

SUMMARY NOTES:

DEVELOPER/OWNER:	EMILIANO GUERRERO FORESTAR (USA) REAL ESTATE GROUP 16500 SAN PEDRO AVE., SUITE 400 SAN ANTONIO, TX 78232
ENGINEER:	BGE, INC., TBPE-1046 CONTACT: AARON NEUMANN, P.E. EMAIL: ANEUMANN@BGEINC.COM 7330 SAN PEDRO AVENUE SUITE 202 SAN ANTONIO, TEXAS 78216 PHONE: (210) 581-3600
SURVEYOR:	BGE, INC., TBPE F1046 CONTACT: DION ALBERTSON EMAIL: DALBERTSON@BGEINC.COM 7330 SAN PEDRO AVENUE SUITE 202 SAN ANTONIO, TEXAS 78216 PHONE: (210)581-3600

FLOODPLAIN INFORMATION

A PORTION OF THE LOT IN THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100 YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE LIMITS OF THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL.

CONTROL POINTS

PANEL POINT 103 SURFACE GRID N. 13,735,448.23 E. 2,026,254.82	GENERAL NOTES 1. COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, AND ARE IN SURFACE COORDINATES. 2. PANEL POINTS ARE SIR12 WITH BGE CAPS OR A MAG NAIL WITH A BGE WASHER IN ASPHALT AND 1" X 2" CHEVRON FOR PANEL POINT.
PANEL POINT 104 SURFACE GRID N. 13,738,239.53 E. 2,025,887.19	
PANEL POINT 107 SURFACE GRID N. 13,735,419.26 E. 2,023,790.18	

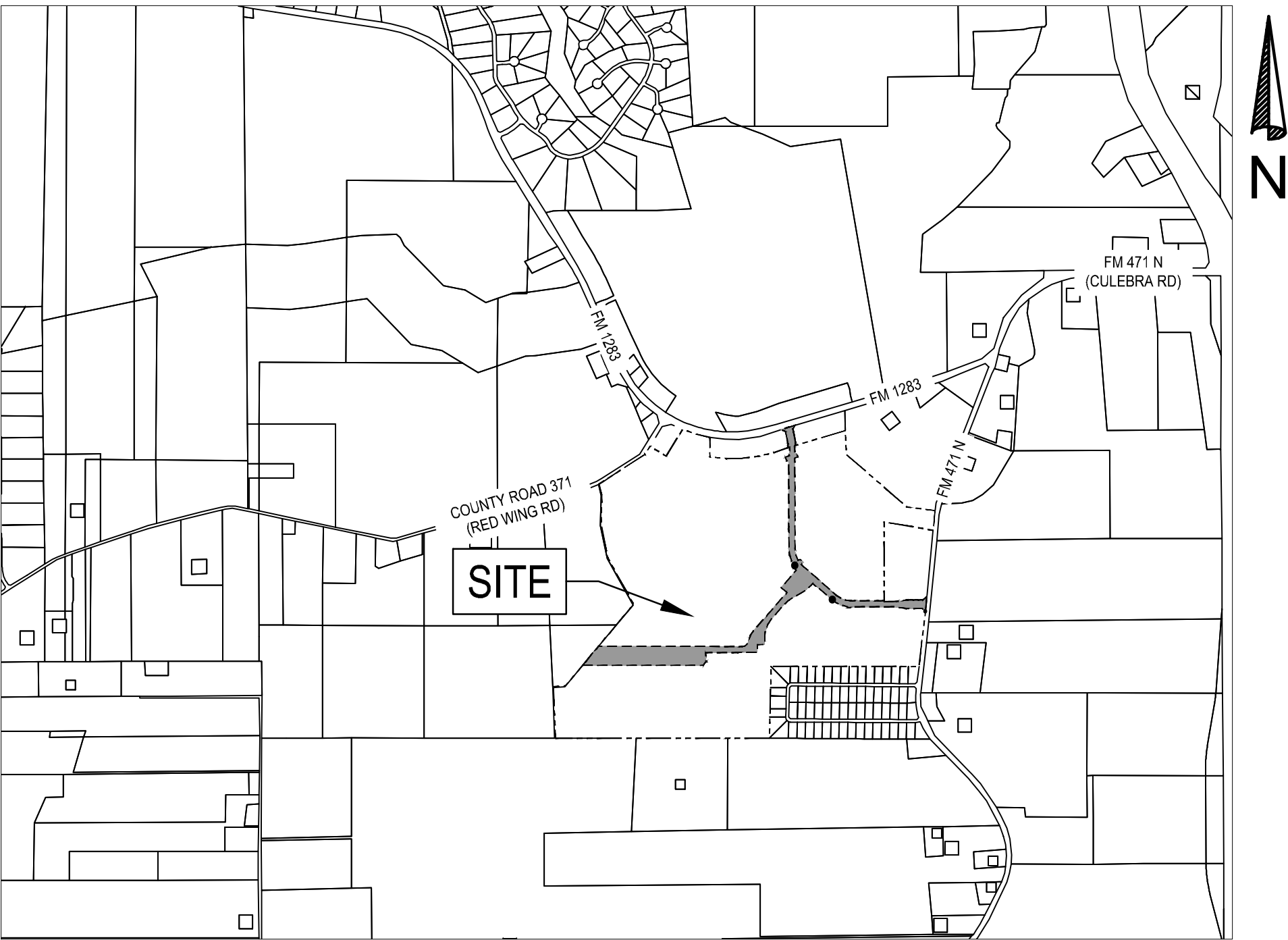
GENERAL NOTES

ALL CONSTRUCTION SHALL CONFORM TO THE LATEST SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.

CIVIL CONSTRUCTION DRAWINGS:
WEATHERWOOD RANCH PHASE 1
SAN ANTONIO WATER SYSTEM
WATER PLANS

APRIL 2024


VICINITY MAP - 1" = 2000'



SHEET LIST TABLE

Sheet Description	Sheet Title
C00.00	W - TITLE SHEET
C01.00	W - CIVIL GENERAL NOTES
C02.10	W - MASTER UTILITY PLAN
C08.00	W - PHASE 1 WATER DISTRIBUTION PLAN (SHEET 1 OF 3)
C08.01	W - PHASE 1 WATER DISTRIBUTION PLAN (SHEET 2 OF 3)
C08.02	W - PHASE 1 WATER DISTRIBUTION PLAN (SHEET 3 OF 3)
C10.00	W - CIVIL UTILITY DETAILS

REVISIONS/CORRECTIONS					
SHEET LIST	DESCRIPTION	DATE	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	ACCEPTED BY	APPROVAL DATE



Know what's below.
Call before you dig.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SAWS PRESSURE ZONE 1170

DEVELOPER NAME: FORESTAR (USA) REAL ESTATE GROUP			
DEVELOPER ADDRESS: 16500 SAN PEDRO AVE			
CITY: SAN ANTONIO	STATE: TX	ZIP: 78232	
PHONE: N/A	FAX: N/A	114451	
SAWS BLOCK MAP # XXXX	TOTAL EDUS 14	TOTAL ACREAGE 29.3	
TOTAL LINEAR FOOTAGE OF PIPE 4.843	PLAT NO. 22-11800271		
NUMBER OF LOTS 0	SAWS JOB NO. 22-1128		



SUBMITTED BY

DATE:

AARON J. NEUMANN, P.E.
BGE, INC. TBPE NO. F-1046
7330 SAN PEDRO AVENUE
SUITE 202
SAN ANTONIO, TEXAS
78216
(210) 581-3600 (MAIN)



BGE, Inc.
7330 San Pedro Ave., Suite 202
San Antonio, TX 78216
Tel: 210-581-3600 • www.browngay.com
TBPE Registration No. F-1046

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TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND 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 TRENCH EXCAVATION. CONTRACTOR SHALL PROVIDE DOCUMENTS TO THE EMPLOYEE OR CONSULTANT 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 COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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NOTE:
IF THE MAXIMUM STATIC PRESSURE EXCEEDS 80 PSI, A PRV WILL BE REQUIRED ON THE
PROPERTY OWNER'S SIDE OF THE WATER METER.

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PROPOSED WATER MAIN SHALL BE:
HDPE PIPE WITH 4" TO 66" DIAMETER SHALL BE PE4710 SOLID WALL PIPE AND FITTINGS THAT ARE IN CONFORMANCE WITH ASTM F714, AWWA C901 AND C906, AND NSF 61 REQUIREMENTS STATED HEREIN

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ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARDS SPECIFICATION FOR CONSTRUCTION (ITEM NO. 839)

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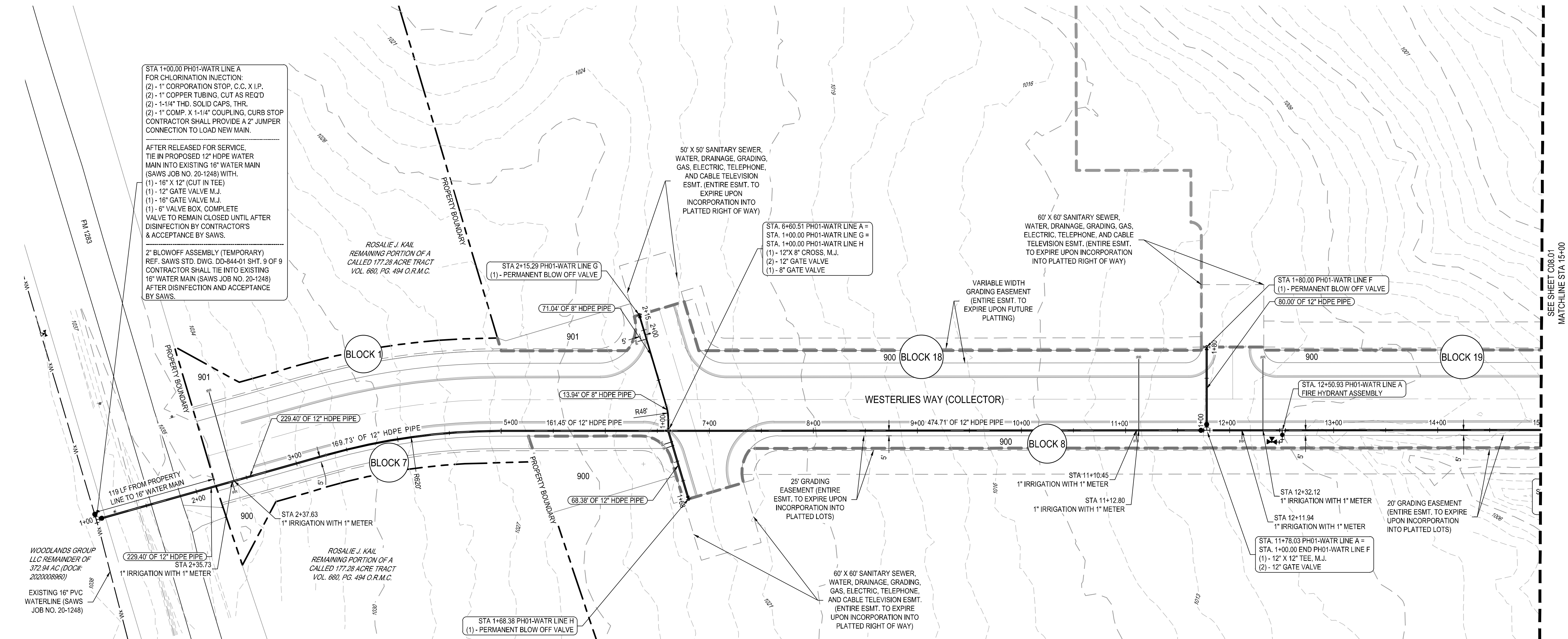
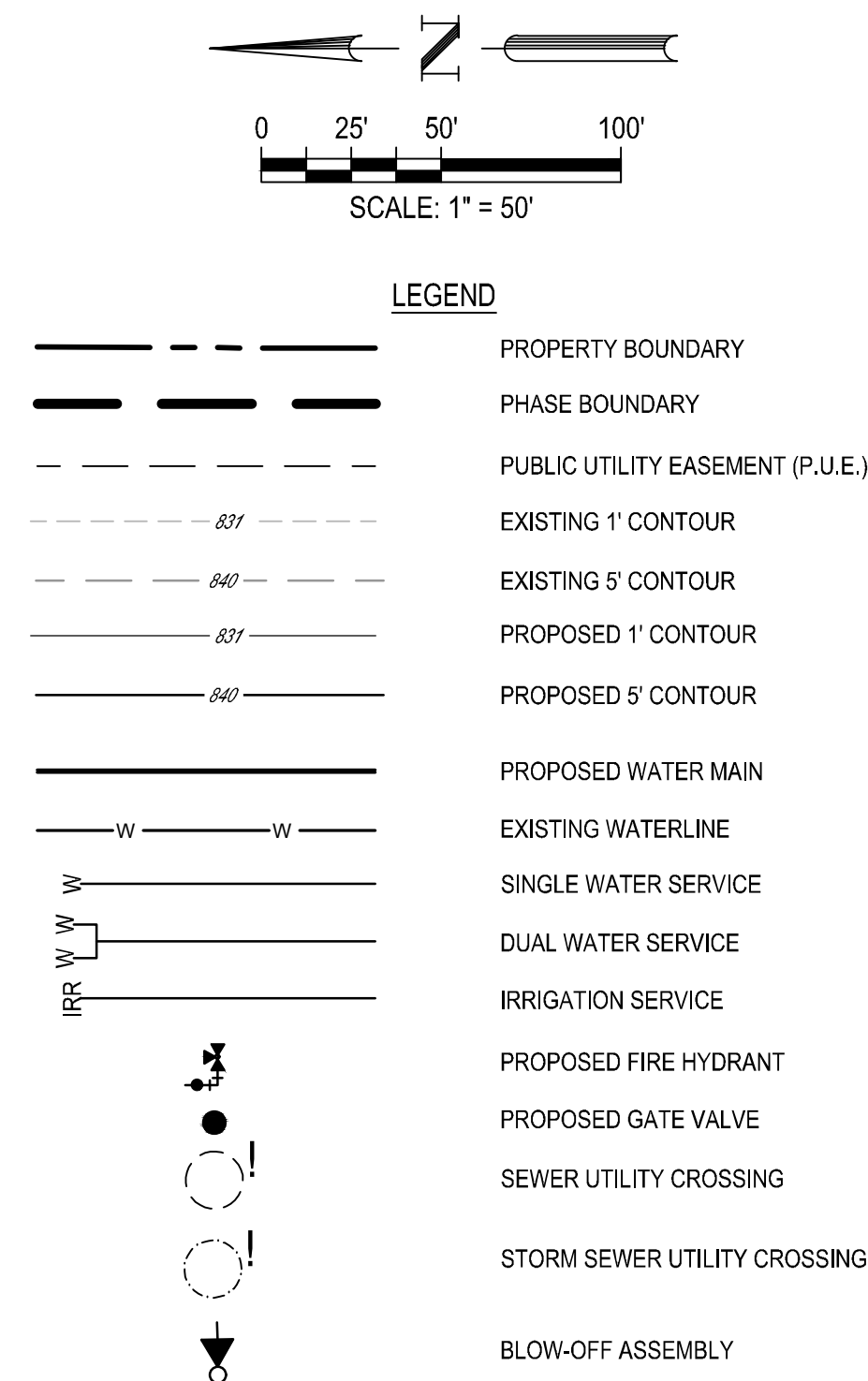
PROPOSED WATER SERVICE SHALL BE:
3/4" COPPER SERVICE LINE WITH 5/8" METER

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3/4" COPPER SERVICE LINE WITH 5/8" METER

FIRE FLOW NOTE:
IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1,500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT MARSHALL.

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1. ALL MAINS SHALL BE FLUSHED, HYDROSTATICALLY TESTED, AND DISINFECTED BY THE CONTRACTOR.
2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
3. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT THEIR EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
5. ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITY OR IMPROVEMENT, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS.
6. DEPTH OF BURY FOR ALL PIPING SHALL BE A MINIMUM OF 4' UNLESS OTHERWISE NOTED OR APPROVED BY SAWS.
7. CONTRACTOR TO GRADE SITE TO WITHIN +/- 0.10' BEFORE THE INSTALLATION OF UTILITIES TO ENSURE PROPER COVER IS ACHIEVED.
8. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES REGARDING THE LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR SHALL EXCAVATE AROUND EXISTING UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF THE SERVICES AND NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS, PRIOR TO ANY CONSTRUCTION IN THE AREA.
10. ALL DISTURBED AREAS WITHIN EASEMENTS AND CITY OF SAN ANTONIO RIGHT-OF-WAY SHALL BE HYDRO-MULCHED IN ACCORDANCE WITH THE CITY OF SAN ANTONIO SUBDIVISION ORDINANCE AND TxDOT SPECIFICATIONS.
11. FOR WATER METER BOX LOCATION DETAIL, SEE SHEET C10.00.



SAWS PRESSURE ZONE 1170

DEVELOPER NAME: FORESTAR (USA) REAL ESTATE GROUP

DEVELOPER ADDRESS: 16500 SAN PEDRO AVE

CITY: SAN ANTONIO STATE: TX ZIP: 78232

PHONE: N/A FAX: N/A

SAWS BLOCK MAP #: XXXX TOTAL EDU'S: 14 TOTAL ACREAGE: 29.3

TOTAL LINEAR FOOTAGE OF PIPE: 4.843 PLAT NO: 22-11800271

NUMBER OF LOTS: 0 SAWS JOB NO: 22-1128

DESIGNED BY:	TR	DESCRIPTION	DATE	APR
REVIEWED BY:	KH			
DRAWN BY:	MV			
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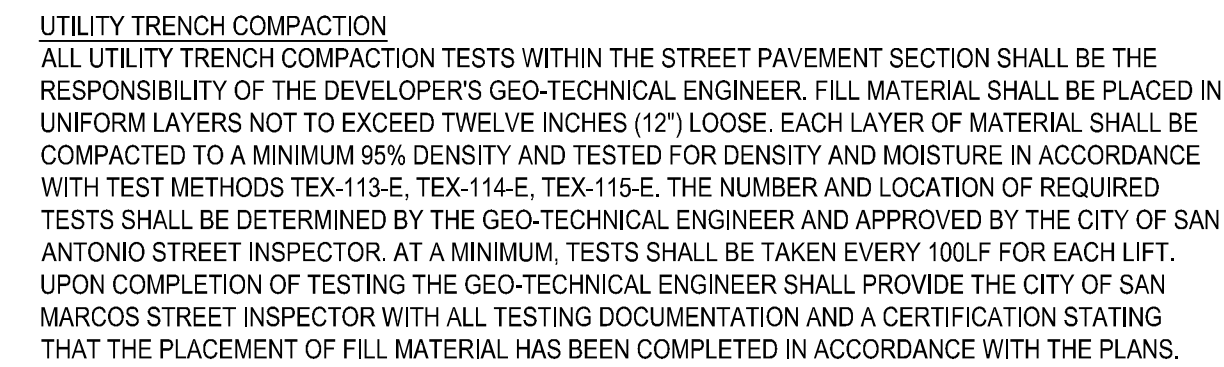


BROWN & GAY ENGINEERS, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 210-581-3600 www.bgeinc.com
TBPE Registration No. F-1046

WEATHERWOOD PHASE 1
CASE 1 WATER DISTRIBUTION PLAN
(SHEET 1 OF 3)

04/22/2024

C08.00



TRENCH EXCAVATION SAFETY PROTECTION
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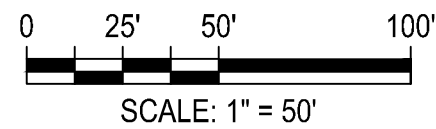
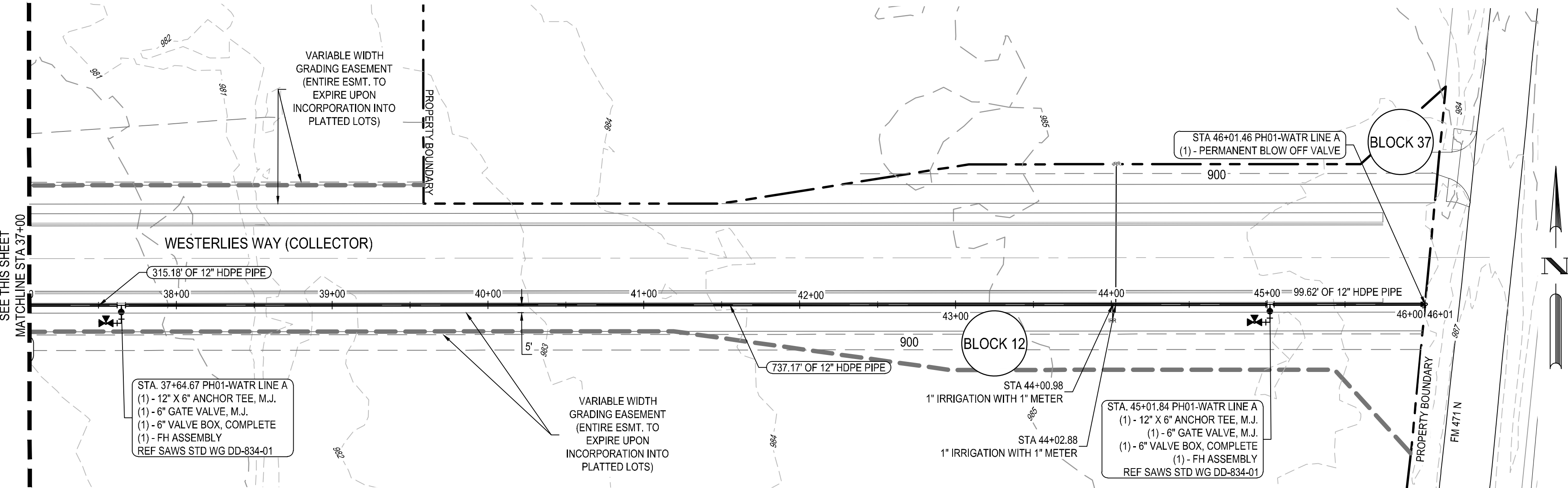
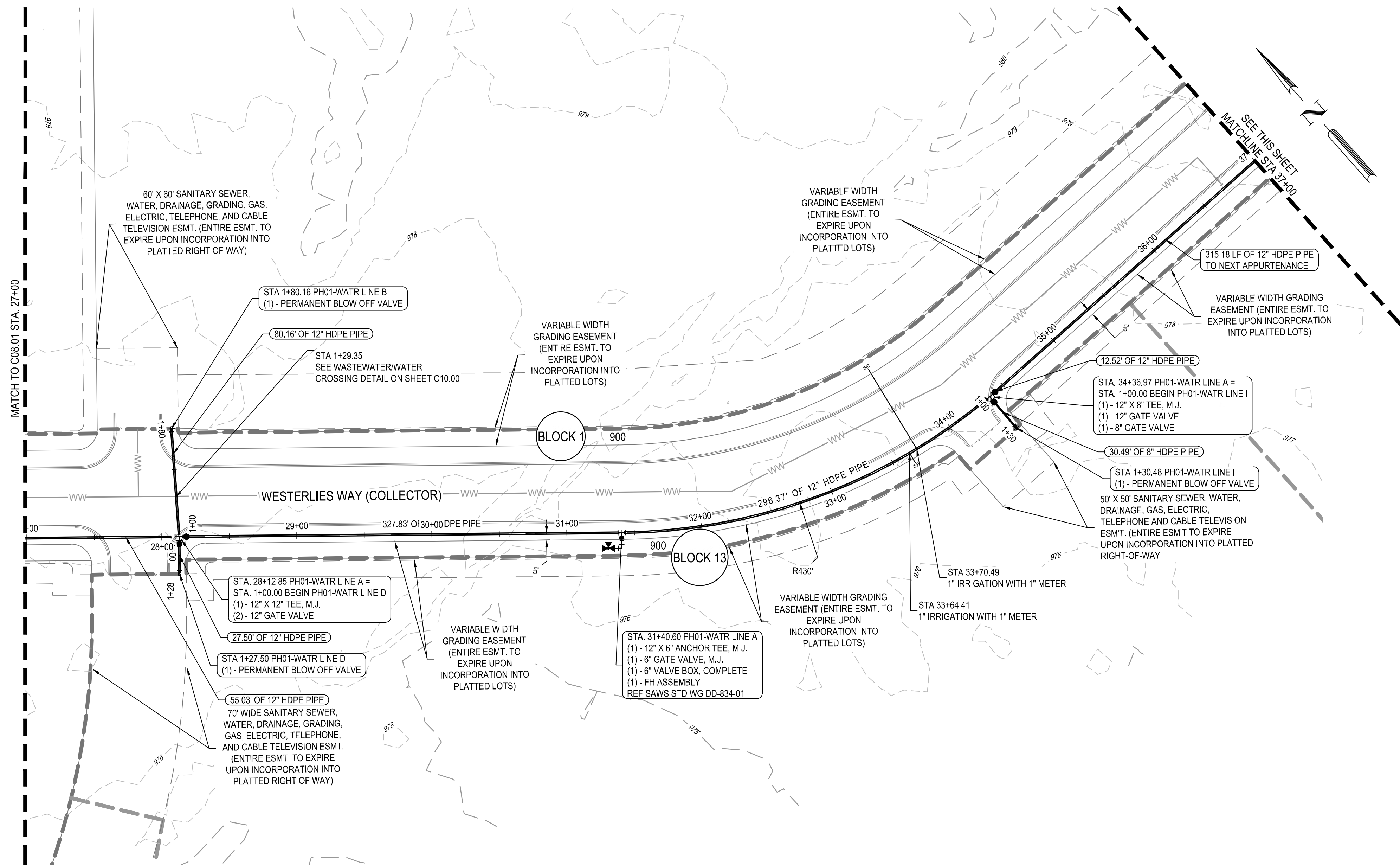
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11. FOR WATER METER BOX LOCATION, SEE SHEET C10.00.

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DEVELOPER NAME: FORESTAR (USA) REAL ESTATE GROUP	
DEVELOPER ADDRESS: 16500 SAN PEDRO AVE	
CITY: SAN ANTONIO	STATE: TX ZIP: 78232
PHONE: N/A	FAX: N/A
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TOTAL LINEAR FOOTAGE OF PIPE: 4.843	PLAT NO.: 22-11800271
NUMBER OF LOTS: 0	SAWS JOB NO.: 22-1128



G:\TXC\Projects\San Antonio Projects\439-00 - Schuchart Ranch\05 - Phase 1 Design\03_CADD\01_Shts_Water Plans\05 W C08.00 PHASE 1 WATER DISTRIBUTION PLAN.dwg Layout: 68 W - PHASE 1 WATER DISTRIBUTION PLAN (SHEET 3 OF 3) Plotted: 4/22/2024 12:04:20 PM By: Jramones



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PUBLIC UTILITY EASEMENT (P.U.E.)
	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED 5' CONTOUR
	PROPOSED WATER MAIN
	EXISTING WATERLINE
	SINGLE WATER SERVICE
	DUAL WATER SERVICE
	IRRIGATION SERVICE
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE
	SEWER UTILITY CROSSING
	STORM SEWER UTILITY CROSSING
	BLOW-OFF ASSEMBLY

UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. 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 GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF SAN ANTONIO STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF SAN MARCOS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

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NOTE:

1. SEE SHEET C10.00 AND THE SAWS WEBSITE FOR UTILITY DETAILS
2. ELECTRIC PLANS SHOWN FOR SCHEMATIC PURPOSES ONLY. REFER TO CPS PLANS FOR FULL ELECTRIC LAYOUT.

NOTE:

IF THE MAXIMUM STATIC PRESSURE EXCEEDS 80 PSI, A PRV WILL BE REQUIRED ON THE PROPERTY OWNER'S SIDE OF THE WATER METER.

UTILITY GENERAL NOTES:

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11. FOR WATER METER BOX LOCATION DETAIL, SEE SHEET C10.00.

FIRE HYDRANT LEAD FREE NOTE:

SAWS REQUIRES GCPS AND COUNTER PERMITS TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS

PROPOSED WATER MAIN SHALL BE:

HDPE PIPE WITH 4" TO 65" DIAMETER SHALL BE PE4710 SOLID WALL PIPE AND FITTINGS THAT ARE IN CONFORMANCE WITH ASTM F714, AWWA C901 AND C906, AND NSF 61 REQUIREMENTS STATED HEREIN

PIPE 6" AND LARGER DIAMETER SHALL BE A MINIMUM OF DR 11 (PRESSURE RATING OF 200 PSI) AND DUCTILE IRON PIPE SIZE (DIPS) OUTSIDE DIAMETER. ALL PIPE AND FITTINGS WILL BE HIGH DENSITY POLYETHYLENE PIPE AND MADE OF VIRGIN MATERIAL.

ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARDS SPECIFICATION FOR CONSTRUCTION (ITEM NO. 839).

BACK FLOW PREVENTION DEVICES FOR RESIDENTIAL SUBDIVISIONS:

ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACK FLOW PREVENTION DEVICES.

PROPOSED WATER SERVICE SHALL BE:

3/4" COPPER SERVICE LINE WITH 5/8" METER

UTILITY NOTE:

UTILITY SYMBOLS ARE NOT TO SCALE AND ARE ONLY FOR ILLUSTRATION PURPOSES. PREFER TO SAWS DETAILS ON THEIR WEBSITE FOR CONSTRUCTION STANDARDS AND SPECIFICATIONS.

FIRE FLOW NOTE:

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PRESSURE REDUCING VALVE NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 985 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 985 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMERS SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF PRESSURE REDUCING VALVE IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED

SAWS PRESSURE ZONE 1170

DEVELOPER NAME	FORESTAR (USA) REAL ESTATE GROUP
DEVELOPER ADDRESS	16500 SAN PEDRO AVE
CITY	SAN ANTONIO, STATE TX
PHONE	N/A
FAX	N/A
SAWS BLOCK MAP #	XXXX
TOTAL EDU'S	14
TOTAL ACREAGE	29.3
TOTAL LINEAR FOOTAGE OF PIPE	4,843
NUMBER OF LOTS	0
SAWS JOB NO.	22-11800221

DESIGN	REV	DATE	DESCRIPTION
DESIGNED BY:	TR		
REVIEWED BY:	KH		
DRAWN BY:	MV		



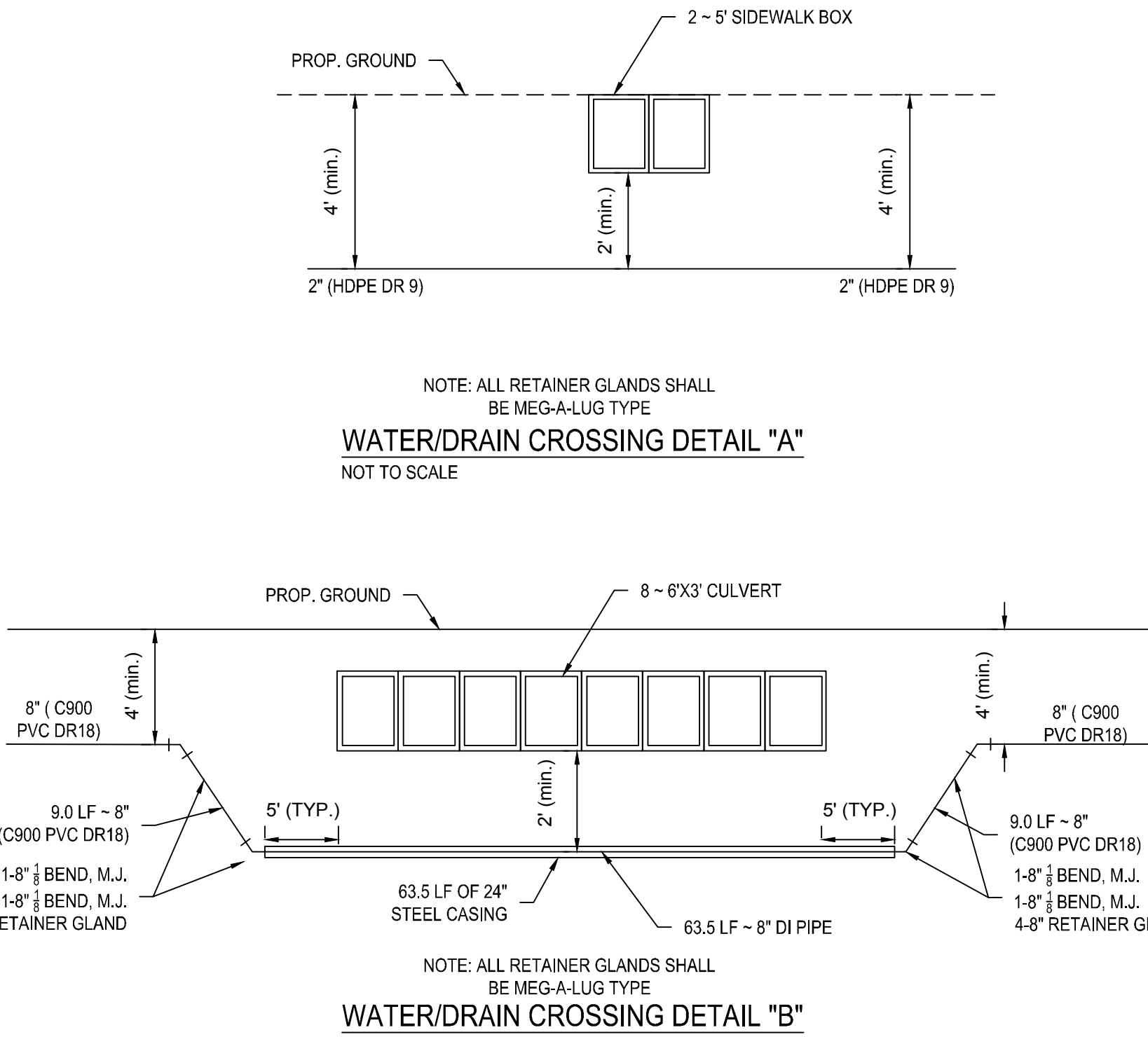
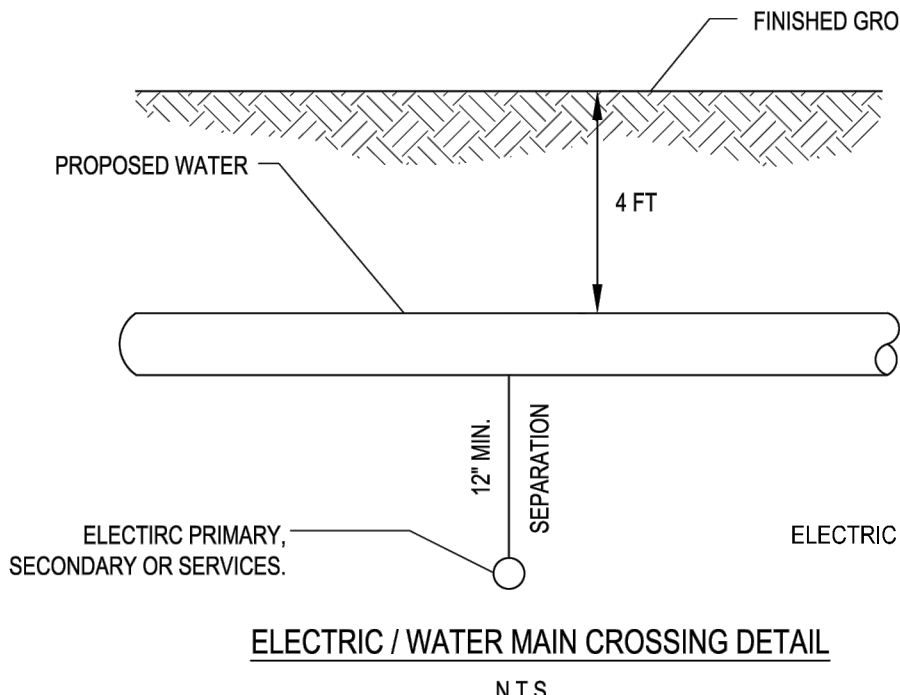
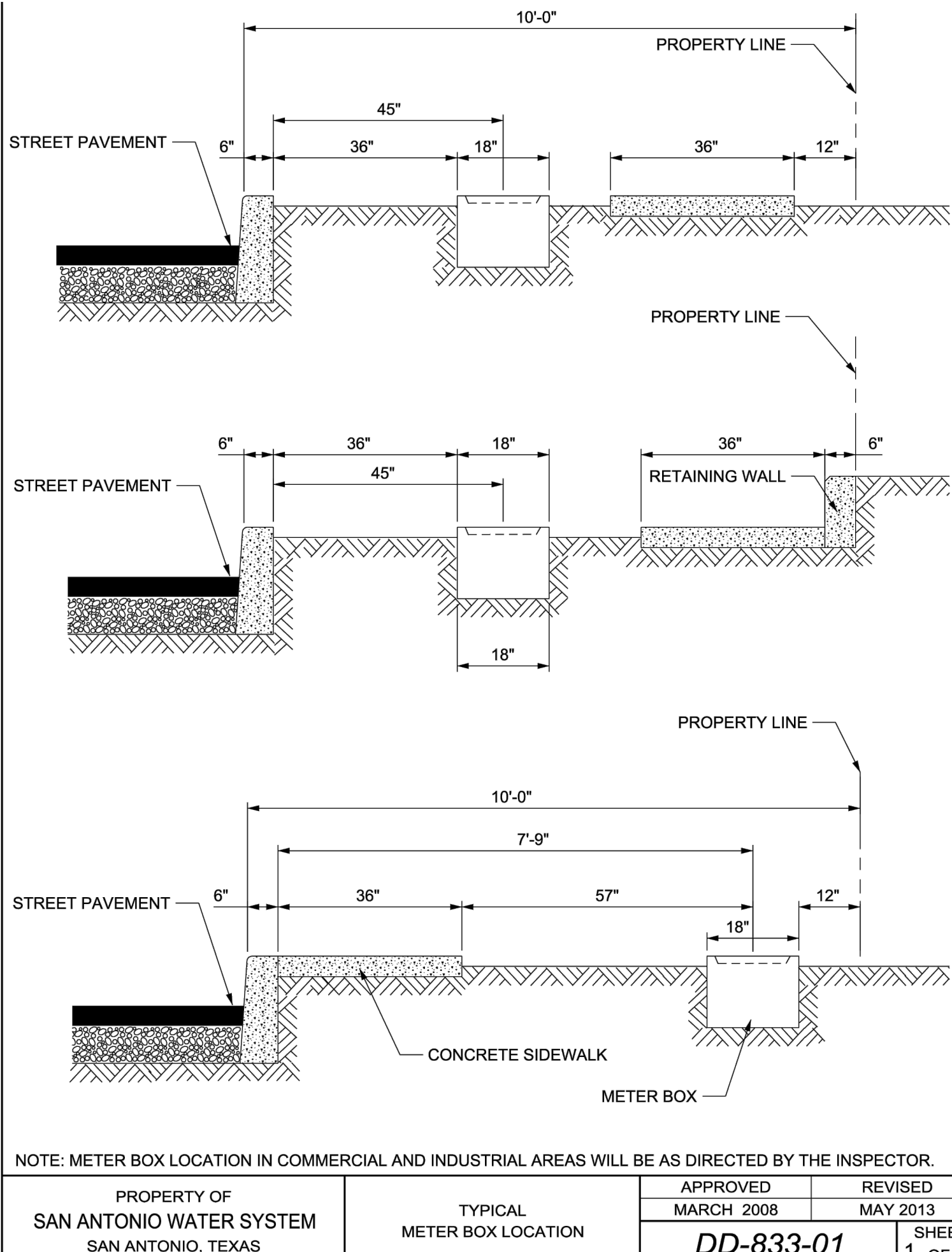
BROWN & GAY ENGINEERS, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-587-3800
FAX: 214-587-3800
www.bgeinc.com
TXPE Registration No. F-106



WEATHERWOOD PHASE 1
W - PHASE 1 WATER DISTRIBUTION PLAN
(SHEET 3 OF 3)



04/22/2024

C08.02



	<p>WEATHERWOOD PHASE 1</p> <p>W - CIVIL UTILITY DETAILS</p>	 <p>BROWN & GAY ENGINEERS, INC. 7330 San Pedro, Suite 202 Dallas, Texas 75247 TX 75247 TEL: 214-681-1990 BGE Registration No. E-1048</p>	DESIGNED BY:	AGS	REV	DESCRIPTION	DATE	APR
			REVIEWED BY:	KWH				
			DRAWN BY:	AGS				

SAWS PRESSURE ZONE 1170

DEVELOPER NAME: FORESTAR (USA) REAL ESTATE GROUP			
DEVELOPER ADDRESS: 16500 SAN PEDRO AVE			
CITY: SAN ANTONIO	STATE: TX	ZIP: 78232	
PHONE: N/A	FAX: N/A		
SAWS BLOCK MAP #: XXXXX	TOTAL EDU'S: 14	TOTAL ACREAGE: 29.3	
TOTAL LINEAR FOOTAGE OF PIPE: 4.843		PLAT NO. 22-11800271	
NUMBER OF LOTS: 0	SAWS JOB NO. 22-1128		