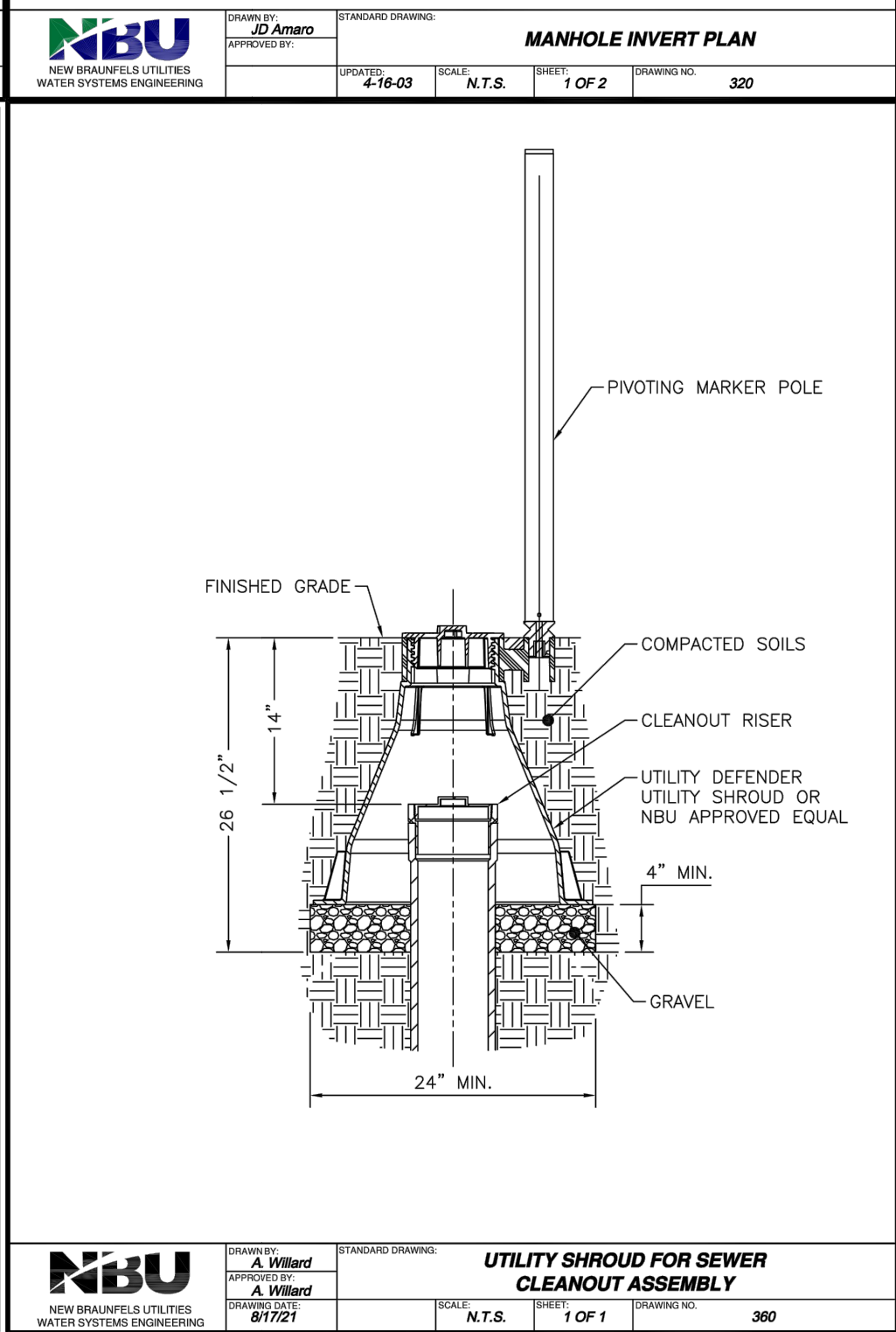
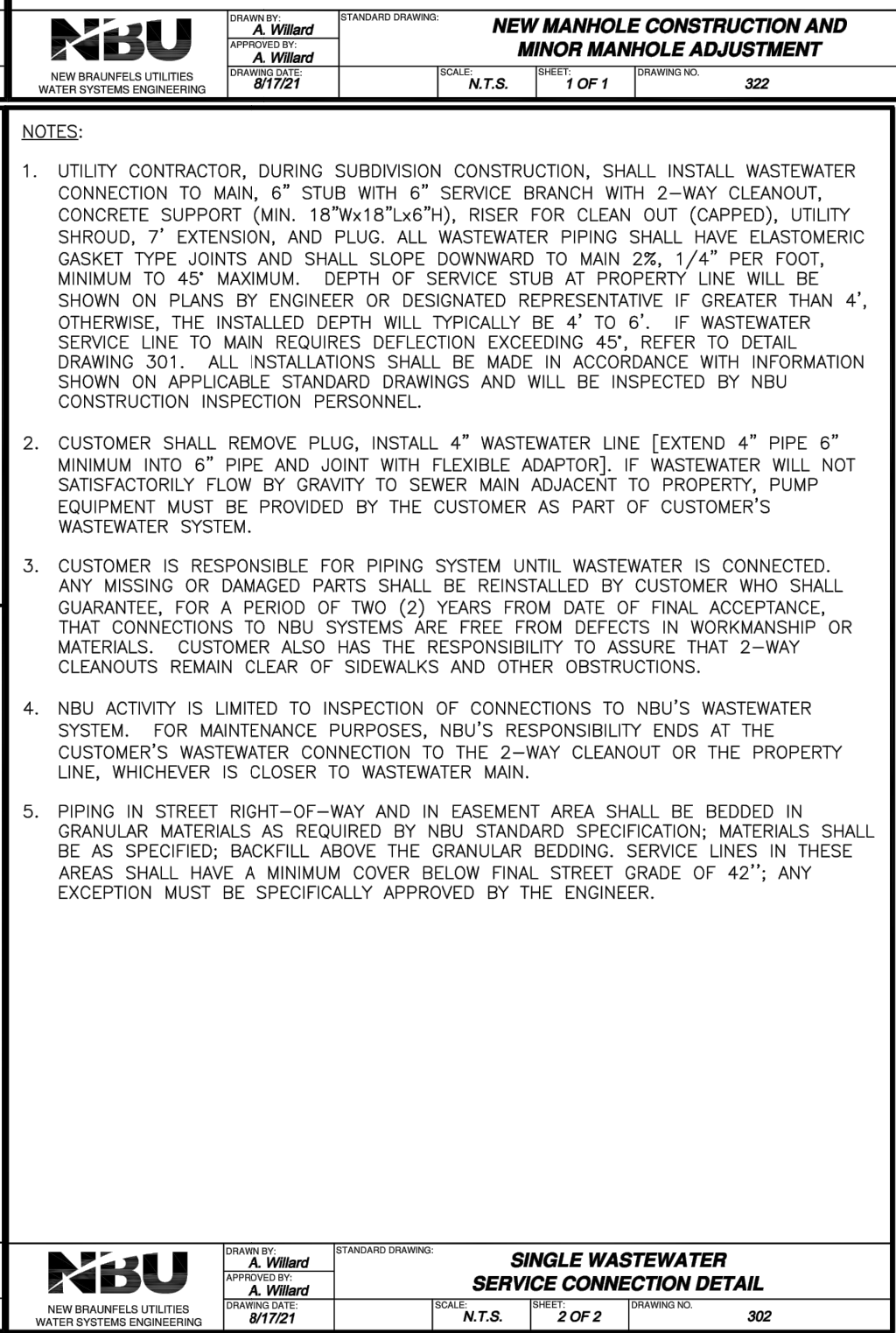
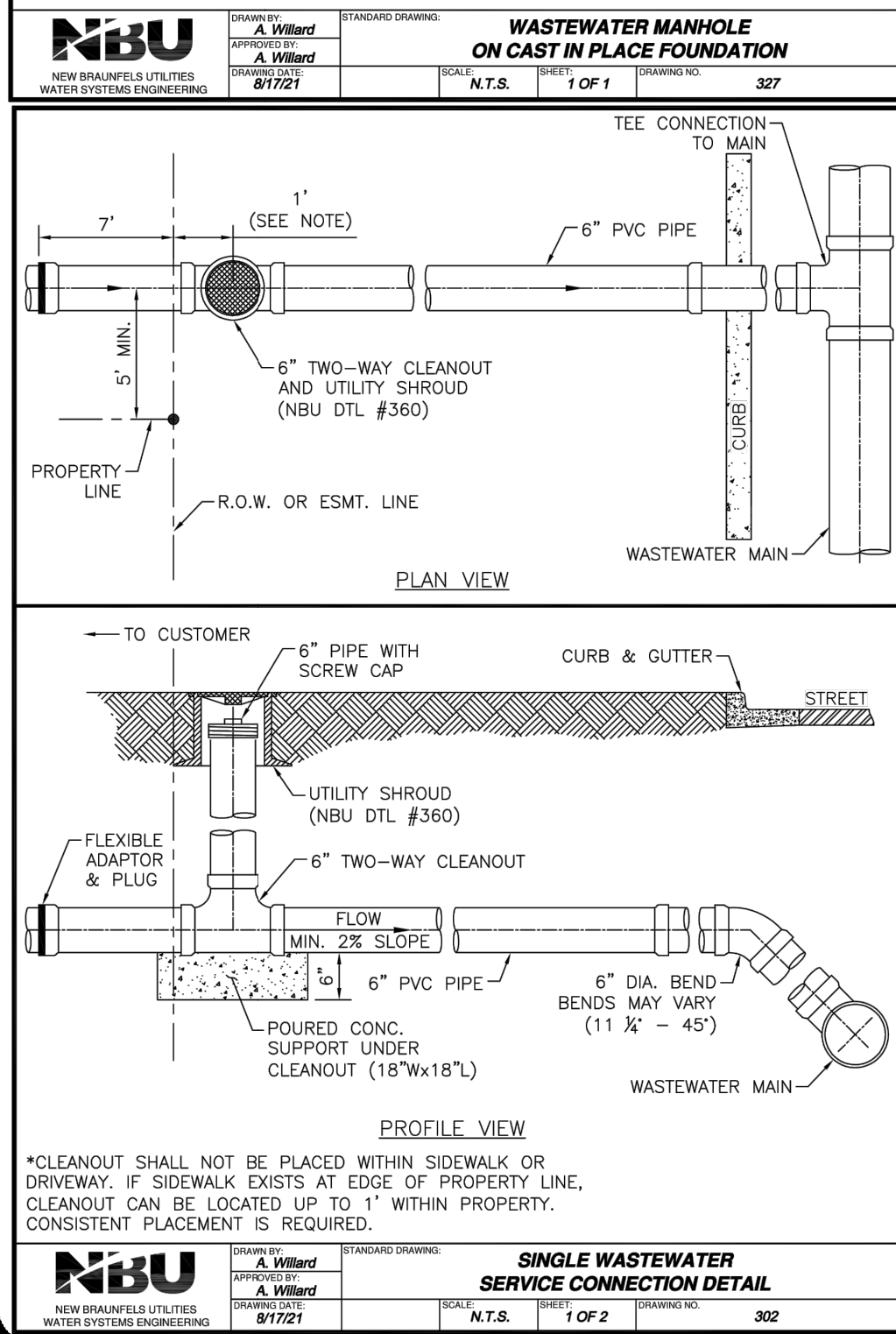
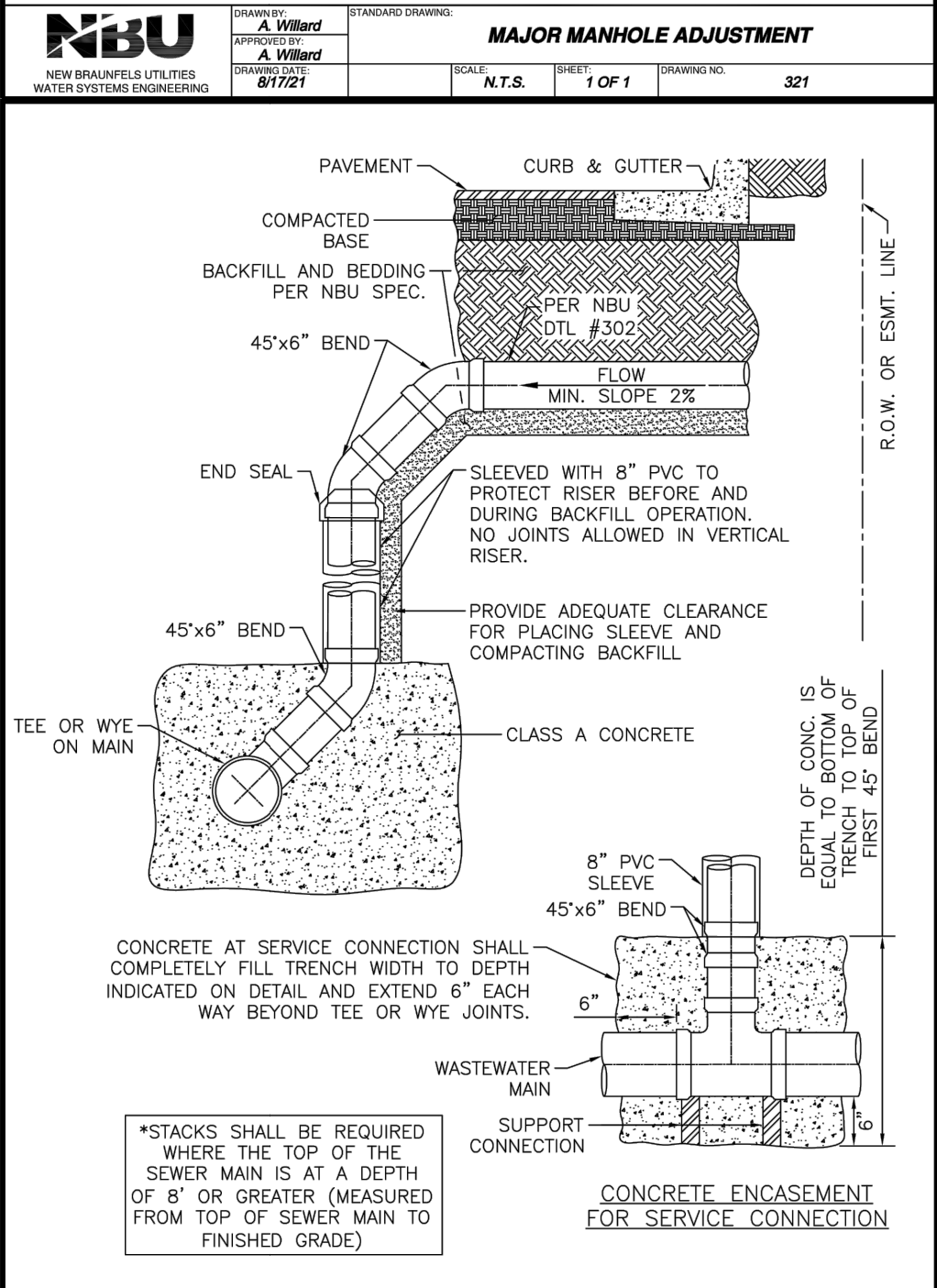
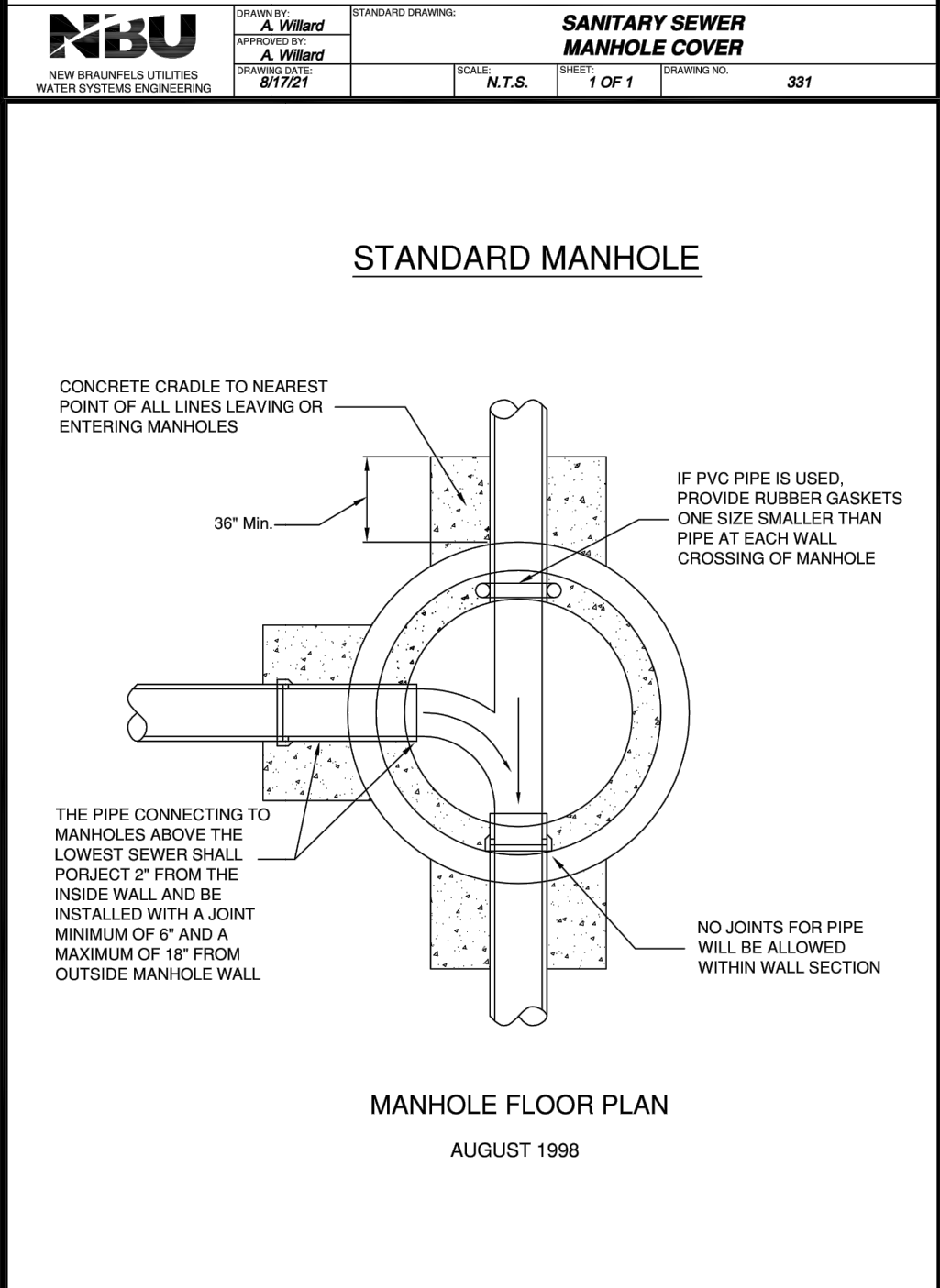
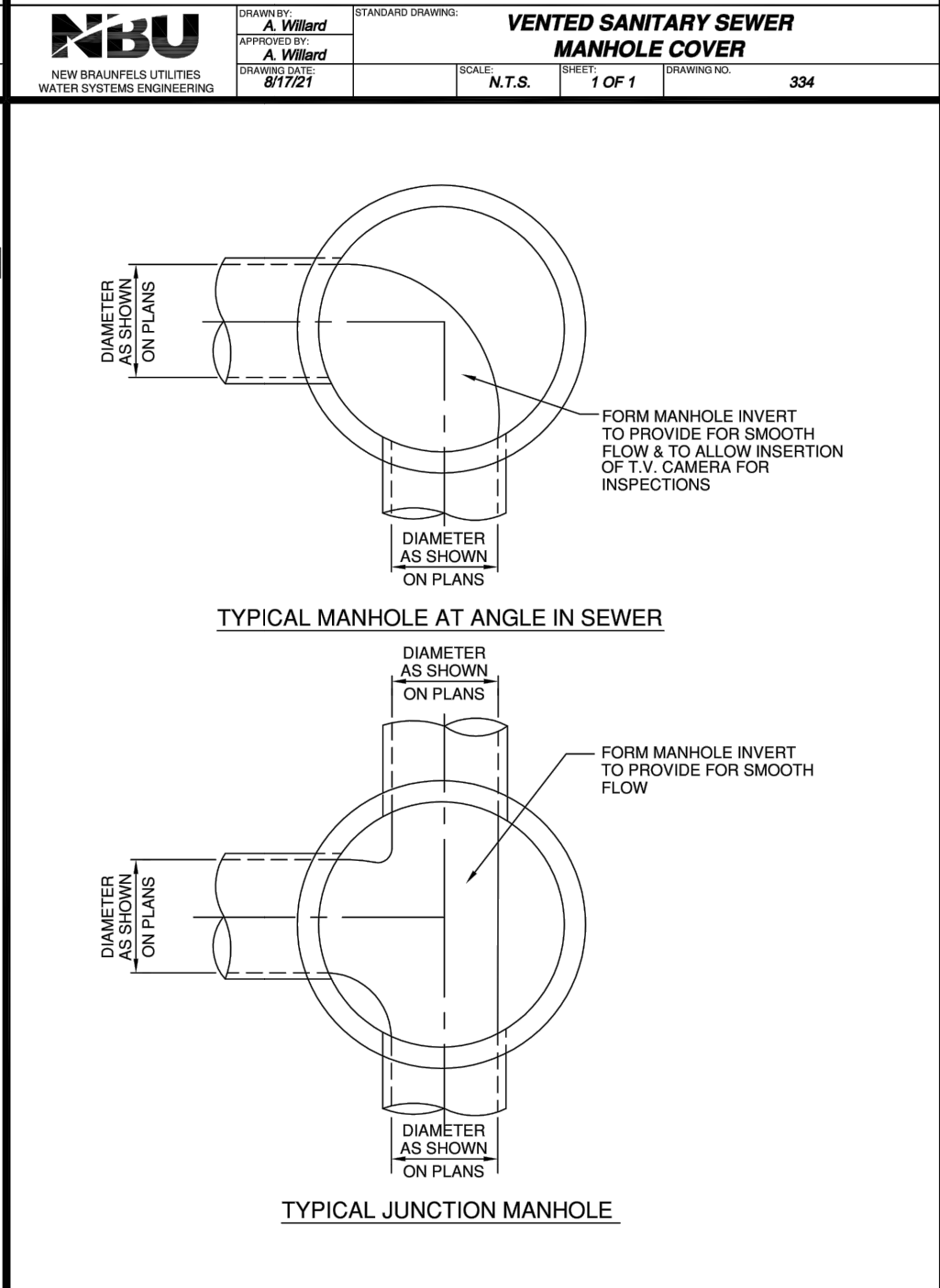
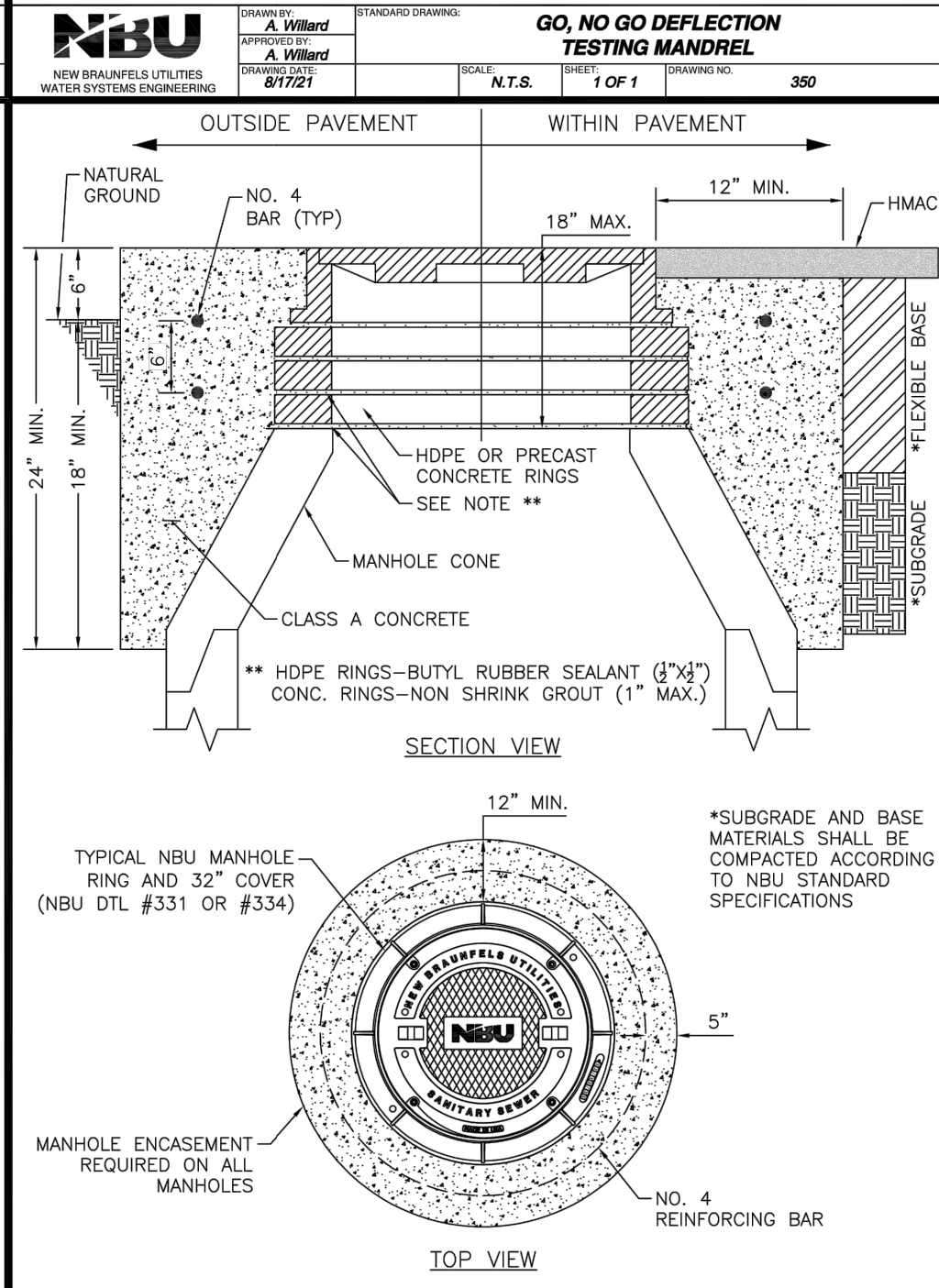
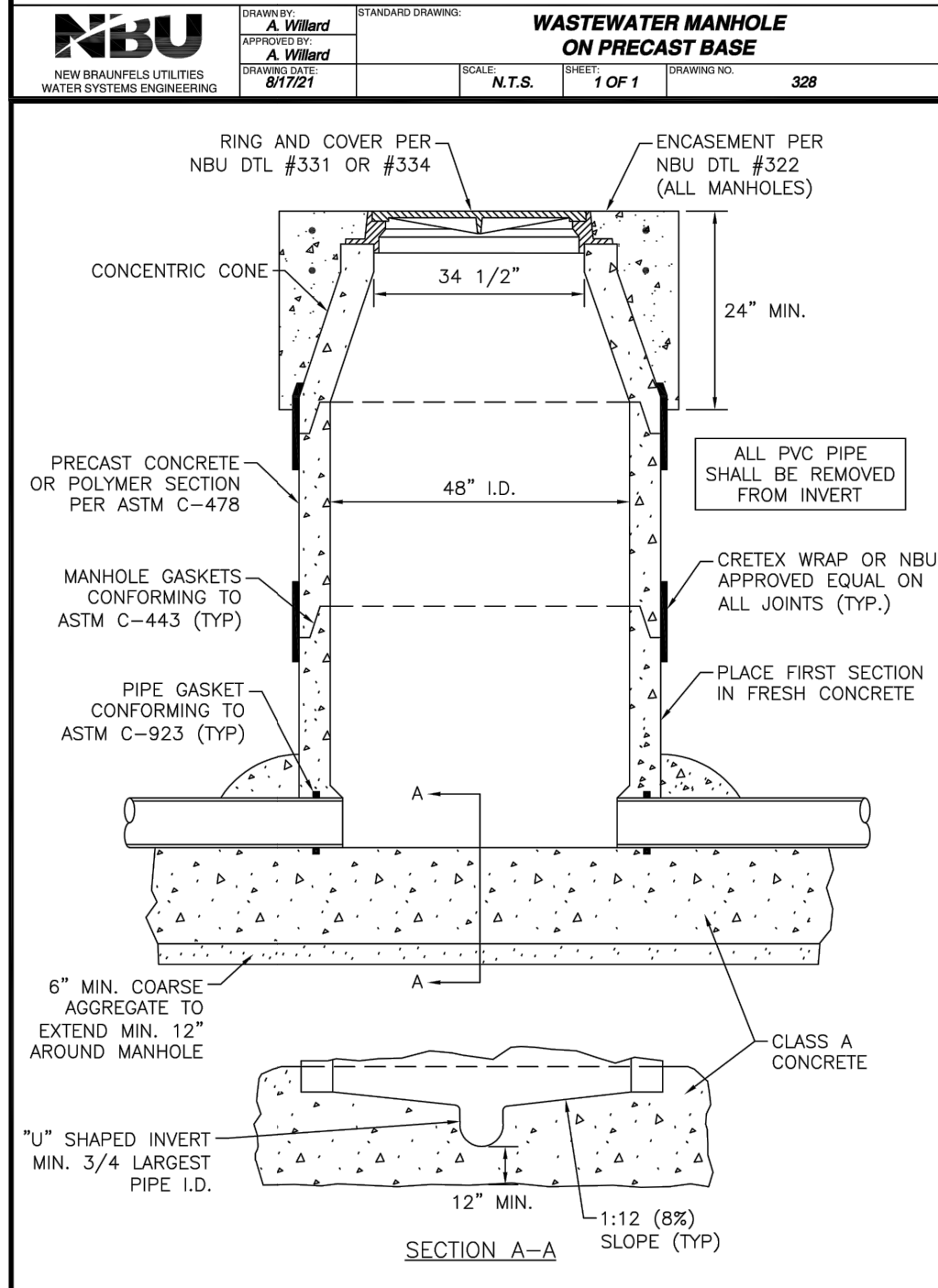
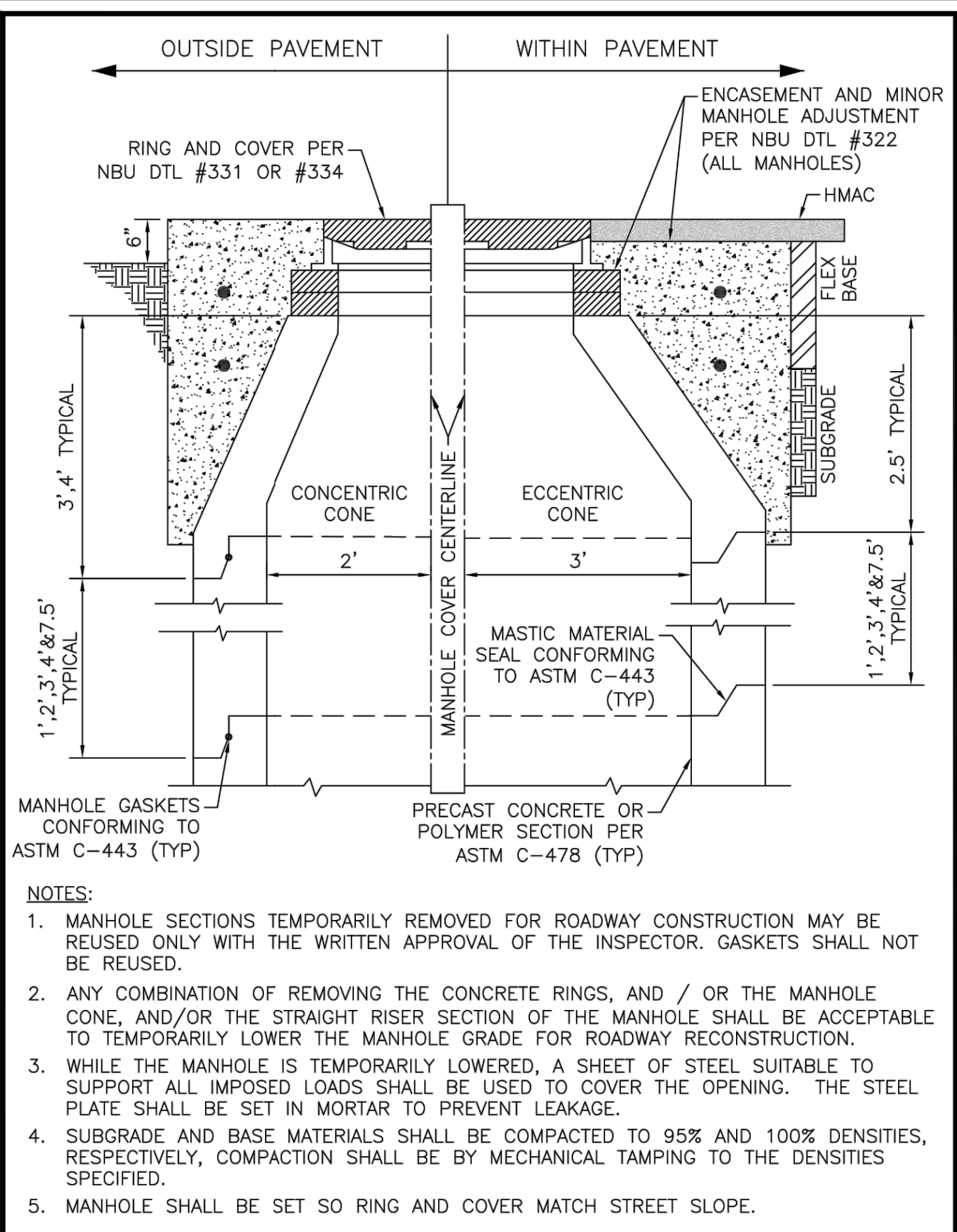
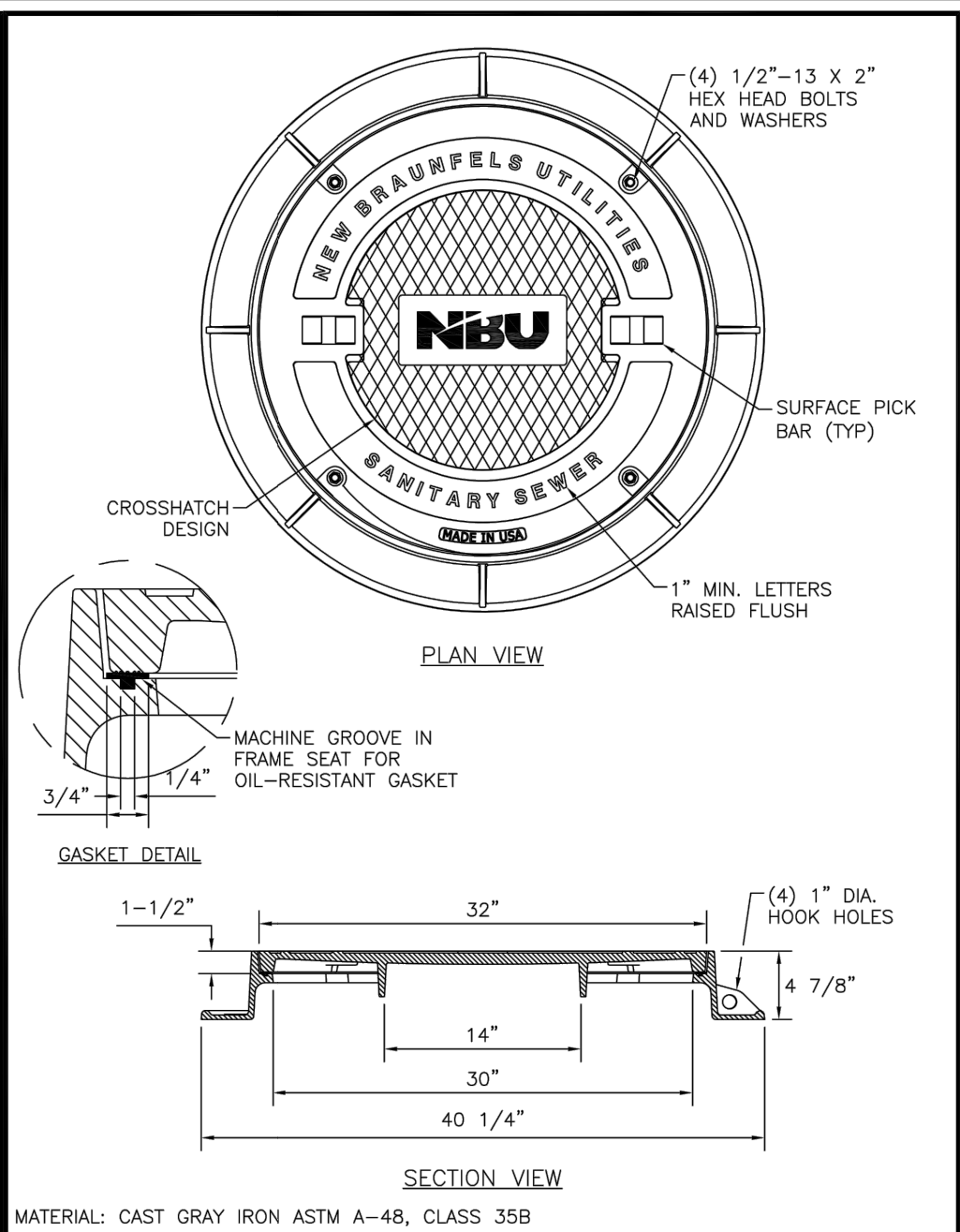
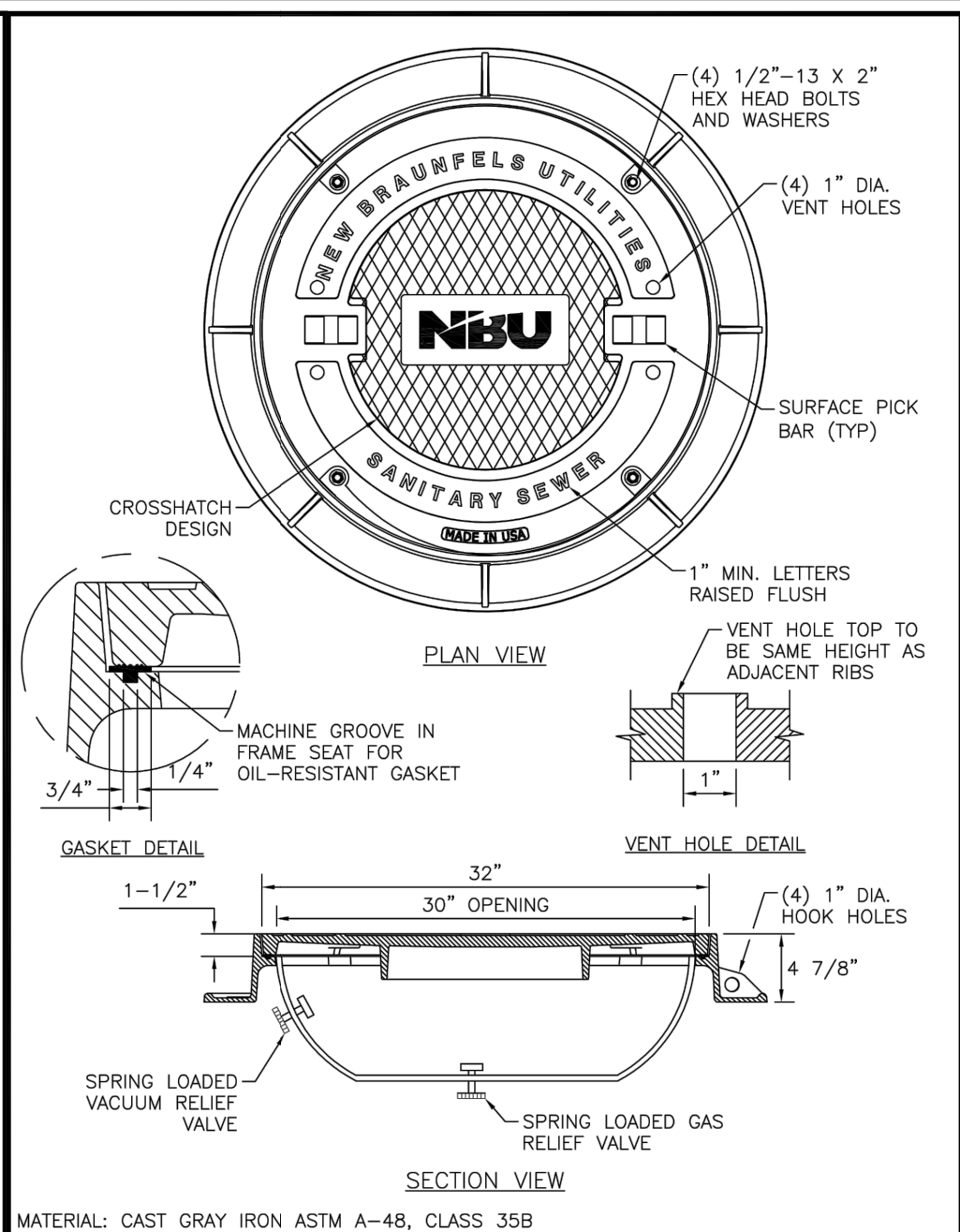
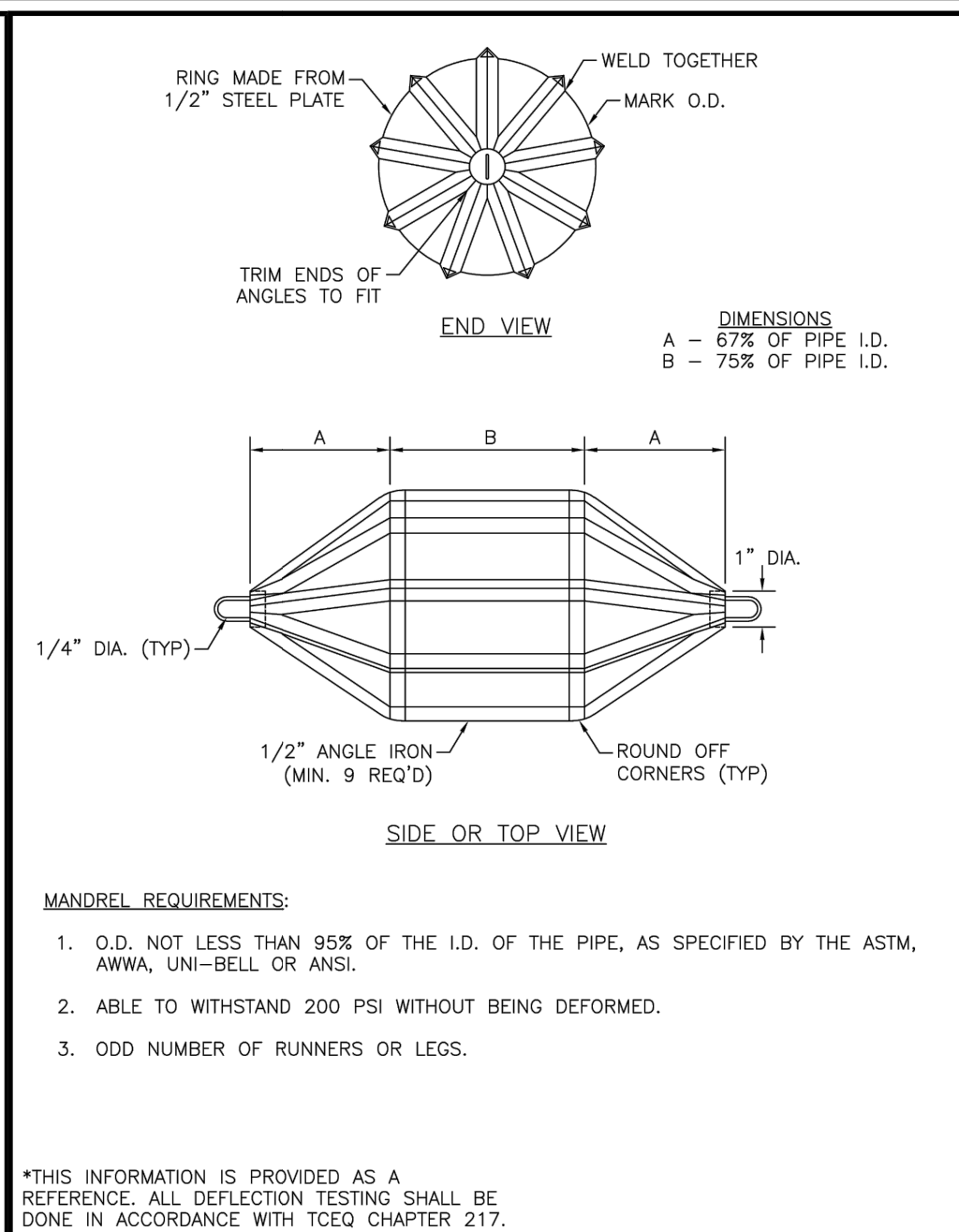
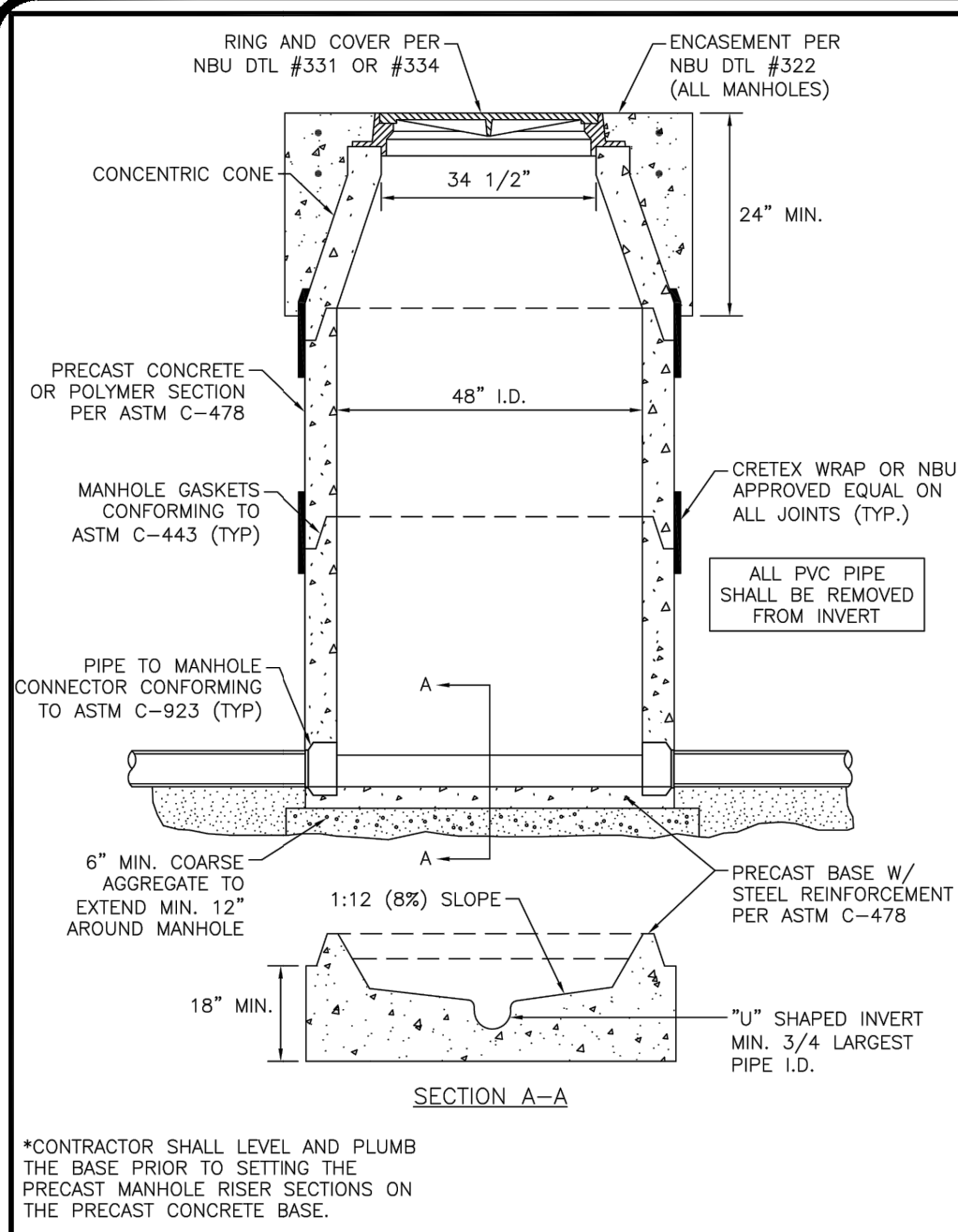
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SHEET NO.

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OF 60

SHEETS



VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER DETAILS (SHEET 1 OF 2)

DATE	BY	REVISIONS	DESCRIPTION
7/11/2024	NG	DESIGNED BY	
	TM	DRAWN BY	
	PF	CHECKED BY	
		DRAWING NAME	Wastewater Details.dwg
		NO.	



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San Antonio, Texas 78230
TBE No. F-1386

JOB NUMBER: SA3856.0401
SHEET NO. 48 OF 60 SHEETS

FOR PERMIT

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User: jmorales Date: 11/14/25
Last Modified: May 22, 2024 - 14:25
Plot Date/Time: 11/24/25 - 11:14:53

Texas Commission on Environmental Quality
Organized Sewage Collection System
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director, nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code, Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following listed "construction notes" restricts the powers of the Executive Director, the commission or any other governmental entity to prevent, correct, or control activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, Texas Administrative Code, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through any phases of plan implementation. Failure to comply with any condition of the Executive Director's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, Texas Administrative Code § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following listed "construction notes" in no way represent an approved regulation by the Executive Director to any part of Title 30 Texas Administrative Code, Chapters 213 and 217, or any other TCEQ applicable regulation.

- This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.
- All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.
- A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
 - the name of the approved project;
 - the activity start date; and
 - the contact information of the prime contractor.
- Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.

- If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the

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executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

- Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.
- Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.
- All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet ____ of ____.

It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.

- Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).
- Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer:
 - If pipe flexure is proposed, the following method of preventing deflection of the joint must be used:
 - Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

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If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet ____ of ____ (For potential future laterals).

- Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 121 (ANSI A 106.2) classes A, B or C.

- Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).

- All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:

- For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:
 - Low Pressure Air Test.
 - A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-628, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(iv) of this paragraph.
 - For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.
 - A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.
 - Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

$$\text{Equation C.3} \quad T = \frac{0.085 \times D \times K}{Q}$$

Where:

- T = time for pressure to drop 1.0 pound per square inch gauge in seconds
K = 0.000419 X D X L, but not less than 1.0
D = average inside pipe diameter in inches

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- L = length of line of same size being tested, in feet
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface
- Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Maximum Length for Minimum Time (feet)	Time for Longer Length (seconds/foot)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

- An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
- If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
- Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
- A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.
- Infiltration/Exfiltration Test.
 - The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
 - An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
 - The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
 - For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
 - If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce

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- the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.
- If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:
 - For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.
 - Mandrel Sizing.
 - A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the ASTMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.
 - If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.
 - All dimensions must meet the appropriate standard.
 - Mandrel Design.
 - A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.
 - A mandrel must have nine or more odd number of runners or legs.
 - A barrel section length must equal at least 75% of the inside diameter of a pipe.
 - Each size mandrel must use a separate proving ring.
 - Method Options.
 - An adjustable or flexible mandrel is prohibited.
 - A test may not use television inspection as a substitute for a deflection test.
 - If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.
 - For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.
 - A deflection test method must be accurate to within plus or minus 0.2% deflection.
 - An owner shall not conduct a deflection test until at least 30 days after the final backfill.
 - Gravity collection system pipe deflection must not exceed five percent (5%).
 - If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.

- All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.
 - All manholes must pass a leakage test.
 - An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
 - Hydrostatic Testing.

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- The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
- To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
- A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.
- Vacuum Testing.
 - To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.
 - No grout must be placed in horizontal joints before testing.
 - Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
 - An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
 - A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
 - There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
 - A test does not begin until after the vacuum pump is off.
 - A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9 inches of mercury.

- All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(i). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329
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THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

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Wastewater Notes

WASTEWATER NOTES:

- The contractor shall maintain service to existing wastewater system at all times during construction.
- A minimum of 8" wastewater pipe and fittings (P.V.C. SDR-26, ASTM, D-3034, D-3212, F-477) are required on new installation.
- All residential wastewater service laterals shall be extended to the property line and a cleanout shall be installed at the property line. Services to lots will extend four (4) feet past the underground electric conduit if electric is installed in the front easement. All sewer cleanouts that lead to NBU mains shall be installed with a protective utility shroud and pivoting marker pole during time of construction.
- Pipe bedding of wastewater lines shall be manufactured sand or pea gravel as per NBU specifications.
- Secondary backfill of wastewater lines shall generally consist of materials removed from the trench and shall be free from brush, debris and trash, no rocks or stones having any dimension larger than 6 inches at the largest dimension.
- All wastewater pipes shall have compression or mechanical joints as per 30 TAC §217.53 (c)(2).
- For wastewater lines less than 24" in diameter, select initial backfill material shall be placed in two lifts.
 - The first lift shall be spread uniformly and simultaneously on each side and under the shoulders of the pipe to the mid point or spring line of the pipe.
 - The second lift shall be placed to a depth as shown on the pipe backfill detail. For pipes larger than 24", 12" maximum lifts shall be used.
- All manholes must be water tight, either monolithic, cast-in-place concrete structures or prefabricated manholes specifically approved by NBU. The manholes shall have water-tight rings and covers. Wherever they are within the 100 year floodplain, the manhole covers shall be bolted. Every third manhole in sequence shall have an alternate means of venting. 30 TAC §213.5 (c) (3) (A) and 30 TAC §217.55 (c).
- All manholes shall be constructed so that the top of the ring is two inches (2") above surrounding ground except when located in paved area. In paved areas, the manhole ring shall be flush with pavement.
- All new manholes, unless approved by NBU Engineering, are to have covers with 12" openings.
- Wastewater pipe connections to pre-cast manholes will be compression joints or mechanical "boot type" joint as approved by NBU.
- Wastewater lines shall be tested from manhole to manhole. In areas where a new wastewater manhole is to be constructed over an existing wastewater system, it shall be the contractor's responsibility to test the existing manholes before construction. After the proposed manhole(s) has been built, the contractor shall re-test the existing system to the satisfaction of the construction inspector. (no separate pay item).
- Where the minimum 9 foot separation distance between wastewater lines and water lines / mains cannot be maintained, the installation of wastewater lines shall be in strict accordance with TCEQ. The wastewater line shall be constructed of cast iron, ductile iron or PVC meeting the ASTM specification for both pipes and joints of 150 psi and shall be in accordance with 30 TAC §217.53 (d) (3) (A) (i).
- No testing will be performed prior to 30 days from complete installation of the wastewater lines. The following sequence will be strictly adhered to:
 - Pull mandrel
 - Perform Air test
 - Cleaning of any debris
 - Flushing of system
 - TV Inspection (within 72 hours of flushing)
- A minimum of 3 feet of cover is to be maintained over the wastewater main and laterals at subgrade, otherwise concrete encasement will be required.
- Wastewater main connections made directly to existing manholes will require successful testing of the manhole in accordance with NBU Connection & Construction Policy Manual.
- TCEQ and EPA require erosion and sedimentation control for construction of wastewater collection systems. Developer or authorized representative shall provide erosion and sedimentation control as notes on the project's plan and profile sheets. All temporary erosion and sedimentation controls shall be removed by the Contractor at final acceptance of the project by NBU Water Systems.
- All manholes not within paved streets shall have locking concrete collar to secure ring and cover to manhole cone per NBU Detail drawing #329.
- All manholes over the Edwards Aquifer Recharge Zone shall have locking concrete collar to secure ring and cover to manhole cone per NBU detail drawing #329.

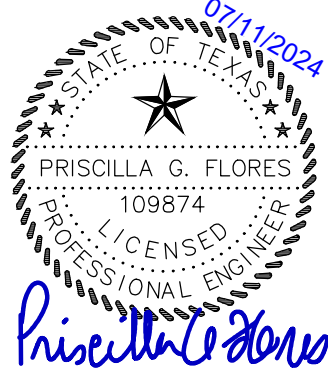
Appendix/Appendix B Approved 12/9/03; Rev 3/2/20 Page 2 of 2

CITY OF NEW BRAUNFELS NOTES:

- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- UTILITY TRENCH COMPACTION - ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL BELOW REFILL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR AT A MINIMUM. TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

VERAMENDI PRECINCT 19 UNIT 1
WASTEWATER DETAILS (SHEET 2 OF 2)

REVISIONS	DATE	BY
DESCRIPTION		
NO.		
7/11/2024	NG	
DESIGNED BY:	PM	
DRAWN BY:	PF	
CHECKED BY:		
DRAWING NAME:	sh. Wastewater Details.dwg	



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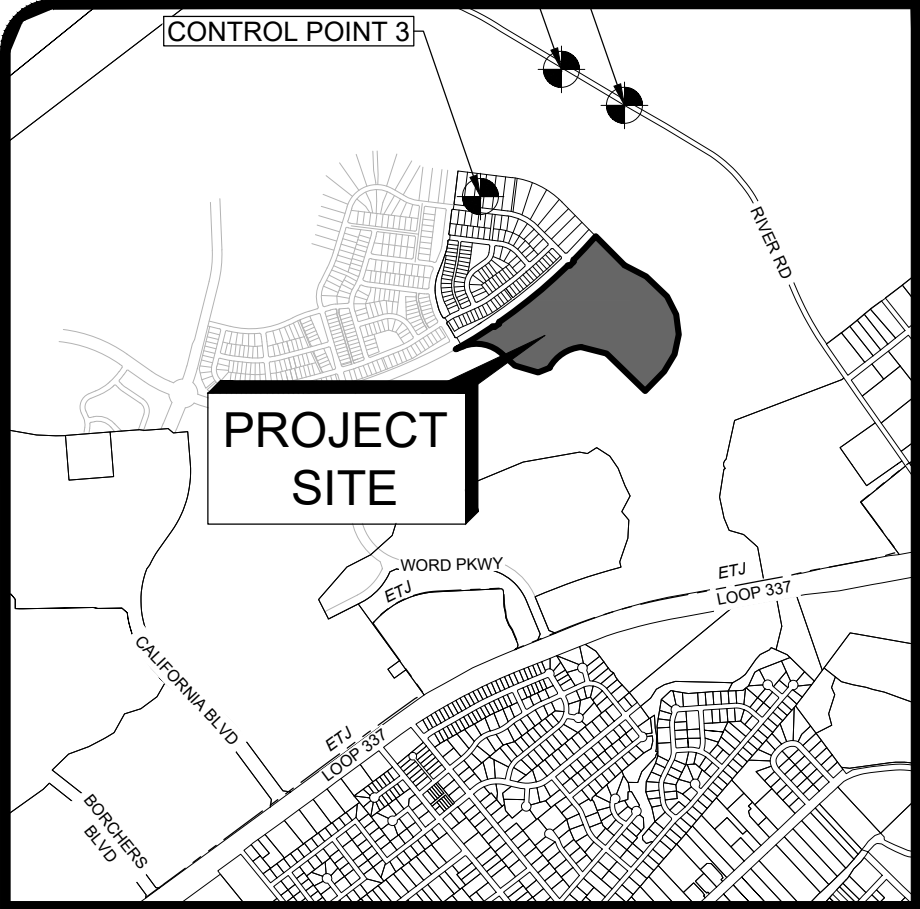
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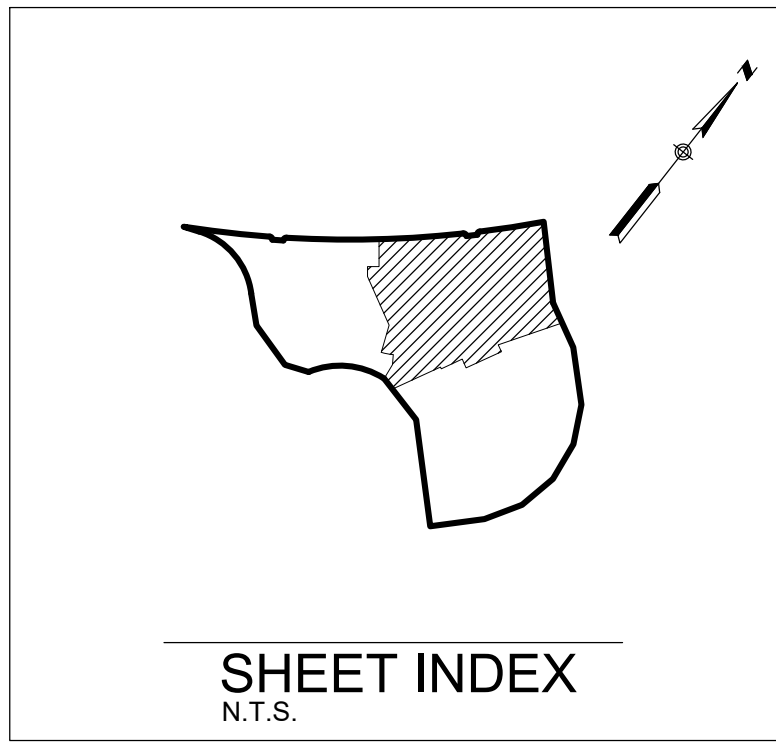
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OF 60 SHEETS

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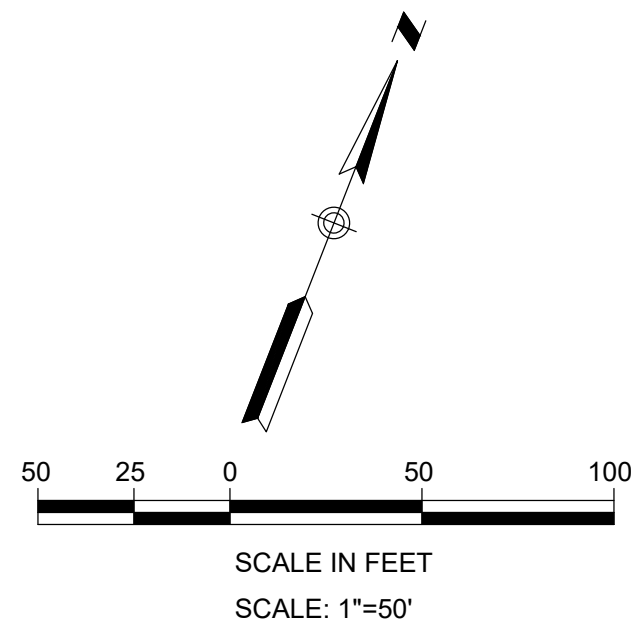
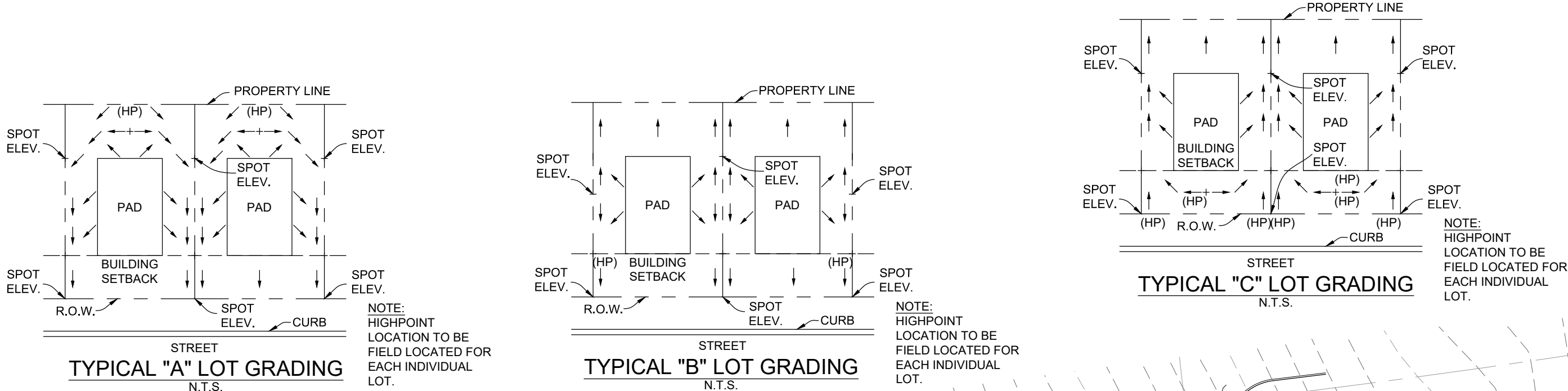


LOCATION MAP
SCALE: 1" = 2000'



GRADING NOTES:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TxDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
- SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
- ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
- ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
- THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).
- THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN +/- ONE-TENTH (0.10) FOOT.
- IN PROPOSED PAVING AREAS, STREET DESIGN PLANS SHALL CONTROL. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1.0% UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ASSURE HIMSELF THAT ALL UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
- UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION AND VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
- POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
- FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
- NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.
- STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC.12.2(N).



526.27 ACRES
WORD-BORCHERS RANCH REAL
ESTATE LIMITED PARTNERSHIP
(DOC 201006024823, OPR)

LEGEND

PROPOSED	EXISTING	
800	800	CONTOUR
2%	2%	FLOW ARROW
		GRASSED DRAIN FLOW
X 706.41	X EG: 801.33	GROUND ELEVATION
X 706.41 ME		MATCH EXISTING GROUND
A		LOT DRAINS TO FRONT
B		LOT DRAINS 1/2 TO FRONT AND 1/2 TO REAR
C		LOT DRAINS TO REAR
Am		LOT TYPE A MODIFIED
Bm		LOT TYPE B MODIFIED
Cm		LOT TYPE C MODIFIED
TMH		TOP OF MANHOLE
EX.		EXISTING
G,E,T,CA		GAS, ELEC. TELE & CABLE TV ESM'T.
ESM'T.		EASEMENT
VOL		VOLUME
PG		PAGE
		SIGNIFICANT TREE PRESERVED
		HERITAGE TREE PRESERVED

LOCATION OF EXISTING
UNDERGROUND AND OVERHEAD
UTILITIES ARE APPROXIMATE
LOCATIONS ONLY. THE
CONTRACTOR SHALL DETERMINE
THE EXACT LOCATION OF ALL
EXISTING UTILITIES PRIOR TO
BEGINNING WORK AND SHALL BE
FULLY RESPONSIBLE FOR ANY AND
ALL DAMAGES WHICH MIGHT OCCUR.



VERAMENDI PRECINCT 19 UNIT 1

GRADING PLAN (SHEET 2 OF 3)

REVISIONS	DESCRIPTION	NO.	DATE

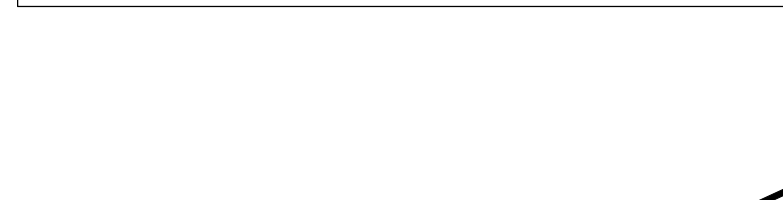
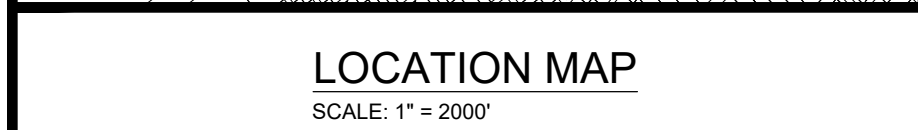
DATE: 11/09/2023	DESIGNED BY: NG	DRAWN BY: TM	CHECKED BY: PF	DRAWING NAME: st Grading.dwg
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TBPE No. F-1386

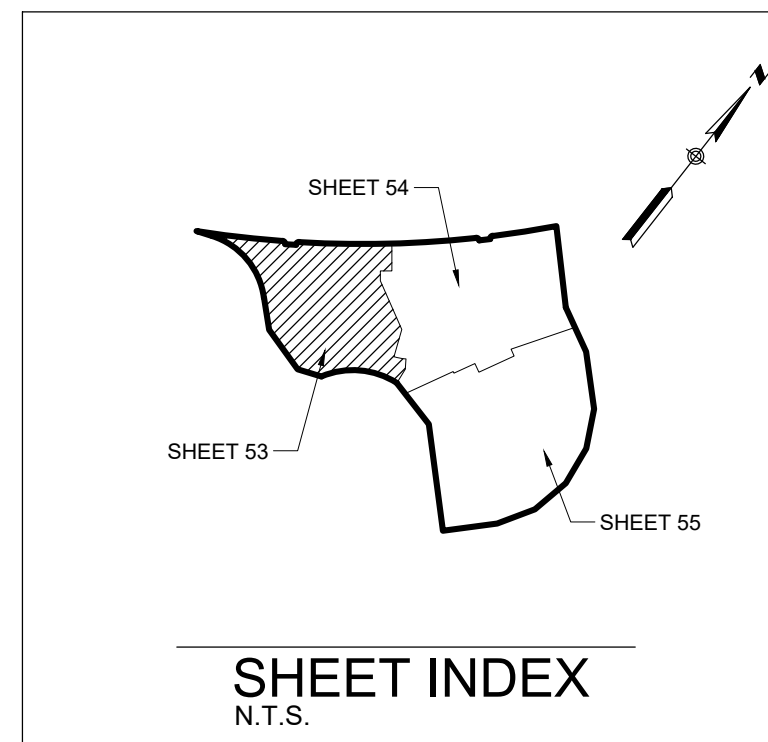
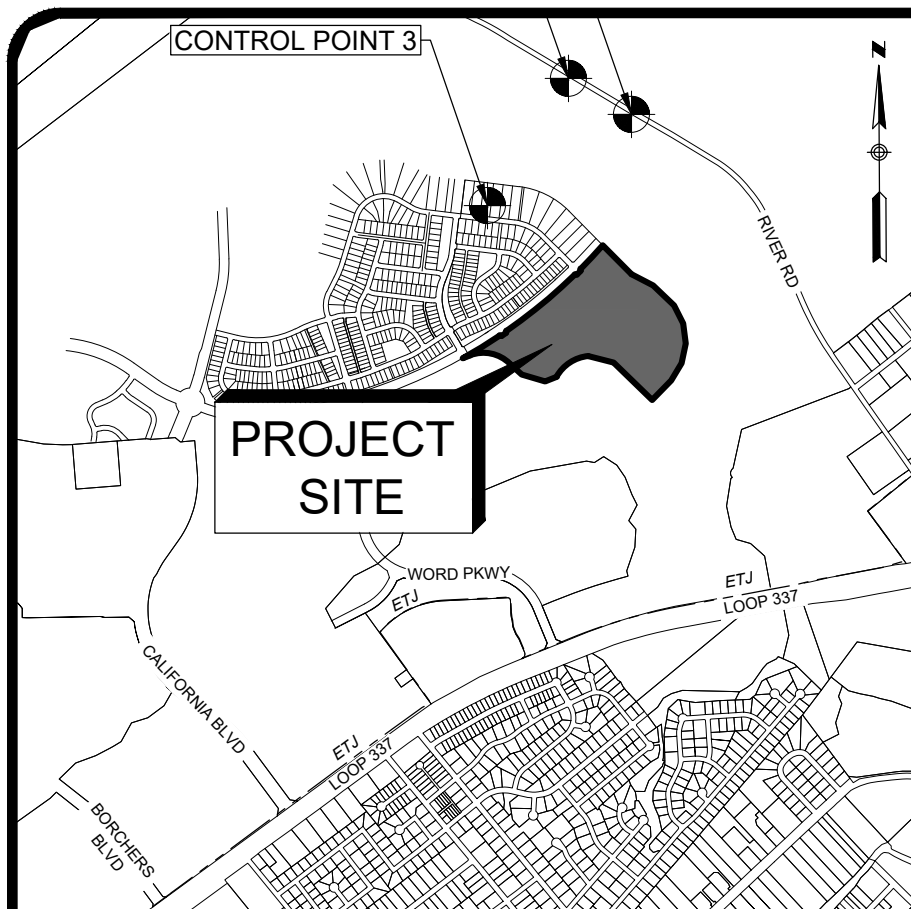
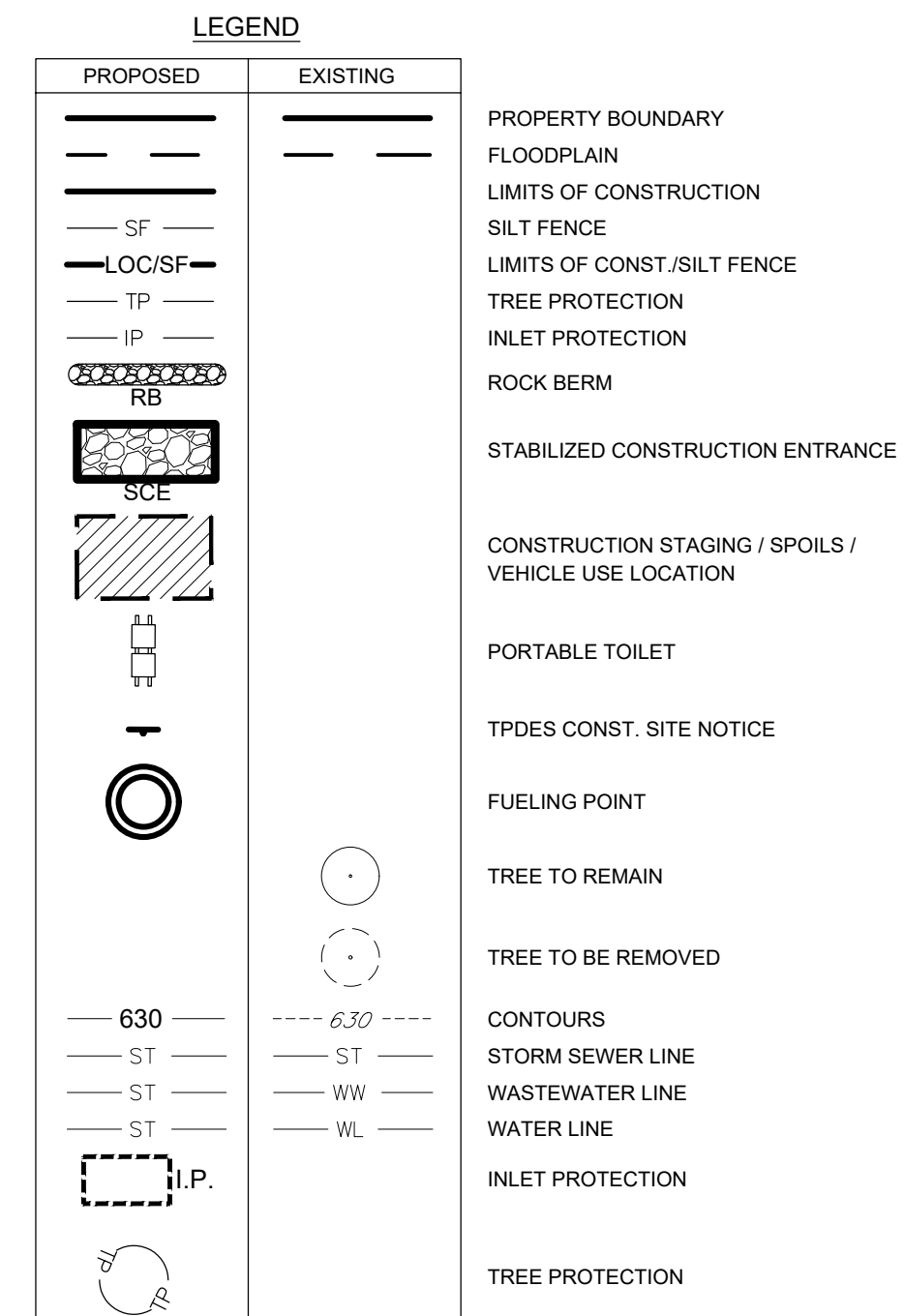
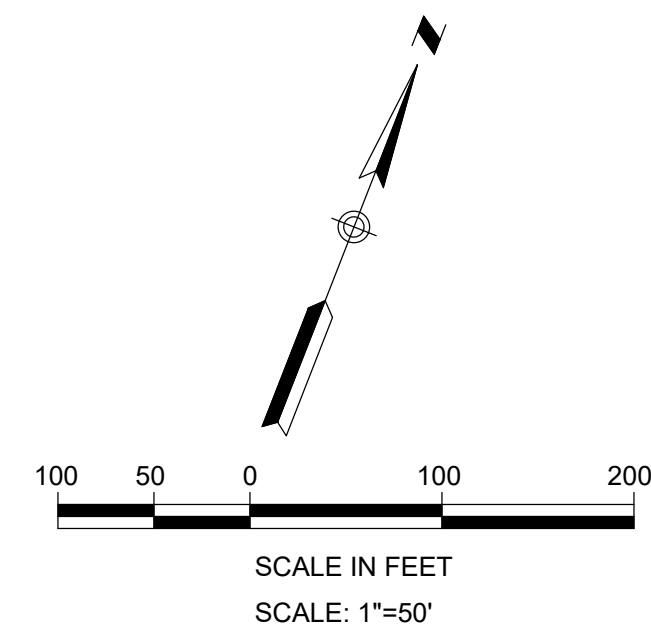
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SHEET NO.	51
OF	60
SHEETS	



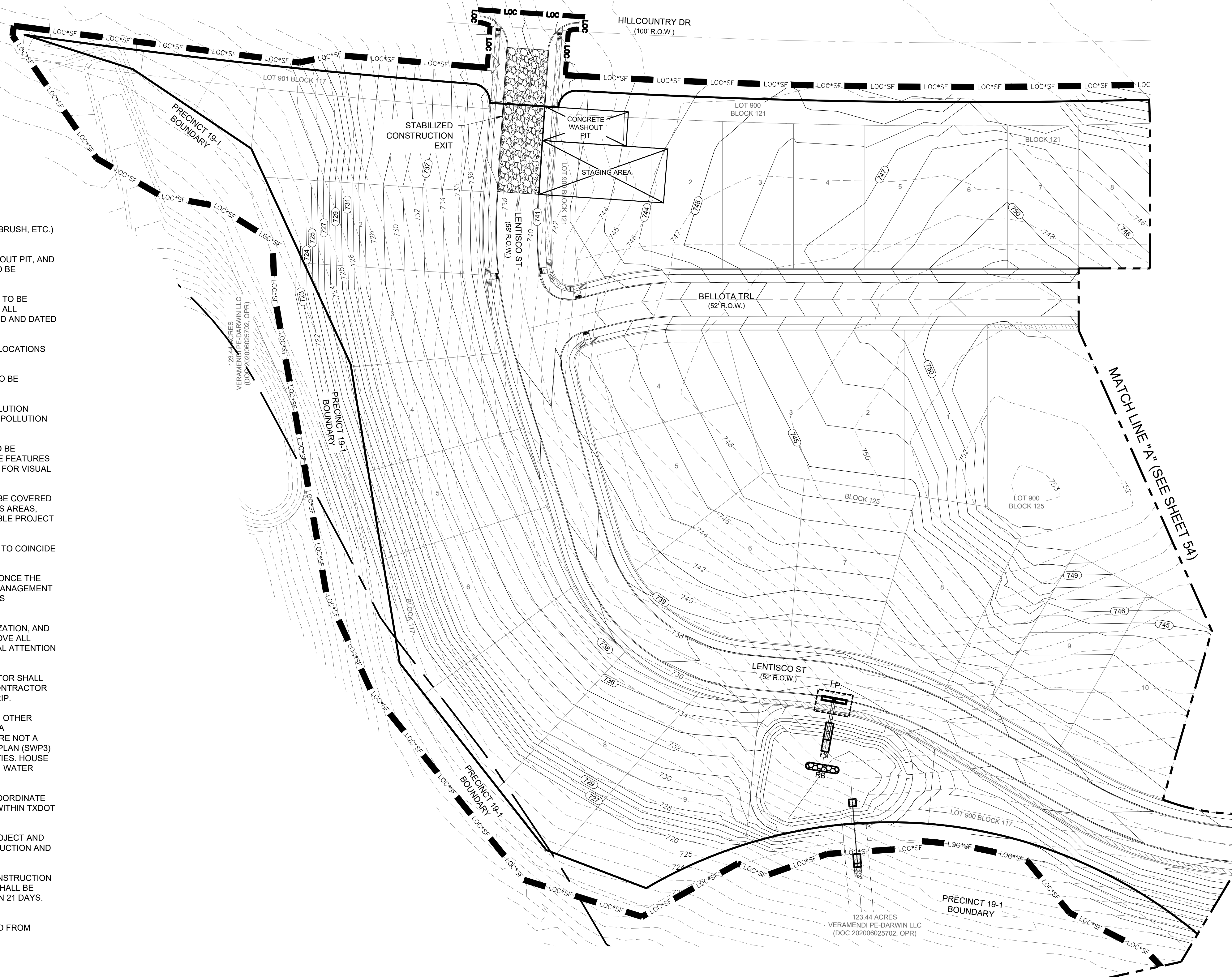
Know what's below.
Call before you dig.



Diagram illustrating Typical "A" Lot Grading. The diagram shows two lots separated by a street. Each lot contains a building setback area (P.A.D.) and a spot elevation. The street is labeled "STREET" and "N.T.S." (Not To Scale). The diagram includes labels for "PROPERTY LINE", "SPOT ELEV.", "P.A.D.", "BUILDING SETBACK", "R.O.W." (Right of Way), "CURB", and "NOTE: HIGHPOINT LOCATION TO BE FIELD LOCATED FOR EACH INDIVIDUAL LOT." Arrows indicate the flow of water or grading from the lots towards the street.

[illegible]

- GENERAL NOTES:**
1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
 2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
 3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
 4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
 5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
 6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
 7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
 8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENTS AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
 9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADE AREAS.
 10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
 11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
 12. WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.
 13. SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.
 14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.
 15. NBU WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.
 16. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
 17. ACCESS TO VERAMENDI PRECINCT 19 UNIT 1 WILL BE PROVIDED FROM VERAMENDI WORD PKWAY.



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR



VERAMENDI PRECINCT 19 UNIT 1
STORM WATER POLLUTION PREVENTION PLAN
(SHEET 1 OF 3)

REVISIONS	
NO.	DESCRIPTION
DESIGNED BY: NG	BY: DATE:
DRAWN BY: TM	
CHECKED BY: PF	
DRAWING NAME:	
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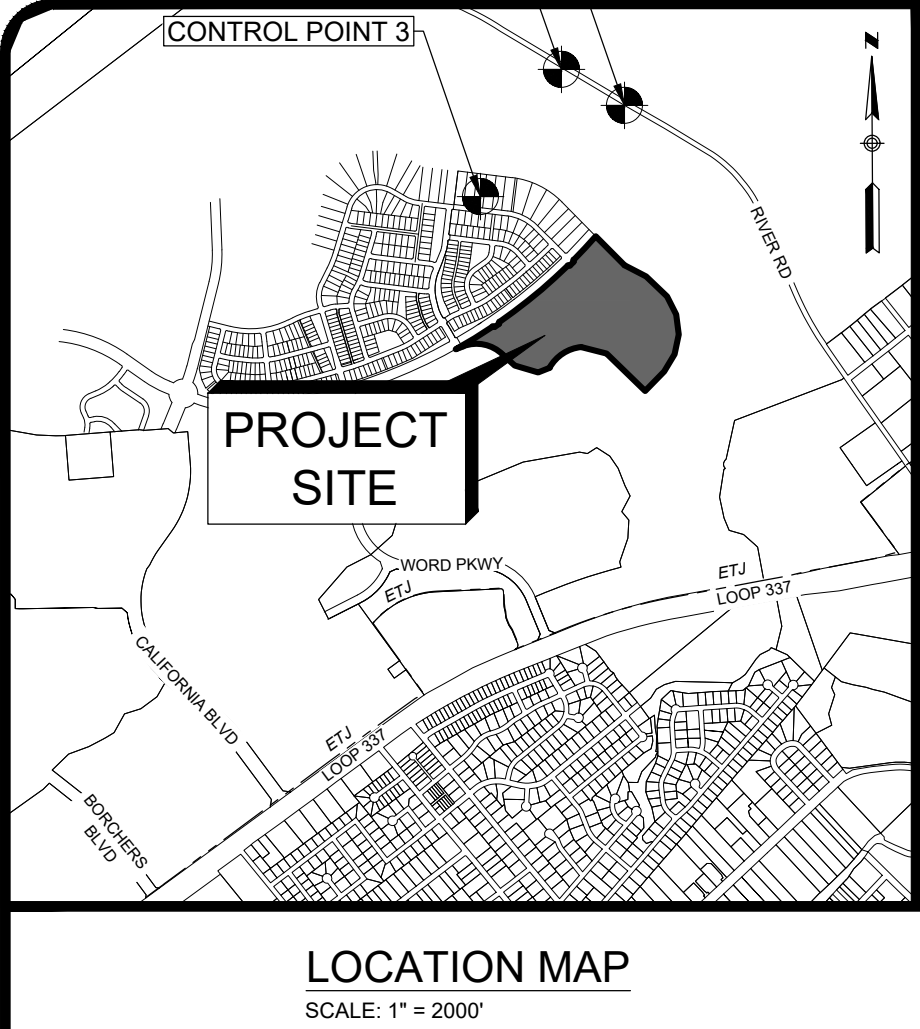
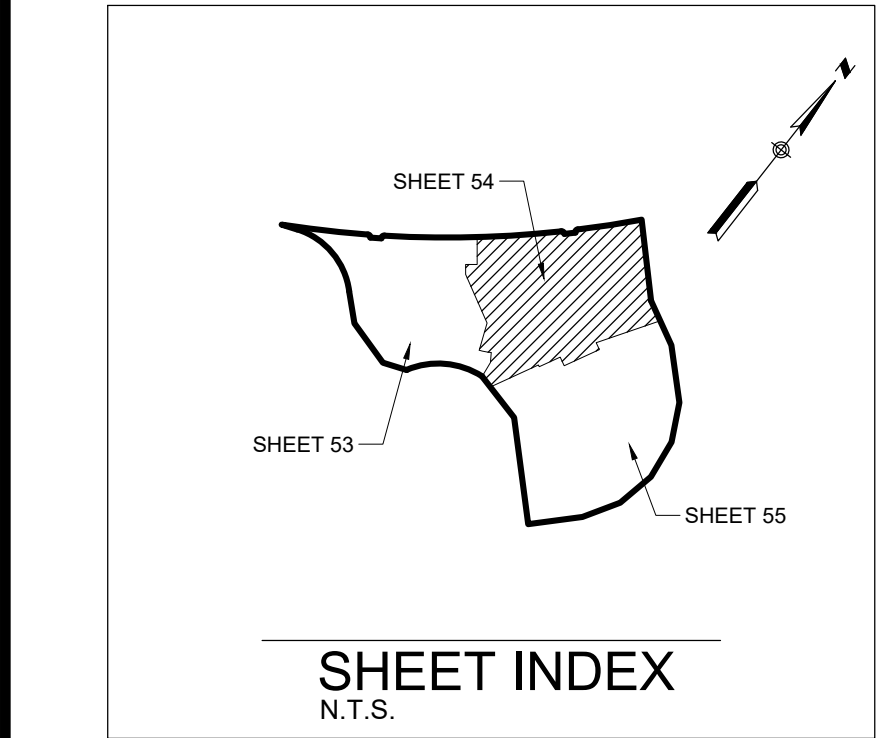
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JOB NUMBER:
SA3856.0401

SHEET NO.
53

OF 60 SHE

K:\34856 ASA Properties\3401 Veramendi Precinct 19-1\426 Site Development Plans\3401-Sheets\sm_SWPPP.dwg
Last Modified: Mar 27, 24 - 15:53
Plot Date/Time: Tue, 23, 24 - 16:44:04



LEGEND	
PROPOSED	EXISTING

SWPPP MODIFICATIONS		
DATE	SIGNATURE	MODIFICATIONS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR.



JOB NUMBER: SA3856.0401
SHEET NO. 54
OF 60 SHEETS

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DATE: 11/2/2023
DESIGNED BY: NG
DRAWN BY: TM
CHECKED BY: PF
DRAWING NAME: sm_SWPPP.dwg

REVISIONS	
NO.	DESCRIPTION

VERAMENDI PRECINCT 19 UNIT 1
STORMWATER POLLUTION PREVENTION PLAN
(SHEET 2 OF 3)

SEDIMENTATION AND EROSION CONTROLS

- A. SILT FENCE
- FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT², AND BRINELL HARDNESS EXCEEDING 140.
 - WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.
 - STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
 - LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.
 - THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
 - THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 - SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
 - INSPECT ALL FENCINGS WEEKLY, AND AFTER ANY RAINFALL, REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

- B. TRIANGULAR SEDIMENT FILTER DIKE
- THE DIKE STRUCTURE SHALL BE CONSTRUCTED OF 6" X 6", 6 GAUGE WELDED WIRE MESH, 18 INCHES PER SIDE, AND WRAPPED WITH GEOTEXTILE FABRIC THE SAME COMPOSITION AS THAT USED FOR SILT FENCES.
 - FILTER FABRIC SHOULD LAP OVER ENDS SIX (6) INCHES TO COVER DIKE TO DIKE JUNCTION; EACH JUNCTION SHOULD BE SECURED BY SHOAT RINGS.
 - POSITION DIKE PARALLEL TO THE CONTOURS, WITH THE END OF EACH SECTION CLOSELY ABUTTING THE ADJACENT SECTIONS.
 - FASTENING - THE FABRIC SKIRT MAY BE TOED-IN WITH 6 INCHES OF COMPACTED MATERIAL, OR 12 INCHES OF THE FABRIC SKIRT SHOULD EXTEND UPHILL AND BE SECURED WITH A MINIMUM OF 3 INCHES OF OPEN GRADED ROCK, OR WITH STAPLES OR NAILS. IF THESE TWO OPTIONS ARE NOT FEASIBLE THE DIKE STRUCTURE MAY BE TRENCHED IN 4 INCHES.
 - TRIANGULAR SEDIMENT FILTER DIKES SHOULD BE INSTALLED ACROSS EXPOSED SLOPES DURING CONSTRUCTION WITH ENDS OF THE DIKE TIED INTO EXISTING GRADES TO PREVENT FAILURE AND SHOULD INTERCEPT NO MORE THAN ONE ACRE OF RUNOFF.
 - WHEN MOVED TO ALLOW VEHICULAR ACCESS, THE DIKES SHOULD BE REINSTALLED AS SOON AS POSSIBLE, BUT ALWAYS AT THE END OF THE WORKDAY.
 - INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR. INSPECT AND REALIGN DIKES AS NEEDED TO PREVENT GAPS BETWEEN SECTIONS.
 - ACCUMULATED SILT SHOULD BE REMOVED AFTER EACH RAINFALL, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

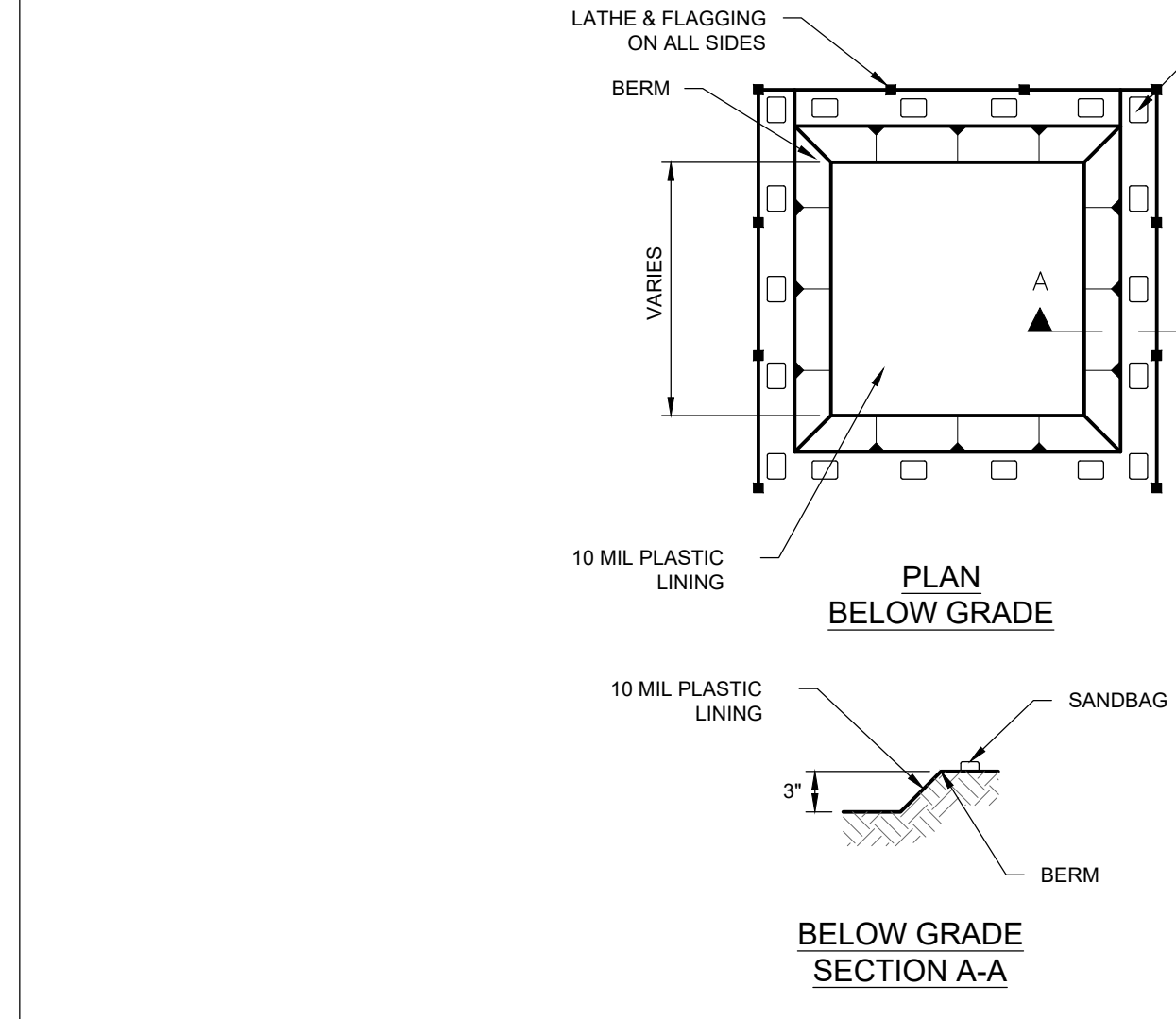
- C. TEMPORARY CONSTRUCTION ENTRANCE/EXIT
- AGGREGATE SIZE - 4 TO 8 INCHES WASHED, COARSE STONE.
 - LENGTH - AT LEAST 50 FEET.
 - THICKNESS - MINIMUM 8 INCHES.
 - WIDTH - MINIMUM WIDTH SHALL BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
 - WASHING - WHEN NECESSARY, IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHALL BE INSTALLED WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN 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 ROADWAY MUST BE REMOVED IMMEDIATELY.
 - DRAINAGE - IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
 - FABRIC - PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

- D. INTERCEPTOR SWALE
- MAXIMUM DEPTH OF FLOW IN THE SWALE SHALL BE 1 FOOT.
 - THE MINIMUM BOTTOM WIDTH OF THE SWALE SHALL BE 2 FEET.
 - SIDE SLOPES OF THE SWALE SHALL BE 3:1 OR FLATTER.
 - MINIMUM DESIGN CHANNEL FREEBOARD SHALL BE 6 INCHES.
 - SWALES MUST MAINTAIN POSITIVE GRADE TO AN ACCEPTABLE OUTLET.
 - INTERCEPTOR SWALES MUST BE STABILIZED IMMEDIATELY UPON EXCAVATION SO AS NOT TO CONTRIBUTE TO THE EROSION PROBLEM THEY ARE ADDRESSING.
 - ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
 - ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROPRIATE SPOILS SITE.
 - INSPECTION MUST BE MADE AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE TO THE CHANNEL OR TO CLEAR DEBRIS OR OTHER OBSTRUCTIONS SO AS NOT TO DIMINISH FLOW CAPACITY. DAMAGES WHICH RESULT FROM NORMAL CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE END OF EACH WORK DAY.
- E. ROCK BERMS
- LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
 - BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
 - PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM (FIGURE 1-28), TO A HEIGHT NOT LESS THAN 18".
 - WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
 - BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
 - INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
 - REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
 - REPAIR ANY LOOSE WIRE SHEATHING. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
 - THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

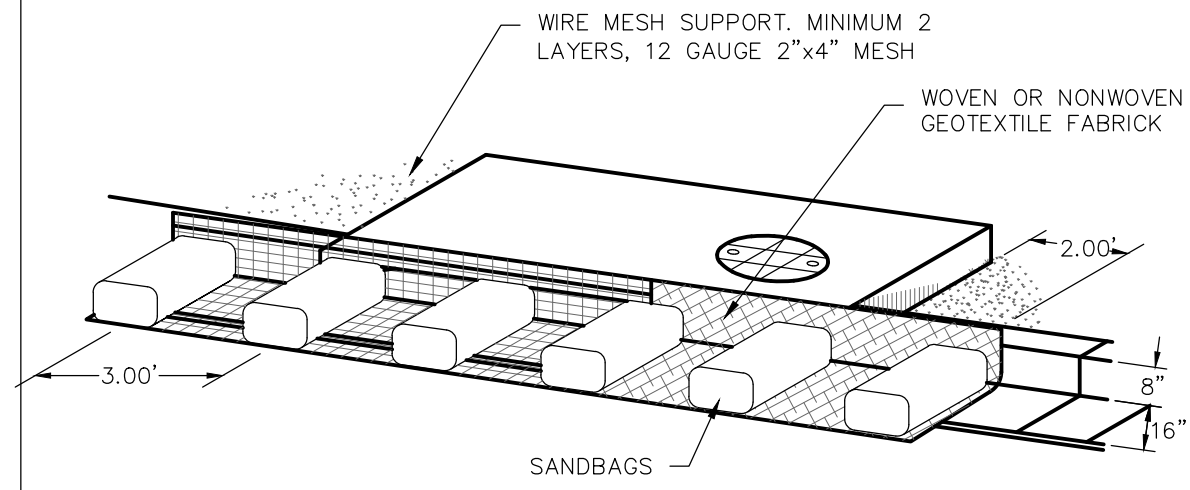
- F. SANDBAG BERMS
- THE BAG LENGTH SHOULD BE 24 TO 30 INCHES, WIDTH SHOULD BE 18 TO 18 INCHES AND THICKNESS SHOULD BE 6 TO 8 INCHES. (3) SANDBAGS SHOULD BE FILLED WITH COARSE GRADE SAND, FREE FROM DELETERIOUS MATERIAL. ALL SAND SHOULD PASS THROUGH A NO. 10 SIEVE. THE FILLED BAG SHOULD HAVE AN APPROXIMATE WEIGHT OF 40 POUNDS.
 - THE BERM SHOULD BE A MINIMUM HEIGHT OF 18 INCHES, MEASURED FROM THE TOP OF THE EXISTING GROUND AT THE UPSLOPE TOE TO THE TOP OF THE BERM.
 - THE BERM SHOULD BE SIZED AS SHOWN IN THE PLANS BUT SHOULD HAVE A MINIMUM WIDTH OF 48 INCHES MEASURED AT THE BOTTOM OF THE BERM AND 16 INCHES MEASURED AT THE TOP OF THE BERM.
 - RUNOFF WATER SHOULD FLOW OVER THE TOPS OF THE SANDBAGS OR THROUGH 4-INCH DIAMETER PVC PIPES EMBEDDED BELOW THE TOP LAYER OF BAGS AS SHOWN.
 - SANDBAGS SHOULD BE STACKED IN AT LEAST THREE ROWS ABUTTING EACH OTHER, AND IN STAGGERED ARRANGEMENT.
 - THE BASE OF THE BERM SHOULD HAVE AT LEAST 3 SANDBAGS, THESE CAN BE REDUCED TO 2 AND 1 BAG IN THE SECOND AND THIRD ROWS RESPECTIVELY. FOR EACH ADDITIONAL 6 INCHES OF HEIGHT, AN ADDITIONAL SANDBAG MUST BE ADDED TO EACH ROW WIDTH.
 - THE SAND BAG BERM SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN. THE SANDBAGS SHOULD BE RESHAPED OR REPLACED AS NEEDED DURING INSPECTION.
 - WHEN THE SILT REACHES 6 INCHES, THE ACCUMULATED SILT SHOULD BE REMOVED AND DISPOSED OF AT AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
- G. STONE OUTLET SEDIMENT TRAP
- ALL AGGREGATE SHOULD BE AT LEAST 3 INCHES IN DIAMETER AND SHOULD NOT EXCEED A VOLUME OF 0.5 CUBIC FOOT.
 - EARTH EMBANKMENT: PLACE FILL MATERIAL IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE THE OPTIMUM MOISTURE CONTENT OF THE MATERIAL. COMPACT EACH LAYER TO 95 PERCENT STANDARD PROCTOR DENSITY. DO NOT PLACE MATERIAL ON SURFACES THAT ARE MUDDY OR FROZEN. SIDE SLOPES FOR THE EMBANKMENT ARE TO BE 3:1. THE MINIMUM WIDTH OF THE EMBANKMENT SHOULD BE 3 FEET.
 - A GAP IS TO BE LEFT IN THE EMBANKMENT IN THE LOCATION WHERE THE NATURAL CONFLUENCE OF RUNOFF CROSSES THE EMBANKMENT LINE. THE GAP IS TO HAVE A WIDTH IN FEET EQUAL TO 6 TIMES THE DRAINAGE AREA IN ACRES.

- GEOTEXTILE COVERED ROCK CORE: A CORE OF FILTER STONE HAVING A MINIMUM HEIGHT OF 1.5 FEET AND A MINIMUM WIDTH AT THE BASE OF 3 FEET SHOULD BE PLACED ACROSS THE OPENING OF THE EARTH EMBANKMENT AND SHOULD BE COVERED BY GEOTEXTILE FABRIC WHICH SHOULD EXTEND A MINIMUM DISTANCE OF 2 FEET IN EITHER DIRECTION FROM THE BASE OF THE FILTER STONE CORE.
 - FILTER STONE EMBANKMENT: FILTER STONE SHOULD BE PLACED OVER THE GEOTEXTILE AND IS TO HAVE A SIDE SLOPE WHICH MATCHES THAT OF THE EARTH EMBANKMENT OF 3:1 AND SHOULD COVER THE GEOTEXTILE/ROCK CORE A MINIMUM OF 6 INCHES WHEN INSTALLATION IS COMPLETE. THE CREST OF THE OUTLET SHOULD BE AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.
 - INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE. SEDIMENT SHOULD BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGN DEPTH OF THE TRAP.
- A. SEDIMENT BASINS
- THE DRAINAGE AREA FOR A SEDIMENT BASIN SHALL BE LESS THAN 100 ACRES.
 - THE BASIN SHOULD INCLUDE A PERMANENT STAKE TO INDICATE THE SEDIMENT LEVEL IN THE POOL AND MARKED TO INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME (NOT THE TOP OF THE STAKE). SEDIMENT SHALL BE REMOVED WHEN SEDIMENT REACHES 50% STORAGE CAPACITY.
 - PLACE FILL MATERIAL IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE THE OPTIMUM MOISTURE CONTENT OF THE MATERIAL. COMPACT EACH LAYER TO 95 PERCENT STANDARD PROCTOR DENSITY. DO NOT PLACE MATERIAL ON SURFACES THAT ARE MUDDY OR FROZEN. SIDE SLOPES FOR THE EMBANKMENT SHOULD BE 3:1 (H:V). MINIMUM WIDTH OF THE EMBANKMENT AT THE TOP SHALL BE 8 FEET.
 - AN EMERGENCY SPILLWAY SHOULD BE INSTALLED ADJACENT TO THE EMBANKMENT ON UNDISTURBED SOIL AND SHOULD BE SIZED TO CARRY THE FULL AMOUNT OF FLOW GENERATED BY A 10-YEAR, 24-HOUR STORM WITH 1-FOOT OF FREEBOARD LESS THE AMOUNT WHICH CAN BE CARRIED BY THE PRINCIPAL OUTLET CONTROL DEVICE. THE EMERGENCY SPILLWAY SHOULD BE LINED WITH RIPRAP AS SHOULD THE SWALE LEADING FROM THE SPILLWAY TO THE NORMAL WATERCOURSE AT THE BASE OF THE EMBANKMENT.
 - INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR. TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE.
 - ACCUMULATED SILT SHOULD BE REMOVED AND THE BASIN SHOULD BE RE-GRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT THAT THE CAPACITY OF THE IMPOUNDMENT HAS BEEN REDUCED TO 75% OF ITS ORIGINAL STORAGE CAPACITY.

- ADDITIONAL NOTES:
- UPON COMPLETION OF CONSTRUCTION ALL DISTURBED AREAS SHALL BE REVEGETATED TO 70% OF EXISTING CONDITIONS IN ACCORDANCE WITH THE SWPPP AND TPDES REQUIREMENTS.
 - THIS SITE IS NOT LOCATED ADJACENT TO ANY SURFACE WATERS.
 - THIS SITE WILL NOT HAVE ANY LOCATIONS WHERE STORM WATER DISCHARGES DIRECTLY TO A SURFACE WATER BODY.



56.02 CONCRETE WASHOUT AREA
N.T.S.



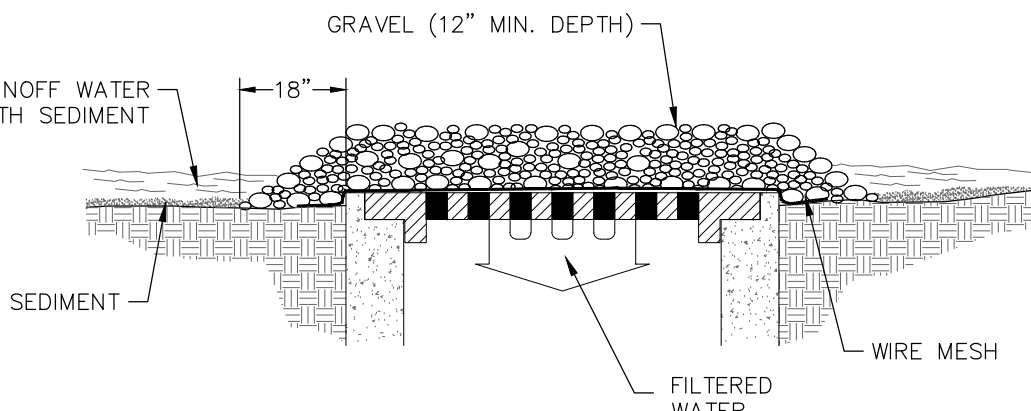
CURB INLET PROTECTION

- NOTES:
- WHEN A SANDBAG IS FILLED WITH MATERIAL, THE OPEN END OF THE SANDBAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CHORD.
 - INLET PROTECTION SHALL BE PLACED OVER THE MOUTH OF THE INLET WITH A 2 FOOT OVERLAP ON EITHER SIDE.
 - THE FABRIC COVER AND SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE.
 - THE SKIRT SHALL BE WEIGHTED WITH ONE 18"x24"x6" SANDBAG EVERY 3 FEET.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF FOUR INCHES, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
 - AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

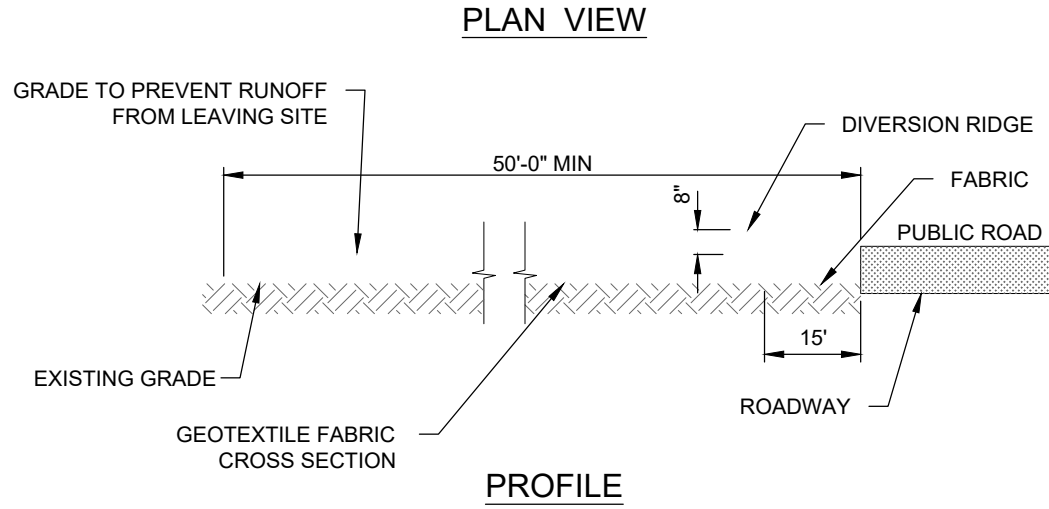
56.04 INLET PROTECTION
N.T.S.

- NOTES:
- WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. WIRE MESH WITH 1/2 INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
 - COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ABOVE. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
 - IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

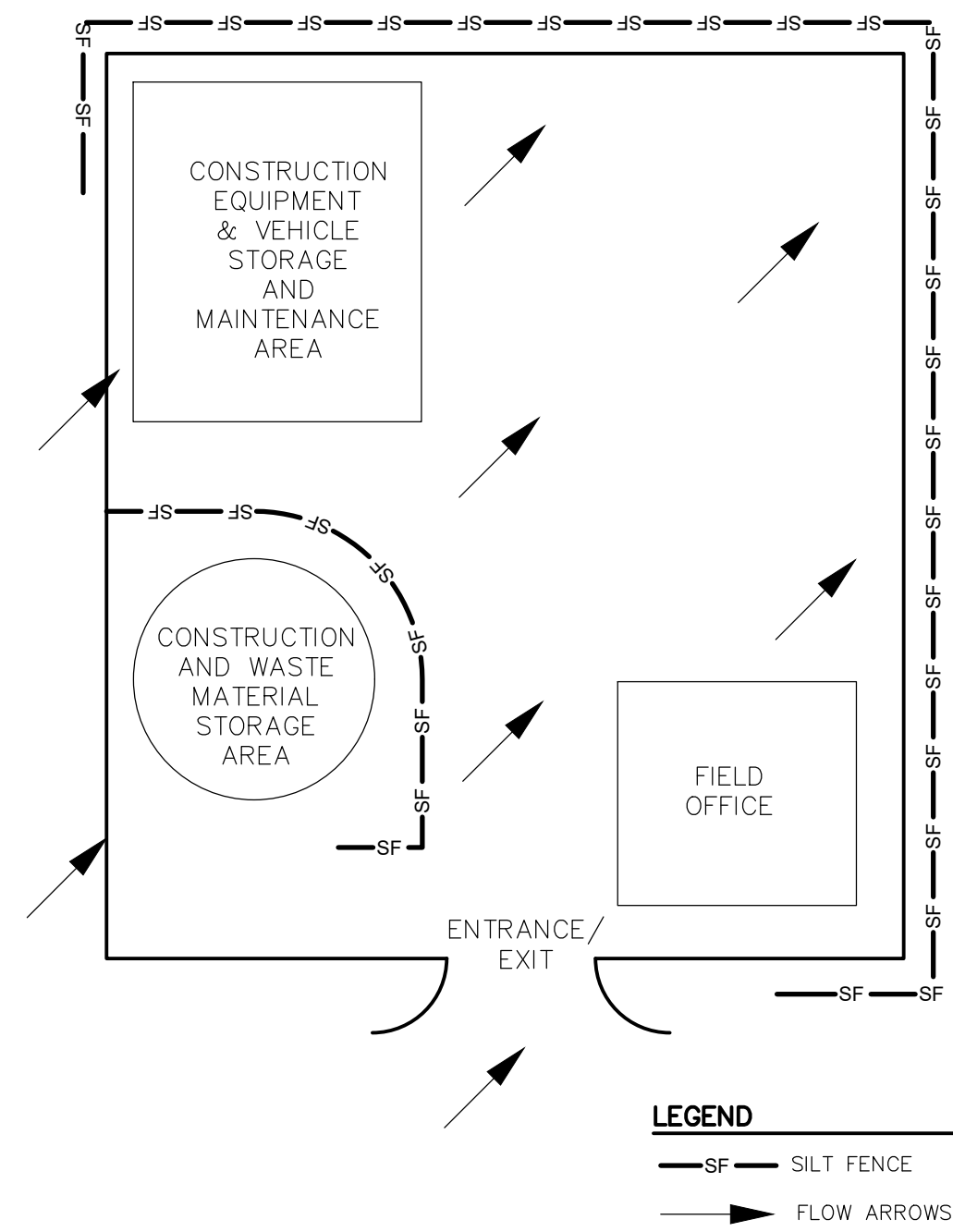
GRATE INLET PROTECTION



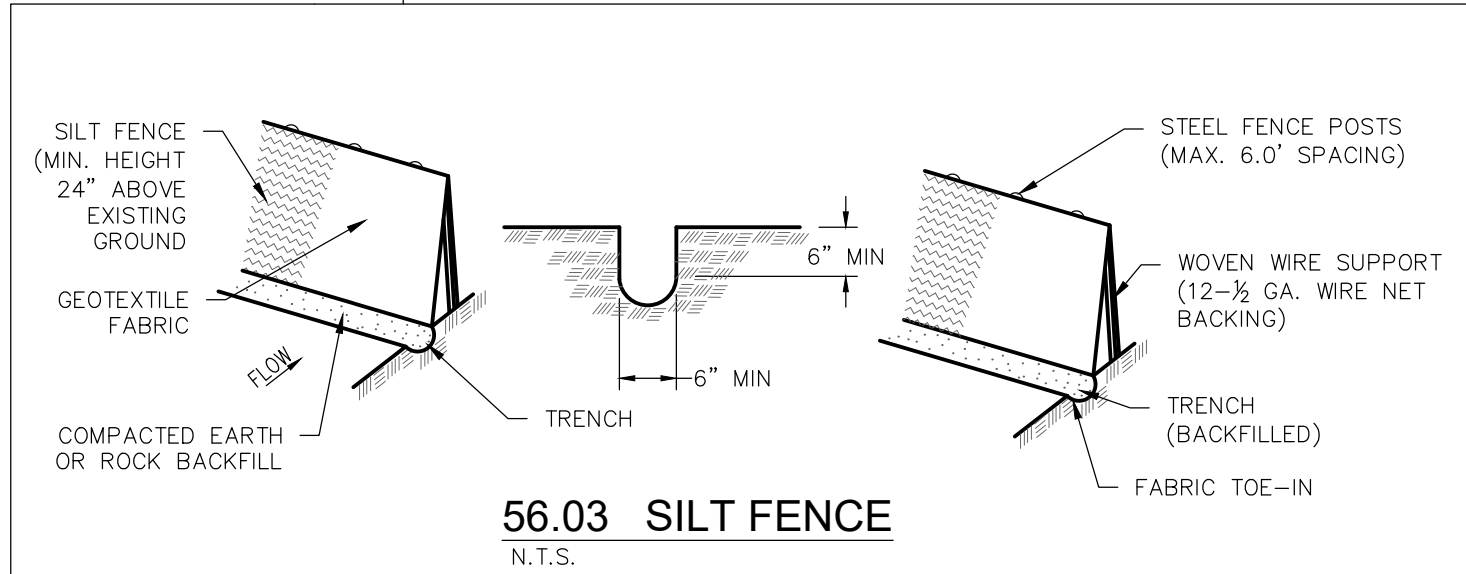
GRATE INLET PROTECTION



56.01 STABILIZED CONSTRUCTION EXIT
N.T.S.



CONSTRUCTION STAGING AREA
N.T.S.



56.03 SILT FENCE
N.T.S.

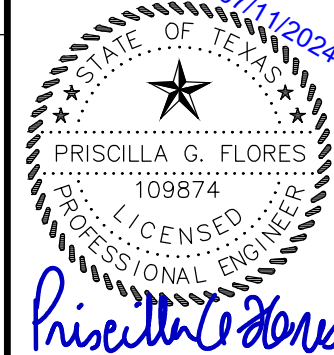
- NOTES:
- USE ONLY OPEN GRADED ROCK 4-8 INCH DIAMETER FOR STREAMFLOW CONDITION; USE OPEN GRADED ROCK 3-5 INCHES DIAMETER FOR OTHER CONDITIONS.
 - THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
 - THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN. THE STONE AND/OR FABRIC CORE - WOVEN WIRE SHEATHING, SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
 - WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
 - DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
 - WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

56.05 ROCK BERM
N.T.S.

VERAMENDI PRECINCT 19 UNIT 1

SWPPP DETAILS

REVISIONS	DATE	BY	DESCRIPTION
NO.			
1	7/11/2024	NG	
2		TM	
3		PF	
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Phone 210.503.2700
LJA.COM
LJA Engineering, Inc.
8830 Calomarde Blvd
Suite 300
San Antonio, Texas 78230

LJA Engineering, Inc.
8830 Calomarde Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER:
SA3856.0401

SHEET NO.

56

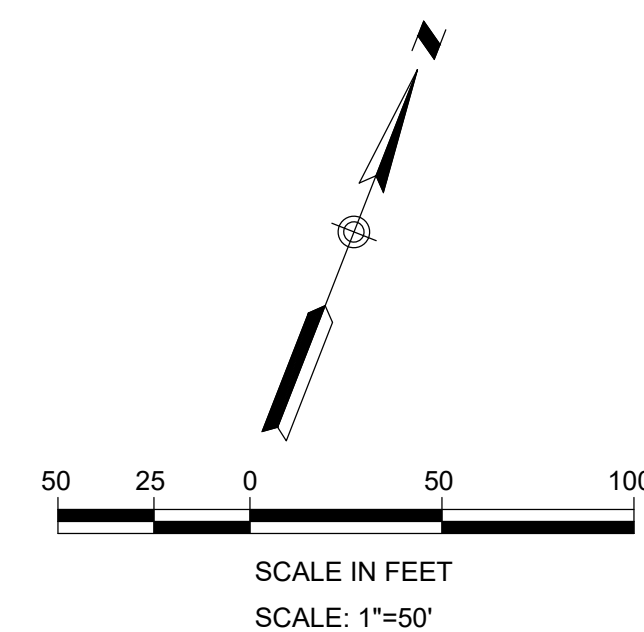
OF 60 SHEETS

FOR PERMIT

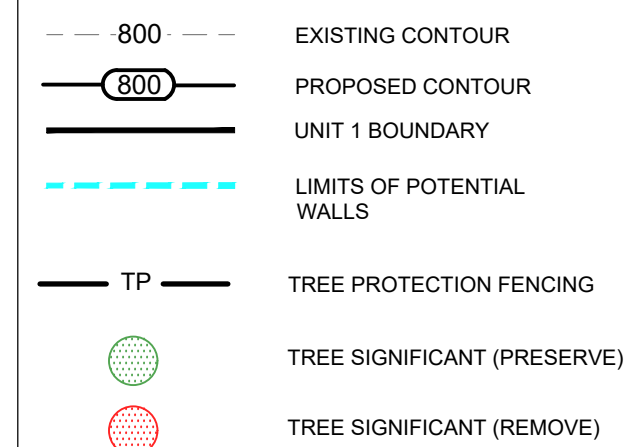


LOCATION MAP

SCALE: 1" = 2000'



LEGEND



NOTES

1. ALL TREE PROTECTION FENCING SHALL CONSIST OF LEVEL 1 FENCING PROTECTION UNLESS OTHERWISE NOTED.
2. NO CONSTRUCTION SHALL OCCUR WITHIN THE ONE HALF (1/2) ROOT PROTECTION ZONE.
3. REFER TO SHEET 24 FOR PROTECTION DETAILS

VERAMENDI PRECINCT 19 UNIT 1
TREE PRESERVATION PLAN
(SHEET 2 OF 3)

[illegible]

DATE: 9/11/2024
DESIGNED BY: NG
DRAWN BY: TM
CHECKED BY: PF
DRAWING NAME:
sh_Tree Preservation Plan.dwg



LJA Engineering, Inc.

99830 Colonnade Blvd
Suite 300
San Antonio, Texas 78230

JOB NUMBER:

SHEET NO.

58

OF 60 SHEETS





1. ALL TREE
UNLESS OF

[illegible]

09/27/2024



JOB NUMBER:

50

K:\348566_ASA Properties\348566_Veramendi Precinct 19-1_V205_Site Development_Plan\348566_Sheet\sh...Tree Preservation Plan.dwg
User: Mofidine Date: 11/24/24
Plot: 11x17 Date: 11/24/24

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage				
Tag #	Species	Exempt	Significant Tree	
			Removed	Preserved
3210	21" OAK		21	
3211	23" OAK		23	
3221	8" MESQUITE		8	
3222	8" MESQUITE		8	
3223	9" MESQUITE		9	
3224	8" MESQUITE		8	
3225	8" MESQUITE		8	
3226	8" MESQUITE		8	
3227	8" MESQUITE		8	
3230	10" MESQUITE		10	
3231	8" MESQUITE		8	
3232	8" MESQUITE		8	
3237	9" MESQUITE		9	
3238	12" MESQUITE		12	
3239	16" MESQUITE		16	
3240	8" MESQUITE		8	
3241	20" CEDAR		20	
3242	26" OAK		26	
3243	40" OAK		40	
3244	27" OAK		27	
3245	24" OAK		24	
3246	19" OAK		19	
3247	21" OAK		21	
3248	22" OAK		22	
3249	18" OAK		18	
3250	19" CEDAR		19	
3251	13" OAK			13
3252	33" OAK			33
3253	12" OAK			12
3254	10" OAK			10
3255	16" OAK			16
3256	14" OAK			14
3257	11" OAK			11
3258	14" OAK			14
3259	12" OAK		12	
3260	12" OAK		12	
3261	14" OAK		14	
3262	13" OAK		13	
3263	21" OAK			21
3264	15" OAK		15	
3265	14" OAK		14	
3266	20" OAK		20	
3267	18" OAK		18	
3268	18" OAK		18	
3269	12" OAK		12	
3270	13" OAK			13
3271	14" OAK			14
3272	25" OAK		25	
3273	21" OAK		21	
3274	17" OAK		17	
3275	14" OAK		14	
3276	11" OAK		11	
3277	13" OAK		13	
3278	14" OAK		14	
3279	21" OAK			21
3280	16" OAK		16	
3281	15" OAK		15	
3282	19" OAK		19	
3283	16" OAK		16	
3284	12" OAK		12	
3285	15" OAK		15	
3286	20" OAK		20	
3287	14" OAK		14	
3288	15" OAK		15	
3289	15" OAK		15	
3290	17" OAK		17	
3291	14" OAK		14	
3292	13" OAK		13	
3293	14" OAK		14	
3294	13" OAK		13	
3295	15" OAK		15	
3296	15" OAK		15	
3297	14" OAK		14	
3298	13" OAK		13	
3299	18" OAK		18	
3300	11" OAK		11	
3301	17" OAK		17	
3302	19" OAK		19	
3303	17" OAK		17	
3304	14" OAK			14
3305	18" OAK			18
3306	13" OAK			13
3307	11" OAK			11
3308	15" OAK			15
3309	24" OAK			24
3310	15" OAK			15
3311	21" OAK			21

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage				
Tag #	Species	Exempt	Significant Tree	
			Removed	Preserved
3312	16" OAK			16
3313	15" OAK			15
3314	24" OAK		24	
3315	20" CEDAR		20	
3316	14" OAK		14	
3317	20" OAK		20	
3318	15" OAK		15	
3319	17" OAK		17	
3320	21" OAK		21	
3321	31" OAK		31	
3322	15" OAK			15
3323	18" OAK			18
3324	44" OAK			44
3325	8" OAK			8
3326	19" OAK			19
3327	17" OAK			17
3328	20" OAK			20
3329	29" OAK			29
3330	12" OAK			12
3331	16" OAK			16
3332	14" OAK			14
3333	17" OAK			17
3334	18" OAK			18
3335	12" OAK			12
3336	19" OAK			19
3337	16" OAK			16
3338	32" OAK			32
3339	25" OAK			25
3340	32" OAK			32
3341	13" OAK		13	
3342	10" OAK		10	
3343	10" OAK		10	
3344	11" OAK		11	
3345	9" MESQUITE		9	
3346	9" MESQUITE		9	
3347	33" OAK		33	
3348	27" OAK		27	
3349	22" OAK		22	
3350	13" OAK		13	
3351	17" OAK		17	
3352	21" CEDAR		21	
3353	8" MESQUITE		8	
3354	10" MESQUITE		10	
3355	27" OAK			27
3356	20" OAK		20	
3357	15" OAK		15	
3358	19" OAK		19	
3359	16" OAK		16	
3360	17" OAK			17
3361	17" OAK			17
3362	24" OAK		24	
3363	41" OAK		41	
3364	16" OAK		16	
3365	15" OAK		15	
3366	24" OAK		24	
3367	19" OAK		19	
3368	22" OAK		22	
3369	30" OAK		30	
3370	35" OAK		35	
3371	16" OAK		16	
3372	18" OAK		18	
3373	21" OAK		21	
3374	22" OAK			22
3375	26" OAK		26	
3376	8" CEDAR ELM		8	
3377	13" OAK		13	
3378	9" OAK		9	
3379	10" OAK		10	
3380	10" OAK		10	
3381	9" OAK		9	
3382	13" OAK		13	
3383	10" OAK		10	
3384	13" OAK		13	
3385	11" OAK		11	
3386	8" OAK		8	
3387	8" OAK			8
3388	12" OAK			12
3389	9" CEDAR ELM		9	
3390	18" OAK		18	
3391	21" OAK			21
3392	9" CEDAR ELM			9
3393	13" CEDAR ELM			13
3394	11" OAK			11
3395	8" OAK			8
3396	9" OAK			9
3397	8" OAK			8
3398	8" OAK		8	
3399	8" CEDAR ELM		8	
3400	9" OAK		9	
3401	17" OAK		17	

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage				
Tag #	Species	Exempt	Significant Tree	
			Removed	Preserved
3402	21" OAK		21	
3403	9" OAK		9	
3404	8" OAK		8	
3405	14" OAK		14	
3406	11" OAK		11	
3407	8" CEDAR ELM		8	
3408	8" CEDAR ELM		8	
3409	8" OAK		8	
3410	11" OAK		11	
3411	8" OAK		8	
3412	12" OAK		12	
3413	13" OAK		13	
3414	20" OAK		20	
3415	18" OAK		18	
3416	10" OAK		10	
3417	12" OAK		12	
3418	12" OAK		12	
3419	11" OAK		11	
3420	15" OAK		15	
3421	14" OAK		14	
3422	16" OAK		16	
3423	19" OAK		19	
3424	8" CEDAR ELM		8	
3425	35" OAK		35	
3426	13" OAK		13	
3427	27" OAK		27	
3428	9" CEDAR ELM		9	
3429	16" OAK		16	
3430	12" CEDAR ELM		12	
3431	12" OAK		12	
3432	11" OAK		11	
3433	15" OAK		15	
3434	13" OAK		13	
3435	15" OAK		15	
3436	9" OAK		9	
3437	12" OAK		12	
3438	16" OAK		16	
3439	13" OAK		13	
3440	9" OAK		9	
3441	12" OAK		12	
3442	11" OAK		11	
3443	20" OAK		20	
3444	13" OAK		13	
3445	12" OAK		12	
3446	15" OAK		15	
3447	12" OAK		12	
3448	13" OAK		13	
3449	11" OAK		11	
3450	17" OAK		17	
3451	9" OAK		9	
3452	14" OAK		14	
3453	17" OAK		17	
3454	16" OAK		16	
3455	15" OAK		15	
3456	16" OAK		16	
3457	18" CEDAR ELM		18	
3458	10" OAK		10	
3459	19" OAK		19	
3460	17" OAK		17	
3461	18" OAK		18	
3462	21" OAK		21	
3463	14" OAK		14	
3464	18" OAK		18	
3465	20" OAK		20	
3466	13" OAK		13	
3467	18" OAK		18	
3468	11" OAK		11	
3469	16" OAK		16	
3470	17" OAK		17	
3471	18" OAK		18	
3472	14" OAK		14	
3473	12" OAK		12	
3474	15" OAK		15	
3475	22" OAK		22	
3476	18" OAK		18	
3477	16" OAK		16	
3478	16" OAK		16	
3479	15" OAK		15	
3480	10" OAK		10	
3481	8" OAK		8	
3482	13" OAK		13	
3483	11" OAK		11	
3484	11" OAK		11	
3485	38" OAK		38	
3486	9" OAK		9	
3487	16" OAK		16	
3488	13" OAK		13	
3489	14" OAK		14	
3490	8" OAK		8	
3491	11" OAK		11	

Tree Inventory Worksheet to Determine Preservation and Canopy Shade Coverage				
Tag #	Species	Exempt	Significant Tree	
			Removed	Preserved
3492	15" OAK		15	
3493	16" OAK		16	
3494	10" OAK		10	
3495	14" OAK		14	
3496	20" OAK		20	
3497	10" OAK		10	
3498	12" OAK		12	
3499	15" OAK		15	
3500	18" OAK		18	
3501	21" OAK		21	
3502	19" OAK		19	
3503	8" CEDAR ELM		8	
3504	16" OAK		16	
3505	21" OAK		21	
3506	22" OAK		22	
3507	15" OAK		15	
3508	14" OAK		14	
3509	15" OAK		15	
3510	10" OAK		10	
3511	13" OAK		13	
3512	17" OAK		17	
3513	11" OAK		11	
3514	18" OAK		18	
3515	17" OAK		17	
3516	15" OAK		15	
3517	16" OAK		16	
3518	19" OAK		19	
3519	18" OAK		18	
3520	18" OAK		18	
3521	12" OAK		12	
3522	33" OAK		33	
3523	27" OAK		27	
3524	16" OAK		16	
3525	16" OAK		16	
3526	14" OAK		14	
3527	32" OAK		32	
3528	12" OAK		12	
3529	15" OAK		15	
3530	9" OAK		9	
3531	35" OAK		35	
3532	21" OAK		21	
3533	22" OAK		22	
3534	9" OAK		9	
3535	30" OAK		30	
3536	15" OAK		15	
3537	11" OAK		11	
3538	11" OAK		11	
3539	9" OAK		9	
3540	8" OAK		8	
3541	13" OAK		13	
3542	15" OAK		15	
3543	15" OAK		15	
3544	9" OAK		9	
3545	23" OAK		23	
3546	16" OAK		16	
3547	14" OAK		14	
3548	16" OAK		16	
3549	9" OAK		9	
3550	12" OAK		12	
3551	12" OAK		12	
3552	25" OAK		25	
3553	9" OAK		9	
3554	18" OAK		18	
3555	12" OAK		12	
3556	16" OAK		16	
3557	24" OAK			24
3558	12" OAK			12
3559	9" CEDAR ELM			9
3560	20" OAK			20
3561	17" OAK			17
3562	9" OAK			9
3563	9" OAK			9
3564	10" CEDAR ELM			10
3565	22" OAK			22
3566	38" OAK			38
3567	24" OAK		24	
3568	27" OAK		27	
3569	15" OAK		15	
3570	17" OAK		17	
3571	26" OAK		26	
3572	21" OAK		21	
3573	12" OAK		12	
3574	9" OAK		9	
3575	9" OAK		9	
3576	9" OAK		9	
3577	11" OAK		11	
3578	16" OAK		16	
3579	16" OAK		16	
3580	13" OAK		13	
3581	17" OAK		17	