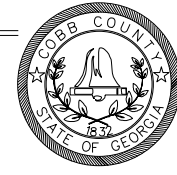
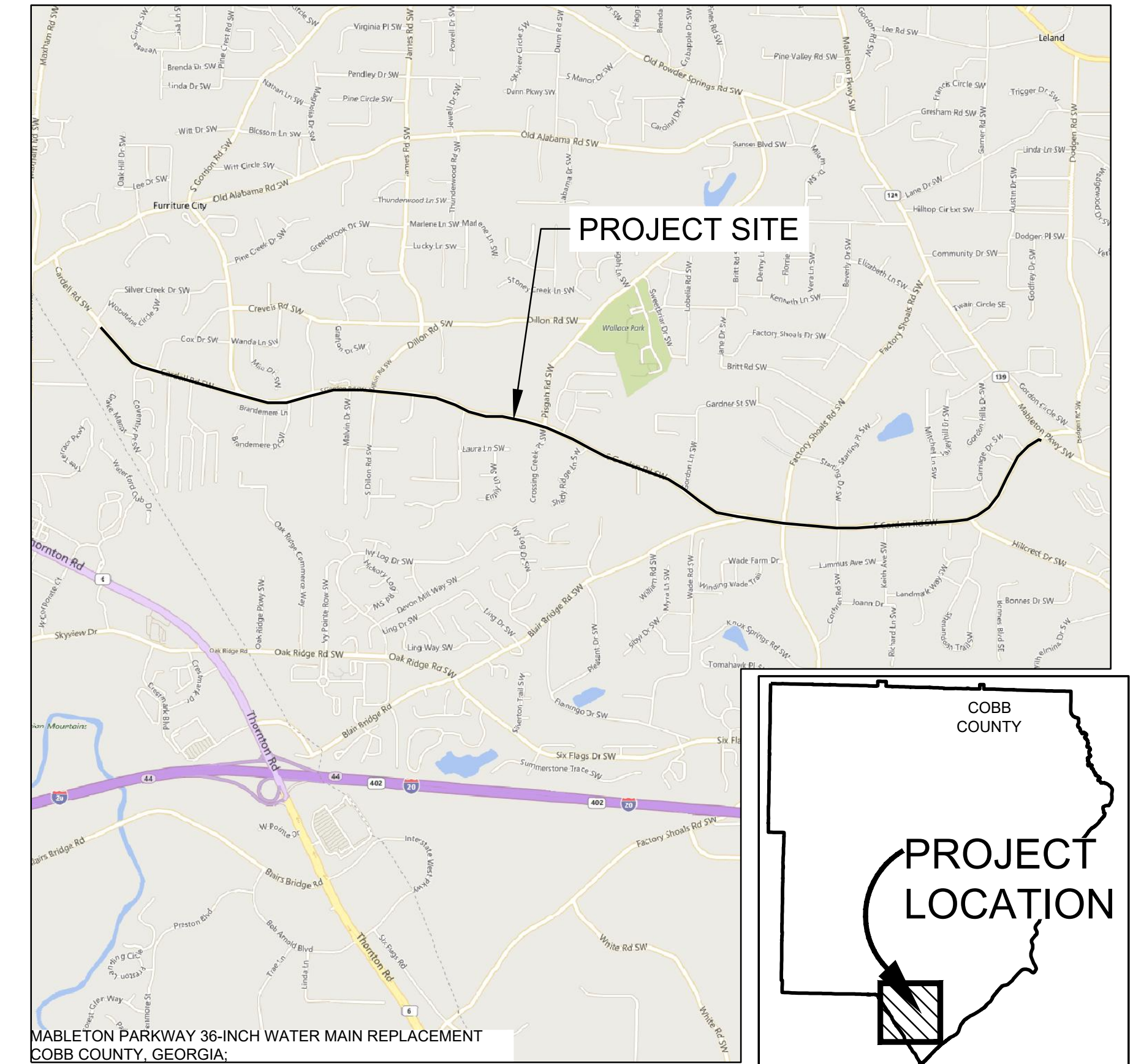
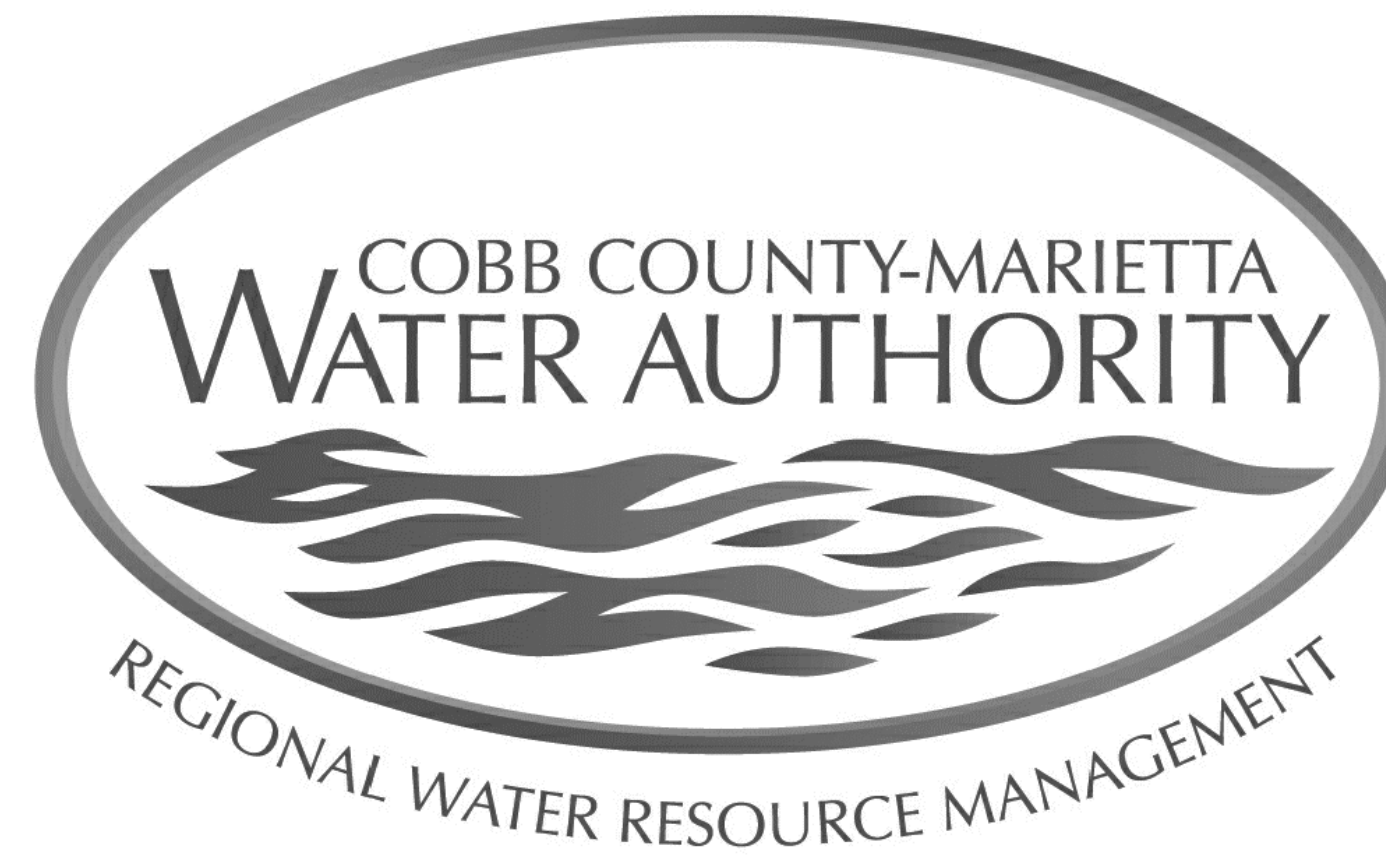


CONSTRUCTION PLANS FOR: COBB COUNTY-MARIETTA WATER AUTHORITY

SPR-2019-00046



ISSUED FOR BID



PROJECT LOCATION MAP

PROJECT: WEST SIDE LOOP SECTION 2 36-INCH WATER MAIN REPLACEMENT

505-9005-10-18-0000
DISTURBED AREA: 9.25 AC.

PROJECT BID DATE: XX/XX/XXXX
PROJECT COMPLETION DATE: XX/XX/XXXX
CONTRACTOR:
CONTRACTOR'S SUPERINTENDENT:
ENGINEER'S FIELD REP.:
CCMWA PROJECT MANAGER: CHRIS DILLARD

CONTRACTOR IDENTIFICATION AND LANGUAGE REQUIREMENTS:

ALL EQUIPMENT USED FOR THE MAINTENANCE OR INSTALLATION OF UTILITY FACILITIES ON PUBLIC RIGHT-OF-WAY SHALL BE IDENTIFIED WITH SIGNS THAT INDICATE THE UTILITY OWNER'S NAME AND TELEPHONE NUMBER. ALL PERSONNEL SHALL CARRY A NAME BADGE THAT IDENTIFIES THE UTILITY COMPANY FOR WHOM THEY ARE WORKING. AT LEAST ONE PERSON IN EACH OPERATION OR LOCATION SHALL BE FLUENT IN ENGLISH. THE INDIVIDUAL SHALL HAVE KNOWLEDGE OF WHAT HIS OR HER COMPANY IS DOING AND WHY.



REVISION TABLE			
NO.	ISSUE	BY	DATE
1	ISSUED FOR PERMIT	JCS	2/8/2019
2	ISSUED FOR BID	JCS	3/1/2019

CONSULTING ENGINEER:



Phone: (404) 334-4310
MARCH 2019

CCMWA BOARD MEMBERS

JAMES C. SCOTT JR.	CHAIRMAN
T.DANIEL "DAN" BUYERS	VICE CHAIRMAN
CHARLIE N. CROWDER	SECRETARY
A. MAX BACON	MEMBER
JAMES A. BALLI	MEMBER
MICHAEL H. BOYCE	MEMBER
GRIFFIN "GRIF" L. CHALFANT, JR.	MEMBER
GLENN M. PAGE, P.E.	GENERAL MANAGER
GEORGE J. KAFFEZAKIS, P.E.	DIRECTOR OF ENGINEERING

24 HOUR CONTACT:

CHRIS DILLARD
(770) 514-5350

GENERAL INFORMATION

- OWNER:
COBB COUNTY--MARIETTA WATER AUTHORITY
1170 ATLANTA INDUSTRIAL DRIVE
MARIETTA, GEORGIA 30066
(770) 514-5300
- THE COBB COUNTY--MARIETTA WATER AUTHORITY 24--HOUR TELEPHONE NUMBER IS
(770) 514-5350.
- ENGINEER:
FREESE & NICHOLS, INC.
360 INTERSTATE NORTH PARKWAY, SUITE 250
ATLANTA, GEORGIA 30339
(404) 334-4310
- THE CONTRACTOR SHALL GIVE A 24--HOUR EMERGENCY TELEPHONE NUMBER AND NAME OF PERSON TO CONTACT IN AN EMERGENCY.
- ALL CONSTRUCTION AND MATERIALS SHALL BE TO COBB COUNTY--MARIETTA WATER AUTHORITY STANDARDS.
- THE CONSTRUCTION EASEMENT REPRESENTS THE LIMITS OF CLEARING FOR THE COMPLETE JOB. THE CONTRACTOR SHALL NOT CLEAR BEYOND THIS LIMIT.
- CONTRACTOR TO PROVIDE AND MAINTAIN OFF STREET PARKING, AND A CONSTRUCTION STORAGE AREA DURING THE ENTIRE CONSTRUCTION PERIOD. THIS AREA WILL NOT BE LOCATED WITHIN THE LIMITS OF DISTURBANCE OF THIS PROJECT.
- AS--BUILTS ARE REQUIRED TO BE SUBMITTED UPON COMPLETION OF CONSTRUCTION.
- EXISTING ROADS SHALL NOT BE OPEN CUT UNLESS PERMISSION IS GRANTED BY THE GEORGIA DOT OR THE COBB COUNTY DOT, AS APPROPRIATE. A COPY OF THE AUTHORIZATION LETTER FROM THE GEORGIA DOT AND COBB COUNTY DOT MUST BE PROVIDED TO THE OWNER & ENGINEER PRIOR TO CONSTRUCTION.
- IF WORK IS PERFORMED ON A GEORGIA DOT OR A COBB COUNTY RIGHT--OF--WAY A LETTER FROM THE GOVERNING AGENCY IS REQUIRED TO BE SUBMITTED TO THE OWNER & ENGINEER AFTER CONSTRUCTION IS COMPLETE STATING THAT GRASSING, CLEAN--UP, DRAINAGE, ETC. IS ACCEPTABLE.

UNDERGROUND UTILITIES

- INFORMATION REGARDING UNDERGROUND UTILITIES ON THESE PLANS IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL REQUEST A FIELD LOCATION THROUGH THE UTILITY PROTECTION CENTER AND ANY UTILITY OWNERS THOUGHT TO HAVE FACILITIES IN THE AREA. THE CONTRACTOR SHALL PROMPTLY COMPARE THESE FIELD--MARKED LOCATIONS WITH THE PROJECT PLANS AND THEN NOTIFY THE ENGINEER OF ANY ANTICIPATED PROBLEMS OR NEED FOR CONTRACT CHANGES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE OR CAUSE THE UTILITY TO EXCAVATE FOR THE PURPOSE OF DETERMINING EXACT ELEVATIONS OR LOCATIONS AT UTILITY CROSSINGS AND OTHER CRITICAL LOCATIONS WELL IN ADVANCE OF THE WORK UNDER THIS CONTRACT.
- THE SITE CONTRACTOR SHALL COORDINATE SERVICE ROUTING OF ALL GAS, TELEPHONE, AND ELECTRICAL LINES WITH THE APPROPRIATE UTILITY COMPANY. ALL CONSTRUCTION MUST COMPLY WITH EACH UTILITY'S STANDARDS AND SPECIFICATIONS AND NOT INTERFERE WITH TREE PLANTING SITES OR EXISTING TREES TO BE PRESERVED.
- IF THERE IS ASBESTOS PIPE PRESENT, ITS REMOVAL (IF REQUIRED) SHALL BE DONE BY A CONTRACTOR LICENSED WITH THE EPD IN ACCORDANCE WITH THE RULES OF GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION CHAPTER 391--3--14--04. ALL ASBESTOS PIPE REMOVAL AND DISPOSAL SHALL BE DONE IN ACCORDANCE WITH EPD REGULATIONS. ALL ASBESTOS PIPE REMOVAL SHALL BE PAID IN ACCORDANCE WITH THE UNIT PRICE BID.
- EXISTING WATER SERVICE CONNECTIONS ARE TO BE SUPPORTED AND PROTECTED DURING CONSTRUCTION. ANY DAMAGED BY THE CONTRACTOR ARE TO BE REPLACED WITH NEW CONNECTIONS MEETING COBB COUNTY WATER SYSTEM REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

COORDINATION WITH COBB COUNTY

- COBB COUNTY HAS ENACTED A LOCAL ORDINANCE, WHICH REQUIRES STRICT ADHERENCE TO OSHA REGULATIONS SUBPART P. PART 1926 PERTAINING TO TRENCHING AND EXCAVATION. ALL BIDDERS ARE ADVISED TO BE FAMILIAR WITH BOTH THE OSHA REGULATIONS AND THE LOCAL ORDINANCE BEFORE BIDDING THIS PROJECT.
- A TRENCHING AND DITCHING PERMIT IS REQUIRED PRIOR TO ANY WATER AND SEWER MAIN CONSTRUCTION. UTILITY CONTRACTORS MAY OBTAIN THIS PERMIT BY CONTACTING TRACY BROWN AT (770) 258-0271.
- ALL CONSTRUCTION TRAILERS ARE TO BE PERMITTED THROUGH THE PLANNING AND ZONING DEPARTMENT.
- ALL SIGNS ON THIS PROJECT ARE TO BE PERMITTED THROUGH CODE ENFORCEMENT/SIGN DIVISION.
- ALL TRAFFIC CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION AND APPROVED BY THE COBB COUNTY DOT AND/OR THE GEORGIA DOT PRIOR TO IMPLEMENTATION. THE CONTRACTOR SHALL MODIFY ANY TRAFFIC CONTROL MEASURES AS DIRECTED BY EITHER ENTITY AT NO ADDITIONAL COST TO THE OWNER.
- PRIOR TO ANY STREET CLOSING, PARTIAL OR TOTAL, THE CONTRACTOR MUST OBTAIN A ROAD CLOSING PERMIT FROM THE COBB COUNTY DOT. FOR LANE CLOSURE -- (770) 528-2145, DEVELOPMENT AND INSPECTIONS. FOR TOTAL STREET CLOSURE -- (770) 528-1670, CCDOT.
- EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL (COBB COUNTY CODE SECTION 50-75) AND SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
- THE "CONTRACTOR" SHALL OBTAIN A GRADING PERMIT FROM THE COBB COUNTY DEVELOPMENT CONTROL DEPARTMENT AT 100 CHEROKEE ST., MARIETTA, GA. AFTER ALL SEDIMENT AND EROSION CONTROL DEVICES ARE INSTALLED ACCORDING TO THE PLANS, CALL DEVELOPMENT CONTROL AT (770) 528-2134 WITH ENOUGH LEAD TIME FOR AN INSPECTION TO MEET THE SCHEDULE.
- COBB COUNTY ACCEPTS NO RESPONSIBILITY FOR THE AMERICANS WITH DISABILITIES ACT (ADA), EXCEPT FOR NOTIFICATION REQUIREMENT.
- ALL CONSTRUCTION TO CONFORM TO APPLICABLE COBB COUNTY DOT SPECIFICATIONS AND IN ACCORDANCE WITH COBB COUNTY ORDINANCES.

WORKMANSHIP

- THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN ALL NECESSARY BARRICADES, SUITABLE AND SUFFICIENT RED LIGHTS, DANGER SIGNALS, AND SIGNS, PROVIDE SUFFICIENT NUMBER OF WATCHMEN, AND TAKE NECESSARY PRECAUTIONS FOR THE PROTECTION OF THE WORK AND THE SAFETY OF THE PUBLIC.
- CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IN THE RIGHT--OF--WAY AT ANY TIME OTHER THAN WORK HOURS.
- CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IN AREAS, WHICH RESTRICT SIGHT DISTANCE AT ANY TIME.
- ROADWAYS ARE TO BE KEPT FREE OF DIRT, MUD, AND OTHER DEBRIS AT ALL TIMES.
- THE ROADWAY AND THE ROADWAY SHOULDERS SHALL BE SHORED PROPERLY DURING ALL TRENCHING ACTIVITY. BACKFILLING SHALL MEET MINIMUM COUNTY OR STATE COMPACTION REQUIREMENTS. NO DROP--OFFS ADJACENT TO THE ROADWAY WILL REMAIN AFTER THE SUSPENSION OF WORK.
- CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AND POSTAL SERVICE THROUGHOUT THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL INSTALL TREE PROTECTION DEVICES AT THE SAME TIME AS EROSION CONTROL DEVICES.
- ANY INFRASTRUCTURE (PAVEMENT, DRAINAGE STRUCTURES, CURB AND GUTTER, SIDEWALKS, SIGNALS, ETC.) DAMAGED OR DISPLACED AS THE RESULT OF THIS PROJECT SHALL BE REPLACED BY THE CONTRACTOR.

- CONTRACTOR IS RESPONSIBLE FOR REPLACING AND MATCHING TO ORIGINAL CONDITION ANY LANDSCAPING THAT HAS BEEN DESTROYED OR REMOVED DUE TO THE INSTALLATION OF THE WATER MAIN.
- THE CONTRACTOR SHALL REPAIR OR REPLACE ANY STORM DRAINAGE INFRASTRUCTURE DAMAGED OR DISTURBED DURING THE CONSTRUCTION PROCESS.

PIPELINE CONSTRUCTION

- THE CONTRACTOR SHALL SCHEDULE ANY SYSTEM SHUTDOWNS, CONNECTIONS TO EXISTING WATER MAINS, AND SERVICE CONNECTIONS WITH THE COBB COUNTY--MARIETTA WATER AUTHORITY AND COBB COUNTY WATER SYSTEM.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE, AND MATERIAL OF ANY EXISTING WATER MAIN PRIOR TO THE PROPOSED CONNECTIONS AS SHOWN ON THE CONTRACT DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER HORIZONTAL AND VERTICAL ALIGNMENT AS SHOWN ON THE PLANS. BENDS INSTALLED DUE TO CONTRACTOR ERROR OR NEGLIGENCE WILL NOT BE MEASURED FOR PAYMENT.
- ALL PIPES, FITTINGS, VALVES, AND RESTRAINT SYSTEMS SHALL BE ABLE TO WITHSTAND A FIELD TEST PRESSURE AS SHOWN ON SHEET G-4.
- ALL PIPE JOINTS TO HAVE DOUBLE BONDING CABLES. (SEE SHEET D-4 FOR DETAIL)
- MAXIMUM JOINT DEFLECTION IS 75% OF MANUFACTURER'S PUBLISHED ALLOWABLE, RESULTING MAXIMUM RADIUS OF CURVATURE IS 385' FOR PIPE LAYOUT. CONTRACTOR SHALL CONSIDER DEFLECTION ALLOWED FOR RESTRAINED AND UNRESTRAINED JOINTS. WHEN LAYING OUT PIPE ALIGNMENT WITH JOINT DEFLECTION (RADIUS ~1,000' FOR RESTRAINED JOINT PIPE).
- LAYOUT DIMENSIONS SHOWN IN PLAN VIEW ARE TO BACK--OF--CURB OR EDGE--OF--PAVEMENT WHERE NO CURB EXISTS. CONTRACTOR TO FIELD VERIFY PRIOR TO TRENCHING OPERATIONS.
- EXISTING CCWMA 36" WATER MAIN TO BE ABANDONED IN PLACE UNLESS INDICATED OTHERWISE. ENDS TO BE PLUGGED (SEE SHEET D-5 FOR DETAIL).

SITE INFORMATION

- A CEMETERY IS PRESENT AT MT. PISGAH BAPTIST CHURCH, 851 SOUTH GORDON ROAD, AUSTELL, COBB COUNTY, GEORGIA, USA. THIS CEMETERY WILL NOT BE IMPACTED BY NEW WATER MAIN CONSTRUCTION.
- THE COBB COUNTY CEMETERY PRESERVATION COMMISSION RESERVES THE RIGHT TO EXAMINE THIS PROPERTY FOR ETHNIC, CULTURAL AND RELIGIOUS EVIDENCE LOCATED THEREIN. IF ANY ETHNIC, CULTURAL OR RELIGIOUS EVIDENCE IS FOUND DURING DEVELOPMENT, THEN THE COBB COUNTY CEMETERY PRESERVATION COMMISSION MUST BE NOTIFIED AT ONCE AT (770) 528-2035. FAILURE TO DO SO WILL RESULT IN A STOP--WORK ORDER.
- THE TOTAL ACREAGE IMPACT OF THIS PROJECT IS 9.25± AC.
- THERE WILL BE NO PERMANENT EFFECTS CAUSED BY THIS PROJECT, WHICH WOULD RESULT IN THE POTENTIAL OF DOWNSTREAM FLOOD HAZARDS.
- ZONING REGULATIONS OBTAINED FROM COBB PLANNING AND ZONING INDICATE THAT THE PROJECT WILL BE LOCATED IN GC AND HI ZONED AREAS.
- THESE PLANS ARE EXEMPT FROM ZONING REQUIREMENTS PER SEC. 134-3 OF THE COBB COUNTY CODE. HOWEVER, THIS PROJECT SHALL BE REQUIRED TO MEET ALL OTHER DEVELOPMENT CODES, REGULATIONS, ORDINANCES, AND LAWS.

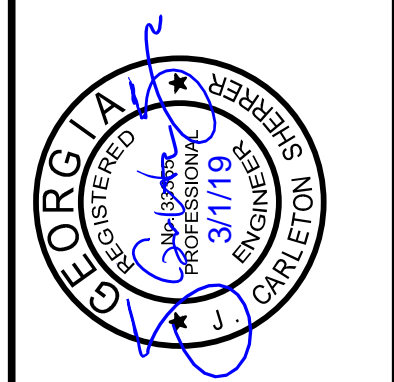
COBB DOT NOTES

- SIGNAL NOTE: ALL SIGNAL PLANS MUST BE SUBMITTED TO AND APPROVED BY THE COBB COUNTY TRAFFIC SIGNAL ENGINEER.
 - ANY TRAFFIC SIGNAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT COBB DOT TRAFFIC SIGNAL SPECIFICATIONS BY AN APPROVED TRAFFIC SIGNAL CONTRACTOR.
 - ANY TRAFFIC SIGNAL EQUIPMENT DAMAGED AS A RESULT OF THIS PROJECT SHALL BE REPLACED/UPGRADED BY THE CONTRACTOR/DEVELOPER IMMEDIATELY.
 - DAMAGED LOOPS SHALL BE REPLACED.
 - DEVELOPER/CONTRACTOR IS REQUIRED TO MAINTAIN VEHICLE DETECTION WITHOUT INTERRUPTION FOR ALL TRAFFIC SIGNAL PHASES AFFECTED DURING CONSTRUCTION OF THIS PROJECT. APPROVED VIDEO DETECTION SHALL BE USED FOR PRESENCE DETECTION AND APPROVED VIDEO OR MICROWAVE DETECTION SHALL BE USED FOR PULSE DETECTION. ADDITIONAL POLES/EQUIPMENT MAY BE REQUIRED TO SUPPORT THESE DETECTION DEVICES.
 - CONTACT COBB TRAFFIC SIGNAL ENGINEER AT (770) 528-3664 FOR ANY TRAFFIC SIGNAL RELATED ISSUES. CONTACT THE SIGNAL MAINTENANCE SUPERVISOR AT (770) 528-1689 TO LOCATE ANY SIGNAL EQUIPMENT IF PROPOSED DEVELOPMENT IS WITHIN 450' OR LESS OF A SIGNALIZED INTERSECTION.
 - ANY DRIVE, ACCESS, SIDEWALK/SHOULDER CROSS--SLOPE, IN THE RIGHT OF WAY, IS TO MATCH 1/2" PER LF (2%, PER ADA).
- COORDINATE PROJECT WITH COBB DOT RESURFACING GROUP. CARDELL RD IS ON THE 2019 LIST TO BE RESURFACED.

TREE PROTECTION NOTES:

- A PRE--CONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO THE ISSUANCE OF THE ON--SITE CONSTRUCTION PERMIT. CALL THE SITE INSPECTIONS SECTION AT (770) 528-2142 TO ARRANGE A MEETING AT THE SITE.
- TREE PROTECTION DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY CLEARING, GRUBBING OR GRADING.
- ROOT SYSTEMS OF SIGNIFICANT TREES, AS INDICATED ON THE PLANS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE FREE--BORED UNDER.
- TREE PROTECTION SHALL BE ENFORCED ACCORDING TO COBB COUNTY STANDARDS. ANY FIELD ADJUSTMENTS TO TREE PROTECTION DEVICE TYPES OR LOCATIONS OR SUBSTITUTIONS OF REPLACEMENT PLANT MATERIALS SHOWN ON THE APPROVED PLANS ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE COBB COUNTY ARBORIST.
- THE INSTALLATION OF EROSION CONTROL DEVICES CAUSES HARM TO TREES. USE SILT FENCE ONLY AS REQUIRED AND LOCATE IT AS FAR FROM TREE PROTECTION ZONES AS POSSIBLE.
- WHEN DIGGING NEAR TREES, THE CONTRACTOR SHALL PRUNE ALL EXPOSED ROOTS ONE (1) INCH IN DIAMETER AND LARGER ON THE SIDE OF THE TRENCH ADJACENT TO THE TREES. PRUNING SHALL CONSIST OF MAKING A CLEAN CUT FLUSH WITH THE SIDE OF THE TRENCH TO PROMOTE NEW ROOT GROWTH.
- PRUNING OF TREE LIMBS TO PROVIDE CLEARANCE FOR EQUIPMENT AND MATERIALS SHALL BE DONE ACCORDING TO STANDARD ARBORICULTURAL PRACTICE (SEE ANSI A300-1995).
- PROTECT THE TRUNKS OF ANY TREES BEING PRESERVED WITHIN THE TEMPORARY OR PERMANENT UTILITY EASEMENTS WITH STRAPPED--ON PLANKING OR SIMILAR PROTECTIVE DEVICE.

DRAWING INDEX		
SEQUENCE	SHEET NO	SHEET
GENERAL		
	--	COVER
1	G-1	GENERAL NOTES & DRAWING INDEX
2	G-2	ABBREVIATIONS, SYMBOLS & LEGEND
3	G-3	KEY MAP & SURVEY CONTROL
4	G-4	HYDRAULIC PROFILE
CIVIL		
5	C-1	STA BEGIN TO 8+00
6	C-2	STA 8+00 TO 15+00
7	C-3	STA 15+00 TO 22+00
8	C-4	STA 22+00 TO 29+00
9	C-5	STA 29+00 TO 36+00
10	C-6	STA 36+00 TO 43+00
11	C-7	STA 43+00 TO 50+00
12	C-8	STA 50+00 TO 57+00
13	C-9	STA 57+00 TO 64+00
14	C-10	STA 64+00 TO 71+00
15	C-11	STA 71+00 TO 78+00
16	C-12	STA 78+00 TO 85+00
17	C-13	STA 85+00 TO 92+00
18	C-14	STA 92+00 TO 99+00
19	C-15	STA 99+00 TO 106+00
20	C-16	STA 106+00 TO 113+00
21	C-17	STA 113+00 TO 120+00
22	C-18	STA 120+00 TO 127+00
23	C-19	STA 127+00 TO 134+00
24	C-20	STA 134+00 TO 141+00
25	C-21	STA 141+00 TO 148+00
26	C-22	STA 148+00 TO 155+00
27	C-23	STA 155+00 TO 162+00
28	C-24	STA 162+00 TO 169+00
29	C-25	STA 169+00 TO 176+00
30	C-26	STA 176+00 TO 183+00
31	C-27	STA 183+00 TO 190+00
32	C-28	STA 190+00 TO END
33	C-29	CONNECTION AT FACTORY SHOALS TO 6+50
34	C-30	STA 6+50 TO END
35	C-31	CONNECTION DETAILS (1 OF 4)
36	C-32	CONNECTION DETAILS (2 OF 4)
37	C-33	CONNECTION DETAILS (3 OF 4)
38	C-34	CONNECTION DETAILS (4 OF 4)
DETAILS		
39	D-1	STANDARD DETAILS
40	D-2	STANDARD DETAILS
41	D-3	STANDARD DETAILS
42	D-4	STANDARD DETAILS
43	D-5	STANDARD DETAILS
44	D-6	STANDARD DETAILS
45	D-7	STANDARD DETAILS
EROSION & SEDIMENT CONTROL		
46	ES-1	STA BEGIN TO STA 15+00
47	ES-2	STA 15+00 TO STA 29+00
48	ES-3	STA 29+00 TO STA 43+00
49	ES-4	STA 43+00 TO STA 57+00
50	ES-5	STA 57+00 TO STA 71+00
51	ES-6	STA 71+00 TO STA 85+00
52	ES-7	STA 85+00 TO STA 99+00
53	ES-8	STA 99+00 TO STA 113+00
54	ES-9	STA 113+00 TO STA 127+00
55	ES-10	STA 127+00 TO STA 141+00
56	ES-11	STA 141+00 TO STA 155+00
57	ES-12	STA 155+00 TO STA 169+00
58	ES-13	STA 169+00 TO STA 183+00
59	ES-14	STA 183+00 TO END
60	ES-15	STA BEGIN TO END
61	ES-16	EROSION & SEDIMENT CONTROL DETAILS
62	ES-17	EROSION NOTES & UNIFORM CODE
63	ES-18	EROSION NOTES
64	ES-19	CHECKLIST
65	ES-20	EROSION & SEDIMENT CONTROL DETAILS



FREESE & NICHOLS
360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freeese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
GENERAL

FILE NO.	CBRLB213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
REVISION	
CHECKED	JCS
ISSUED FOR BID	JCS 03/01/19
ISSUED FOR PERMIT	JCS 02/08/19
FILE NAME	GN-ALL-NOTES.dwg
NO.	1

SHEET
G-1
SEQ.

ACAD Ref: 23.0s (LMS Tech)
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 Last Saved: 2/28/2019 2:53 PM. Saved By: 026188

ABBRE	ABBREVIATION
ACC	ACCESS
AH	AHEAD
@	AT
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ASPH	ASPHALT
AUTO	AUTOMATIC
AVE	AVENUE
BFV	BUTTERFLY VALVE
BK	BACK
B/L	BASE LINE
BM	BENCHMARK
BLDG	BUILDING
BLK	BLOCK
BRG	BEARING
BOC	BACK OF CURB
BRD	BURIED
CAV	COMBINATION AIR/VACCUUM VALVE
CI	CAST IRON
GIRS	CAST IRON ROD SET
k OR CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CP	CONTROL POINT
CTR	CENTER
CSMT	CASEMENT
CY	CUBIC YARD
DET OR DTL	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
DR	DRIVE OR DOOR
DWG	DRAWING
DWY	DRIVE WAY
E	EAST
EB	ELECTRIC BOX
e.g.	FOR EXAMPLE
EA	EACH
ELEC TRANS PAD	ELECTRIC TRANSMITTER PAD
ELEV OR EL	ELEVATION
EMO	ELECTRIC MOTOR OPERATOR
ETC	ET CETERA
EQ	EQUAL
EQUIP	EQUIPMENT
EX OR EXIST	EXISTING
FV	FIELD VERIFY
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FH OR FIRE HYD	FIRE HYDRANT
FD	FLOOR DRAIN
FL OR FLR	FLOOR
FLG X MJ	FLANGED BY MECHANICAL JOINTS
FLG	FLANGED
FLEX BASE	FLEXIBLE BASE
FL	FLOW LINE
FO OR F/O	FIBER OPTIC
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GMH	GAS MANHOLE
GM	GAS METER
G SIGN	GAS SIGN
GV'S	GATE VALVES
GV	GATE VALVE
GND	GROUND
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HMAC	HOT MIX ASPHALTIC CONC.
HORZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HWY	HIGHWAY
ID	INSIDE DIAMETER
IN	INCH
IRF	IRON ROD FOUND
IRS	IRON ROD SET
JB	JUNCTION BOX
JTS	JOINTS
LF	LINEAR FEET
LT	LEFT OR LIGHT
LONG	LONGITUDINAL
LP	LIGHT POLE
LVL	LEVEL
M	MOBILE
MH	MANHOLE

ABBREVIATIONS

MAINT	MAINTENANCE/MAINTAINED
MAX	MAXIMUM
MB	MAIL BOX
MFR	MANUFACTURER
MJ	MECHANICAL JOINT
MIN	MINIMUM
MTG	MOUNTING OR MOUNTED
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NTMWD	NORTH TEXAS MUNICIPAL WATER DISTRICT
N.O.I.	NOTICE OF INTENT
N.O.T.	NOTICE OF TERMINATION
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRIC LINES
OHT	OVERHEAD TELEPHONE LINES
OPNG	OPENING
OPP	OPPOSITE
PAV	PUMP AIR VALVE
PVMT	PAVEMENT
PED	PEDESTAL
PE LINE	PETROLEUM LINE
PE	PLAIN END
PE LINE	PETROLEUM LINE
PER	PURSUANT TO
PIT	PRESSURE INDICATING TRANSMITTER
PL OR PL	PROPERTY LINE OR PLATE
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE PIPE
PP	POWER POLE
PCCP	PRETENSIONED CONC. CYLINDER PIPE
PI	POINT OF INTERSECTION
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
RR	RAILROAD
REHAB	REHABILITATE
RE	REFER TO
REINF	REINFORCED
REF	REFERENCE
REM	REMOVE
REQ'D	REQUIRED
REV	REVERSE
RCB	REINFORCED CONC. BOX
RCP	REINFORCED CONC. PIPE
RCCP	REINFORCED CONC. CYLINDER PIPE
RT	RIGHT
ROW	RIGHT-OF-WAY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SECT	SECTION
SF	SQUARE FEET
SH	SPRINKLER HEAD
SHT	SHEET
SIG BOX	TRAFFIC SIGNAL BOX
SM	SPRINKLER MAIN
SPEC	SPECIFICATIONS
SS	SANITARY SEWER OR STAINLESS STEEL
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
STA	STATION
ST	STREET
STRUCT	STRUCTURAL
SL	STREET LIGHT
SQ	SQUARE
SQ FT	SQUARE FOOT
SURF	SURFACE
SVC	SERVICE
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TC BOX	TRAFFIC CONTROL BOX
TC LT	TRAFFIC CONTROL LIGHT
TEL	TELEPHONE
TEMP	TEMPERATURE
TN	TOP OF NUT
TOP	TOP OF PIPE
TS BOX	TRAFFIC SIGNAL BOX
T SIGN	TRAFFIC SIGN
TYP	TYPICAL
UG	UNDERGROUND GAS
FO MARKER	U/G FIBER OPTIC TELEPHONE MARKER
UGTV	U/G CABLE TV LINES
VAC	VACUUM
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL

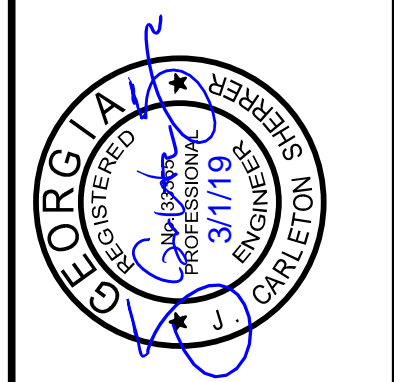
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
W	WEST OR WIDTH
W/	WITH
W/O	WITHOUT
WL	WATER LINE
WMH	WATER MANHOLE
WM	WATER METER
WT	WEIGHT
WV	WATER VALVE
WV'S	WATER VALVES

SYMBOLS

DETAIL NUMBER	
DETAIL REFERENCE	
SHEET ON WHICH DETAIL IS REFERENCED	
NOTE BY SYMBOL	
REVISION NUMBER	
NORTH ARROW	
SCALE BAR	
GAS MARKER	
BENCHMARK	
SURVEY CONTROL POINT	
LIGHT STANDARD	
POWER POLE	
GUY WIRE AND ACHOR	
TELEPHONE PEDESTAL	
SPRINKLER VALVE	
SIGN	
TREE	
IRON ROD	
IRON ROD (FOUND)	
BREAK LINE	
RAILROAD	
BRUSH OR TREES	
PAVEMENT REPLACEMENT (CONCRETE, ASPHALT, GRAVEL)	
GEOTECHNICAL BORE OR TEST HOLE	

LEGEND

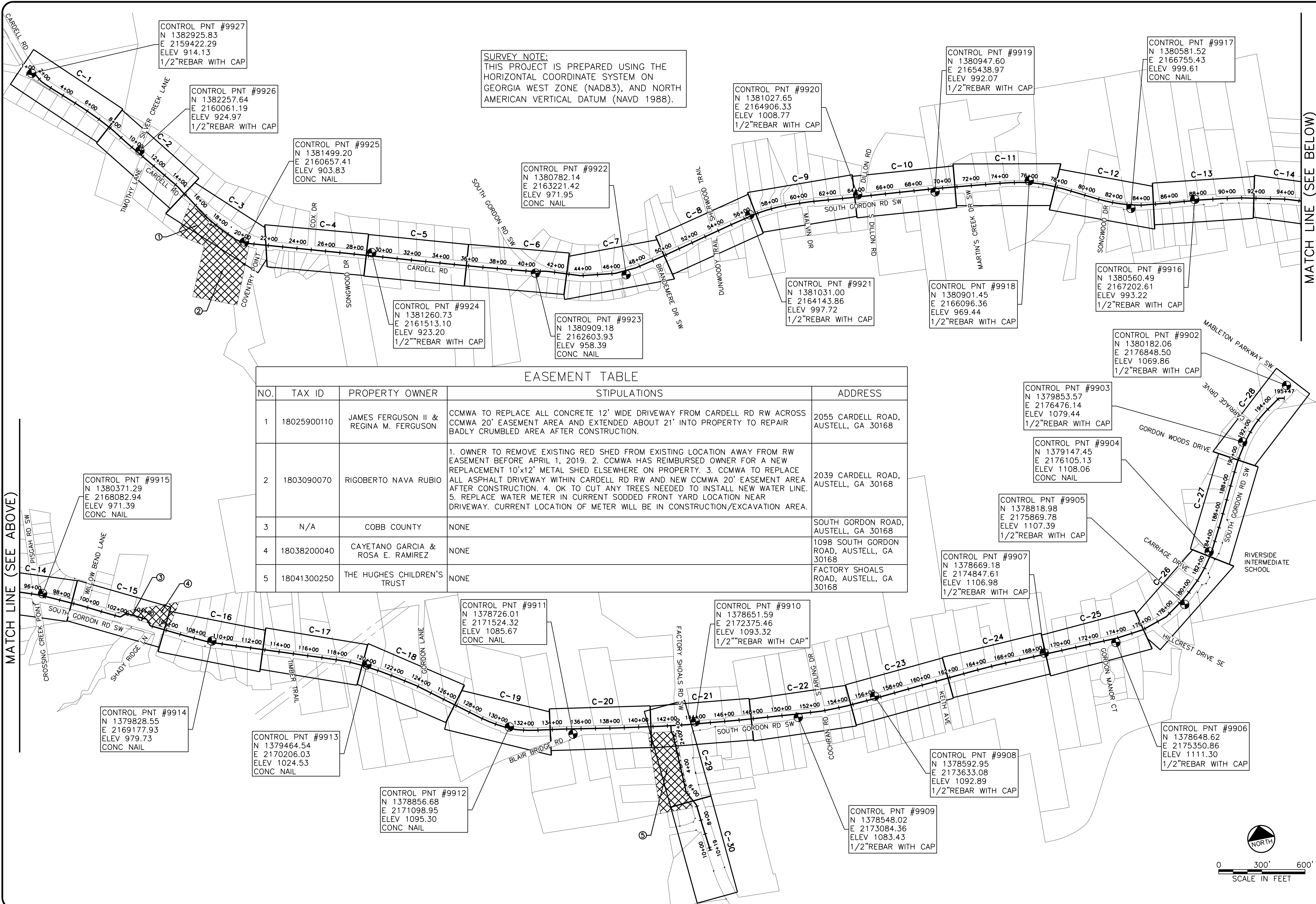
EXISTING	PROFILE VIEW	PROPOSED/FUTURE
	WATER LINE & SIZE	
	SEWER LINE & SIZE	
	UNDERGROUND GAS LINE	
	UNDERGROUND TELEPHONE LINE	
	UNDERGROUND FIBER OPTIC LINE	
	OVERHEAD ELECTRIC	
	UNDERGROUND CABLE TV	
	GATE VALVE	
	MISC. VALVE & TYPE	
	REDUCER	
	FIRE HYDRANT	
	COMBINATION AIR RELEASE/VACUUM VALVE	
	BLOW OFF VALVE	
	WATER METER OR GAS METER	
	VAULT	
	SEWER OR WATER ACCESS MANHOLE	
	STORM DRAIN MANHOLE	
	WATER SERVICE & SIZE	
	PLUG	
	PROPERTY LINE AND/OR R.O.W.	
	EASEMENT	
	CITY LIMIT AND/OR COUNTY LINE	
	IRON PIN/PIPE & SIZE	
	CREEK CENTERLINE	
	PIPE CENTERLINE	
	BARBED WIRE FENCE	
	CHAIN LINK FENCE	
	WOOD FENCE	
	CONCRETE CURB & GUTTER	
	EDGE OF ASPHALT	
	CONCRETE CULVERT (SIZE R.C.C.P.)	
	CONCRETE DRIVEWAY & SIDEWALK	
	GRAVEL DRIVEWAY	
	CONCRETE INLET (SIZE NOTED)	
	WATER MAIN & SIZE	
	GATE VALVE	
	BUTTERFLY VALVE	
	CHECK VALVE	
	UTILITIES	
	SEWER FLOW LINE	



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 GENERAL

FILE NO.	CBR18213	DATE	3/7/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19	ISSUED FOR PERMIT	JCS	02/08/19	BY	DATE	FILE NAME	GN-ALL-NOTES.dwg
VERIFY SCALE	0	1	VERIFY SCALE	0	1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.			
SHEET	G-2								
SEQ.	2								

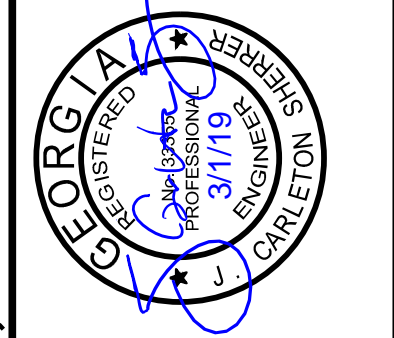


SURVEY NOTE:
 THIS PROJECT IS PREPARED USING THE HORIZONTAL COORDINATE SYSTEM ON GEORGIA WEST ZONE (NAD83), AND NORTH AMERICAN VERTICAL DATUM (NAVD 1988).

EASEMENT TABLE					
NO.	TAX ID	PROPERTY OWNER	STIPULATIONS	ADDRESS	
1	18025900110	JAMES FERGUSON II & REGINA M. FERGUSON	CCMWA TO REPLACE ALL CONCRETE 12' WIDE DRIVEWAY FROM CARDELL RD RW ACROSS CCMWA 20' EASEMENT AREA AND EXTENDED ABOUT 21' INTO PROPERTY TO REPAIR BADLY CRUMBLD AREA AFTER CONSTRUCTION.	2055 CARDELL ROAD, AUSTELL, GA 30168	
2	1803090070	RIGOBERTO NAVA RUBIO	1. OWNER TO REMOVE EXISTING RED SHED FROM EXISTING LOCATION AWAY FROM RW EASEMENT BEFORE APRIL 1, 2019. 2. CCMWA HAS REIMBURSED OWNER FOR A NEW REPLACEMENT 10'x12' METAL SHED ELSEWHERE ON PROPERTY. 3. CCMWA TO REPLACE ALL ASPHALT DRIVEWAY WITHIN CARDELL RD RW AND NEW CCMWA 20' EASEMENT AREA AFTER CONSTRUCTION. 4. OK TO CUT ANY TREES NEEDED TO INSTALL NEW WATER LINE. 5. REPLACE WATER METER IN CURRENT SODDED FRONT YARD LOCATION NEAR DRIVEWAY. CURRENT LOCATION OF METER WILL BE IN CONSTRUCTION/EXCAVATION AREA.	2039 CARDELL ROAD, AUSTELL, GA 30168	
3	N/A	COBB COUNTY	NONE	SOUTH GORDON ROAD, AUSTELL, GA 30168	
4	18038200040	CAYETANO GARCIA & ROSA E. RAMIREZ	NONE	1098 SOUTH GORDON ROAD, AUSTELL, GA 30168	
5	18041300250	THE HUGHES CHILDREN'S TRUST	NONE	FACTORY SHOALS ROAD, AUSTELL, GA 30168	

MATCH LINE (SEE BELOW)

MATCH LINE (SEE ABOVE)



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 GENERAL
KEY MAP & SURVEY CONTROL

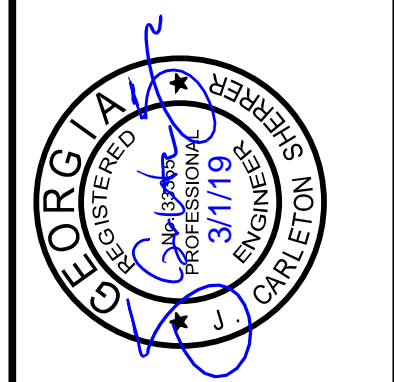
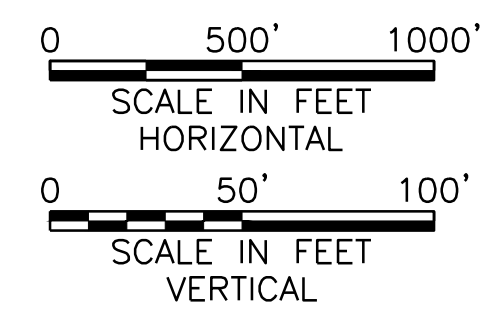
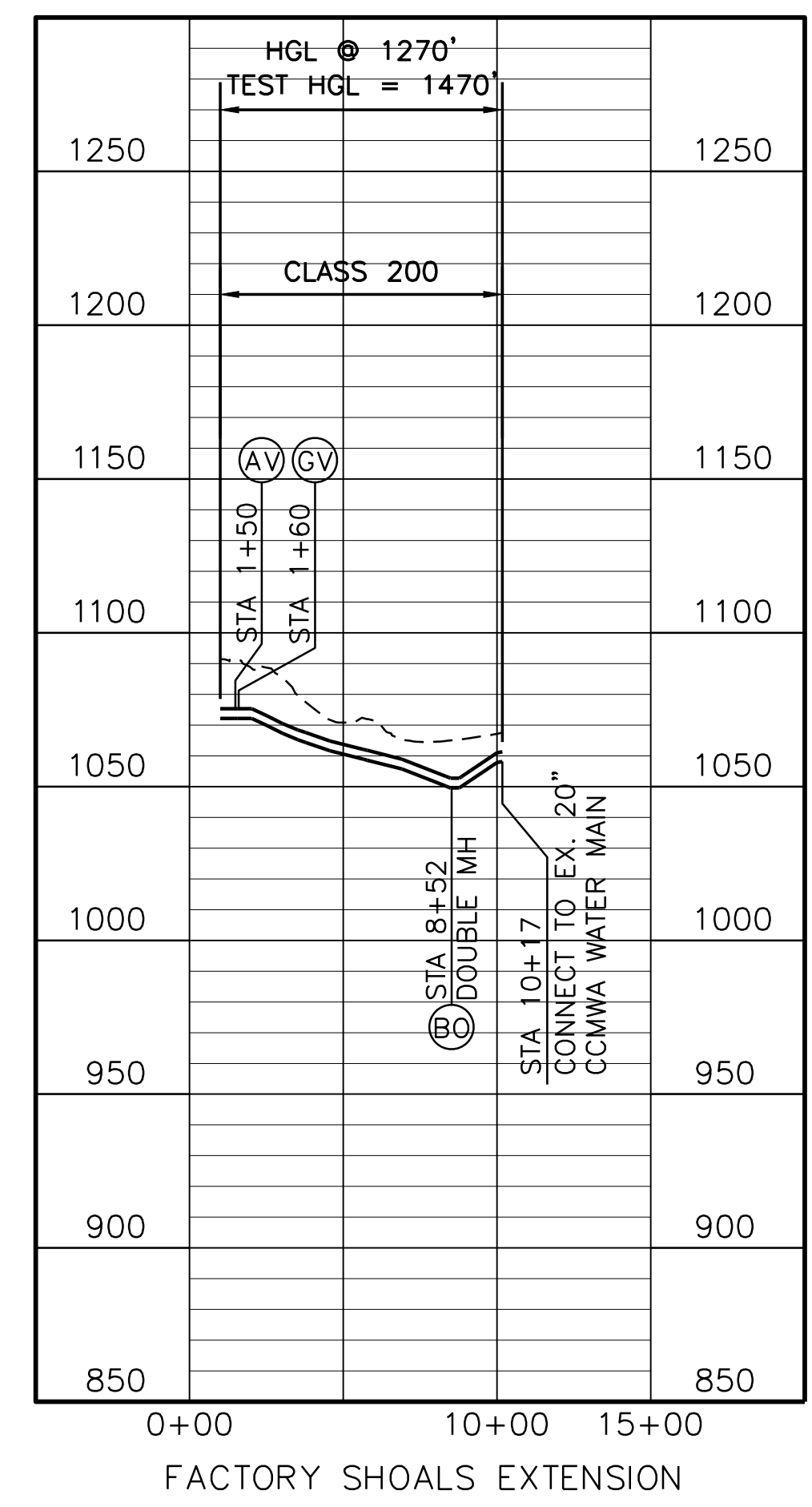
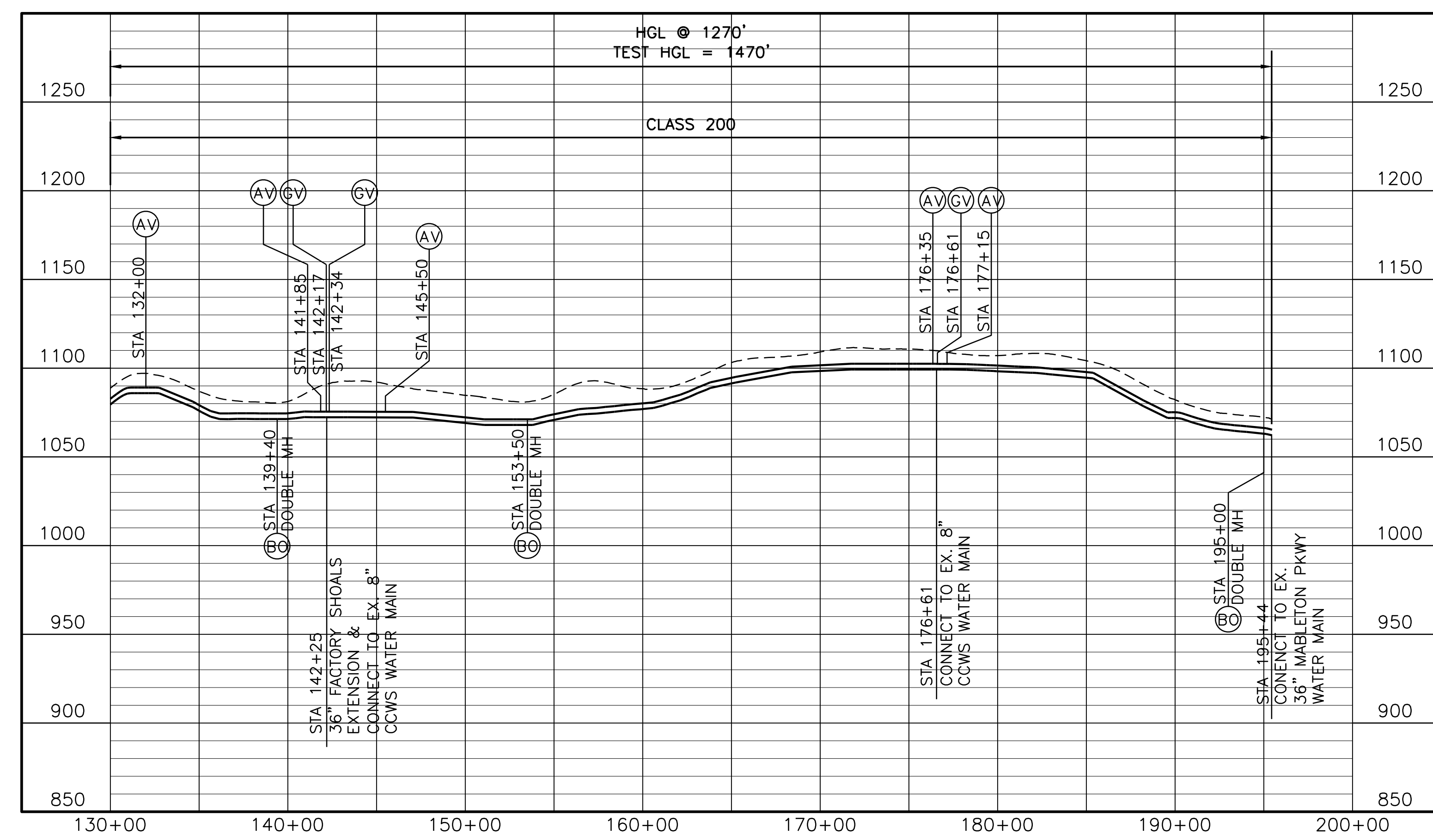
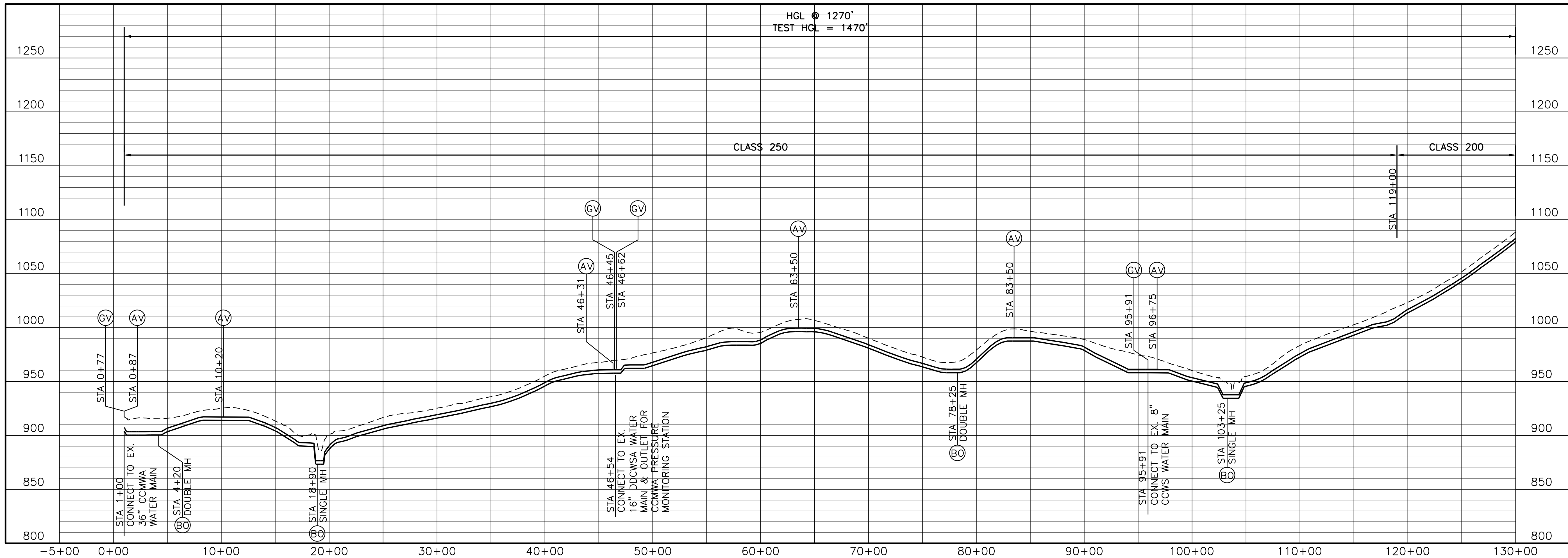
PROJECT NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19							
ISSUED FOR PERMIT	JCS	02/08/19							
VERIFY SCALE									

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SCALE IN FEET: 0 300' 600'

SHEET: **G-3**

SEQ. 3



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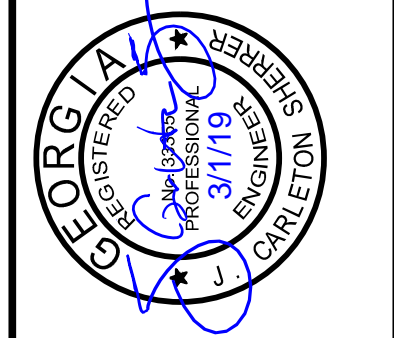
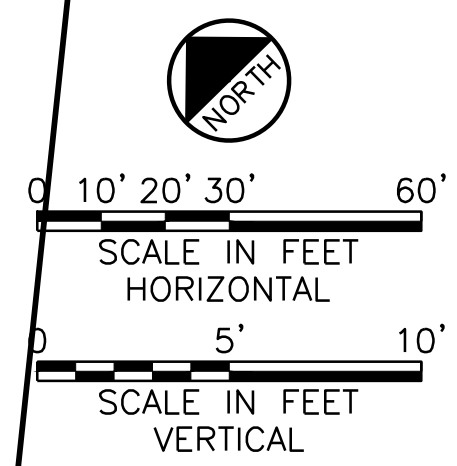
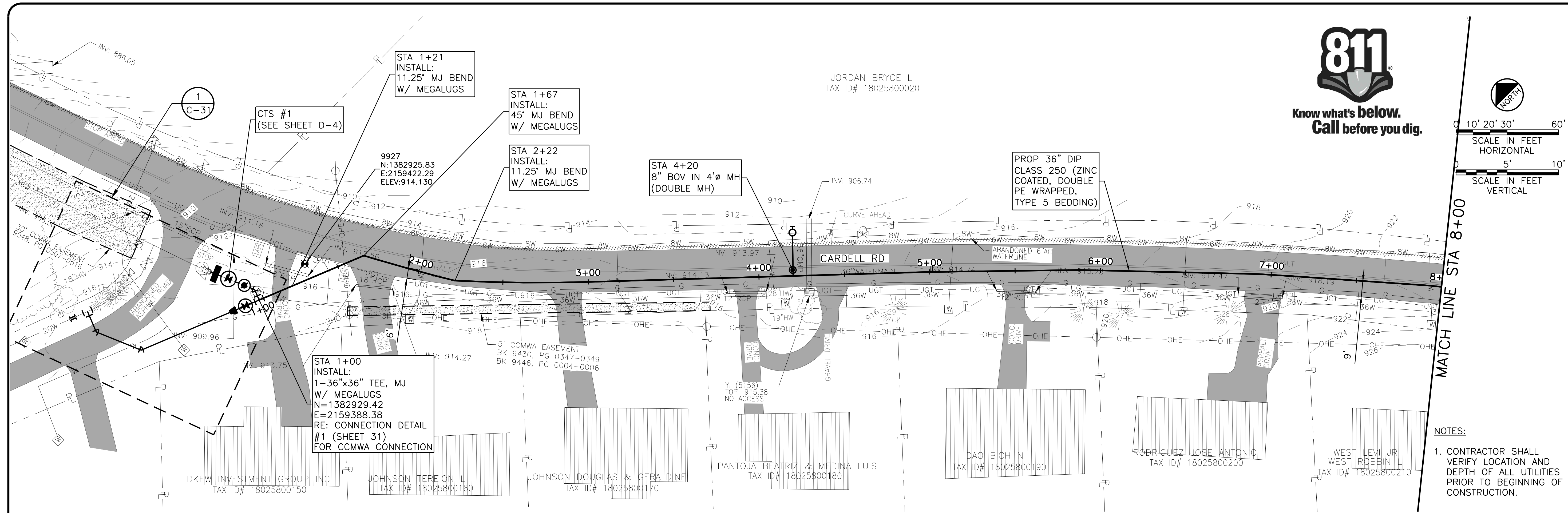
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT

GENERAL
HYDRAULIC PROFILE

PROJ. JOB NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19	ISSUE	BY	DATE	FILE NAME	GN-ALL-HYDR.dwg		
ISSUED FOR PERMIT	JCS	02/08/19	NO.	0	1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.			
SHEET	G-4								
SEQ.	4								

ACAD Ref: 23.05 (LMS Tech)
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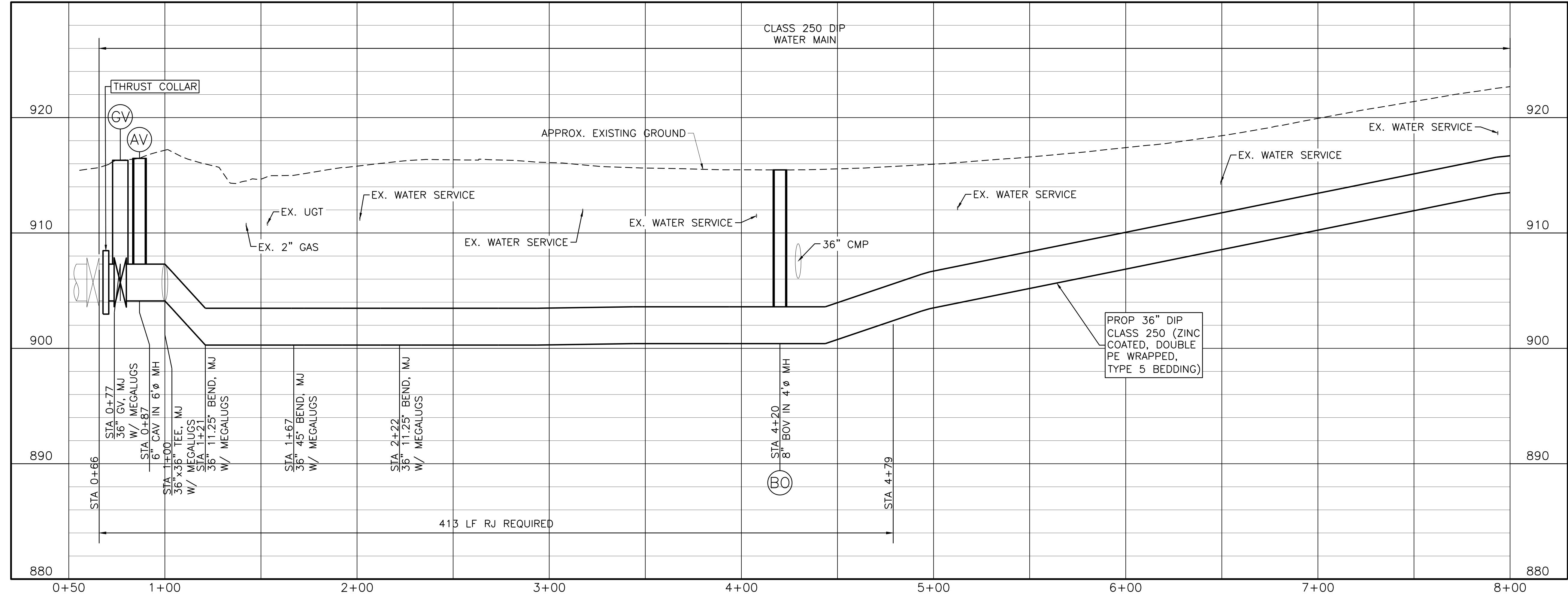
ACAD Ref: 23.0s (LMS Tech)
 Filename: n:\WTD\Drawings\CV-ALL-SHTS01.dwg
 Last Saved: 3/1/2019 10:43 AM. Saved By: 02618



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA BEGIN TO 8+00

- NOTES:**
- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



PERM. JOB NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS	FILE NAME	CV-ALL-SHTS01.dwg
ISSUED FOR BID	JCS	03/01/19									
ISSUED FOR PERMIT	JCS	02/08/19									
VERIFY SCALE											
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.											



Know what's below.
Call before you dig.

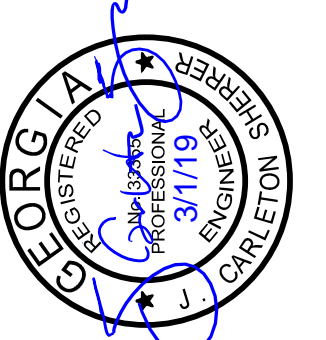


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

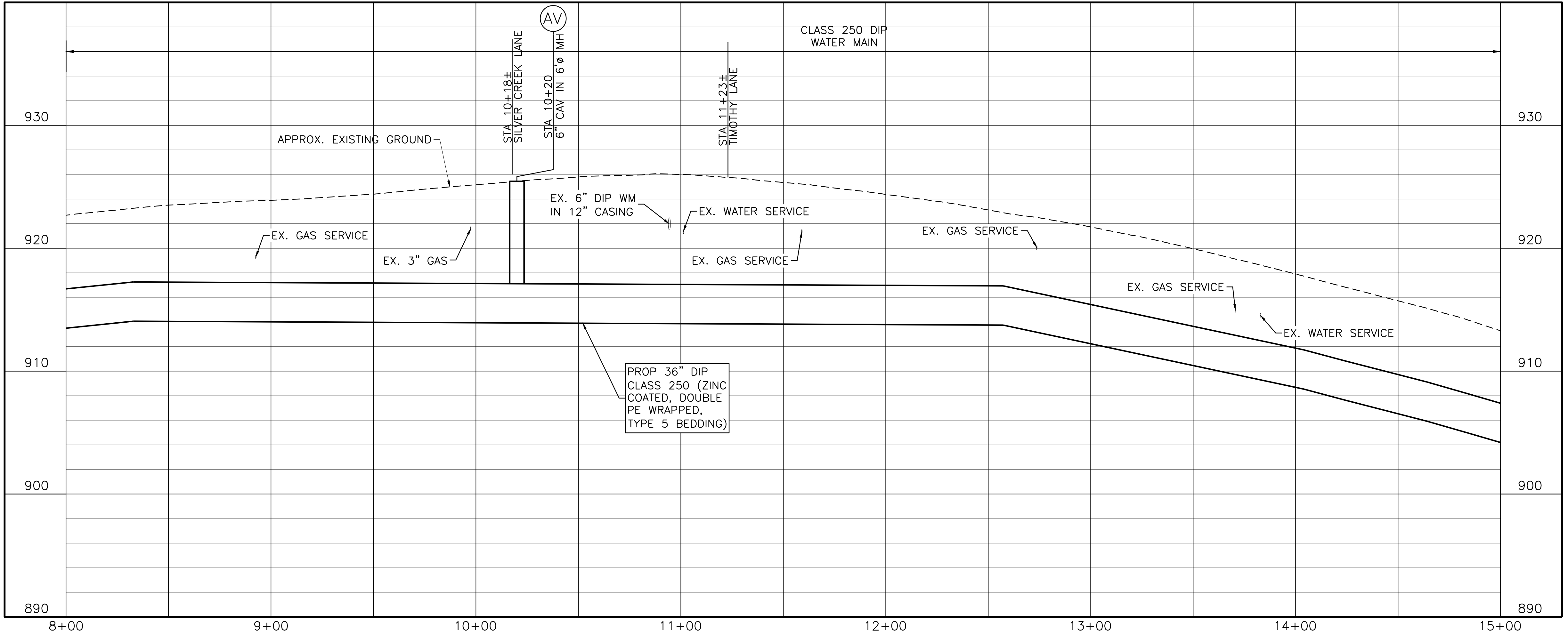
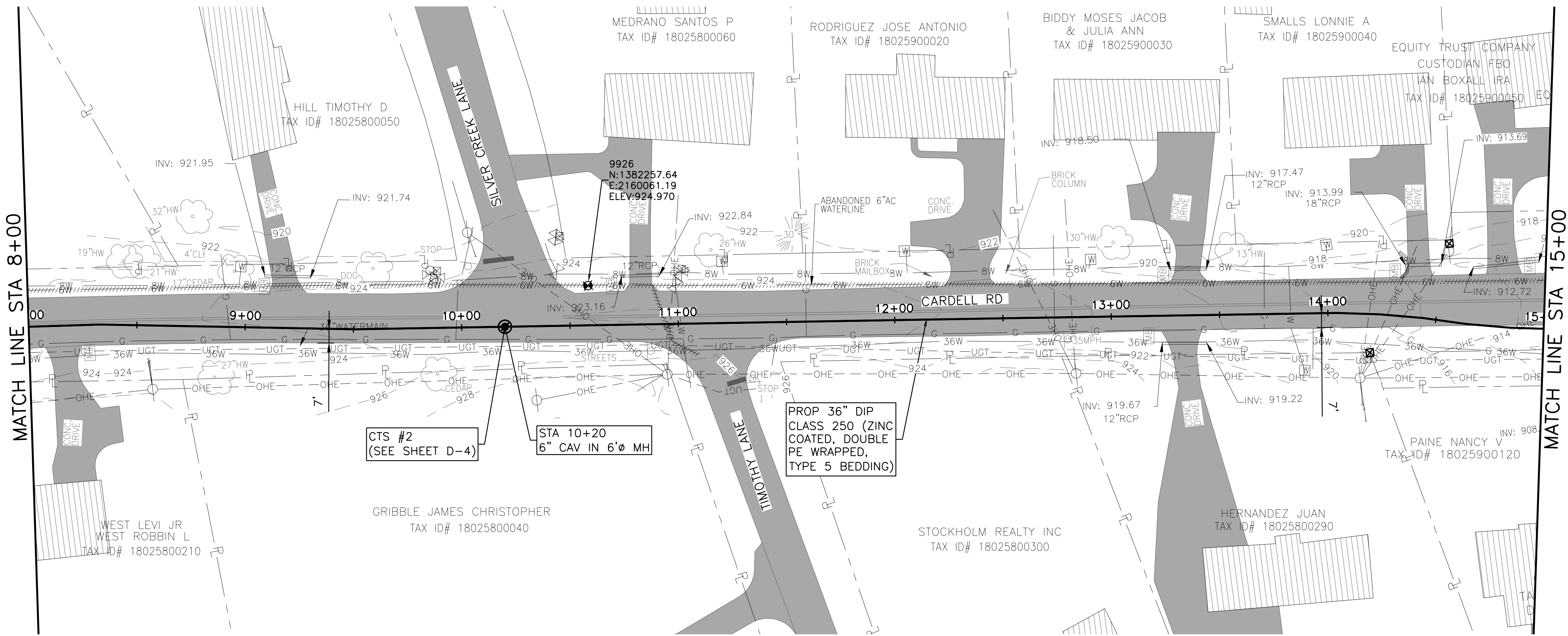


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 8+00 TO 15+00

PERM. JOB NO.	CBR18213
DATE	3/7/19
DESIGNED	FDH
DRAWN	CKM
REVISION	
CHECKED	JCS
FILE NAME	CV-ALL-SHTS01.dwg
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	0
ISSUE DATE	02/08/19
ISSUE BY	JCS
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

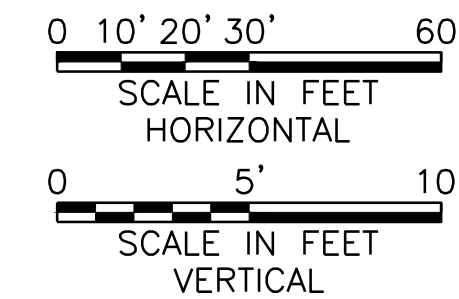
SHEET **C-2**
 SEQ. 6



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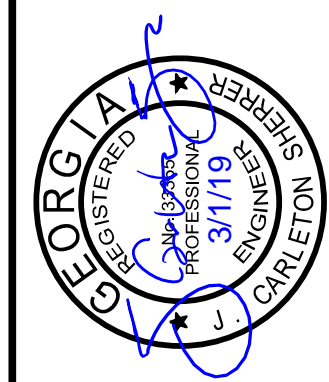


Know what's below.
Call before you dig.



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. CONTRACTOR TO VERIFY LIMIT OF SAME DITCH RELAY BASED ON ACTUAL FIELD CONDITIONS AND REMOVE FULL PIPE JOINTS, BULKHEAD BACKFILL, AND COMPACT AS SPECIFIED. EX. DIP/PCCP AND STEEL CASING DISPOSED BY CONTRACTOR.
3. SUPPORT/PROTECT EX. POWER POLES.

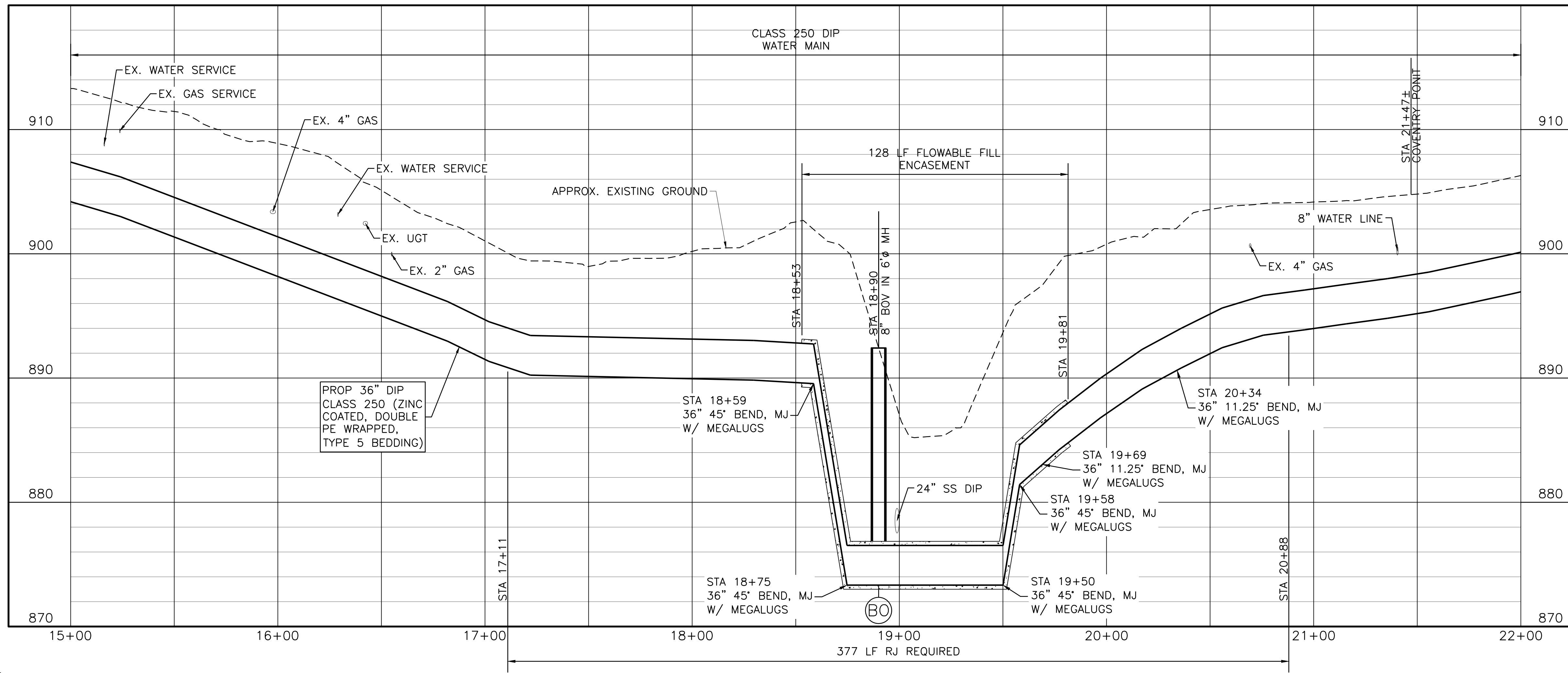
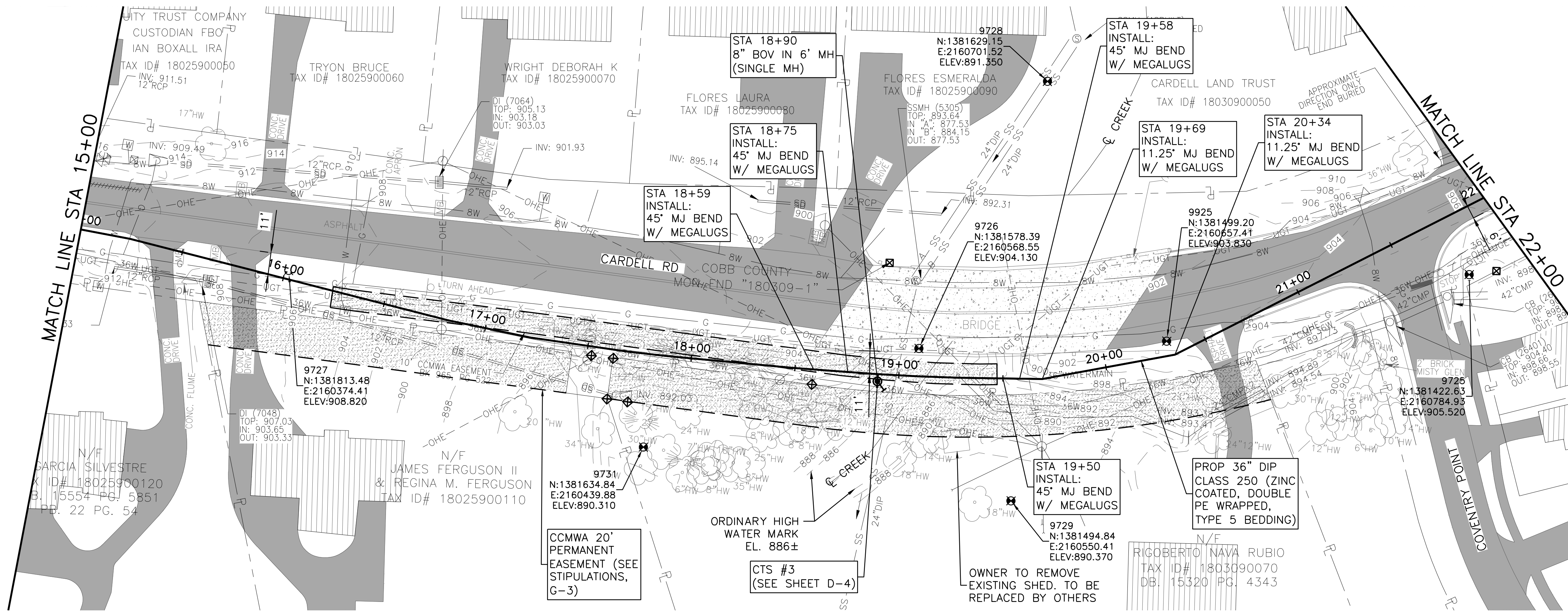


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 15+00 TO 22+00

PERM. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	1
FILE NAME	CV-ALL-SHTS01.dwg
CHECKED	JCS

SHEET **C-3**
 SEQ. 7



ACAD Ref: 23.0s (LMS Tech)
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 Last Saved: 3/1/2019 10:43 AM. Saved By: 02618



Know what's below.
Call before you dig.

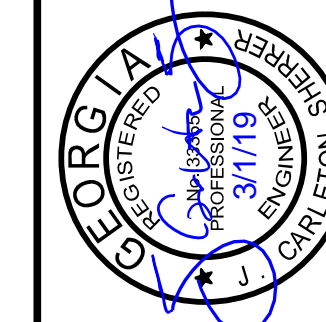


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

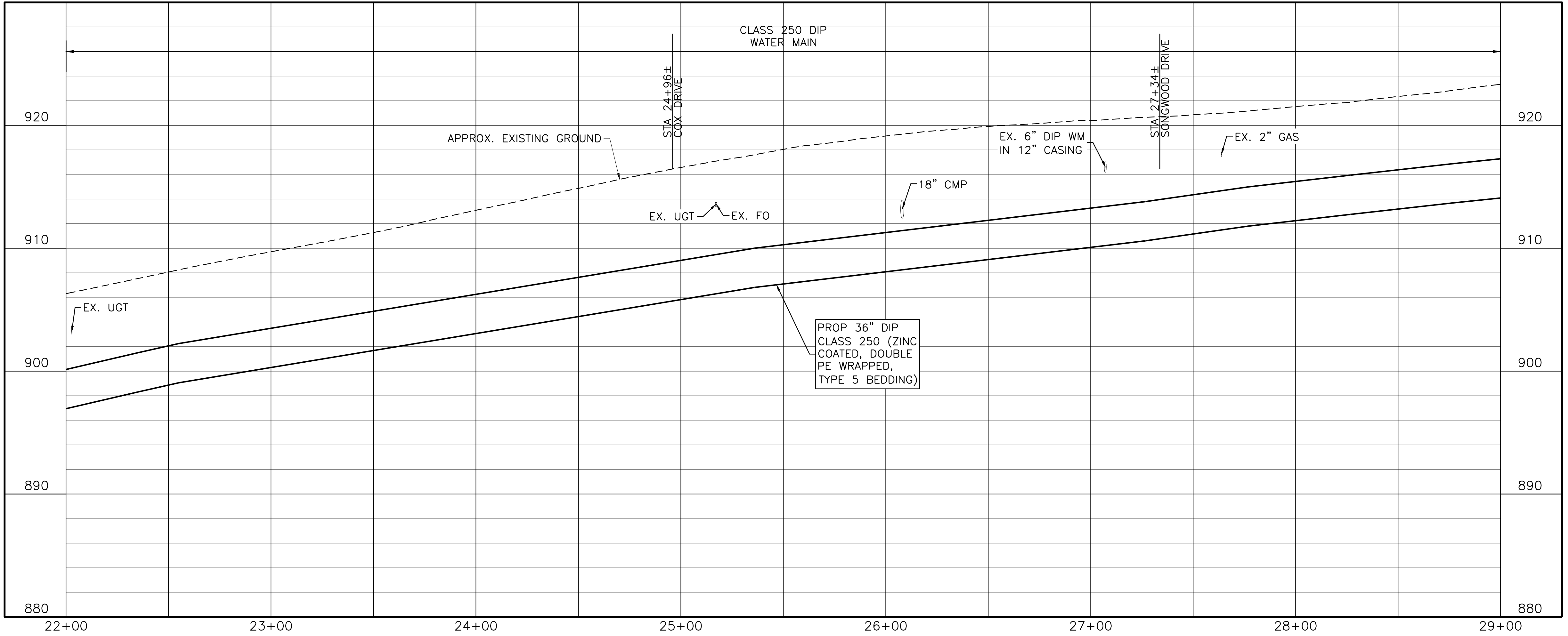
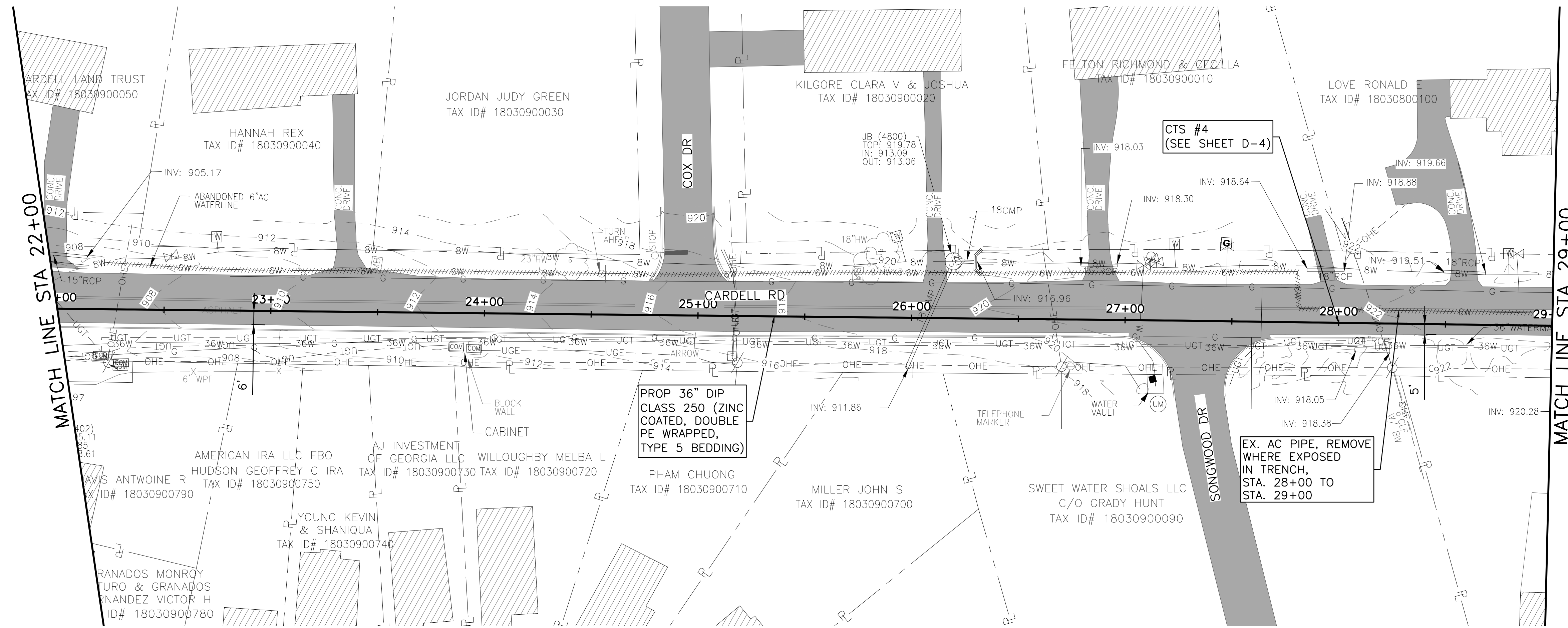


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 22+00 TO 29+00

PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS
ISSUED FOR PERMIT	JCS
ISSUE	BY
NO.	DATE
FILE NAME	CV-ALL-SHTS01.dwg
CHECKED	JCS
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

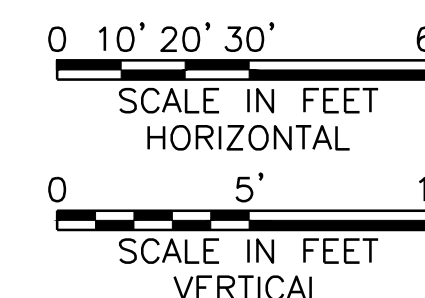
SHEET **C-4**
 SEQ. 8



ACAD Ref: 23.0s (LMSTech)
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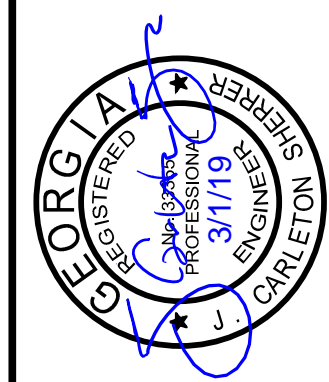


Know what's below.
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NOTES:

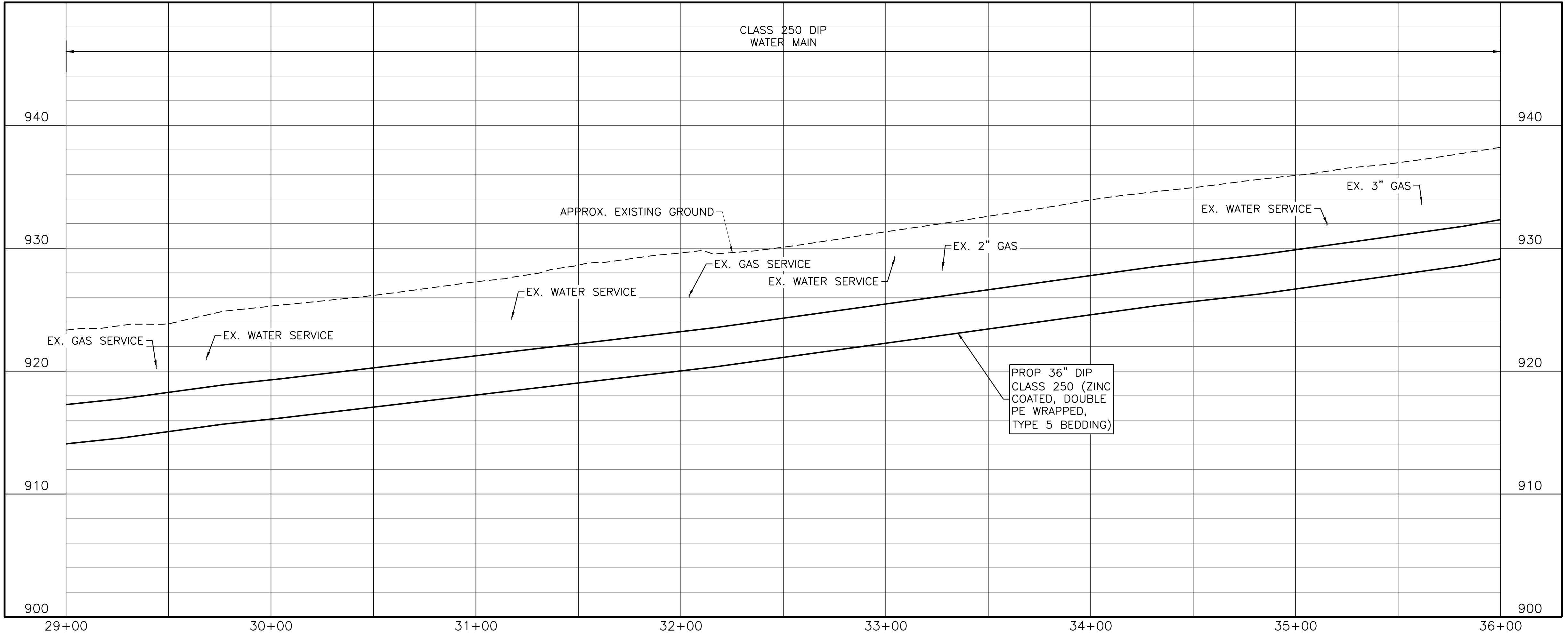
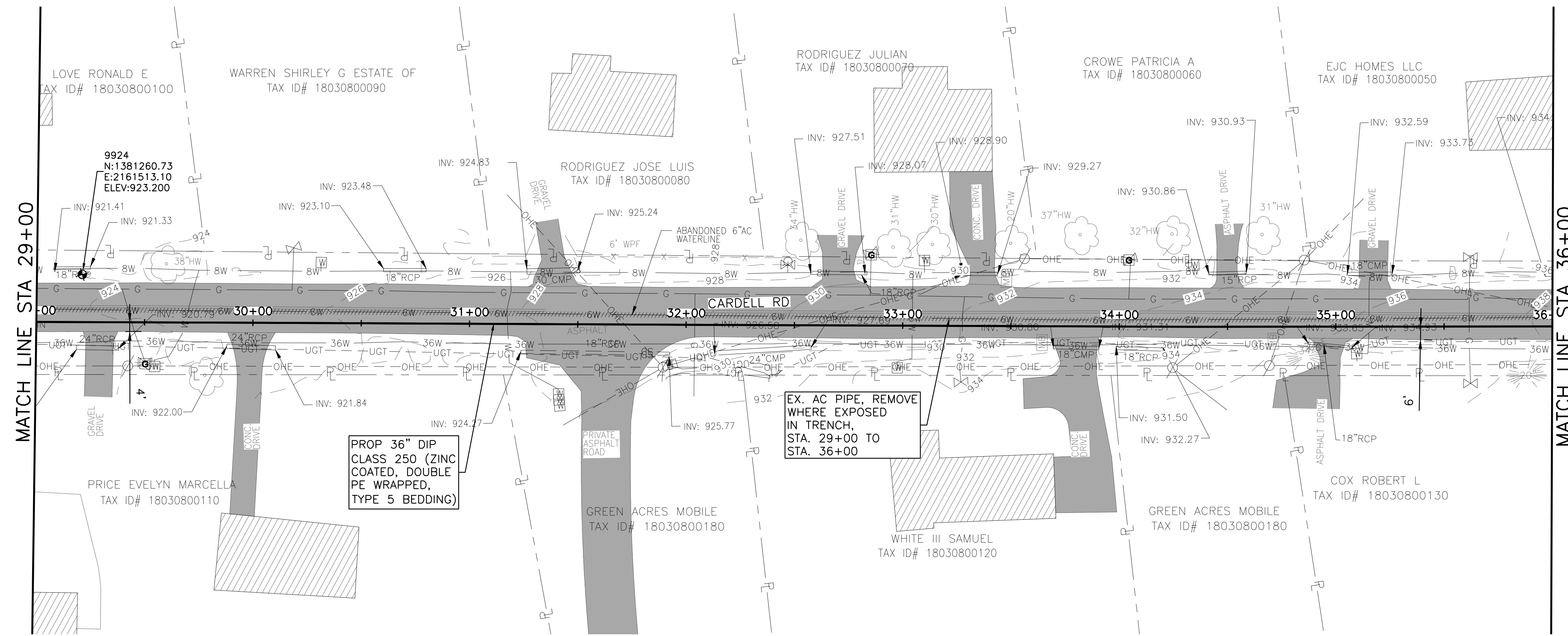
- 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 29+00 TO 36+00

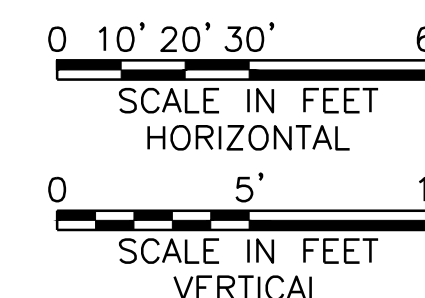
PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS 03/01/19
ISSUED FOR PERMIT	JCS 02/08/19
ISSUE NO.	0
BY	JCS
CHECKED	JCS
FILE NAME	CV-ALL-SHTS01.dwg
VERIFY SCALE	1
Bar is one inch on original drawing, if not one inch on this sheet, adjust scale.	
SHEET	C-5
SEQ.	9



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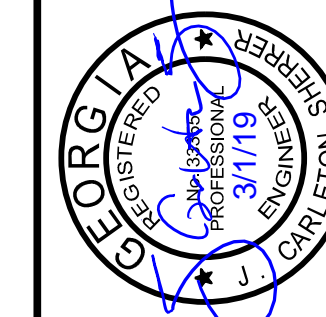


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NOTES:

- 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

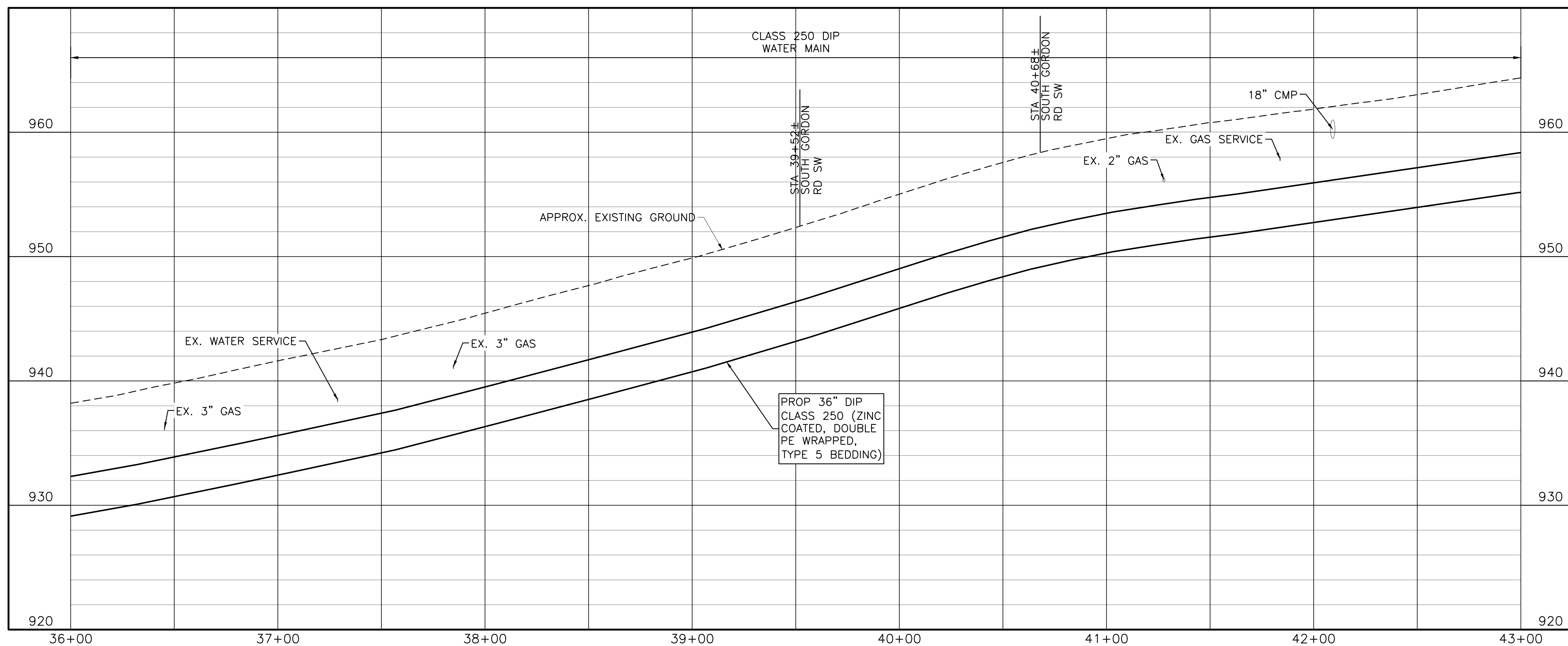
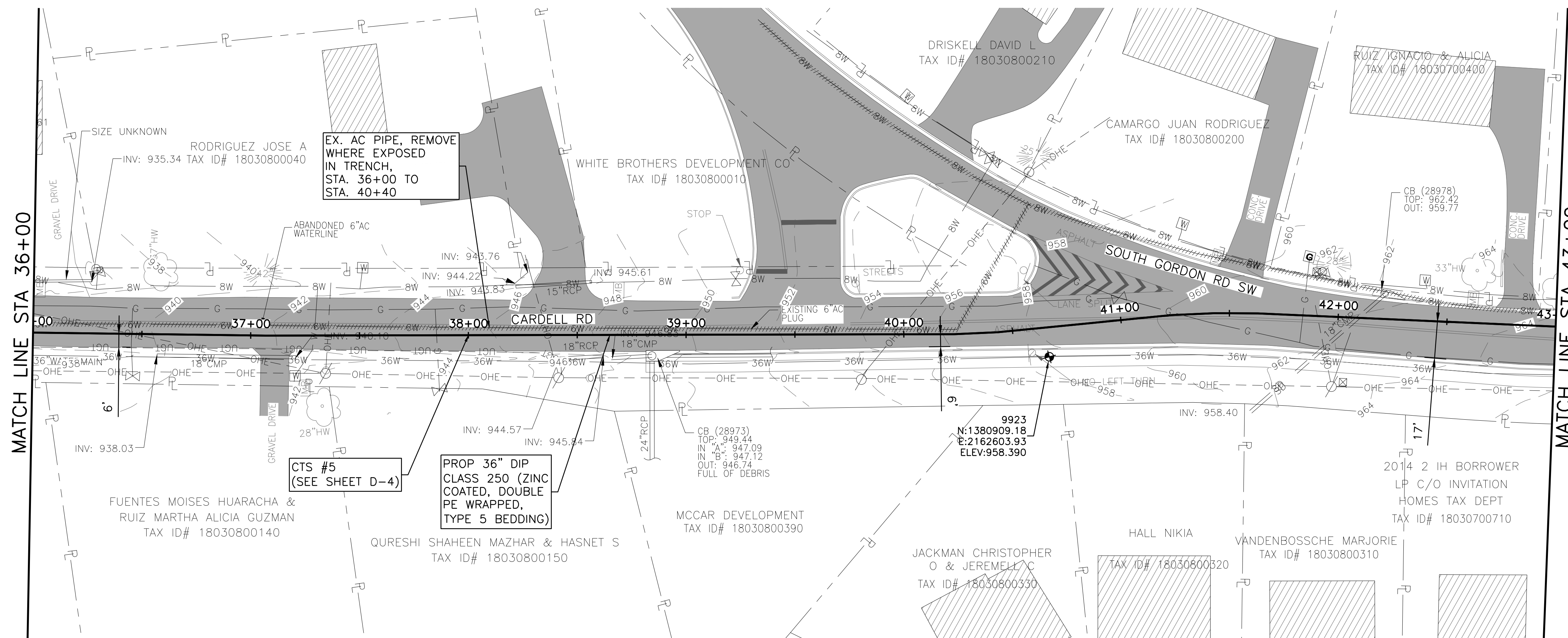


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 36+00 TO 43+00

PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	0
DATE	02/08/19
BY	JCS
CHECKED	JCS
FILE NAME	CV-ALL-SHTS01.dwg
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

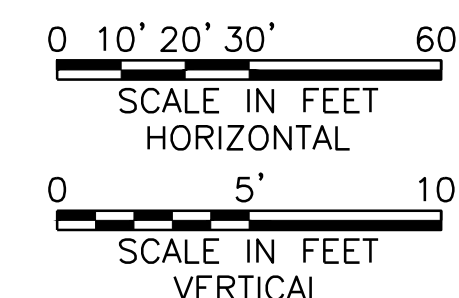
SHEET C-6
SEQ. 10



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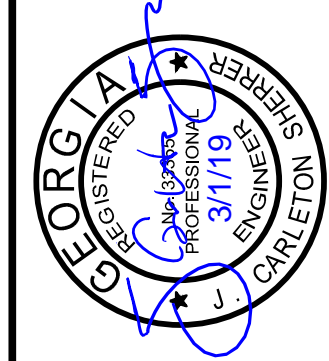


Know what's below.
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NOTES:

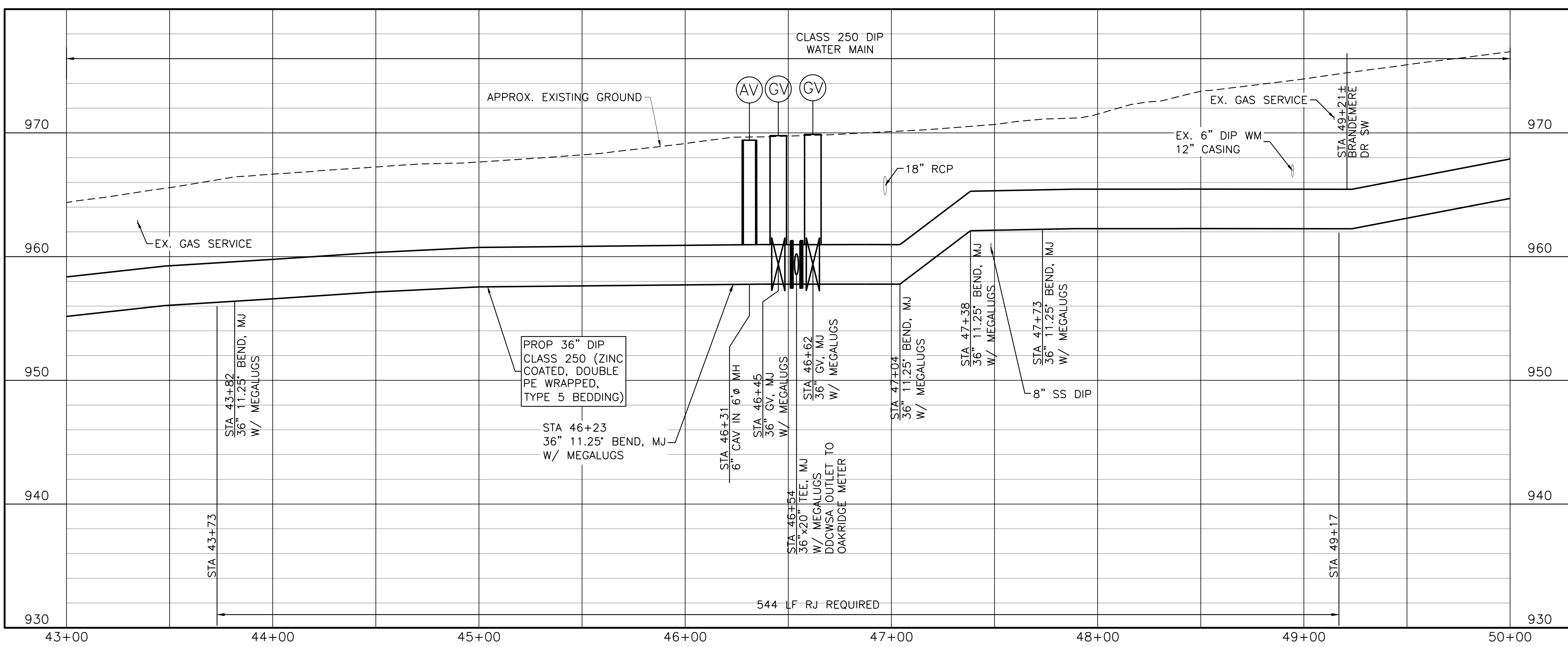
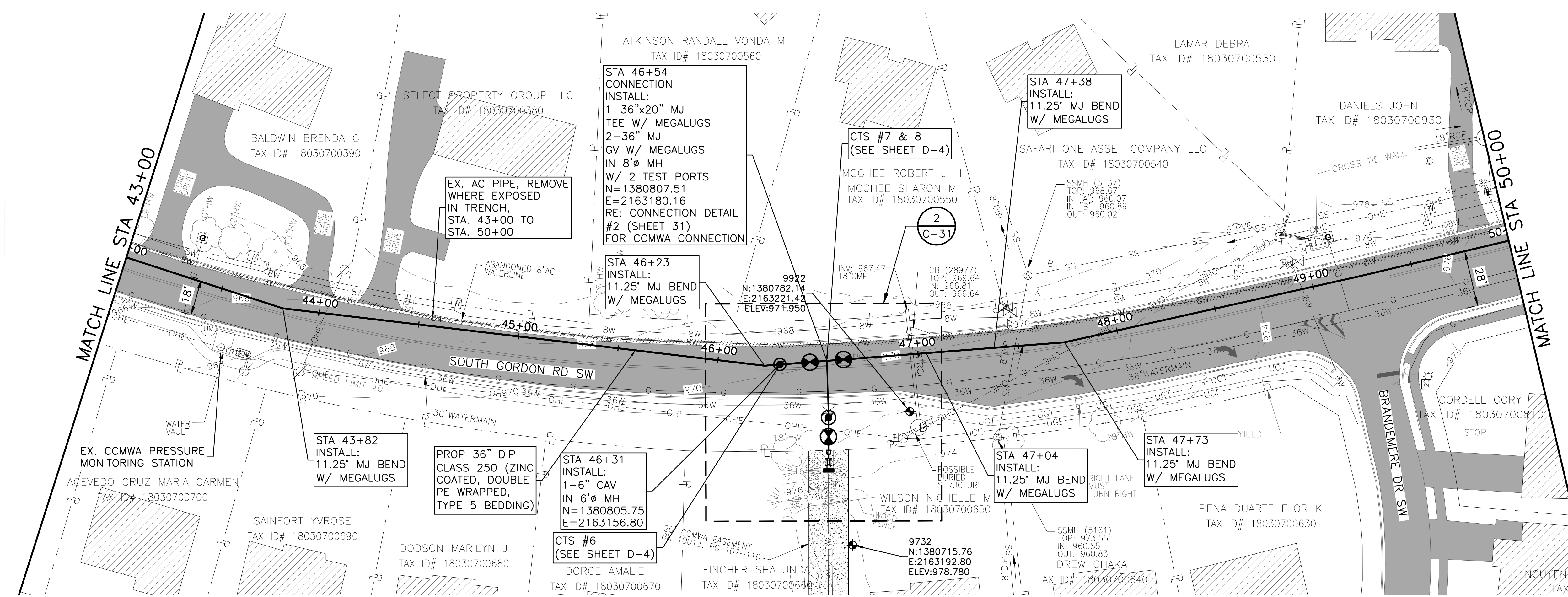
- 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 43+00 TO 50+00

PERM. JOB NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19	ISSUED FOR PERMIT	JCS	02/08/19	FILE NAME	CV-ALL-SHTS01.dwg	NO.	0
VERIFY SCALE	1	Bar is one inch on original drawing, if not one inch on this sheet, adjust scale.							



ACAD Ref: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHTS01.dwg
Last Saved: 3/1/2019 10:43 AM. Saved By: 02618



Know what's below.
Call before you dig.

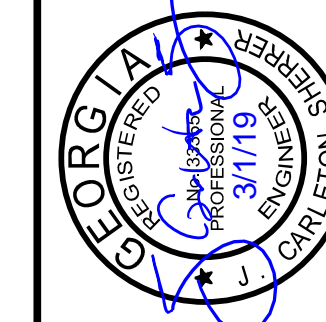


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

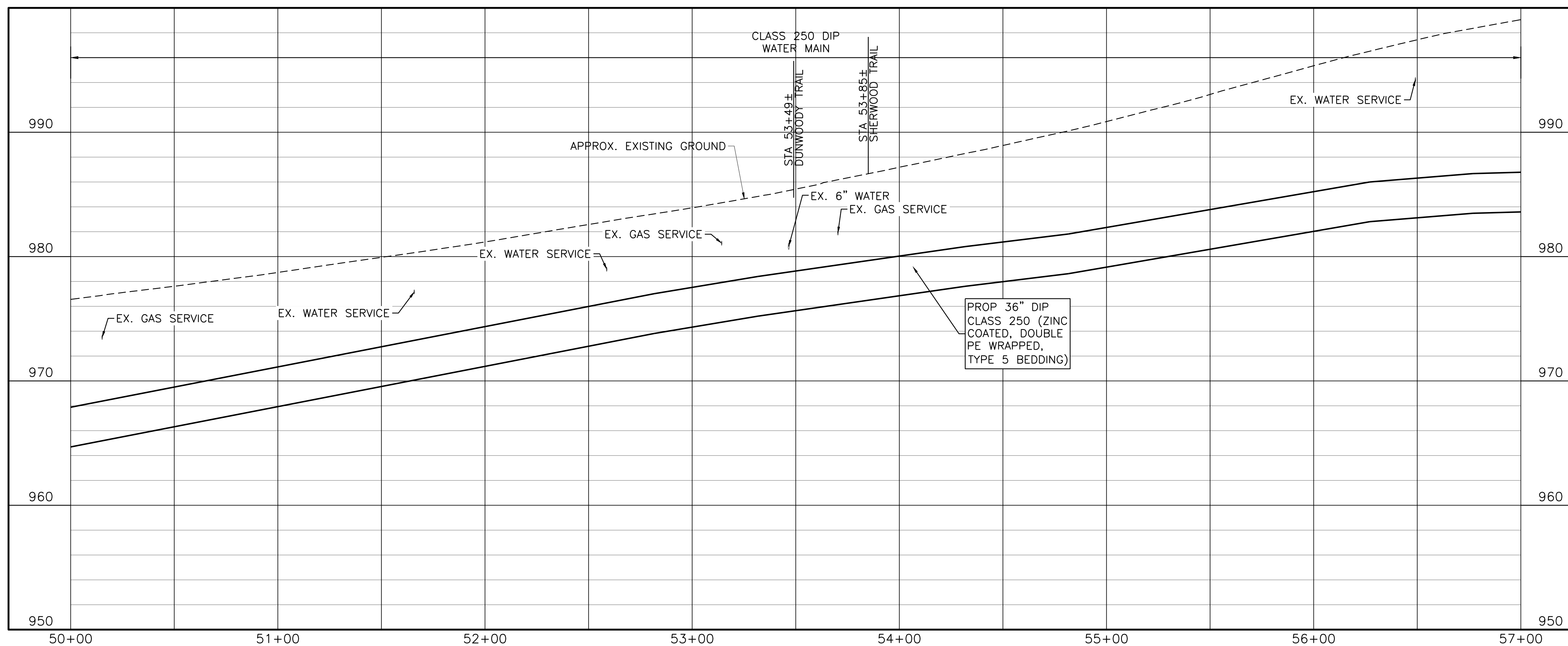
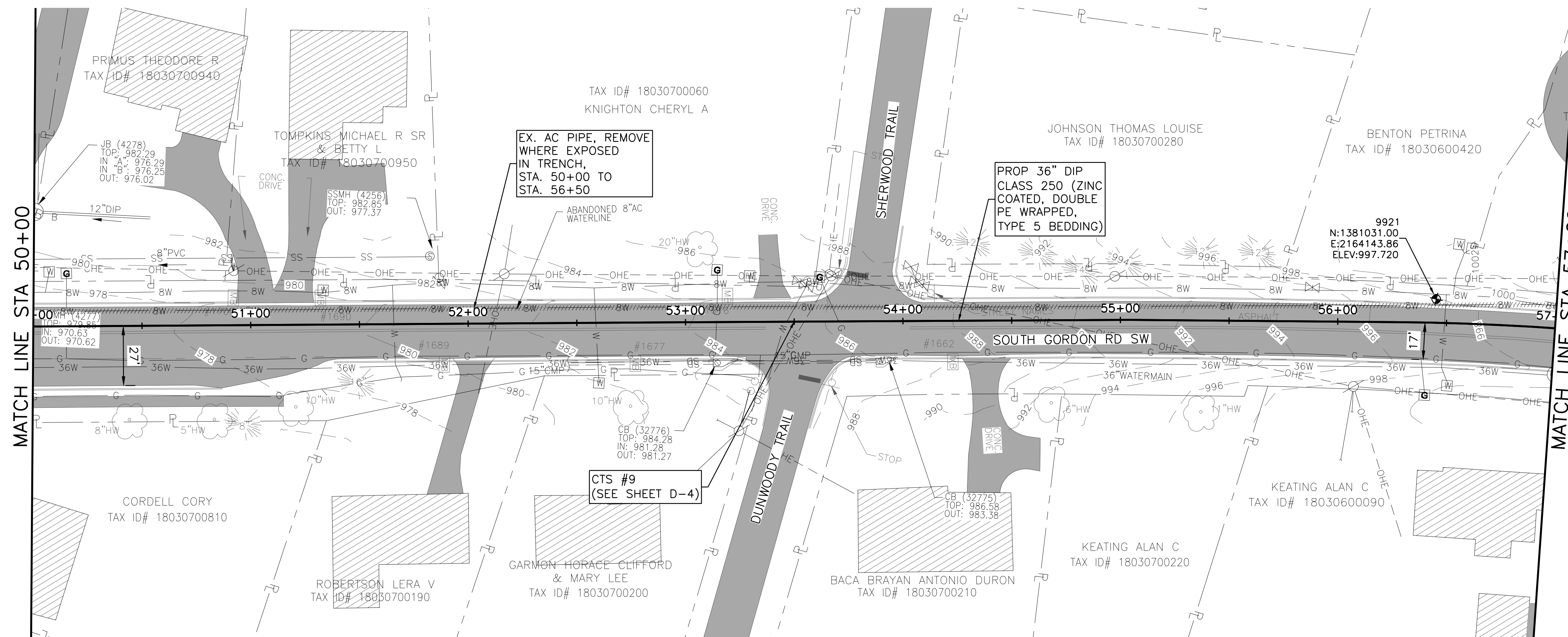


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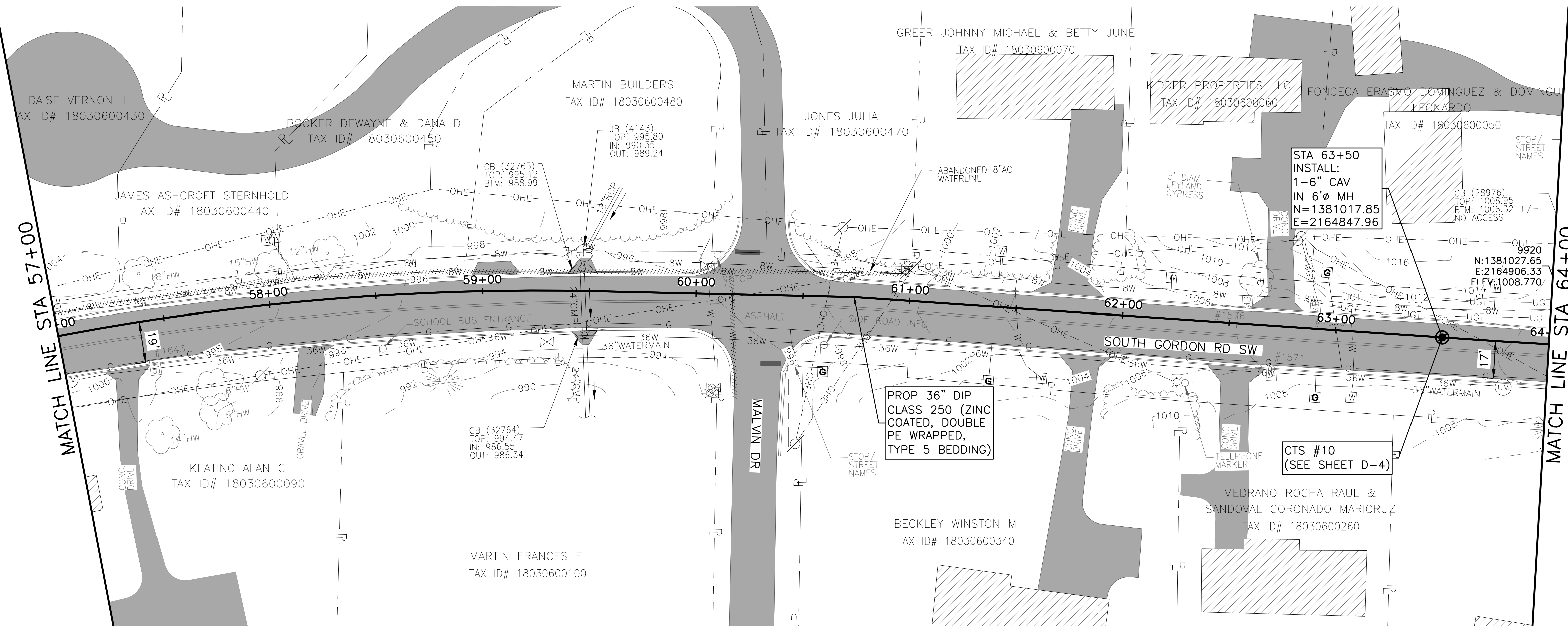
COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 PLAN AND PROFILE
 STA 50+00 TO 57+00

PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	0
DATE	02/08/19
BY	JCS
CHECKED	JCS
FILE NAME	CV-ALL-SHTS01.dwg
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

SHEET C-8
 SEQ. 12



ACAD Ref: 23.0s (LMS Tech)
 Filename: n:\WUTU\Drawings\CV-ALL-SHTS01.dwg
 Last Saved: 3/1/2019 10:43 AM. Saved By: 02618



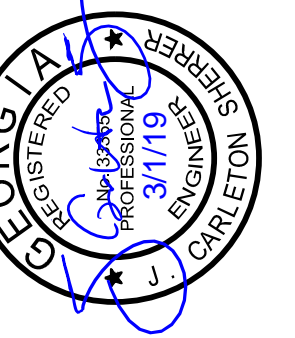
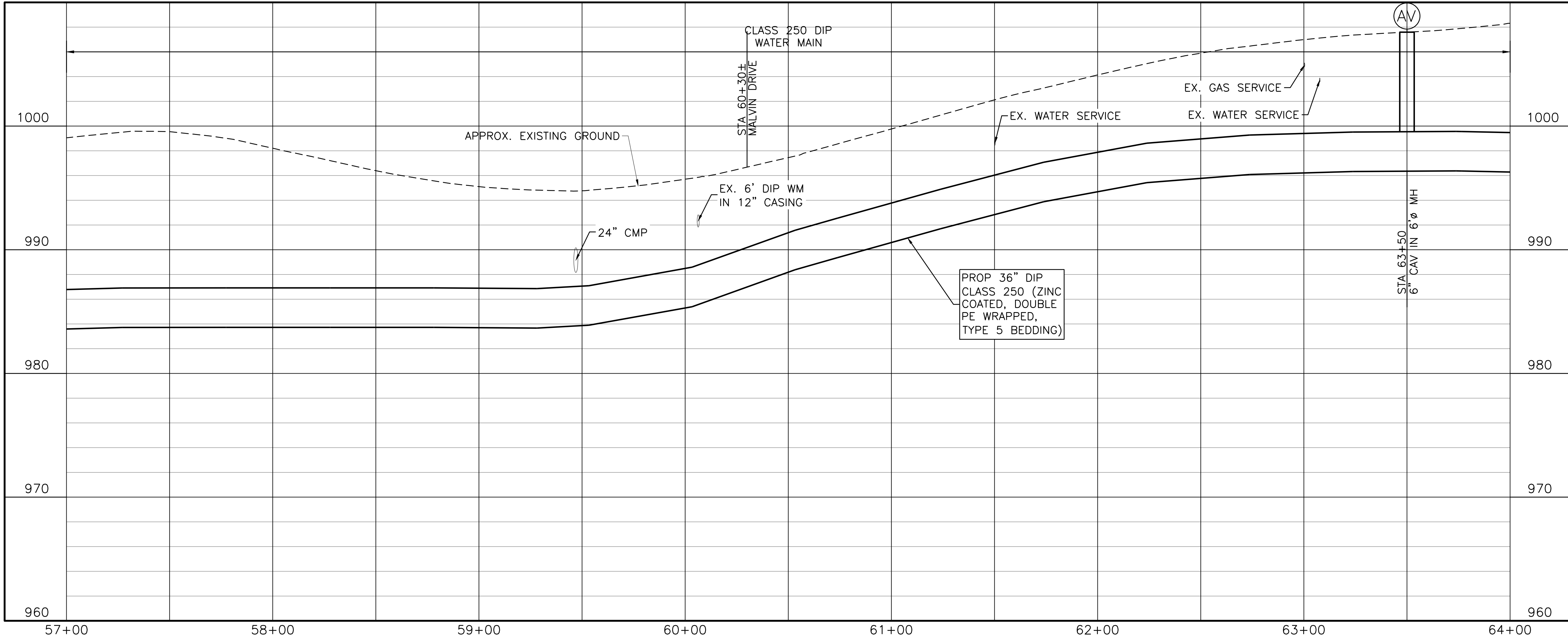
811
 Know what's below.
 Call before you dig.

NORTH

0 10' 20' 30' 60'
 SCALE IN FEET
 HORIZONTAL

0 5' 10'
 SCALE IN FEET
 VERTICAL

NOTES:
 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 57+00 TO 64+00

REV. NO.	DATE	ISSUED FOR	BY	FILE NAME
1	03/01/19	ISSUED FOR BID	JCS	CV-ALL-SHTS01.dwg
2	02/08/19	ISSUED FOR PERMIT	JCS	
3	3/1/19	DESIGNED	FDH	
		DRAWN	CKM	
		CHECKED	JCS	

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET **C-9**
 SEQ. 13



Know what's below.
Call before you dig.



0 10' 20' 30' 60'

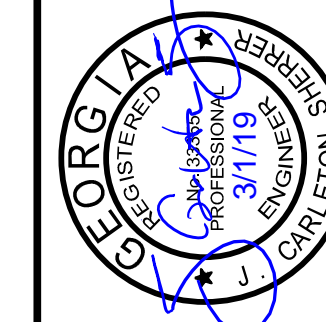
SCALE IN FEET
HORIZONTAL

0 5' 10'

SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



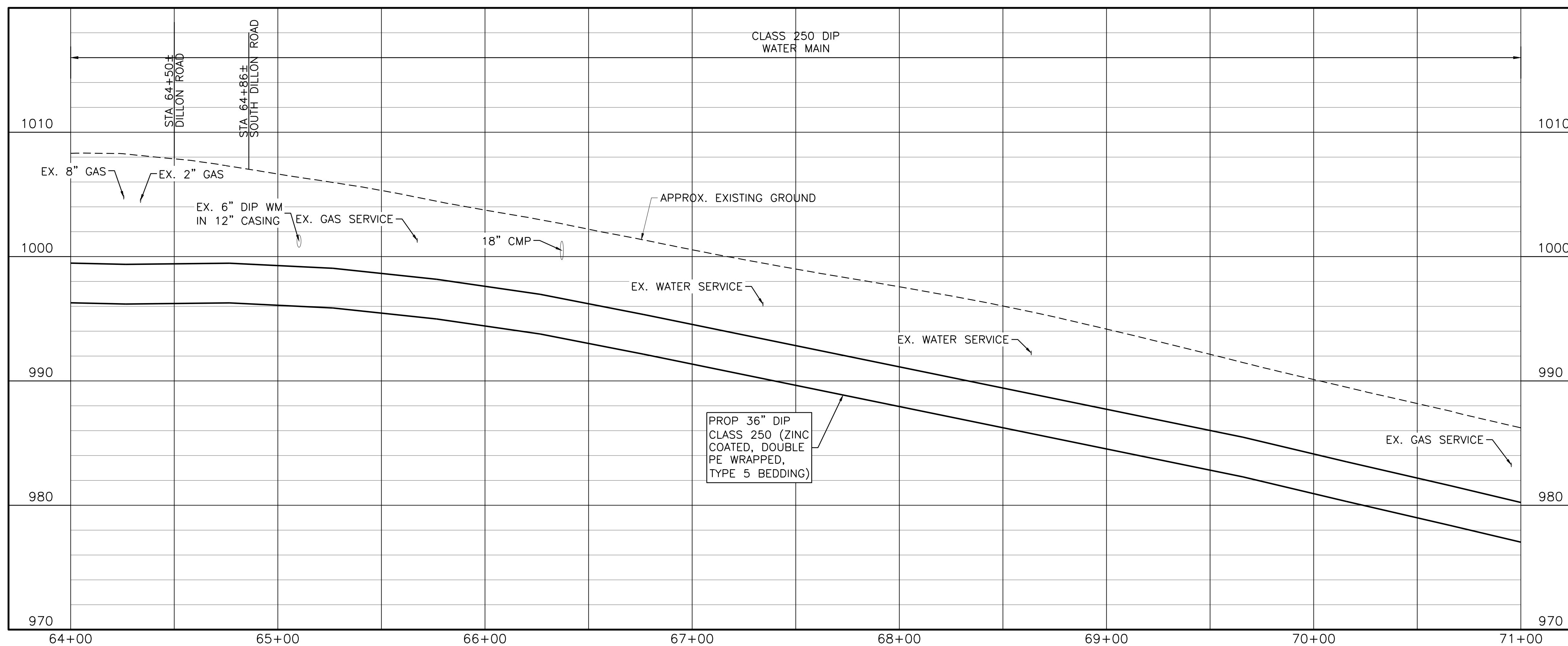
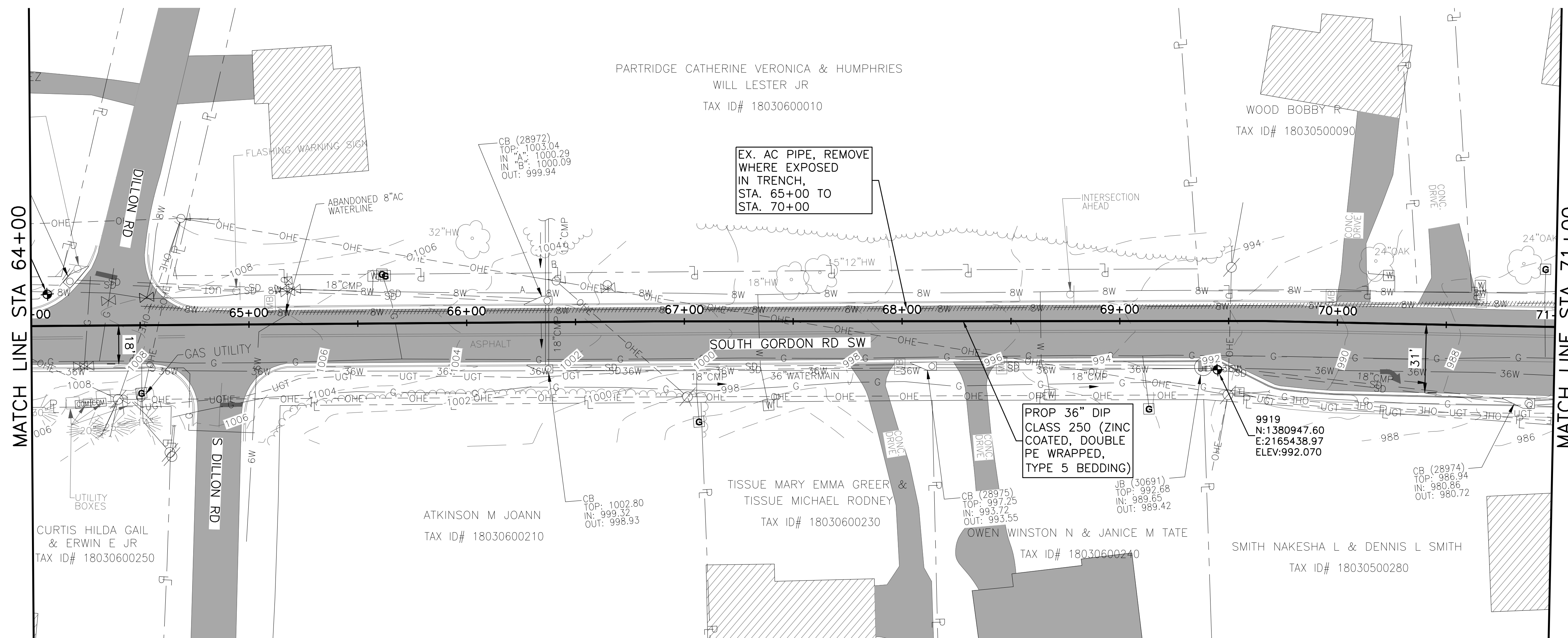
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COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT

CIVIL
 PLAN AND PROFILE
 STA 64+00 TO 71+00

ISSUED FOR BID	ISSUED FOR PERMIT	ISSUE NO.	DATE	FILE NAME
JCS	JCS	0	03/01/19	CV-ALL-SHTS01.dwg
DESIGNED	DRAWN	REVISION	CHECKED	JCS
3/7/19	02/08/19			

SHEET C-10
 SEQ. 14





Know what's below.
Call before you dig.

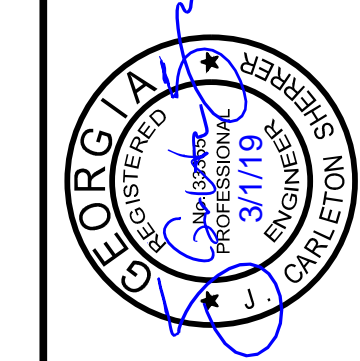


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

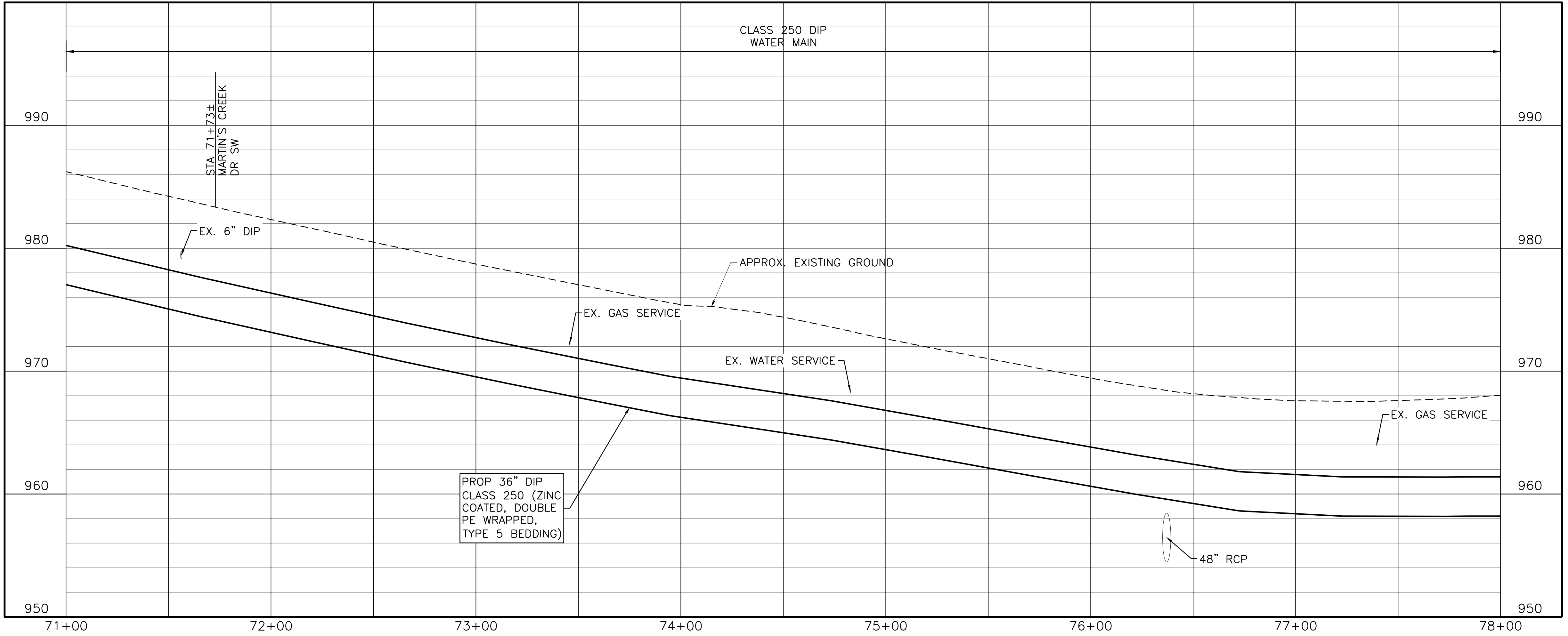
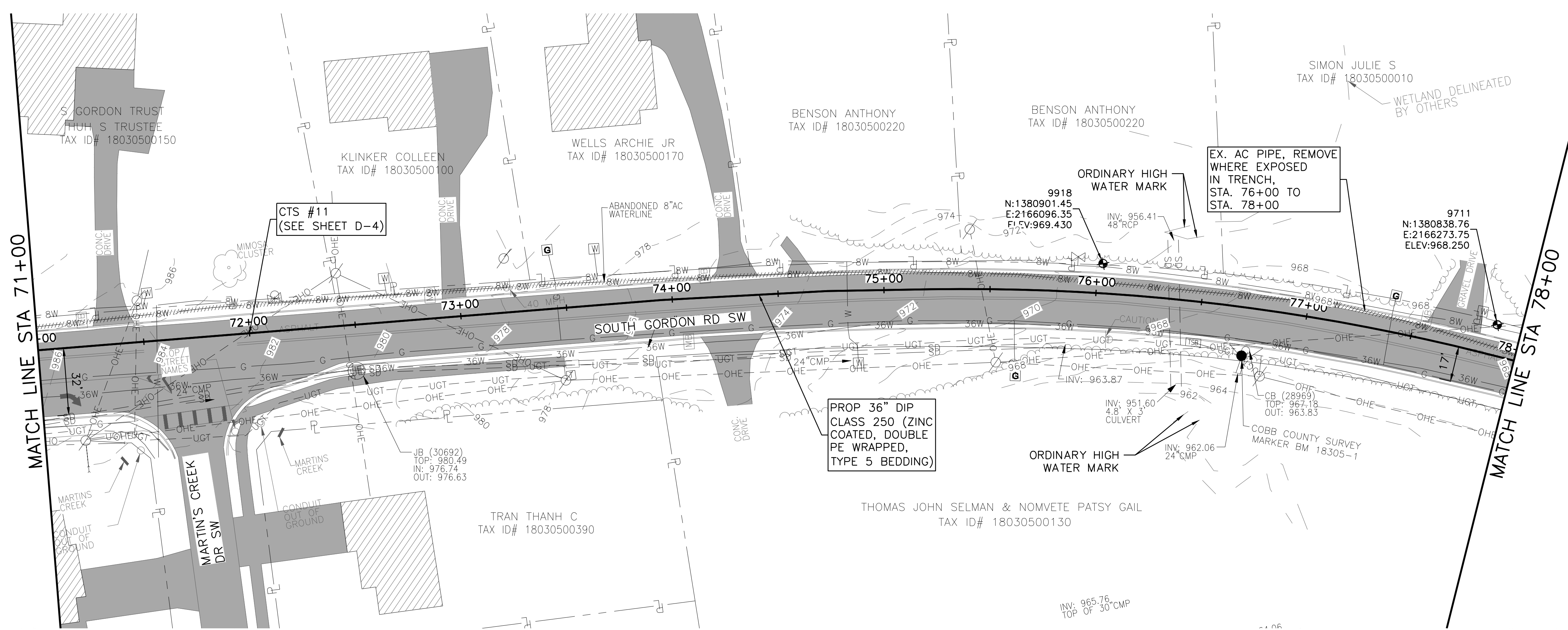


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 71+00 TO 78+00

PROJ. JOB NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	1
DATE	02/08/19
CHECKED	JCS
FILE NAME	CV-ALL-SHTS02.dwg

SHEET **C-11**
 SEQ. 15



ACAD Ref: 23.08 (LMS Tech)
 Filename: n:\W\TU\Drawings\CV-ALL-SHTS02.dwg
 Last Saved: 2/28/2019 3:34 PM. Saved By: 02618



Know what's below.
Call before you dig.

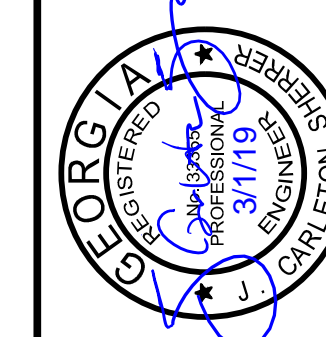


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

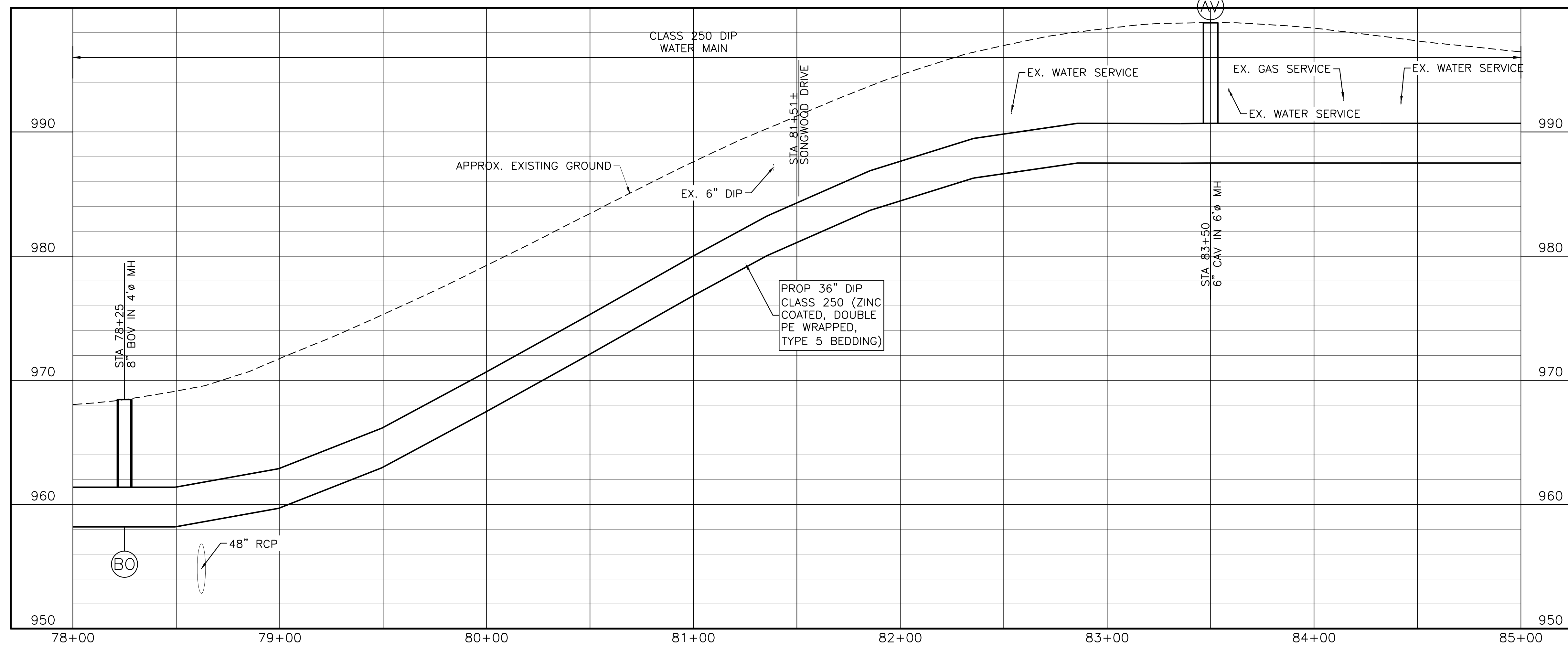
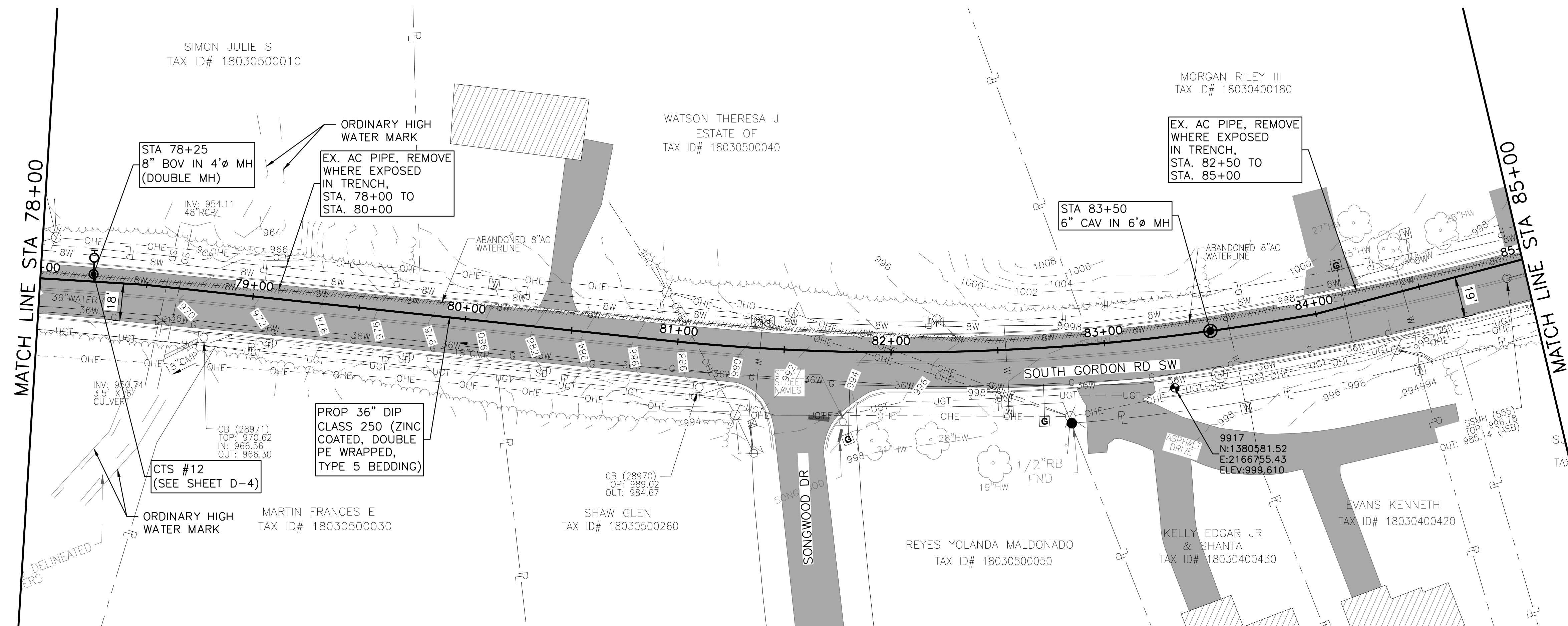


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 78+00 TO 85+00

PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS
ISSUED FOR BID	JCS
ISSUE NO.	0
DATE	02/08/19
REVISION	BY
CHECKED	JCS
FILE NAME	CV-ALL-SHTS02.dwg

SHEET **C-12**
 SEQ. 16





Know what's below.
Call before you dig.

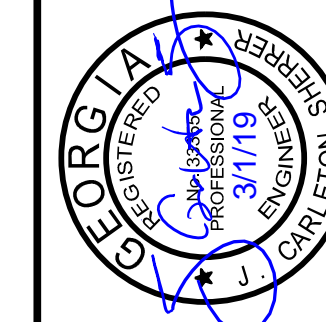


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

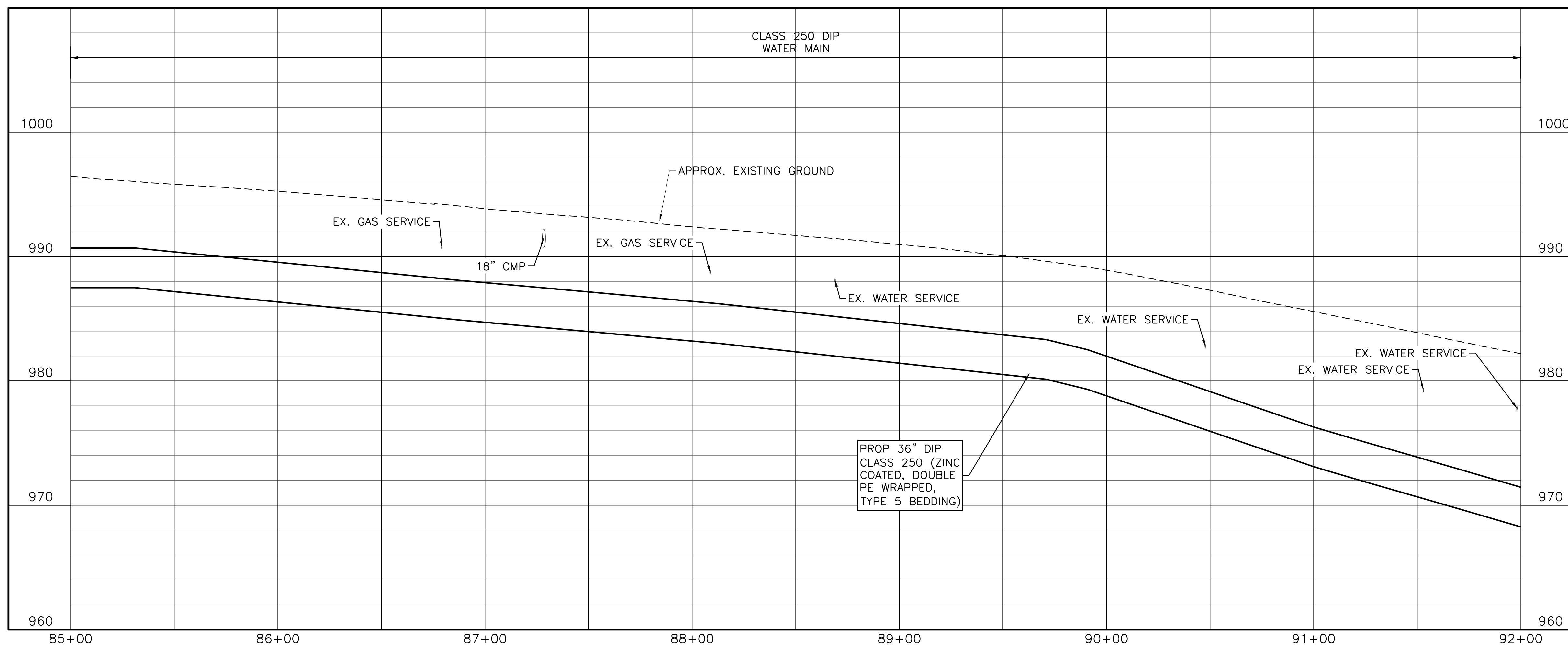
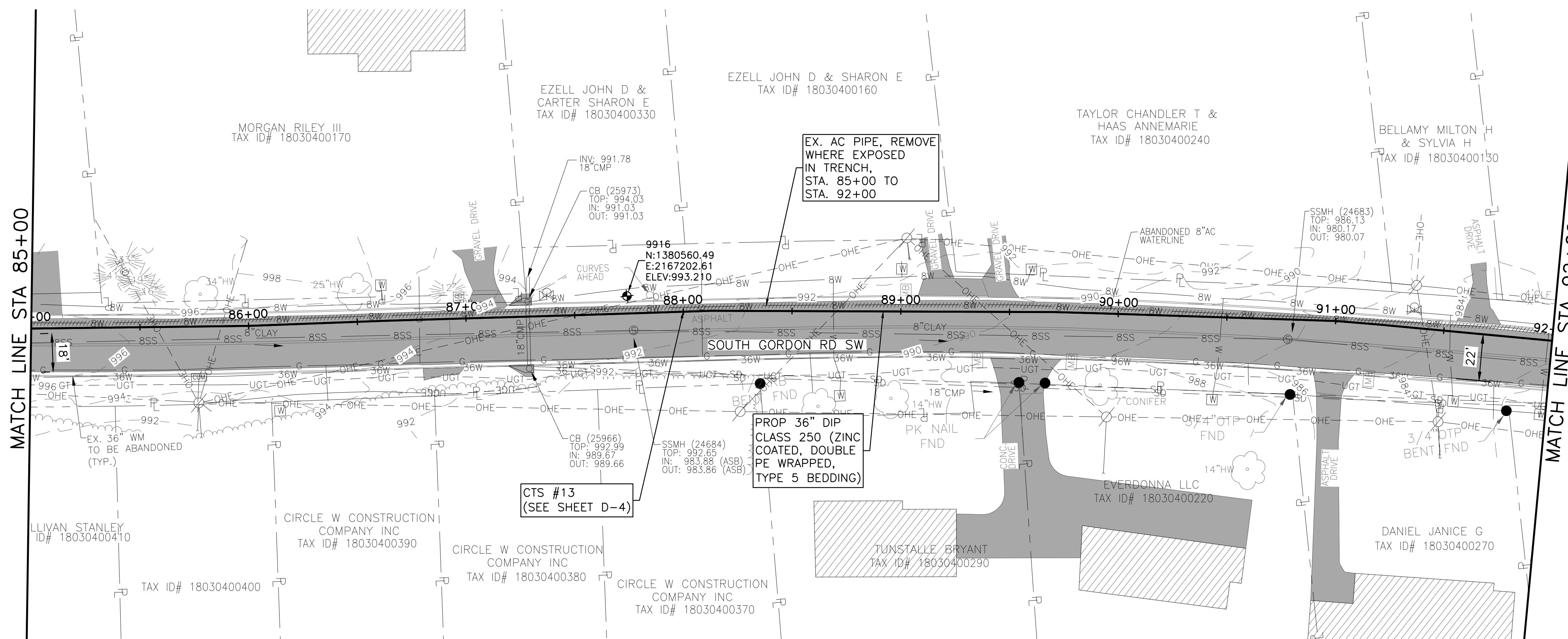


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 85+00 TO 92+00

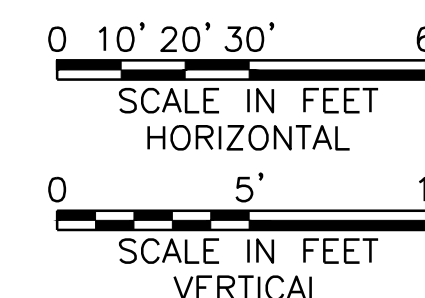
PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	02/08/19
BY	JCS
CHECKED	JCS
FILE NAME	CV-ALL-SHTS02.dwg
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

SHEET **C-13**
 SEQ. 17



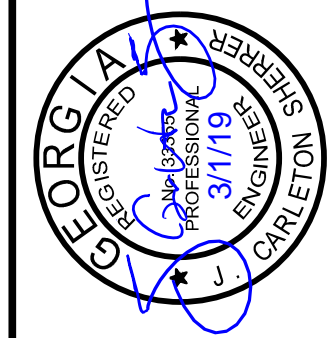


Know what's below.
Call before you dig.



NOTES:

- 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

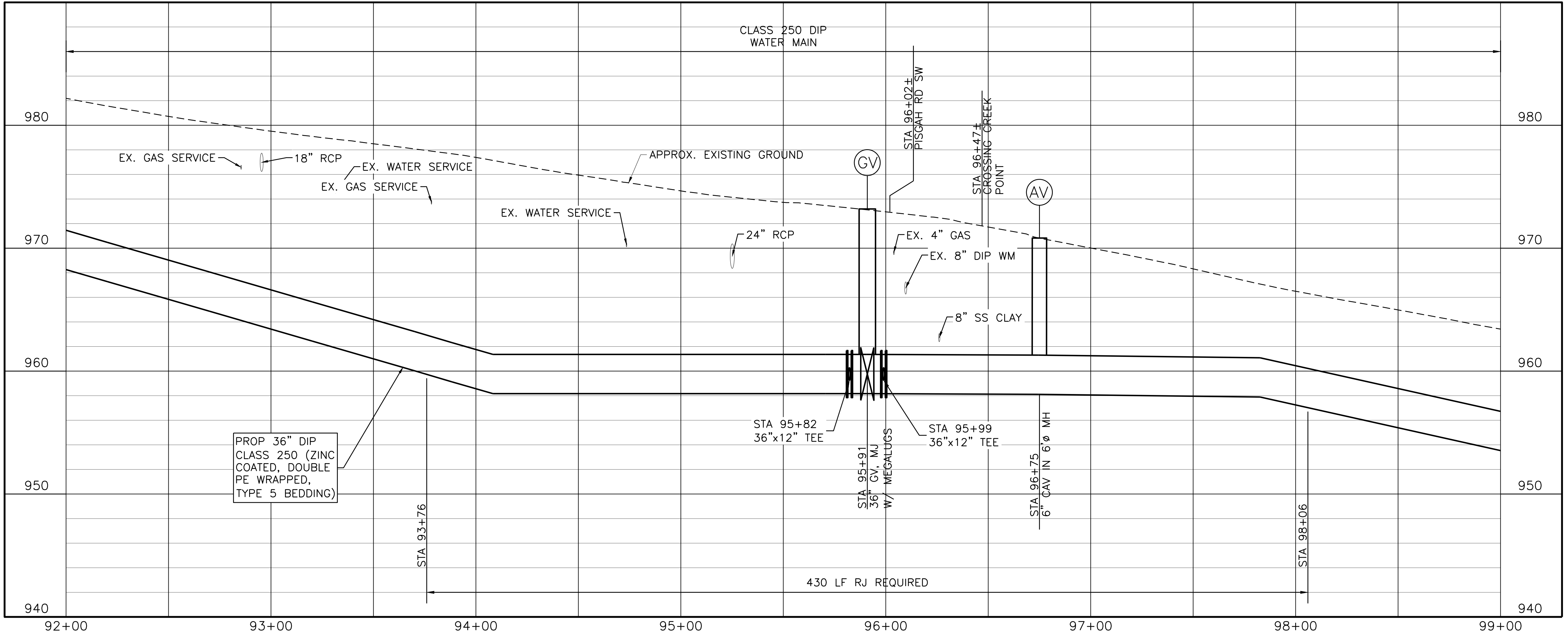
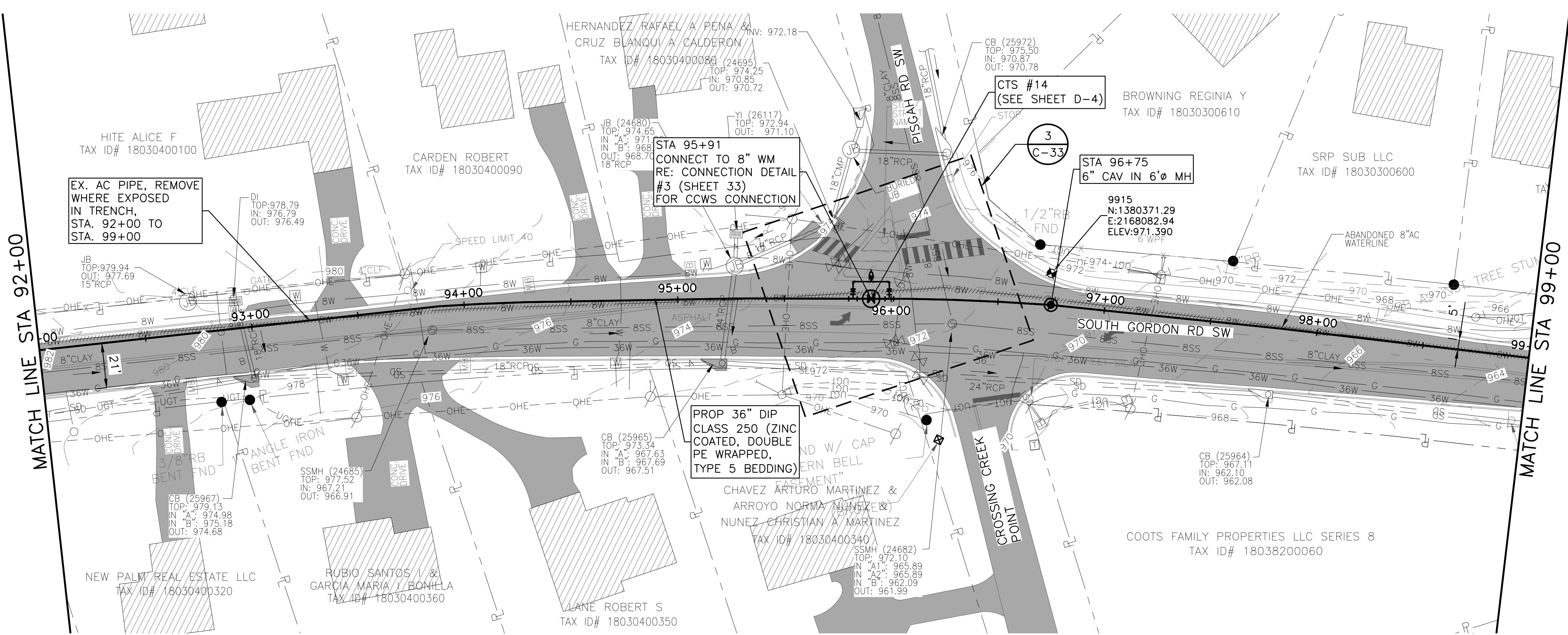


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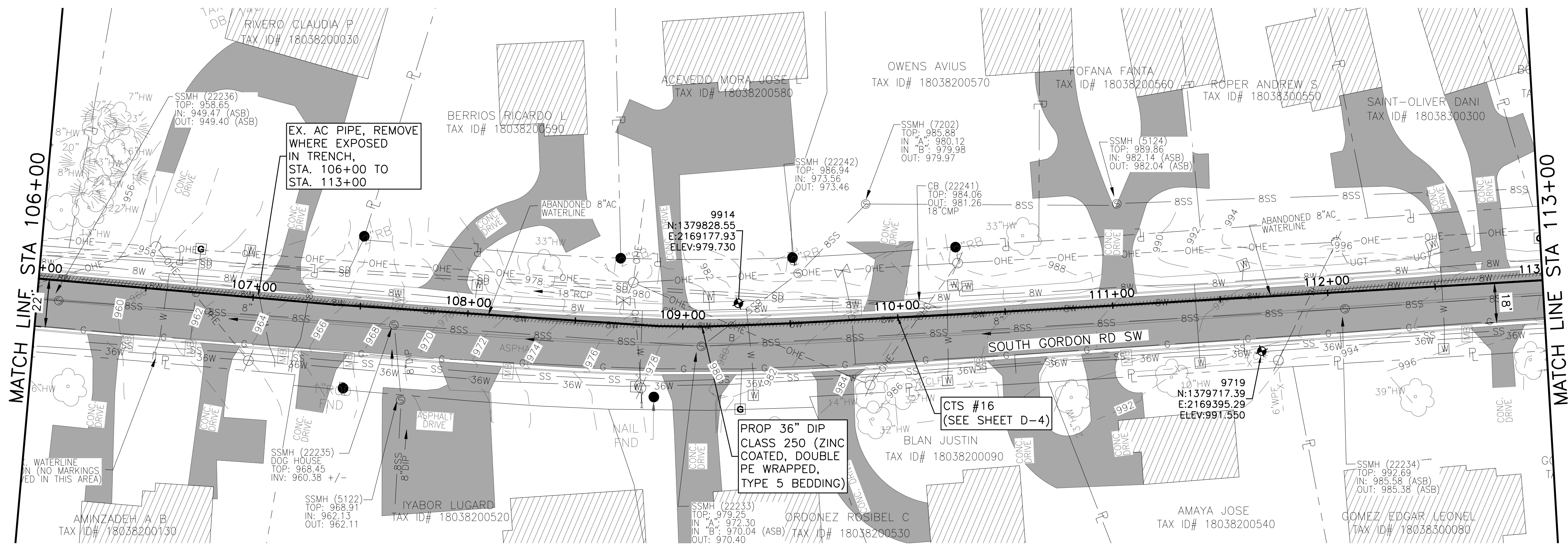
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 92+00 TO 99+00

FILE NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19	JCS	02/08/19	JCS				
ISSUED FOR PERMIT									
VERIFY SCALE									

SHEET C-14
SEQ. 18



ACAD Ref: 23.0s (LMS Tech)
Filename: n:\W\T\Drawings\CV-ALL-SHTS02.dwg
Last Saved: 2/28/2019 3:34 PM. Saved By: 02618



Know what's below.
Call before you dig.

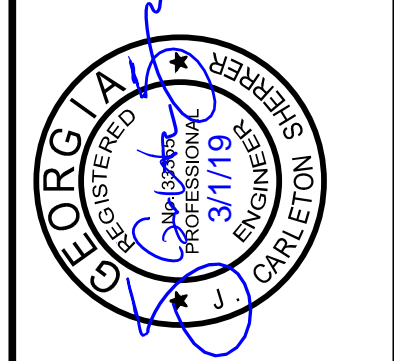


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

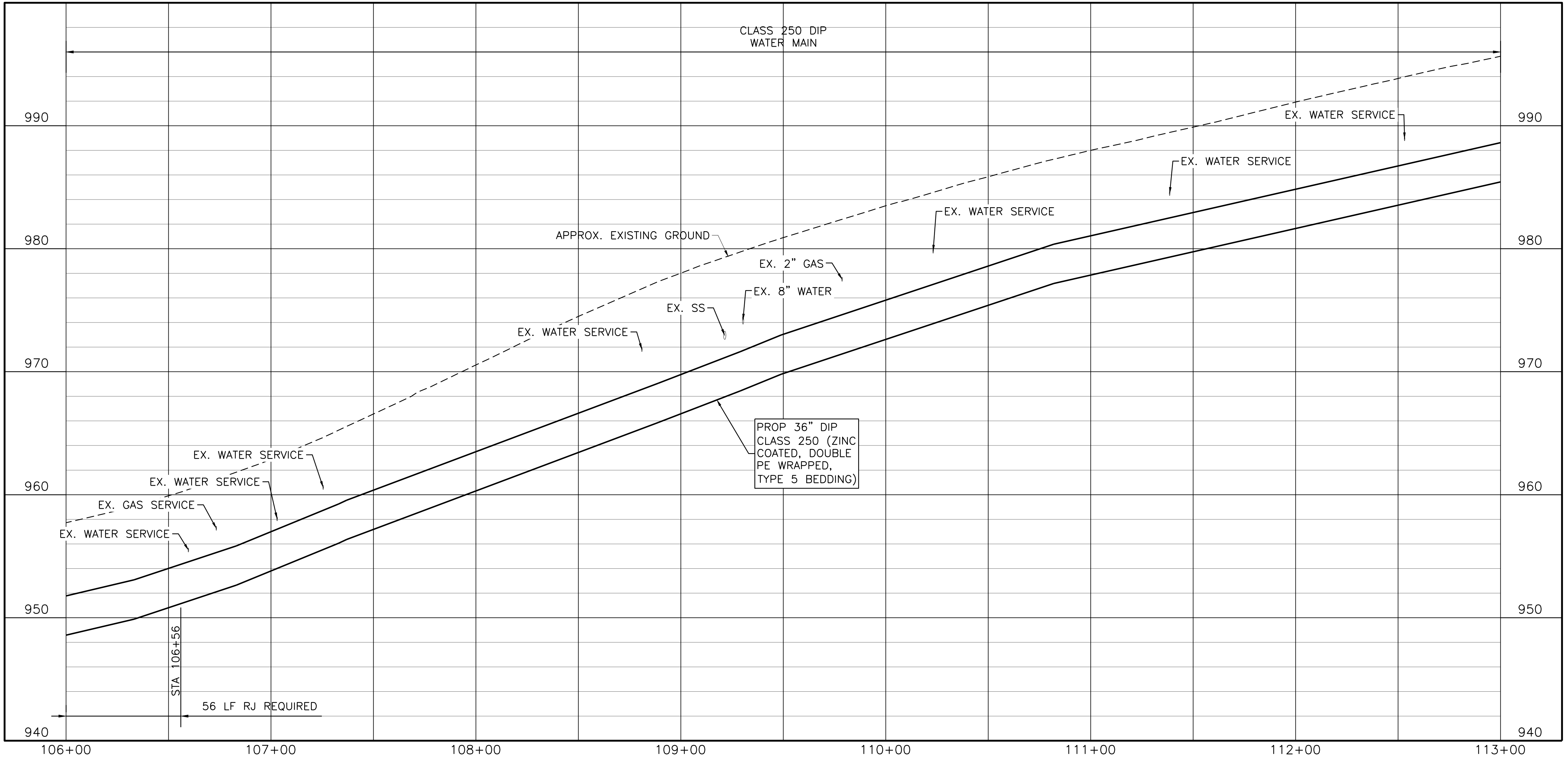
NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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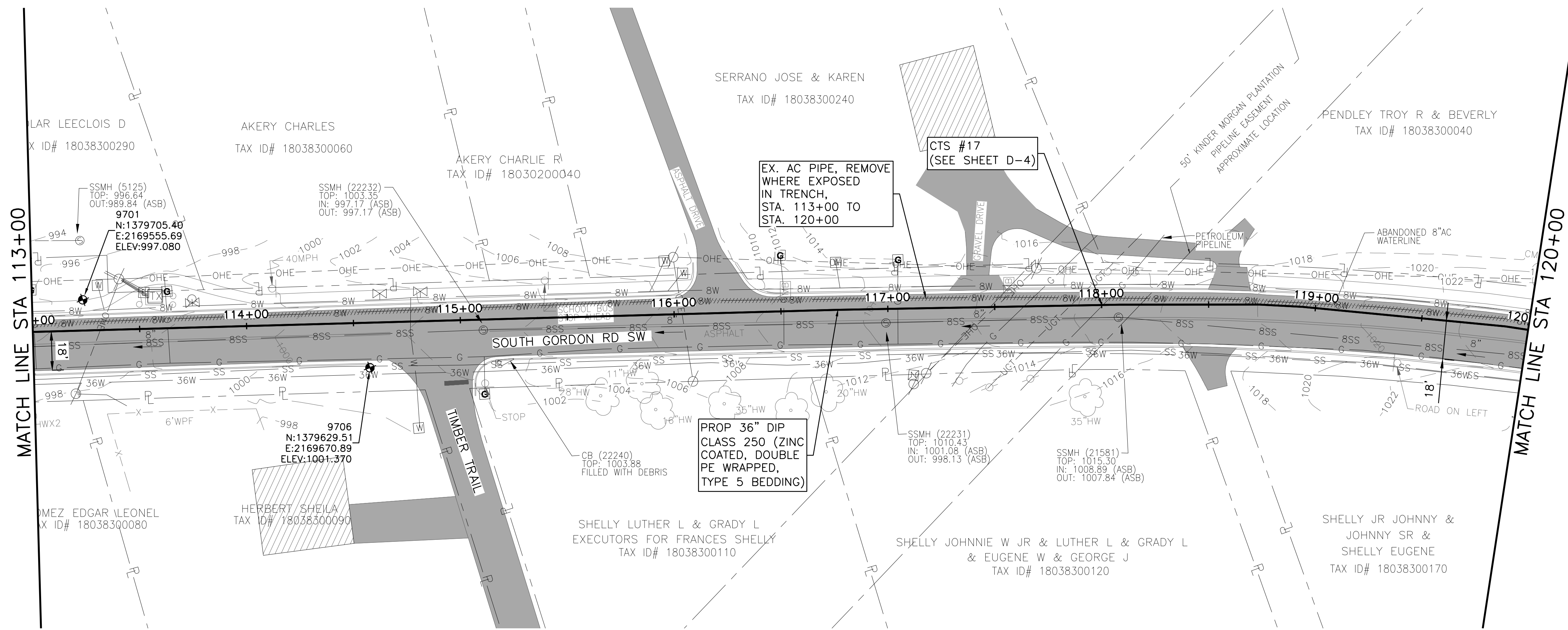
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 106+00 TO 113+00



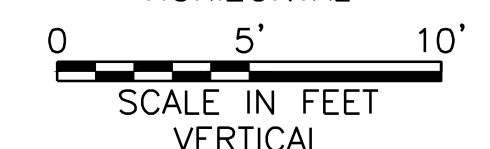
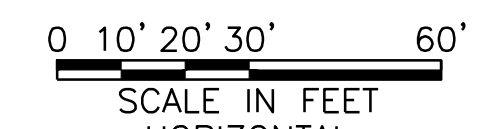
PROJ. NO.	CBR18213	DATE	3/7/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19							
ISSUED FOR PERMIT	JCS	02/08/19							
ISSUE NO.		DATE		BY		FILE NAME			
VERIFY SCALE	0					CV-ALL-SHTS02.dwg			

SHEET **C-16**
SEQ. 20

ACAD Ref: 23.0s (LMS Tech)
Filename: n:\W\TU\Drawings\CV-ALL-SHTS02.dwg
Last Saved: 2/28/2019 3:34 PM. Saved By: 02618

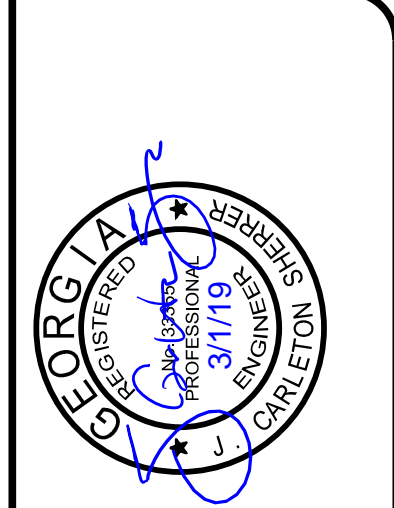
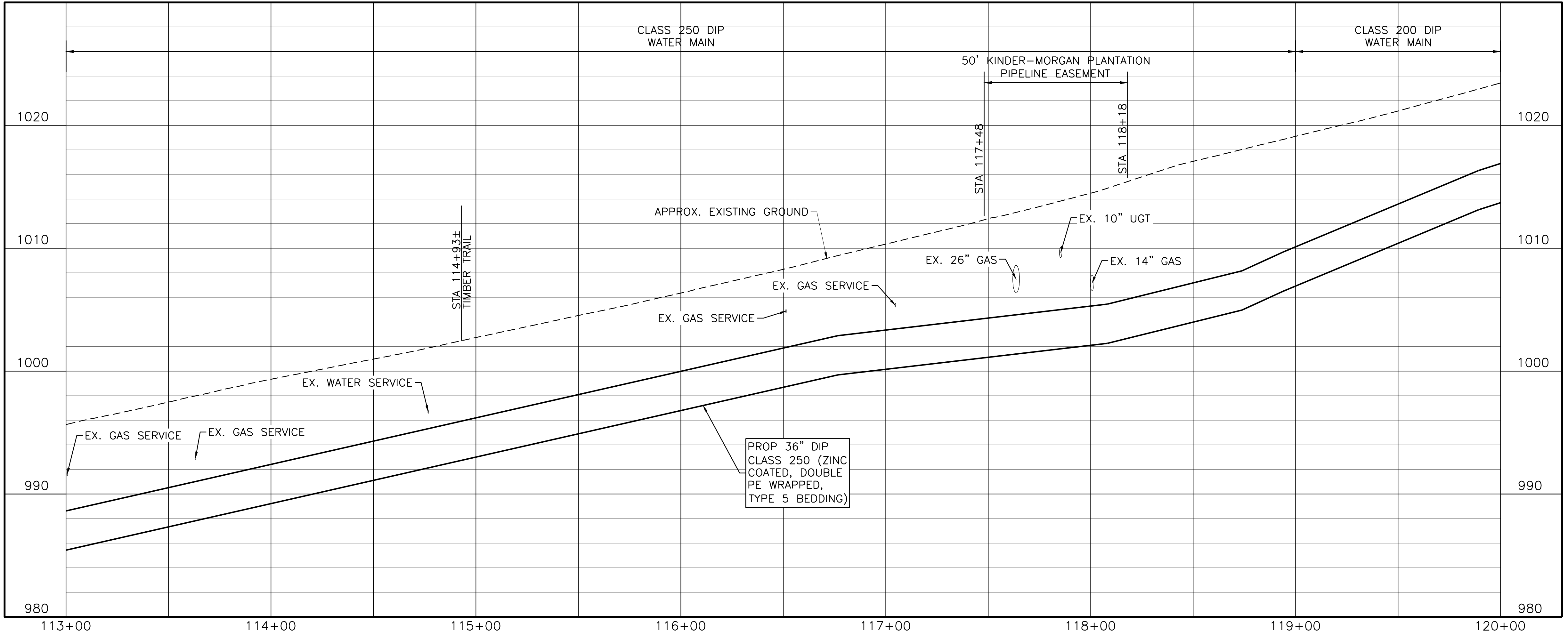


Know what's below.
Call before you dig.



NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

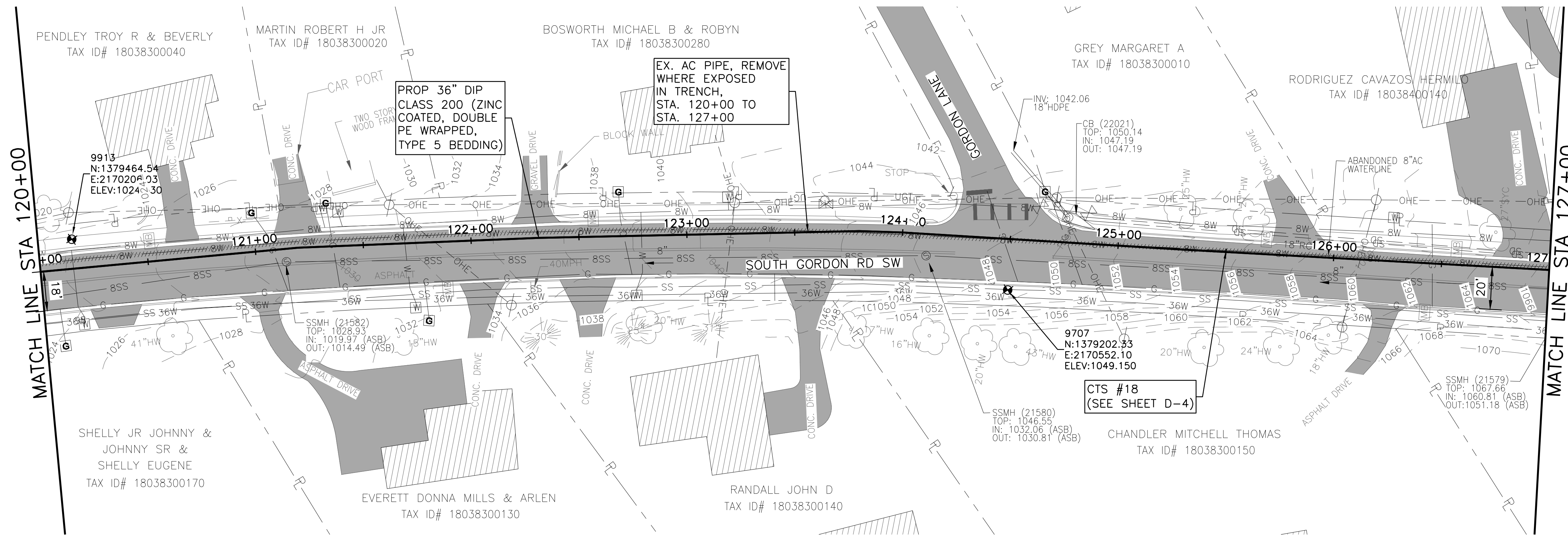


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WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 113+00 TO 120+00

ISSUED FOR BID	JCS	03/01/19	DESIGNED	FDH
ISSUED FOR PERMIT	JCS	02/08/19	DRAWN	CKM
NO.	BY	DATE	REVISION	CHECKED
0				JCS
FILE NAME: CV-ALL-SHTS02.dwg				

SHEET C-17
SEQ. 21



Know what's below.
Call before you dig.

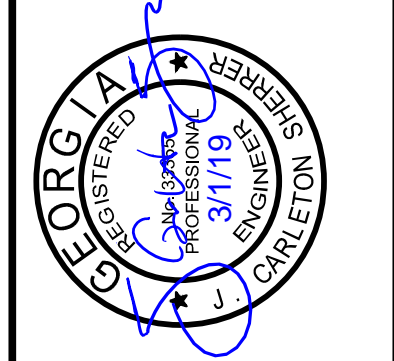


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

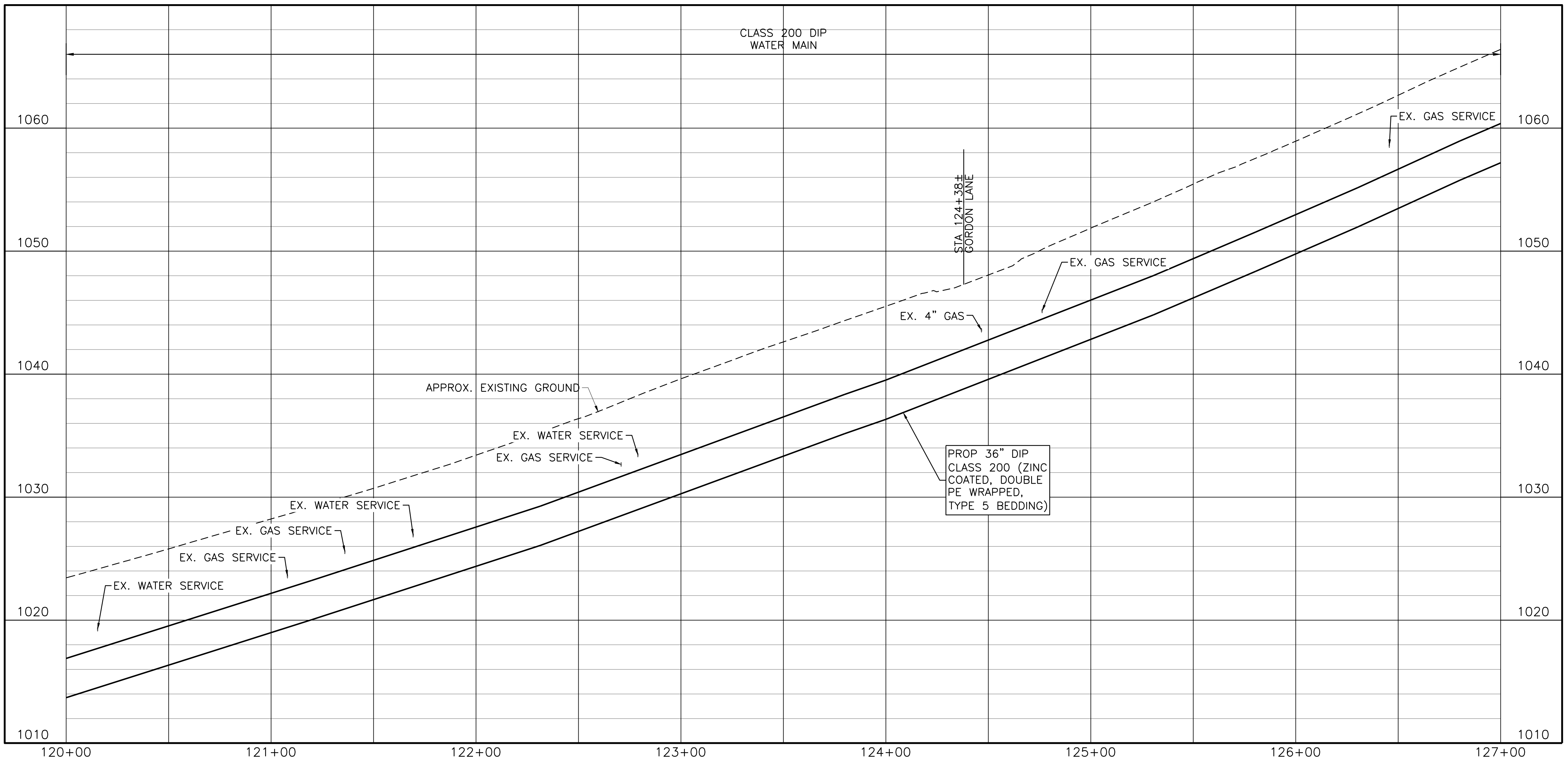
0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 120+00 TO 127+00

PROJ. NO.	CBR18213	DATE	3/7/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19							
ISSUED FOR PERMIT	JCS	02/08/19							
ISSUE NO.		DATE		BY		FILE NAME			
VERIFY SCALE	0					CV-ALL-SHTS02.dwg			

SHEET C-18
SEQ. 22

ACAD Ref: 23.0s (LMS Tech)
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Know what's below.
Call before you dig.



0 10' 20' 30' 60'

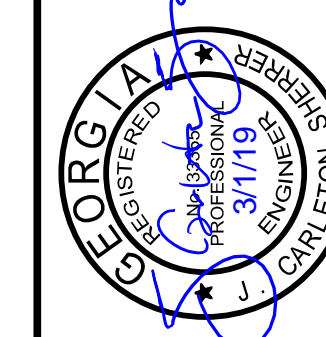
SCALE IN FEET
HORIZONTAL

0 5' 10'

SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

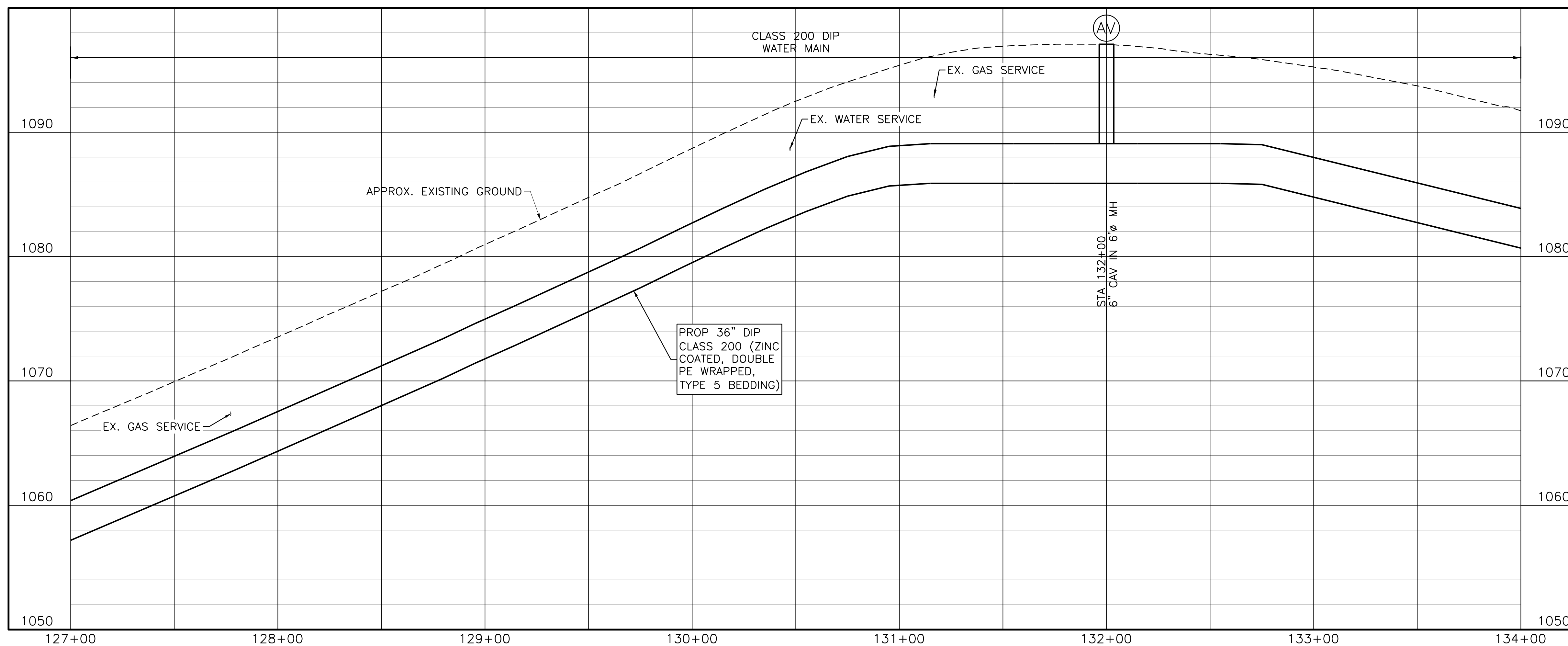
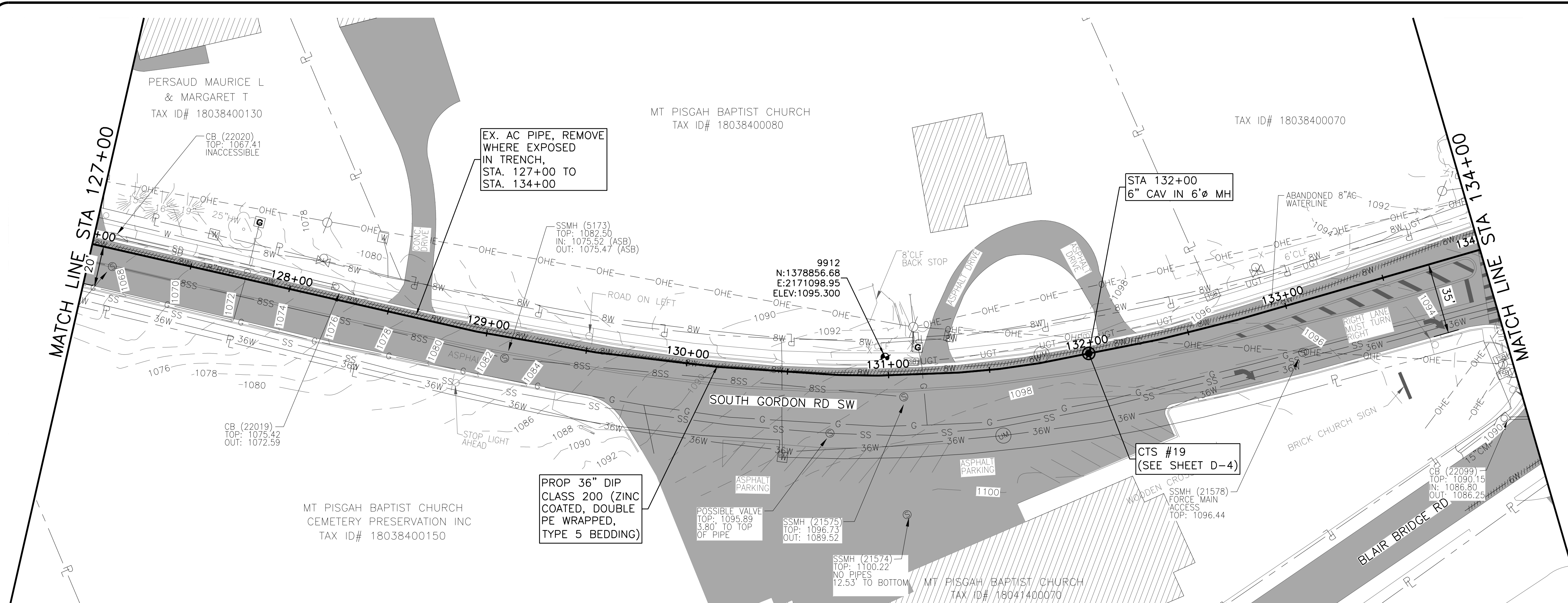


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COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 PLAN AND PROFILE
 STA 127+00 TO 134+00

PROJ. JOB NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	02/08/19
DATE	
CHECKED	JCS
FILE NAME	CV-ALL-SHTS02.dwg
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

SHEET
C-19
 SEQ.
 23





Know what's below.
Call before you dig.



0 10' 20' 30' 60'

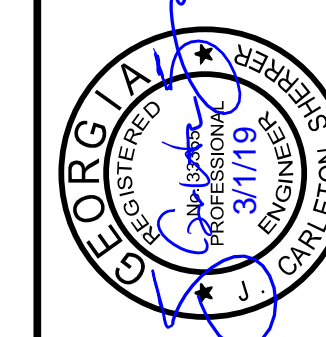
SCALE IN FEET
HORIZONTAL

0 5' 10'

SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

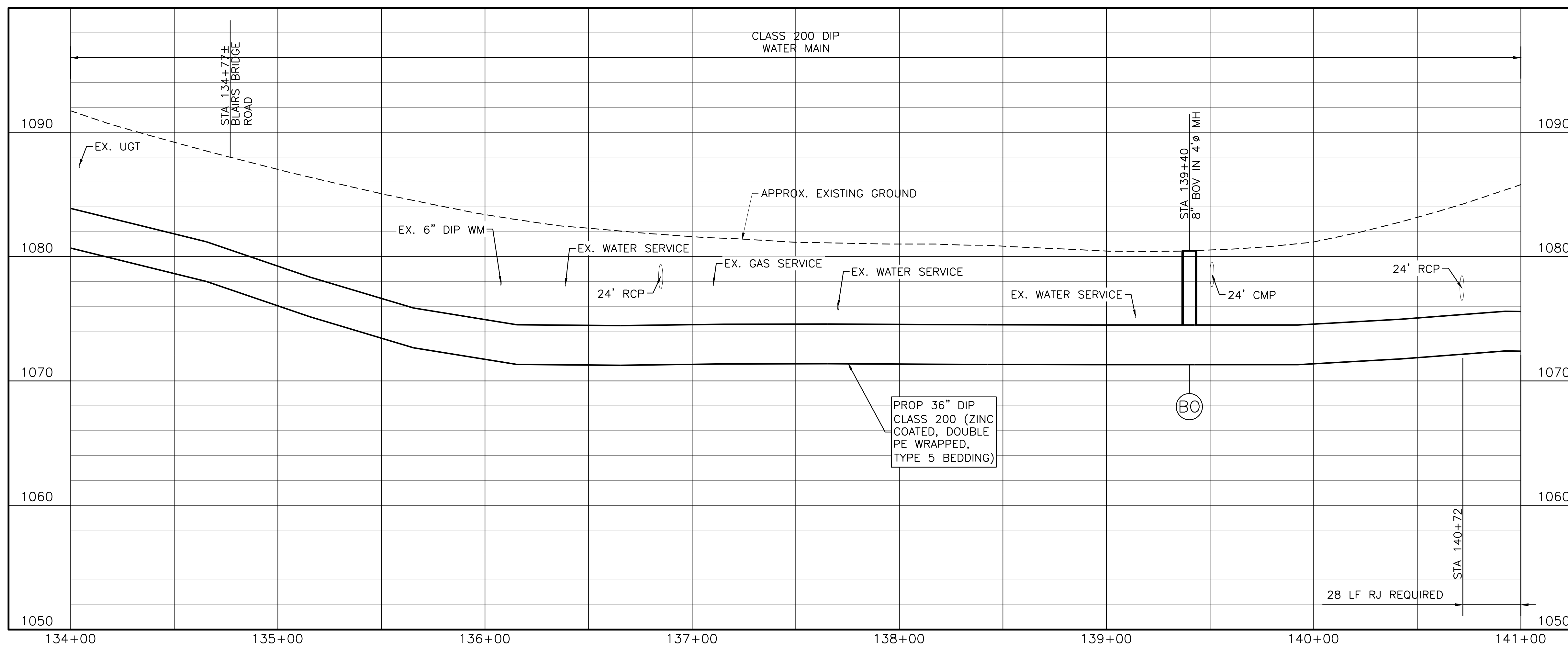
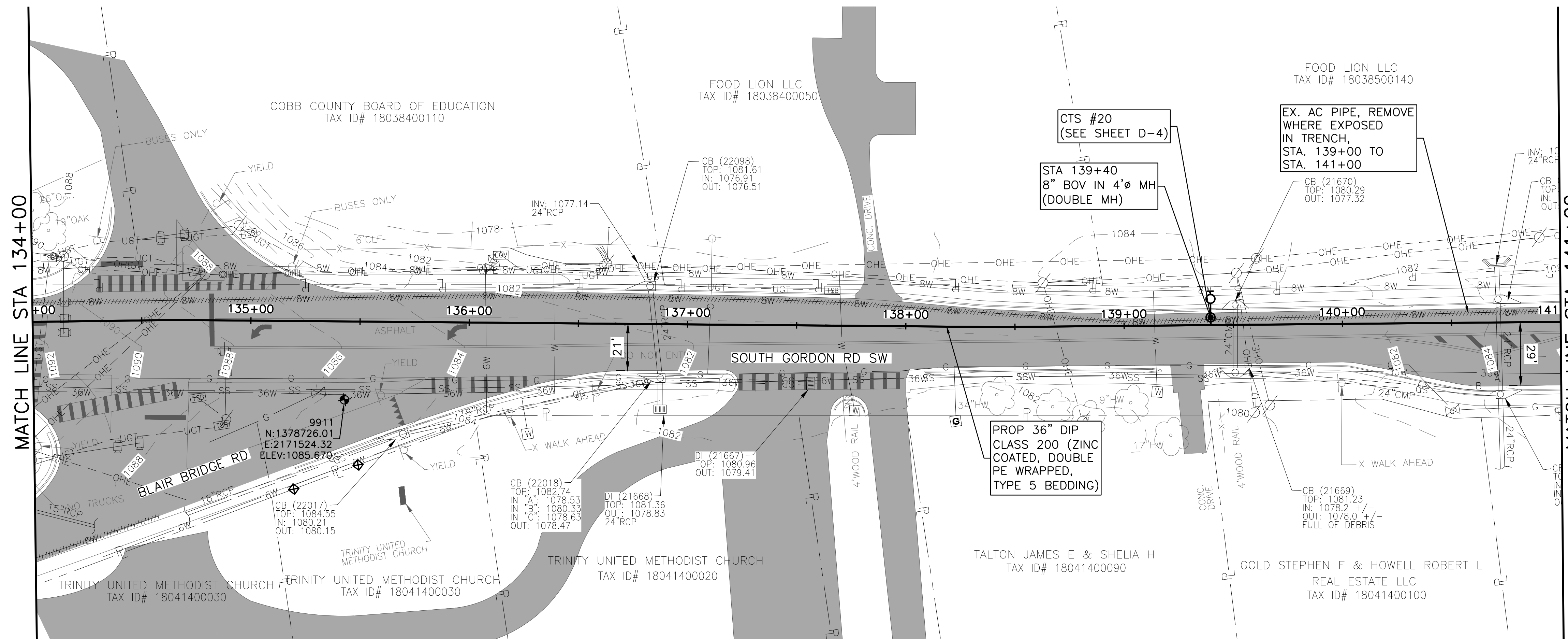


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WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 134+00 TO 141+00

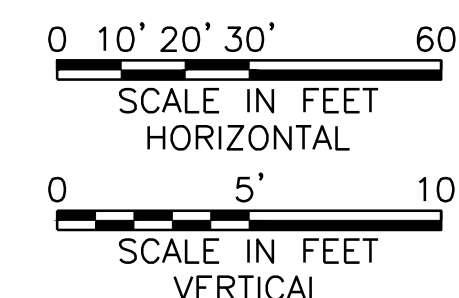
PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS
ISSUED FOR BID	JCS
ISSUE NO.	0
DATE	02/08/19
FILE NAME	CV-ALL-SHTS02.dwg
CHECKED	JCS
BY	
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

SHEET **C-20**
 SEQ. 24



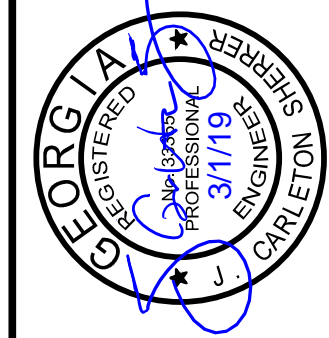


Know what's below.
Call before you dig.



NOTES:

- 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

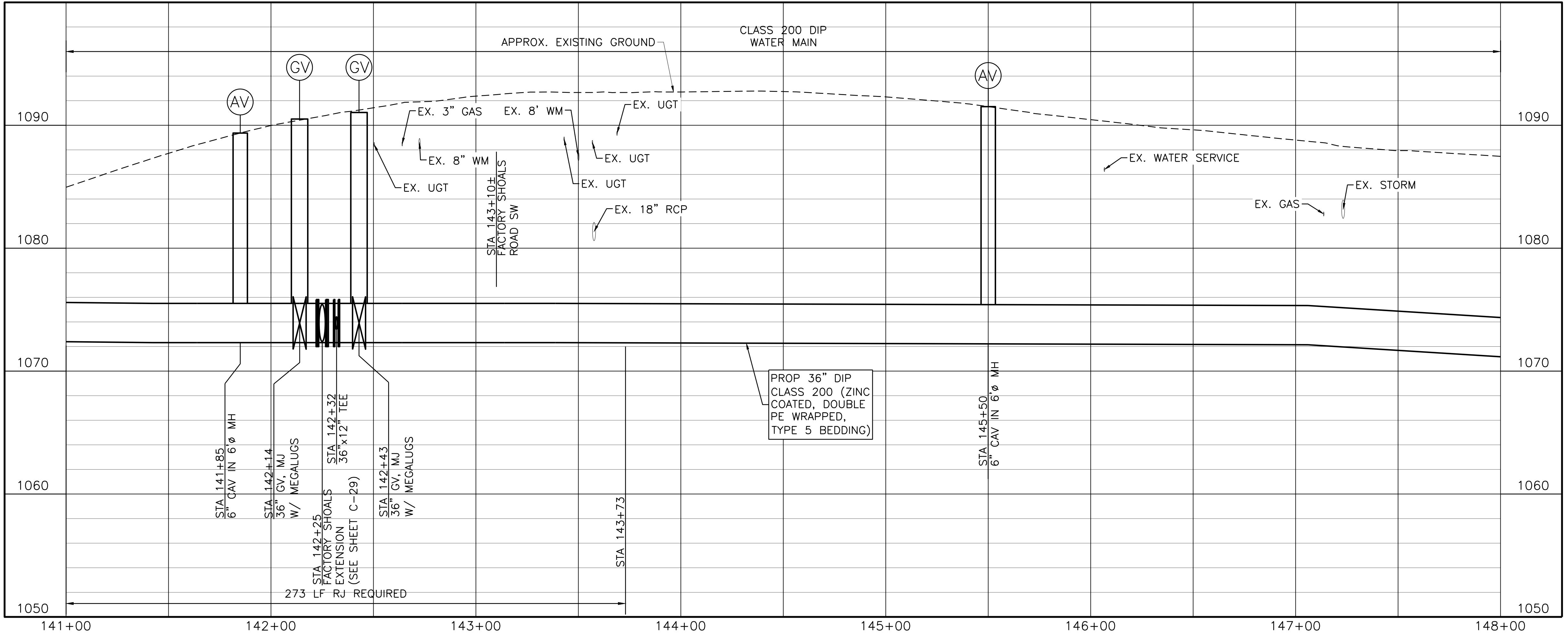
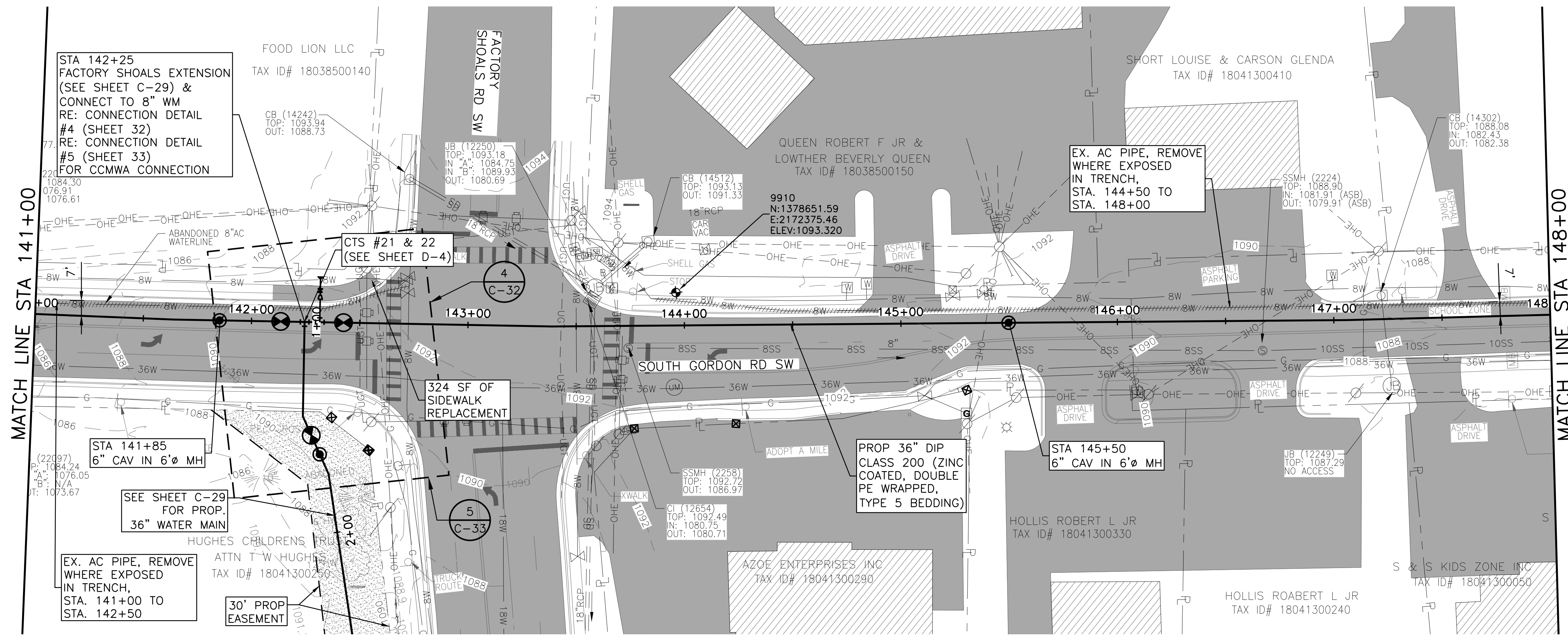


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 141+00 TO 148+00

ISSUED FOR BID	DESIGNED	DATE	FILE NAME
ISSUED FOR PERMIT	DRAWN	DATE	CV-ALL-SHT503.dwg
NO.	BY	REVISION	CHECKED
0	JCS	02/08/19	JCS

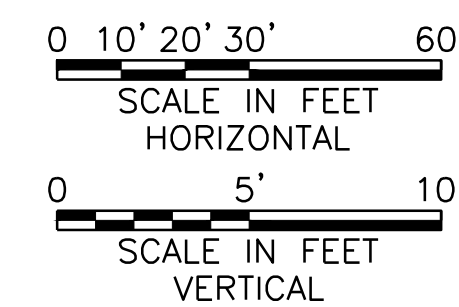
SHEET C-21
SEQ. 25



ACAD Ref: 23.0s (LMS Tech)
Filename: n:\WUTU\Drawings\CV-ALL-SHT503.dwg
Last Saved: 3/1/2019 9:42 AM Saved By: 02618

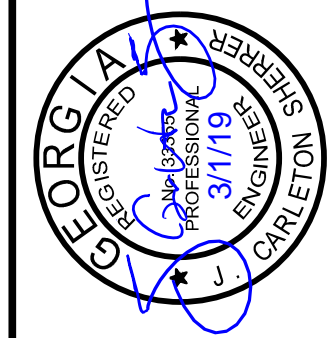


Know what's below.
Call before you dig.



NOTES:

- 1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

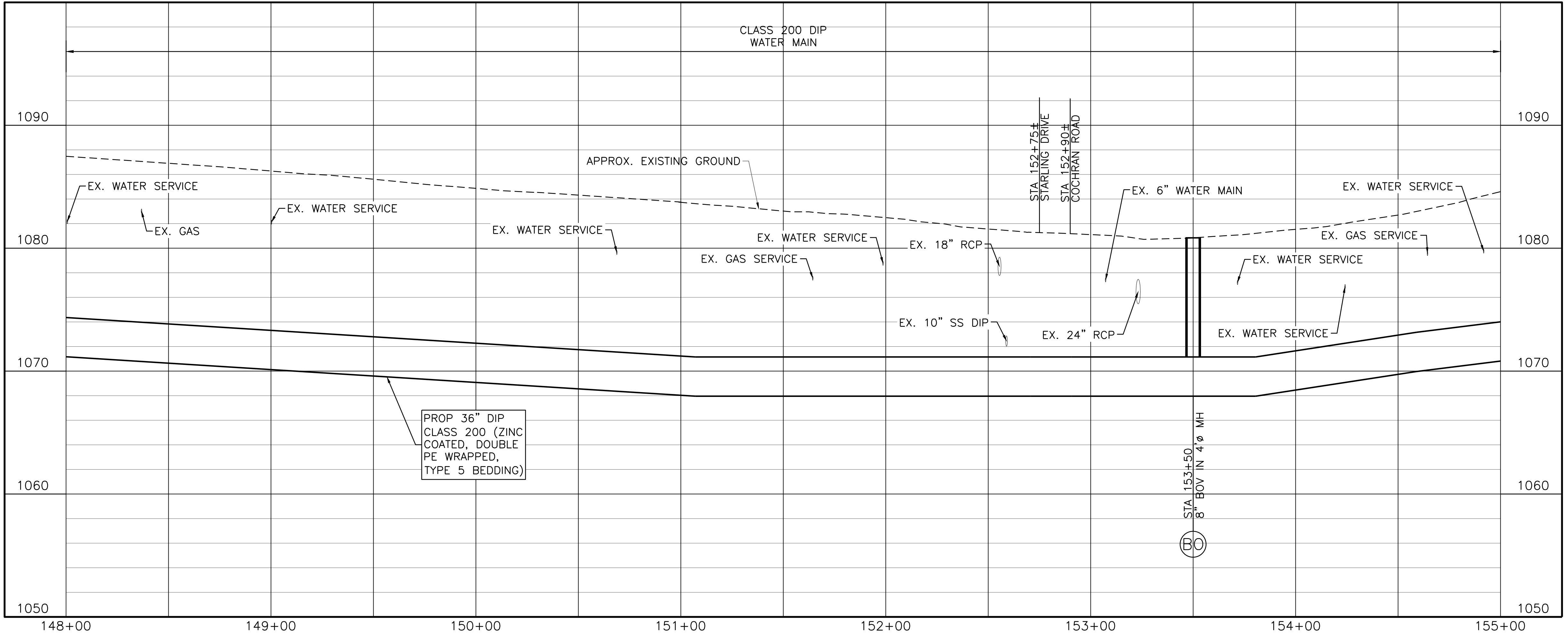
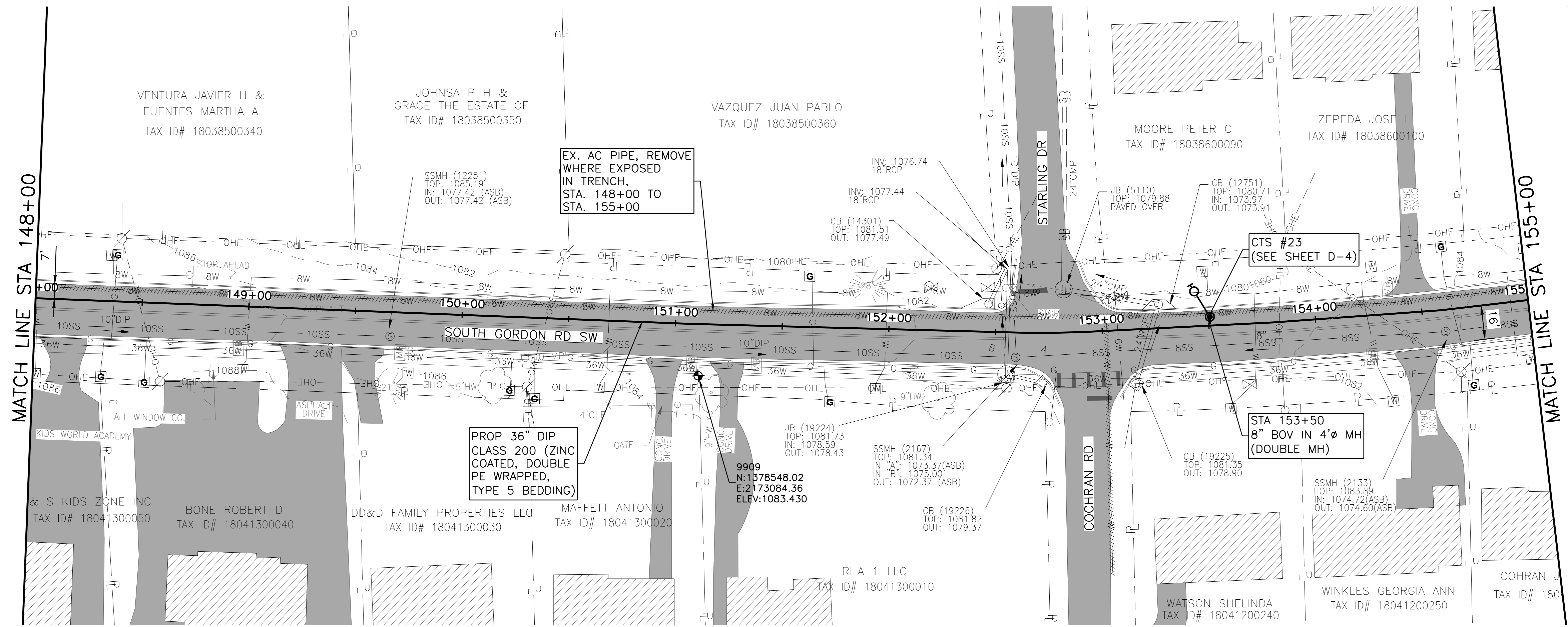


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COBB COUNTY-MARIETTA WATER AUTHORITY
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36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 148+00 TO 155+00

PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS 03/01/19
ISSUED FOR PERMIT	JCS 02/08/19
ISSUE NO.	1
BY	JCS
CHECKED	JCS
FILE NAME	CV-ALL-SHTS03.dwg

SHEET C-22
SEQ. 26



ACAD Ref: 23.0s (LMS Tech)
Filename: n:\W\TU\Drawings\CV-ALL-SHTS03.dwg
Last Saved: 3/1/2019 9:42 AM Saved By: 02618



Know what's below.
Call before you dig.

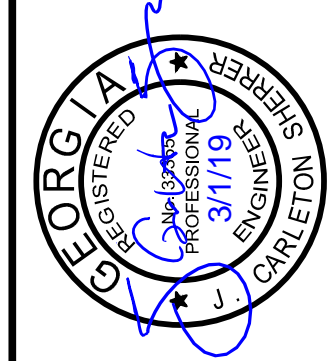


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

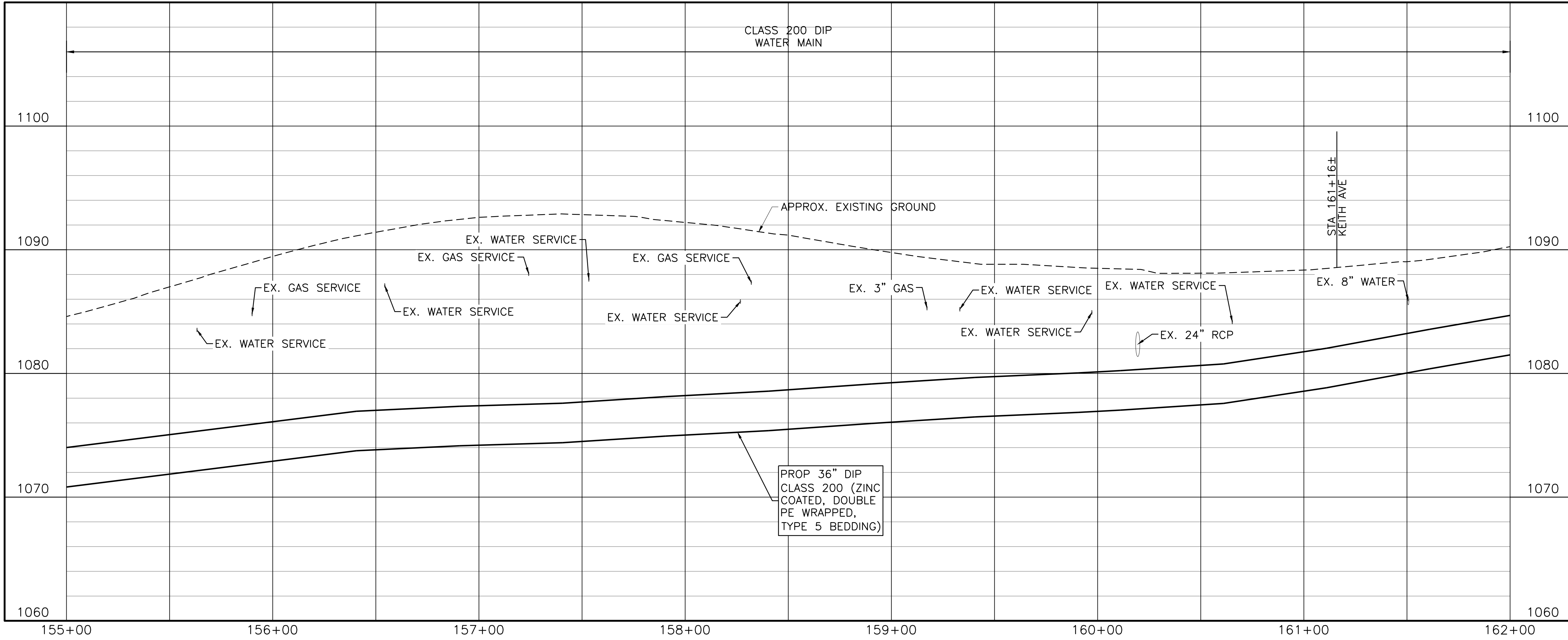
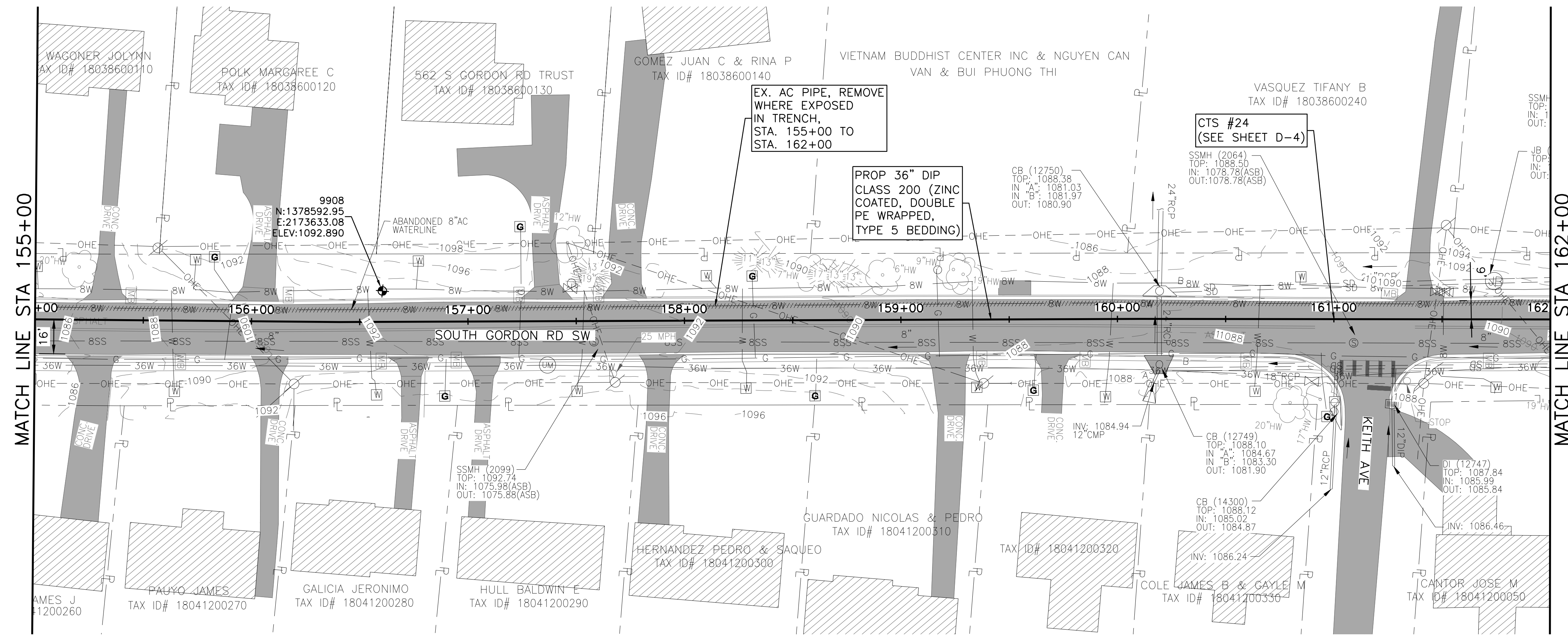
NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



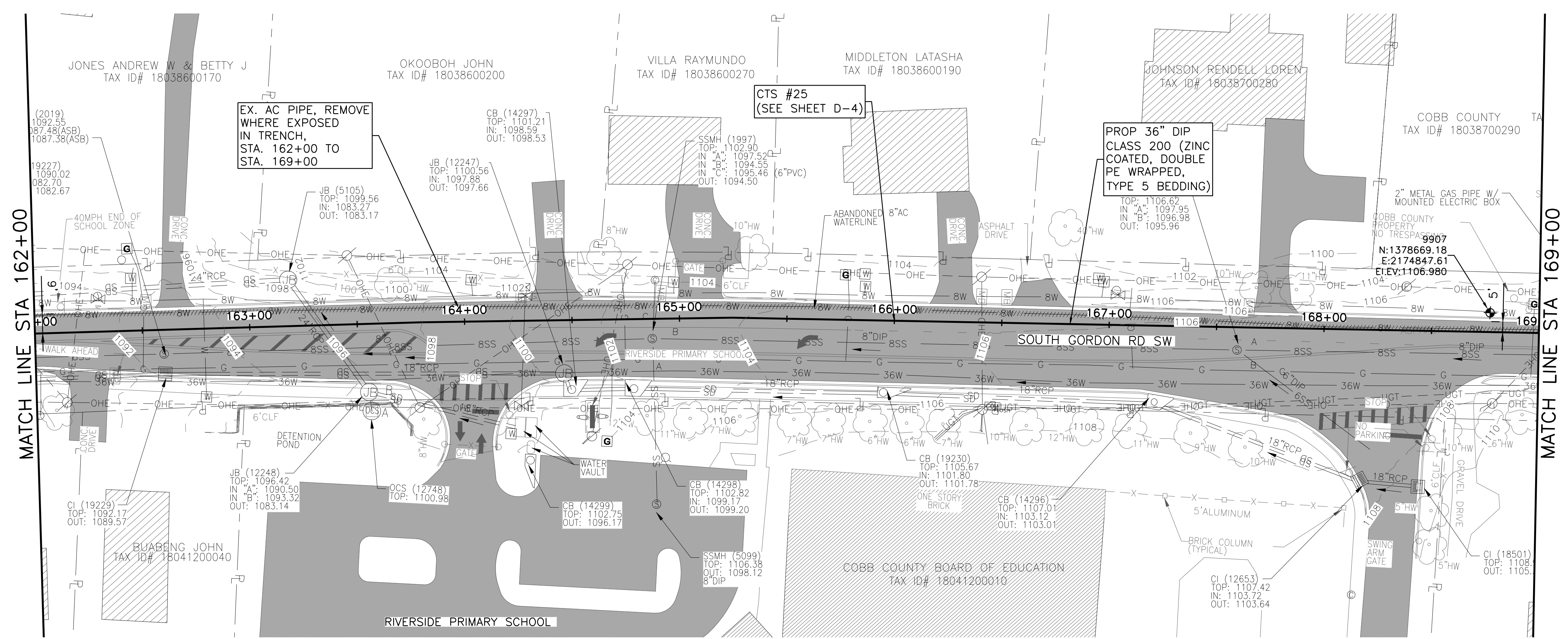
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 360 Interstate North Parkway,
 Suite 250 CA
 Atlanta, GA 30339
 Phone (404) 334-4310
 Web - www.freese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 155+00 TO 162+00



PROJ. JOB NO.	CBR18213
DATE	3/7/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	0
DATE	02/08/19
REVISION	
CHECKED	JCS
FILE NAME	CV-ALL-SHT503.dwg
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

SHEET **C-23**
 SEQ. 27



Know what's below.
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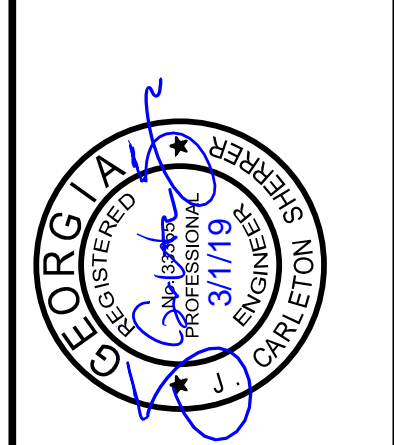


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

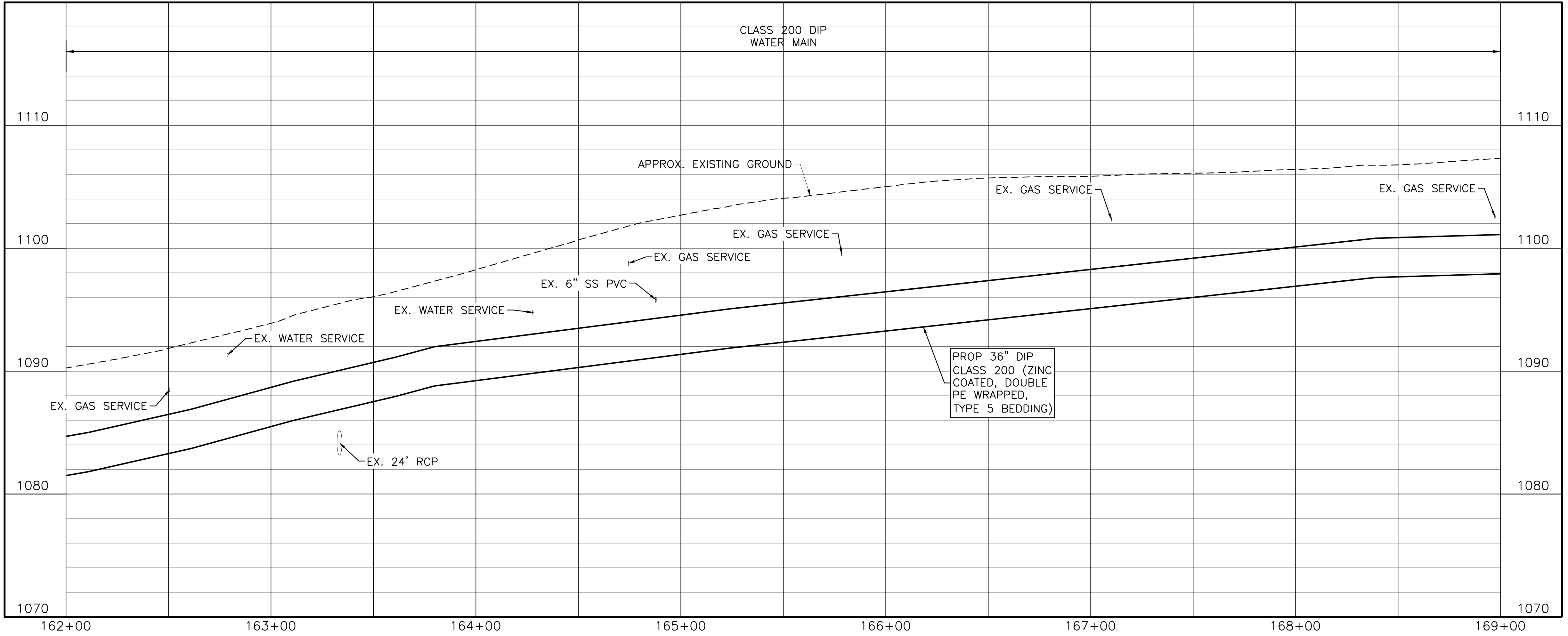
NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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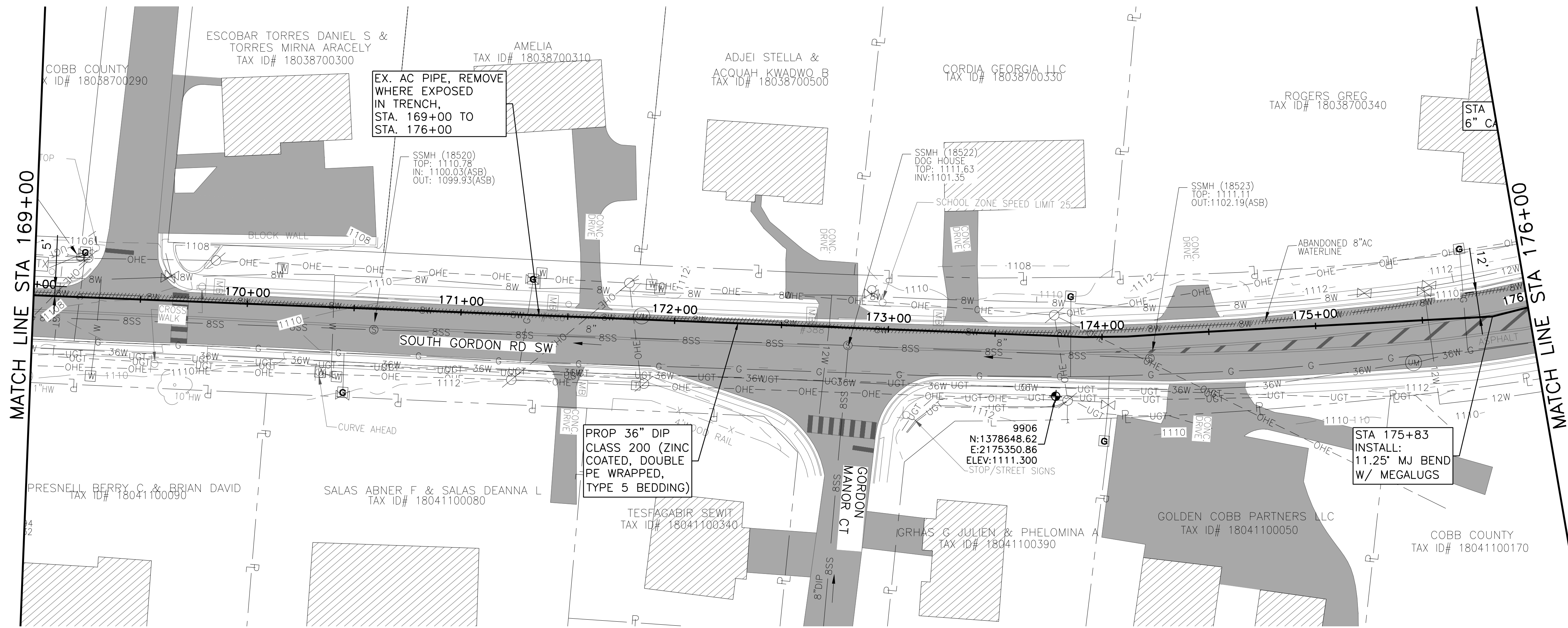
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
PLAN AND PROFILE
STA 162+00 TO 169+00



ISSUED FOR BID	JCS	03/01/19	DESIGNED	FDH
ISSUED FOR PERMIT	JCS	02/08/19	DRAWN	CKM
ISSUE	BY	DATE	REVISION	CHECKED
NO.				JCS
0			FILE NAME	CV-ALL-SHT503.dwg

SHEET C-24
SEQ. 28

ACAD Ref: 23.0s (LMS Tech)
Filename: n:\W\TU\Drawings\CV-ALL-SHT503.dwg
Last Saved: 3/1/2019 9:42 AM Saved By: 02618



Know what's below.
Call before you dig.

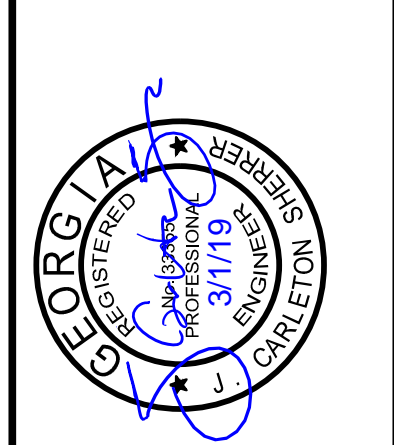


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

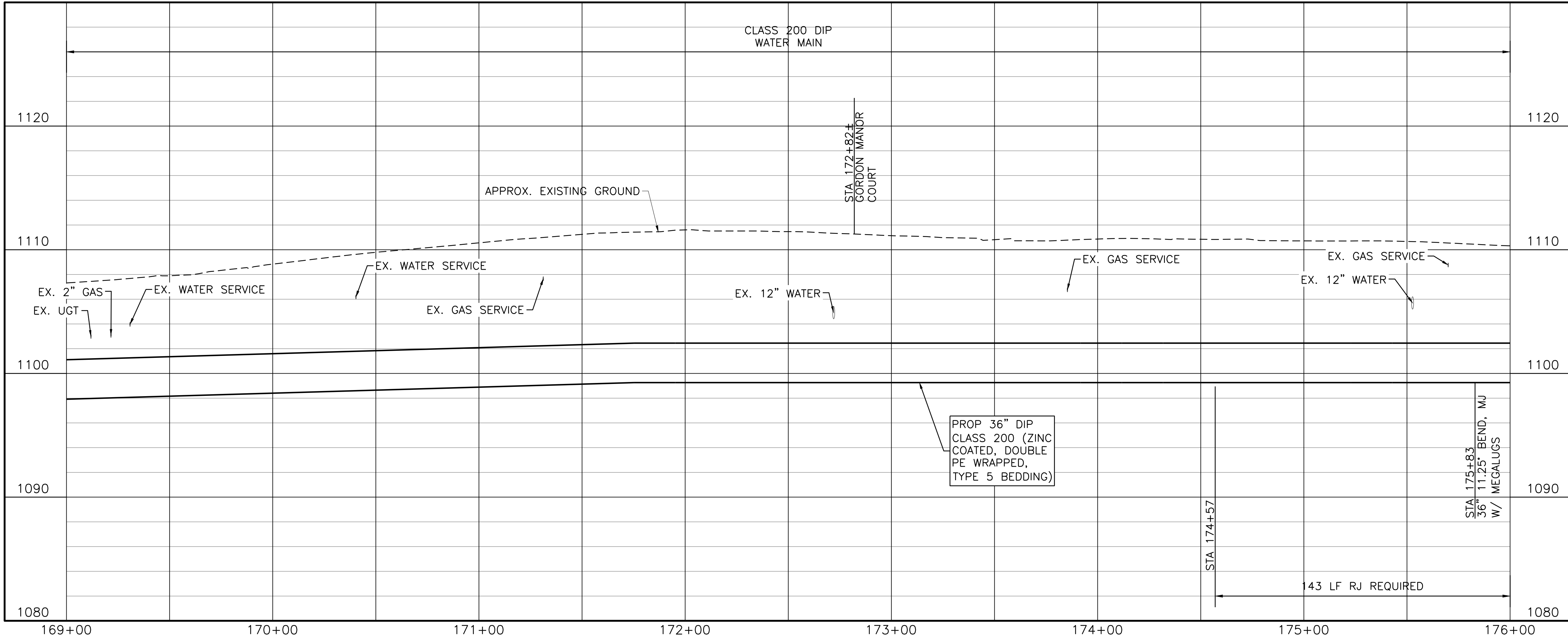
NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



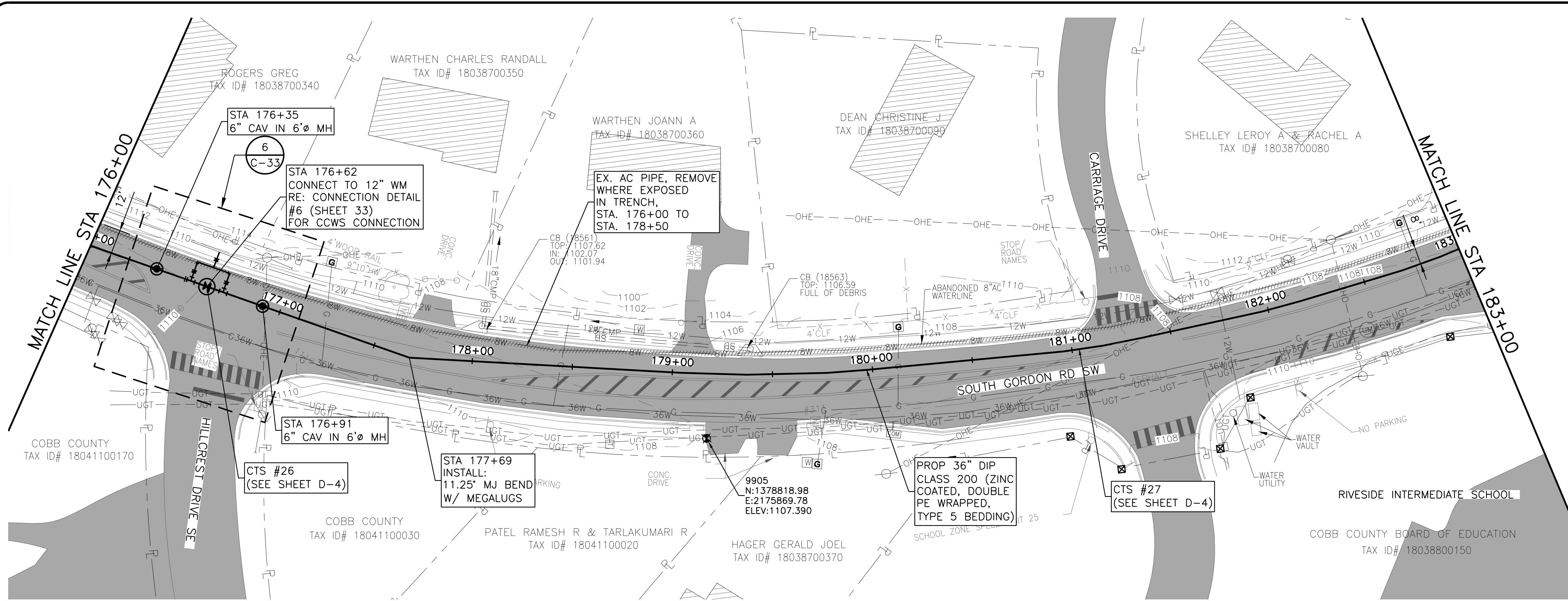
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Web - www.freese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
PLAN AND PROFILE
STA 169+00 TO 176+00

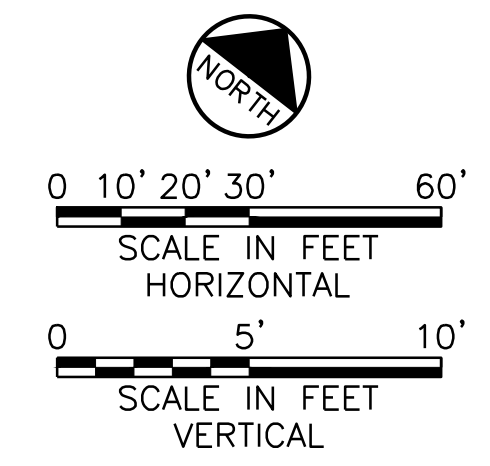


PROJ. NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE	BY
NO.	0
VERIFY SCALE	1
FILE NAME	CV-ALL-SHTS03.dwg
CHECKED	JCS

SHEET
C-25
SEQ. 29

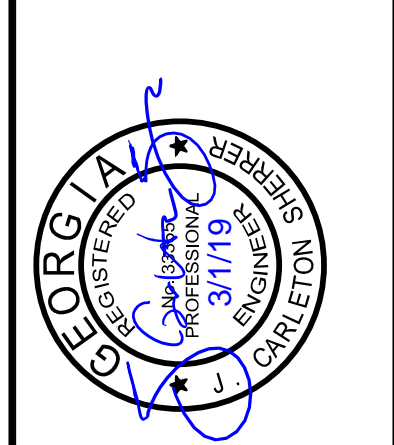


Know what's below.
Call before you dig.



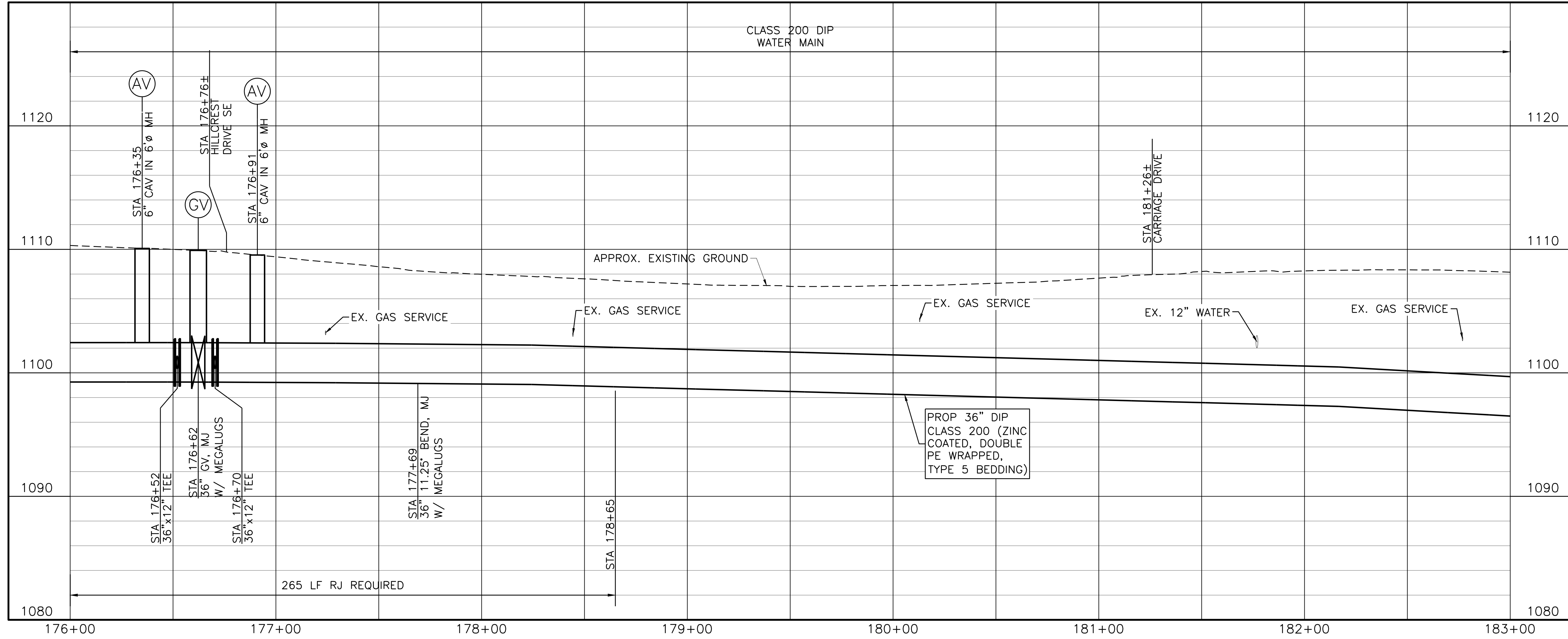
NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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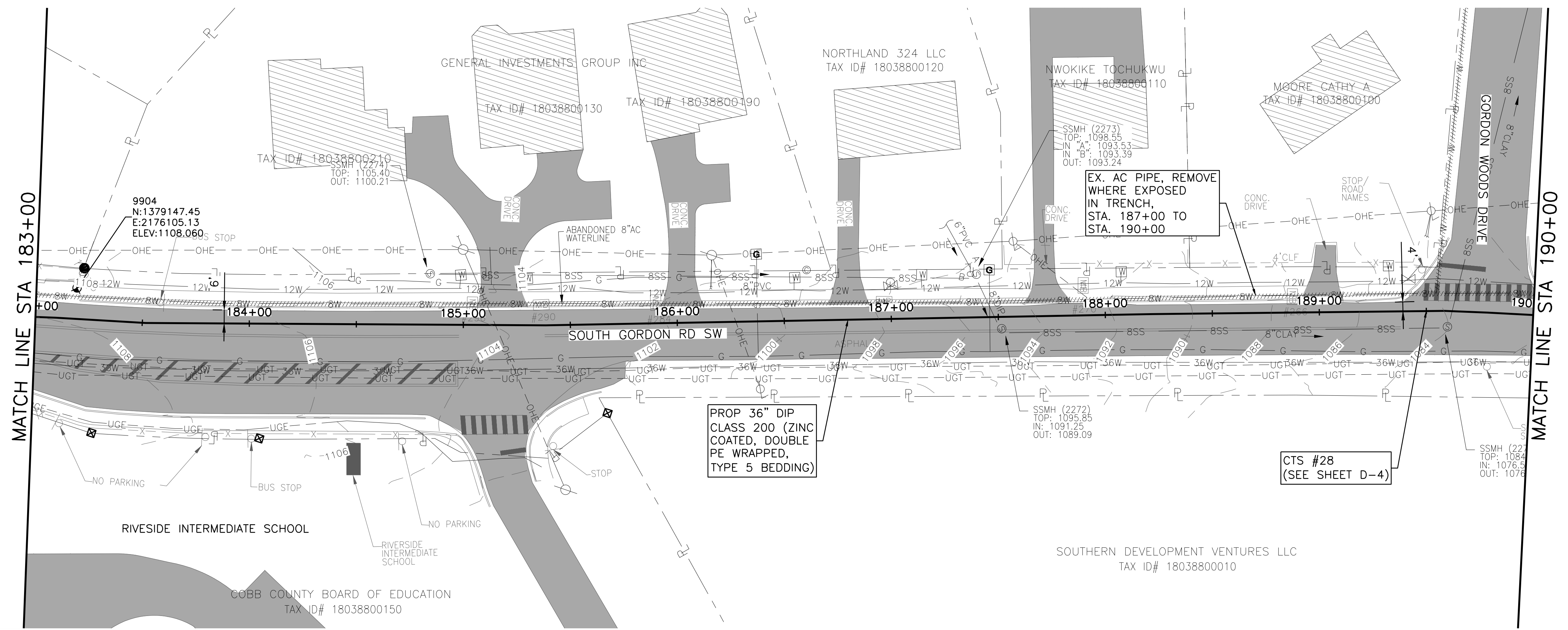
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
PLAN AND PROFILE
STA 176+00 TO 183+00



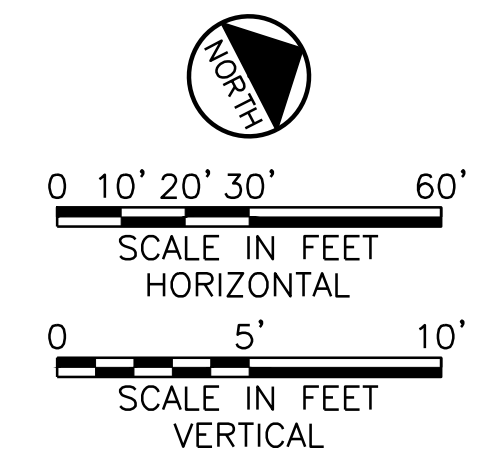
ISSUED FOR BID	JCS	03/01/19	DESIGNED	FDH
ISSUED FOR PERMIT	JCS	02/08/19	DRAWN	CKM
ISSUE NO.	0	DATE	REVISION	CHECKED
VERIFY SCALE	1	FILE NAME	CV-ALL-SHTS03.dwg	JCS

SHEET C-26
SEQ. 30

ACAD Ref: 23.0s (LMS Tech)
Filename: n:\WTD\Drawings\CV-ALL-SHTS03.dwg
Last Saved: 3/1/2019 9:42 AM Saved By: 02618

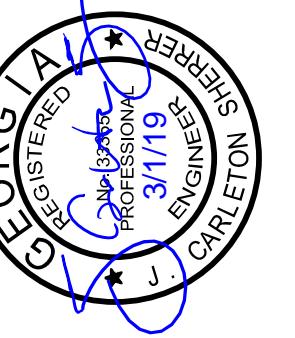


Know what's below.
Call before you dig.



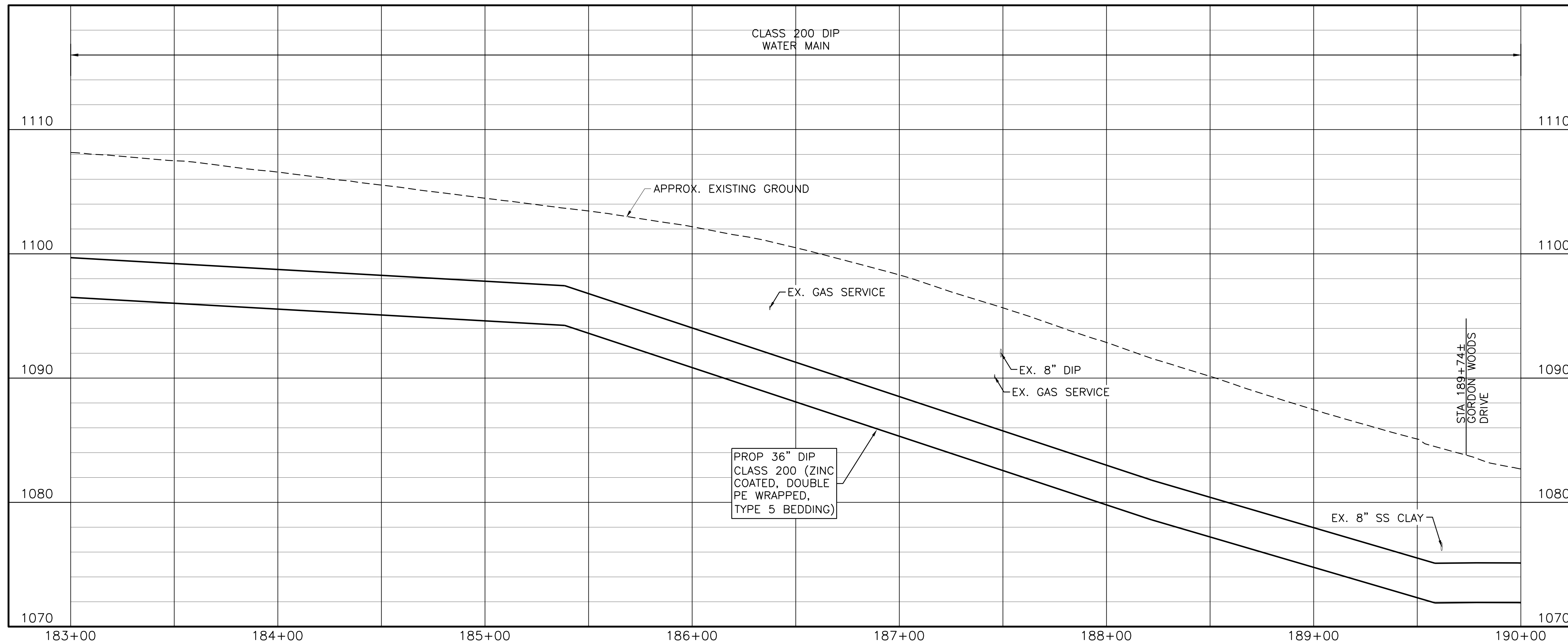
NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



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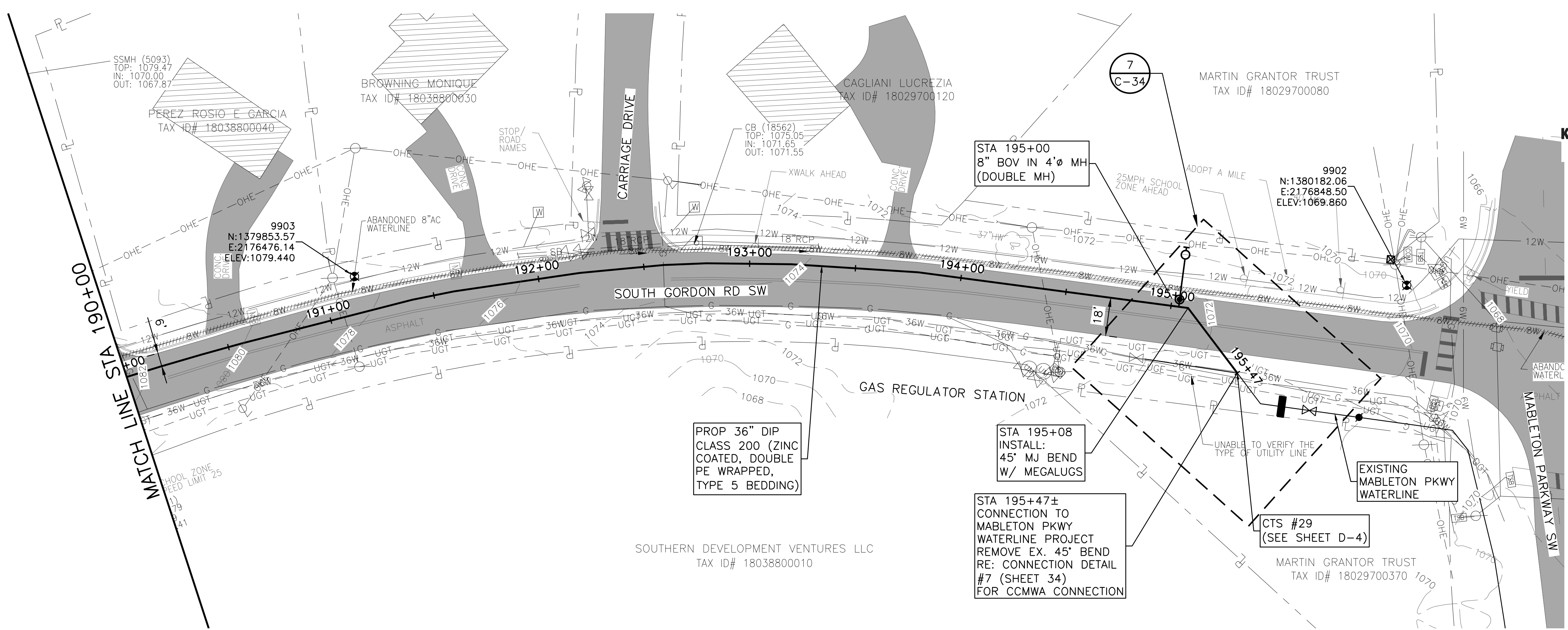
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 183+00 TO 190+00



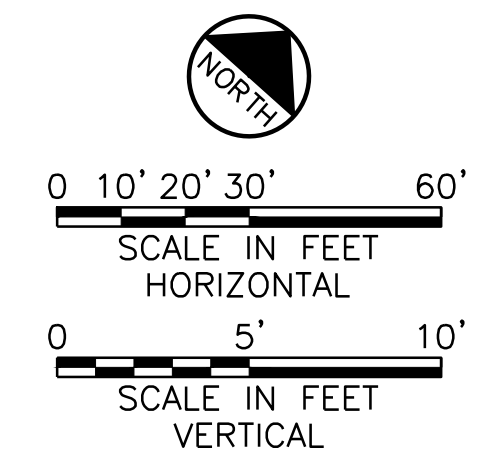
ISSUED FOR BID	DESIGNED	DATE	FILE NAME
ISSUED FOR PERMIT	DRAWN	REVISION	CV-ALL-SHT503.dwg
NO.	BY	DATE	
0	JCS	02/08/19	
1	JCS	03/01/19	
ISSUE		CHECKED	
NO.		DATE	
0			
1			
VERIFY SCALE		FILE NAME	
0		CV-ALL-SHT503.dwg	
1			
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.			

SHEET **C-27**
 SEQ. 31

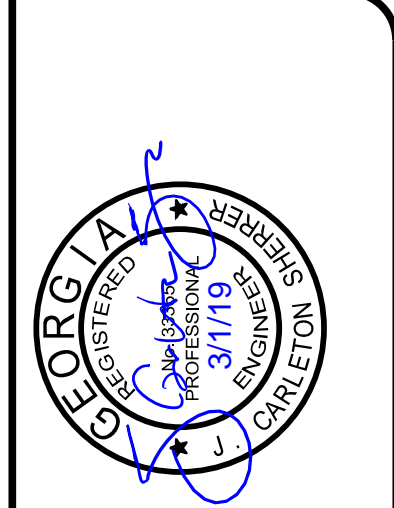
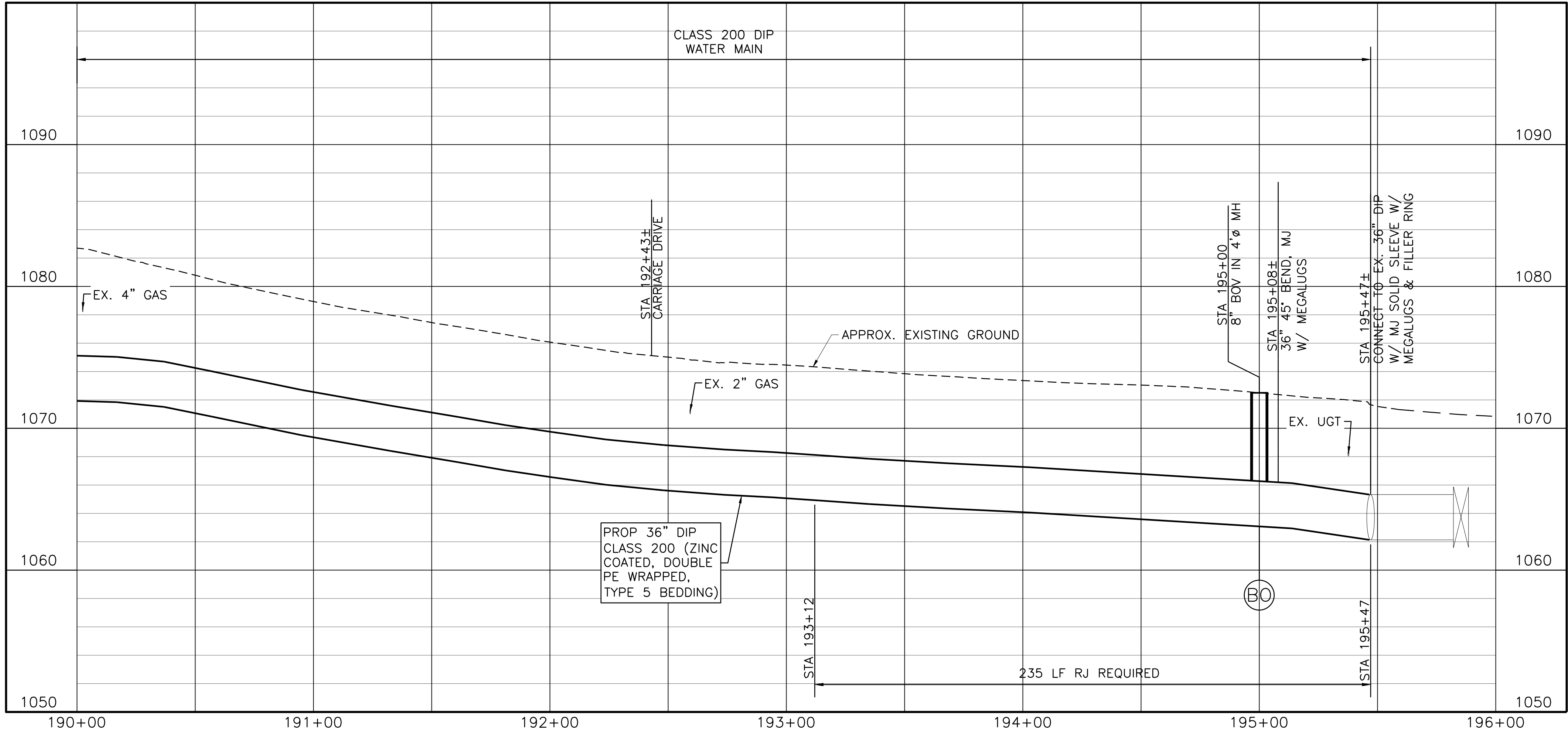
ACAD Ref: 23.0s (UMSTech)
 Filename: n:\WTU\Drawings\CV-ALL-SHTS03.dwg
 Last Saved: 3/1/2019 9:42 AM Saved By: 02618



Know what's below.
 Call before you dig.



- NOTES:
- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.



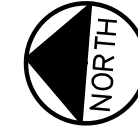
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COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 PLAN AND PROFILE
 STA 190+00 TO END

PROJ. JOB NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	
ISSUED FOR BID	
ISSUED FOR CONSTRUCTION	
FILE NAME	CV-ALL-SHTS03.dwg
NO.	0
BY	JCS
DATE	02/08/19
CHECKED	JCS
REVISION	



Know what's below.
Call before you dig.

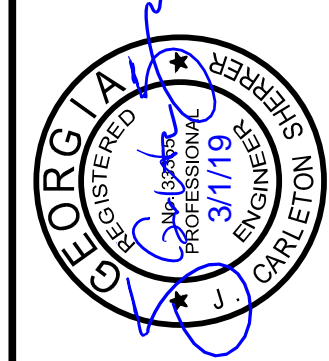


0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

NOTES:

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

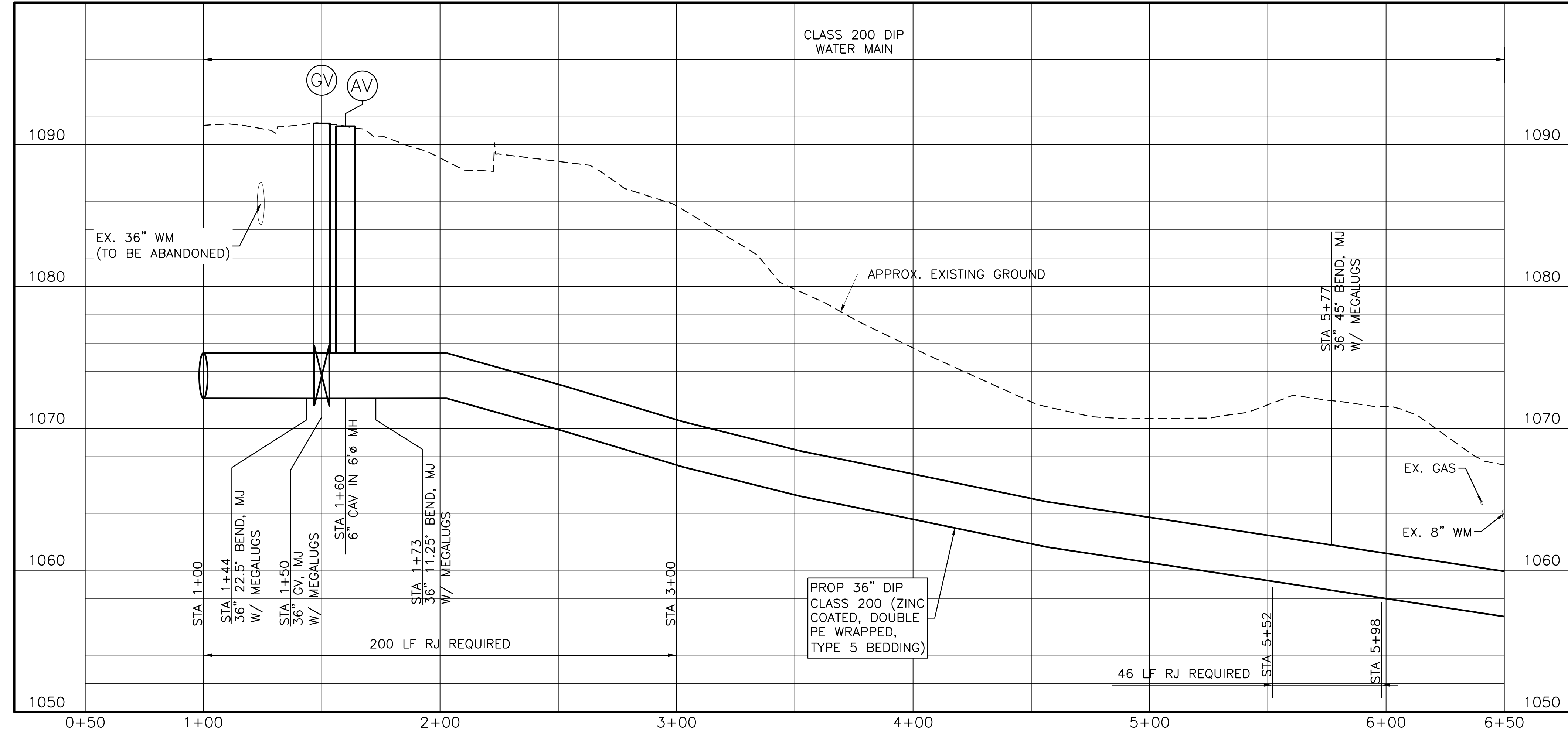
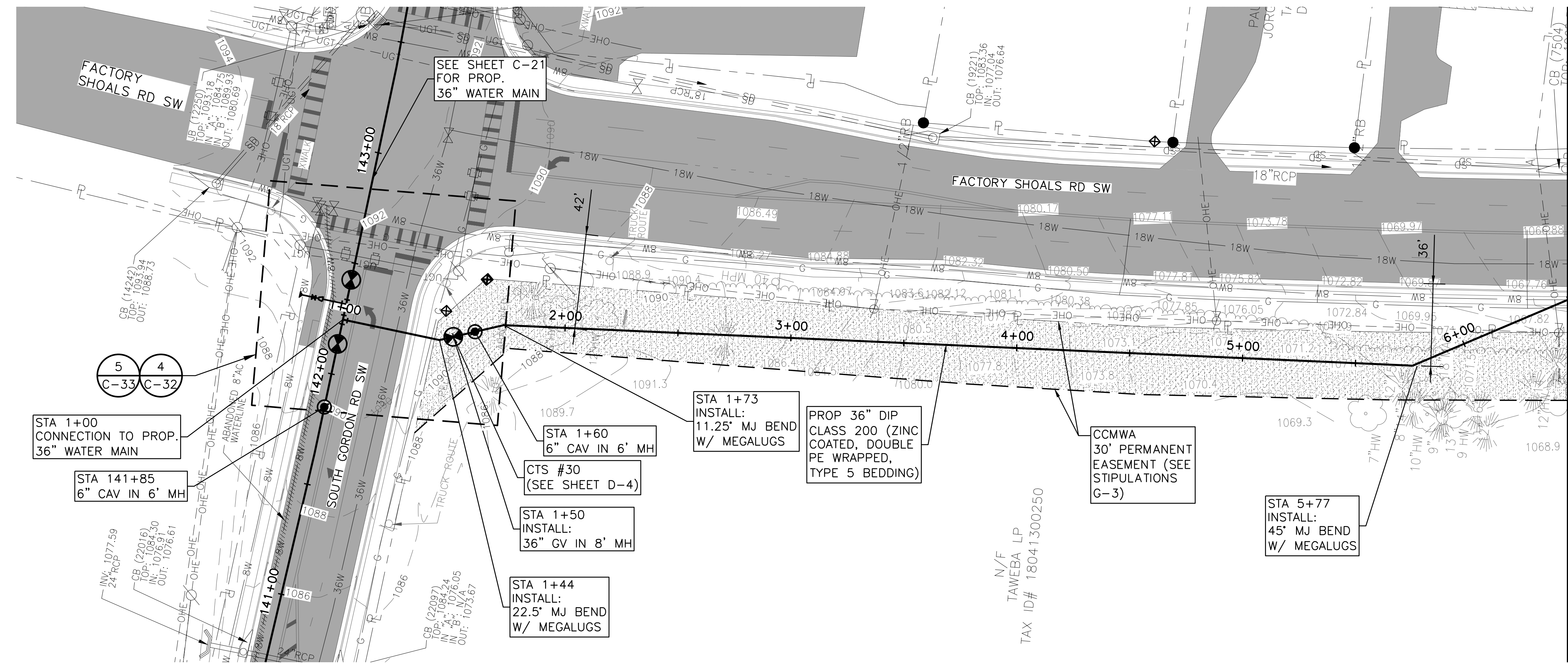


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 Atlanta, GA 30339
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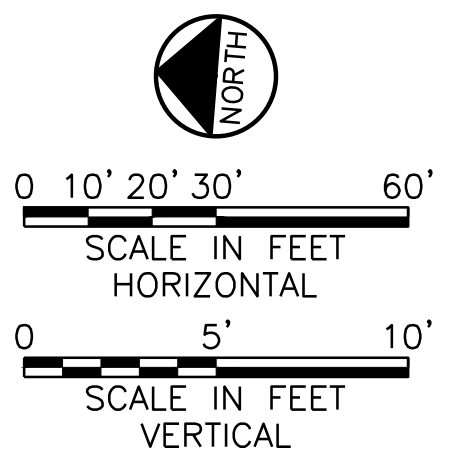
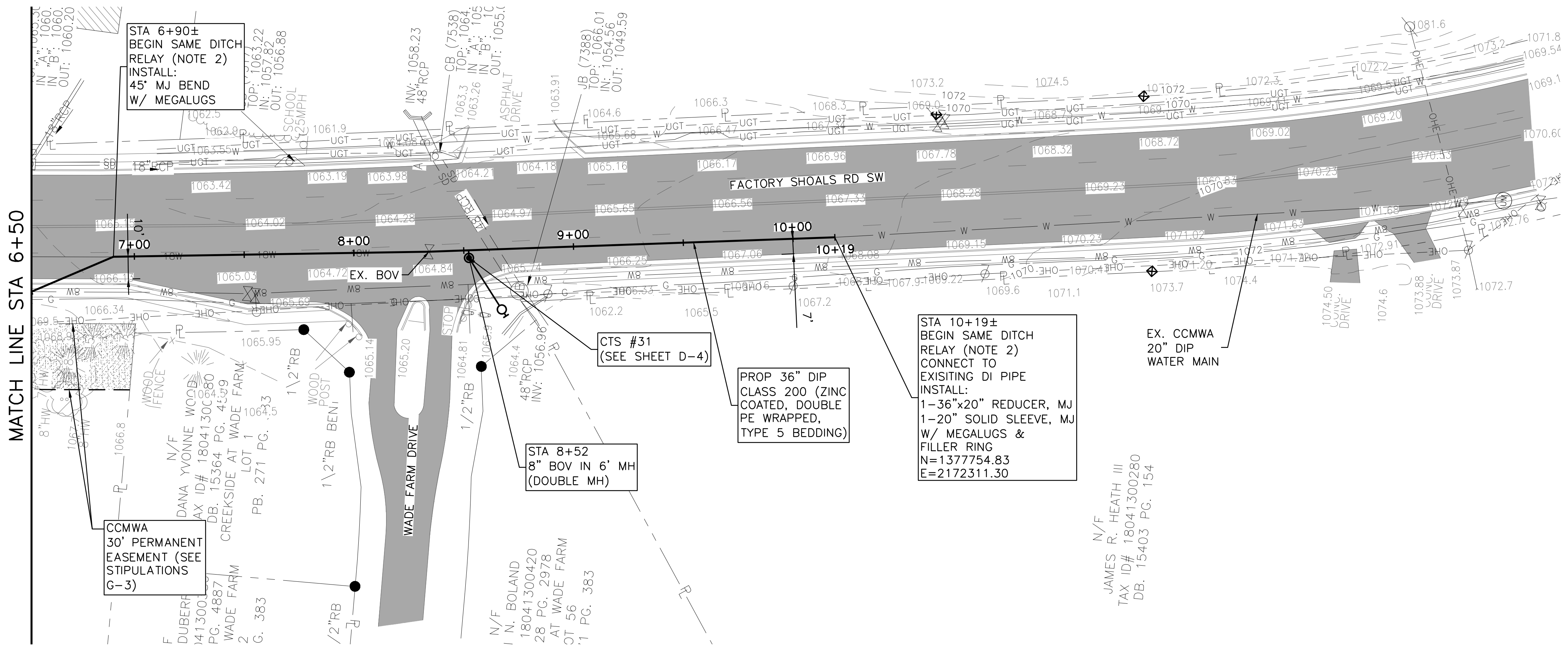
COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 PLAN AND PROFILE
 CONNECTION AT FACTORY SHOALS TO 6+50

PERM. JOB NO.	CBR18213
DATE	3/1/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS
ISSUED FOR BID	JCS
REVISION	DATE
CHECKED	JCS
FILE NAME	CV-ALL-SHTS04.dwg

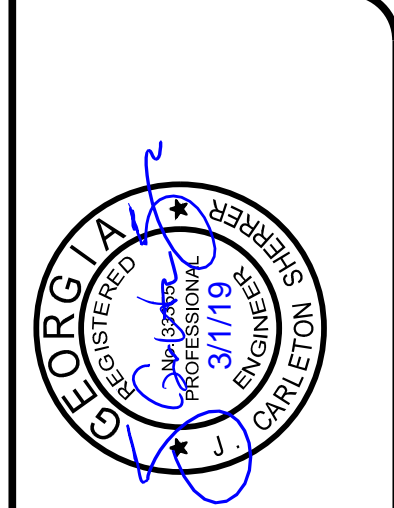
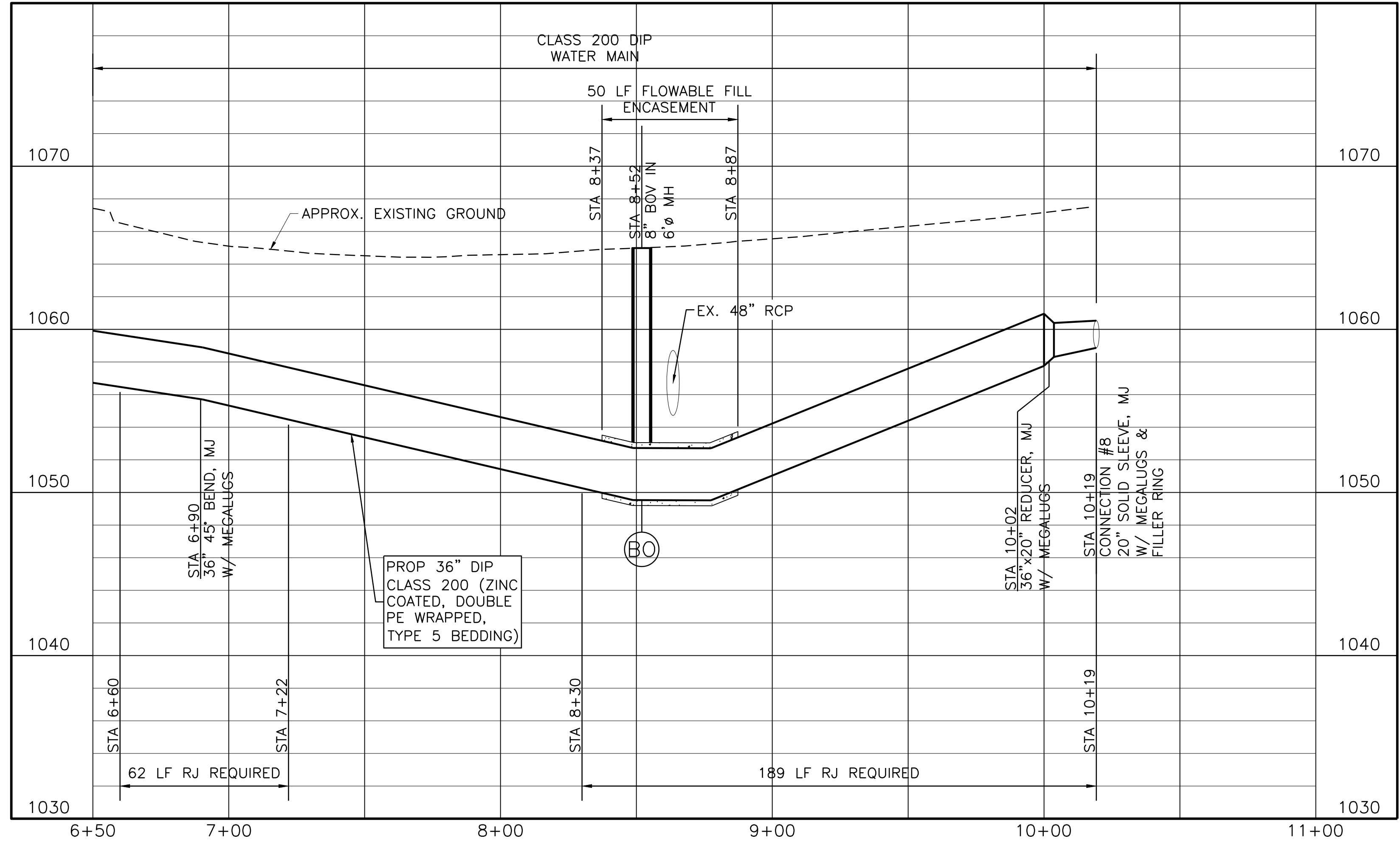
SHEET **C-29**
 SEQ. 33



ACAD Ref: 23.08 (UMSTech)
 Filename: n:\WTU\Drawings\CV-ALL-SHTS04.dwg
 Last Saved: 2/28/2019 3:47 PM. Saved By: 02618



- NOTES:**
- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
 - CONTRACTOR TO VERIFY LIMIT OF SAME DITCH RELAY BASED ON ACTUAL FIELD CONDITIONS AND REMOVE FULL PIPE JOINTS, BULKHEAD BACKFILL, AND COMPACT AS SPECIFIED. PCCC AND EXISTING STEEL CASING DISPOSED BY CONTRACTOR.

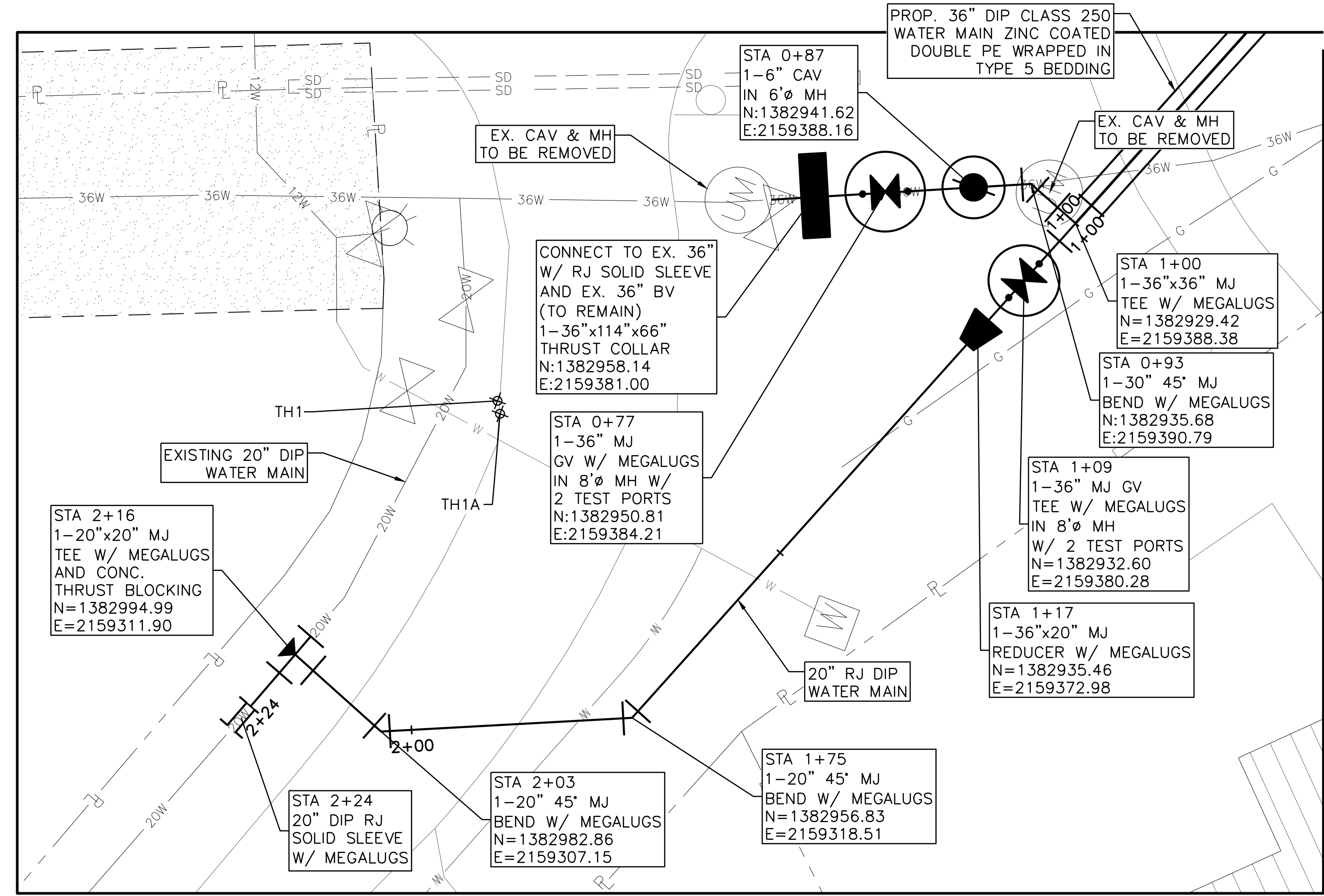


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
PLAN AND PROFILE
STA 6+50 TO END

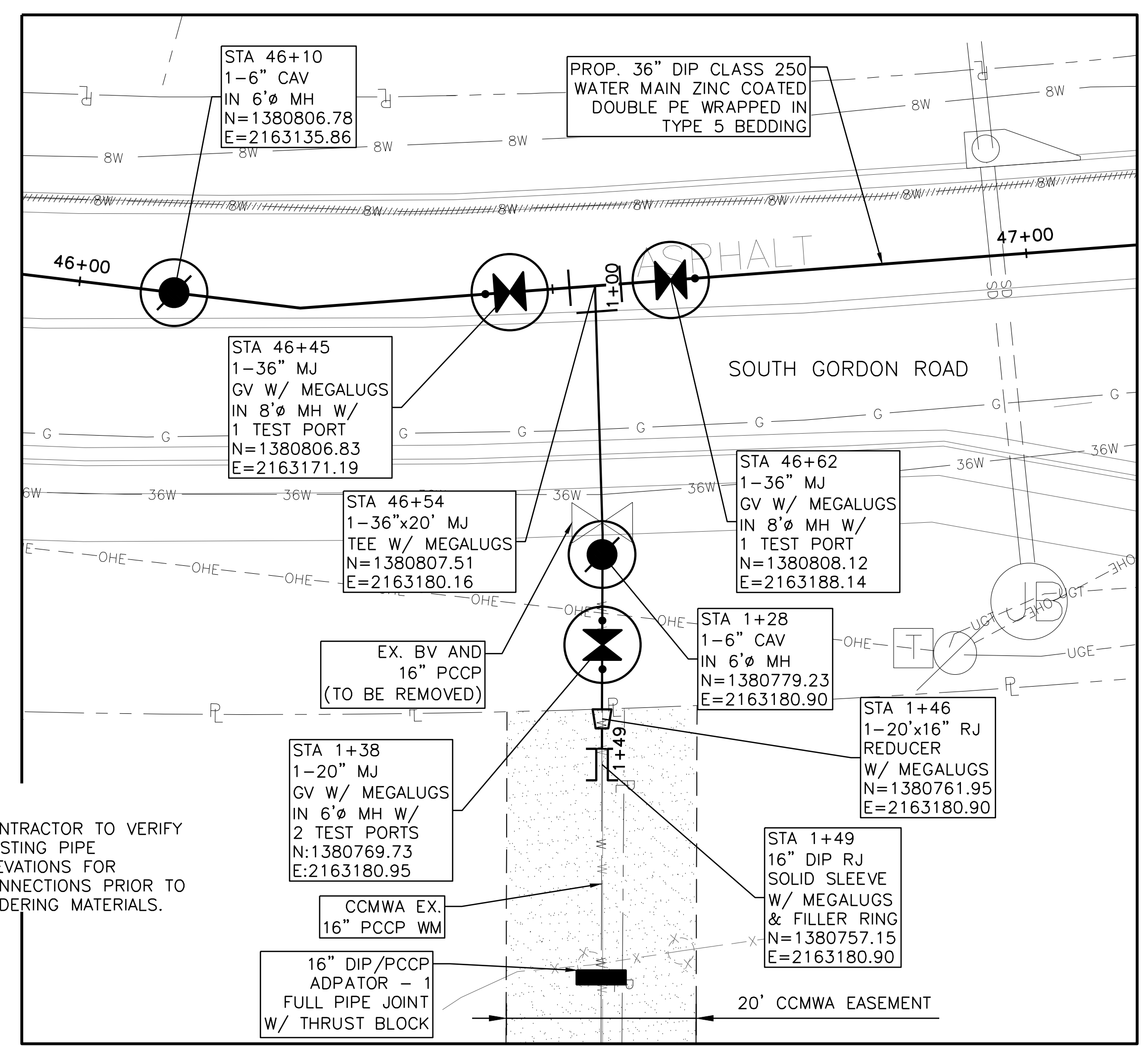
ISSUED FOR BID	JCS	03/01/19	DESIGNED	FDH
ISSUED FOR PERMIT	JCS	02/08/19	DRAWN	CKM
ISSUE NO.	BY	DATE	REVISION	CHECKED
0	JCS			JCS
FILE NAME: CV-ALL-SHTS04.dwg				

ACAD Ref: 23.0s (LMS Tech)
 Filename: n:\WTU\Drawings\CV-ALL-SHT_DTL.dwg
 Last Saved: 3/1/2019 10:09 AM. Saved By: 02618



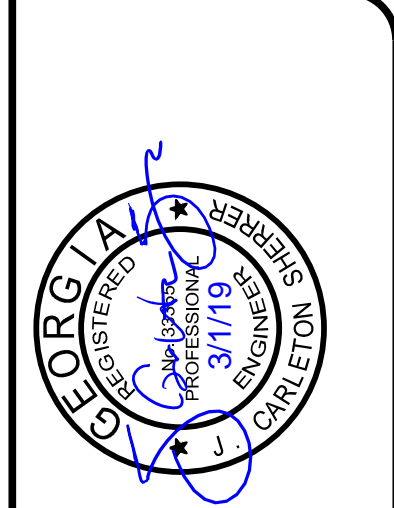
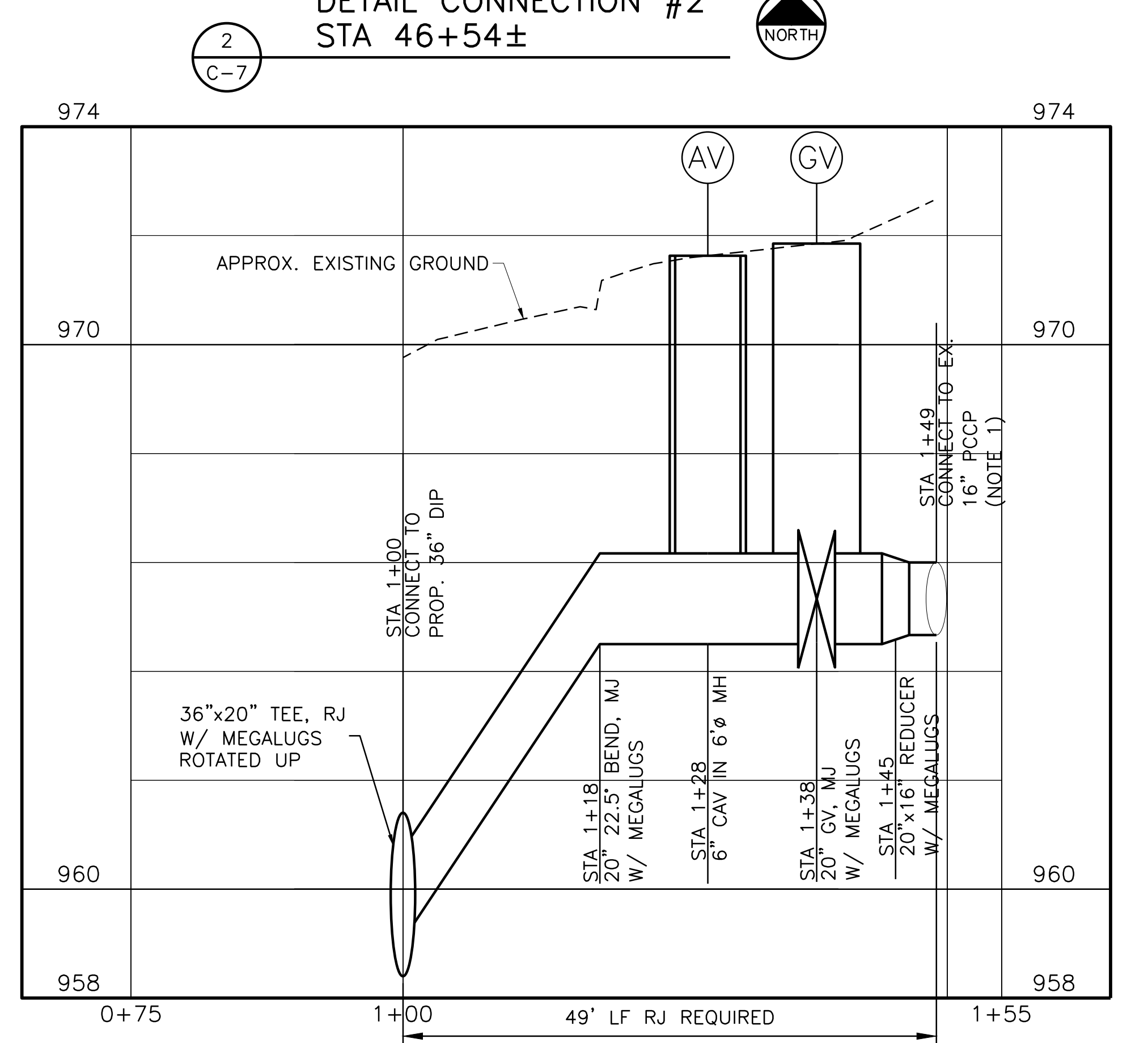
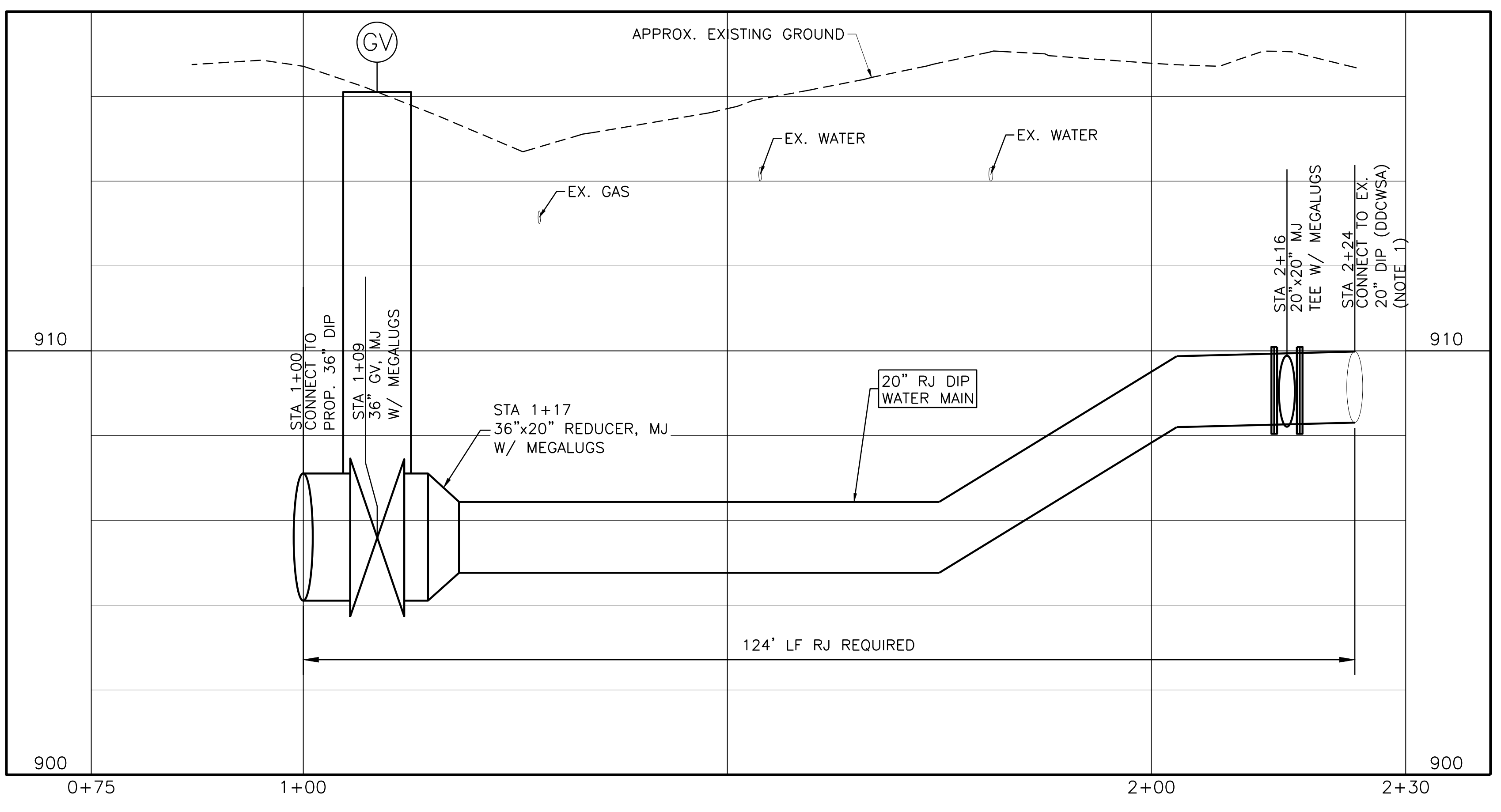
DETAIL CONNECTION #1
STA 1+00±

SCALE IN FEET
 HORIZONTAL: 0 10' 20'
 VERTICAL: 0 2' 4'



NOTES:
 1. CONTRACTOR TO VERIFY EXISTING PIPE ELEVATIONS FOR CONNECTIONS PRIOR TO ORDERING MATERIALS.

DETAIL CONNECTION #2
STA 46+54±



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
 CONNECTION DETAILS (1 OF 4)

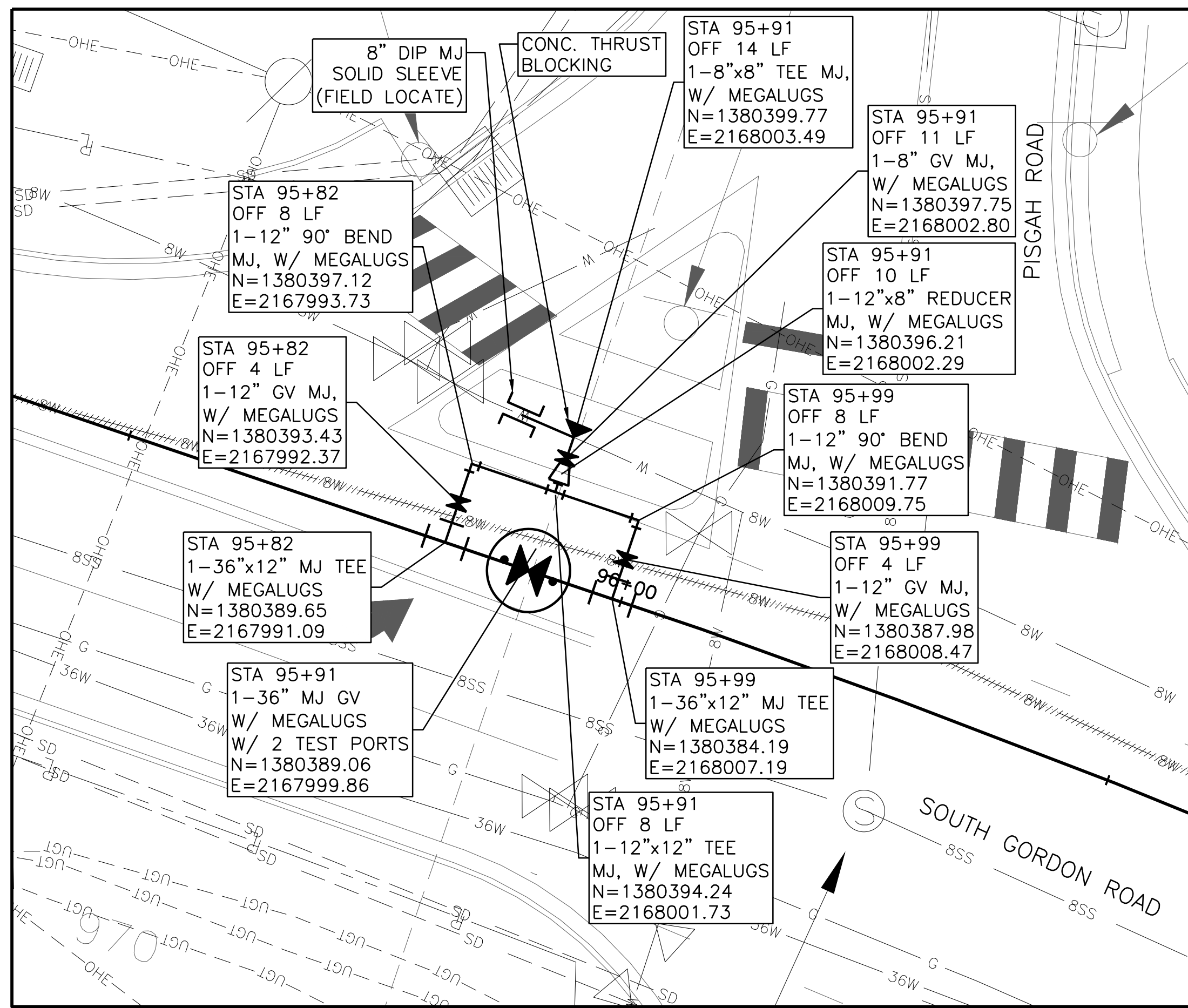
ISSUED FOR BID	JCS	03/01/19	DESIGNED	FDH
ISSUED FOR PERMIT	JCS	02/08/19	DRAWN	CKM
VERIFY SCALE	NO.	0	CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.dwg			

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

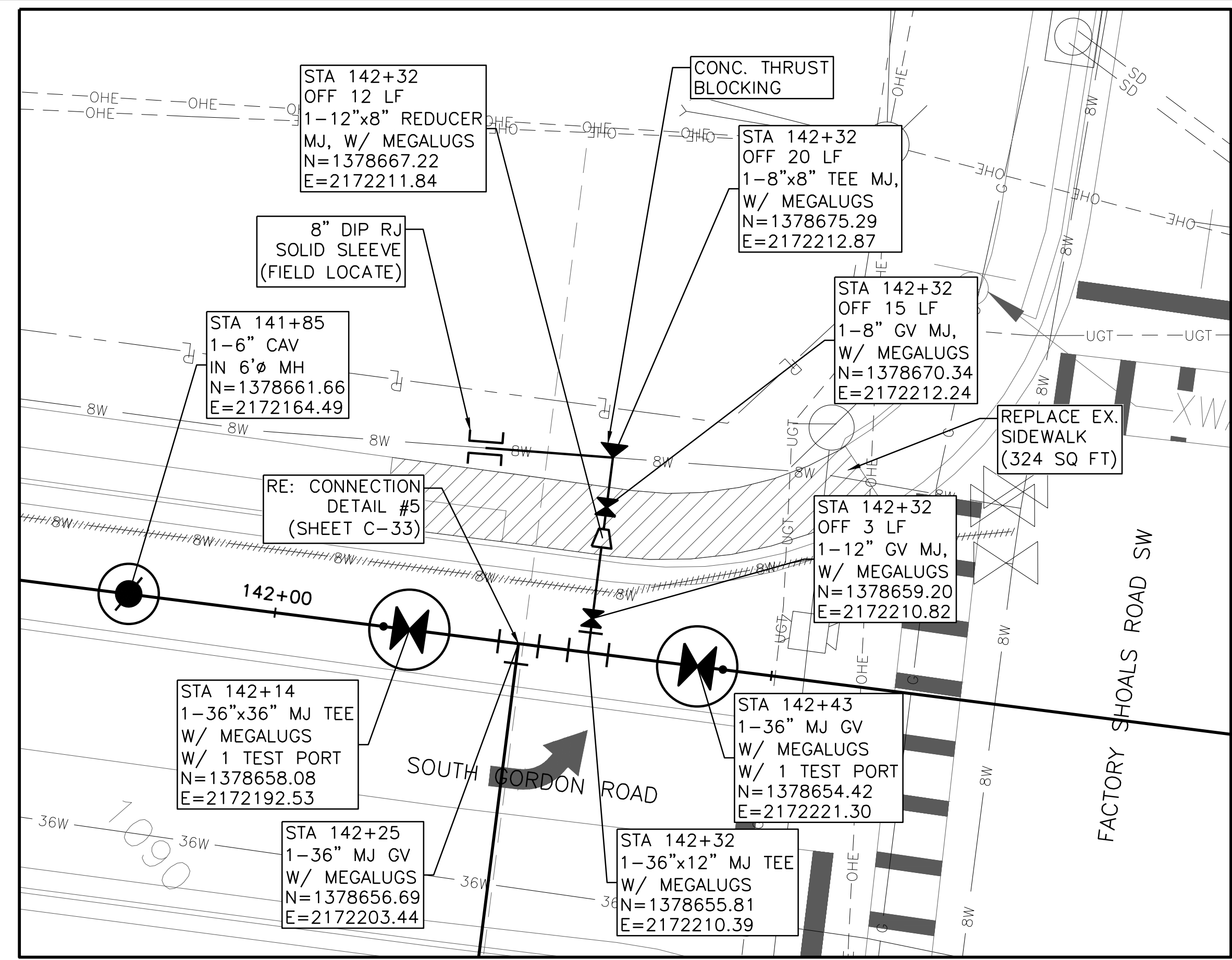
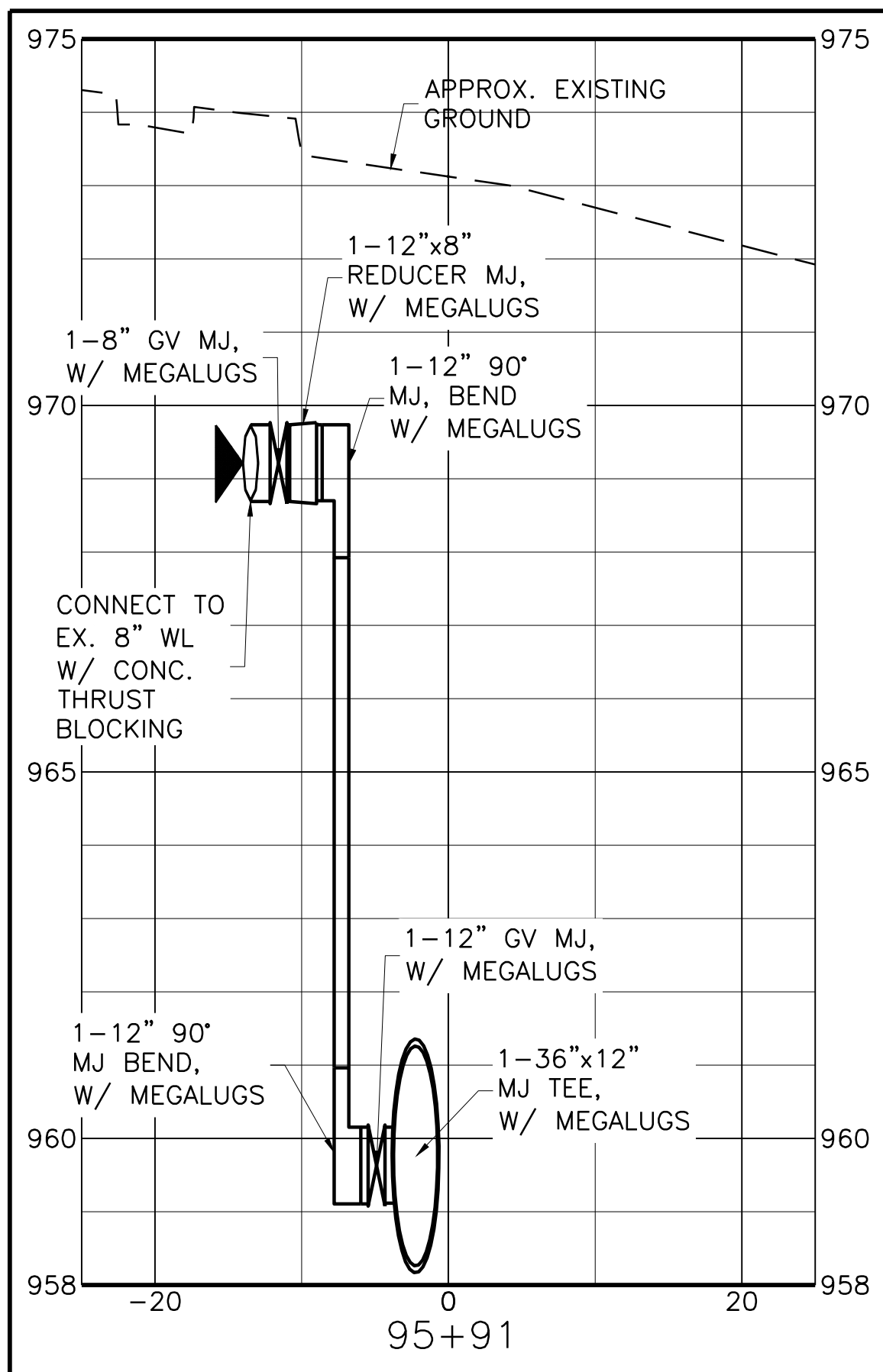
1

SHEET **C-31**

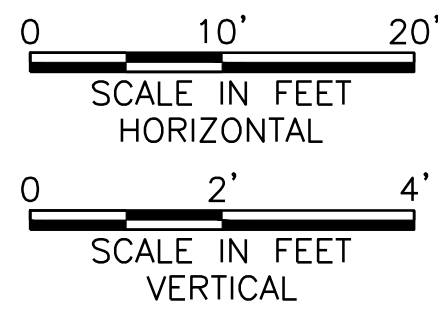
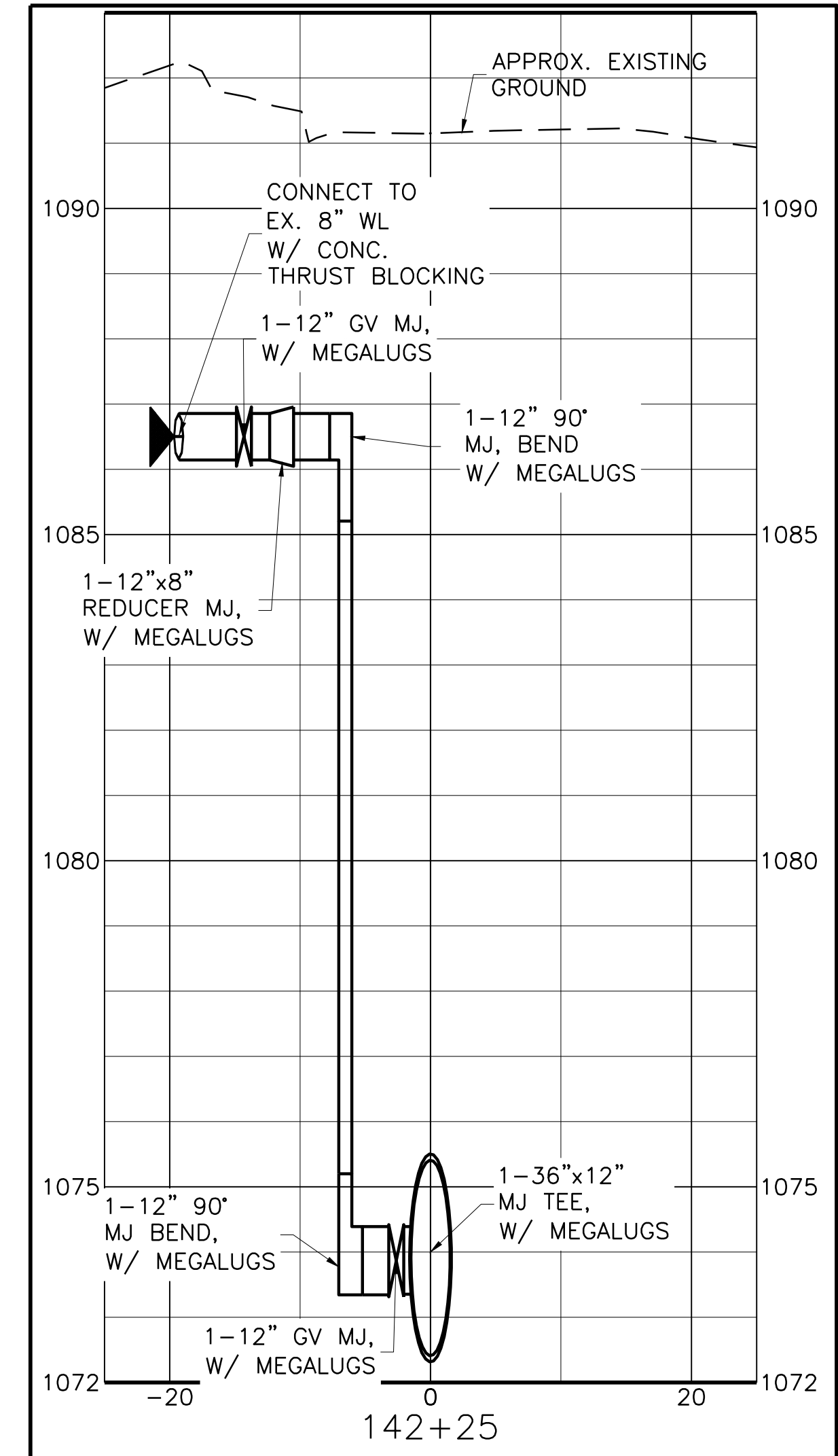
SEQ. 35



DETAIL CONNECTION #3
STA 95+91±

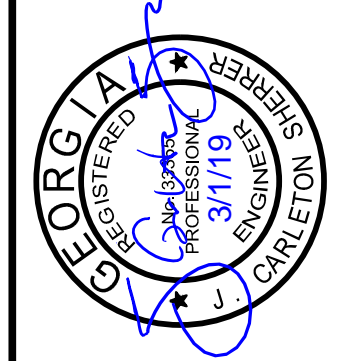


DETAIL CONNECTION #4
STA 142+25±



NOTES:

1. CONTRACTOR TO VERIFY EXISTING PIPE ELEVATIONS FOR CONNECTIONS PRIOR TO ORDERING MATERIALS.
2. ALL VALVE, FITTINGS, AND SPECIALS FOR CONNECTIONS TO BE MJ W/ MEGALUGS FOR RESTRAINT.



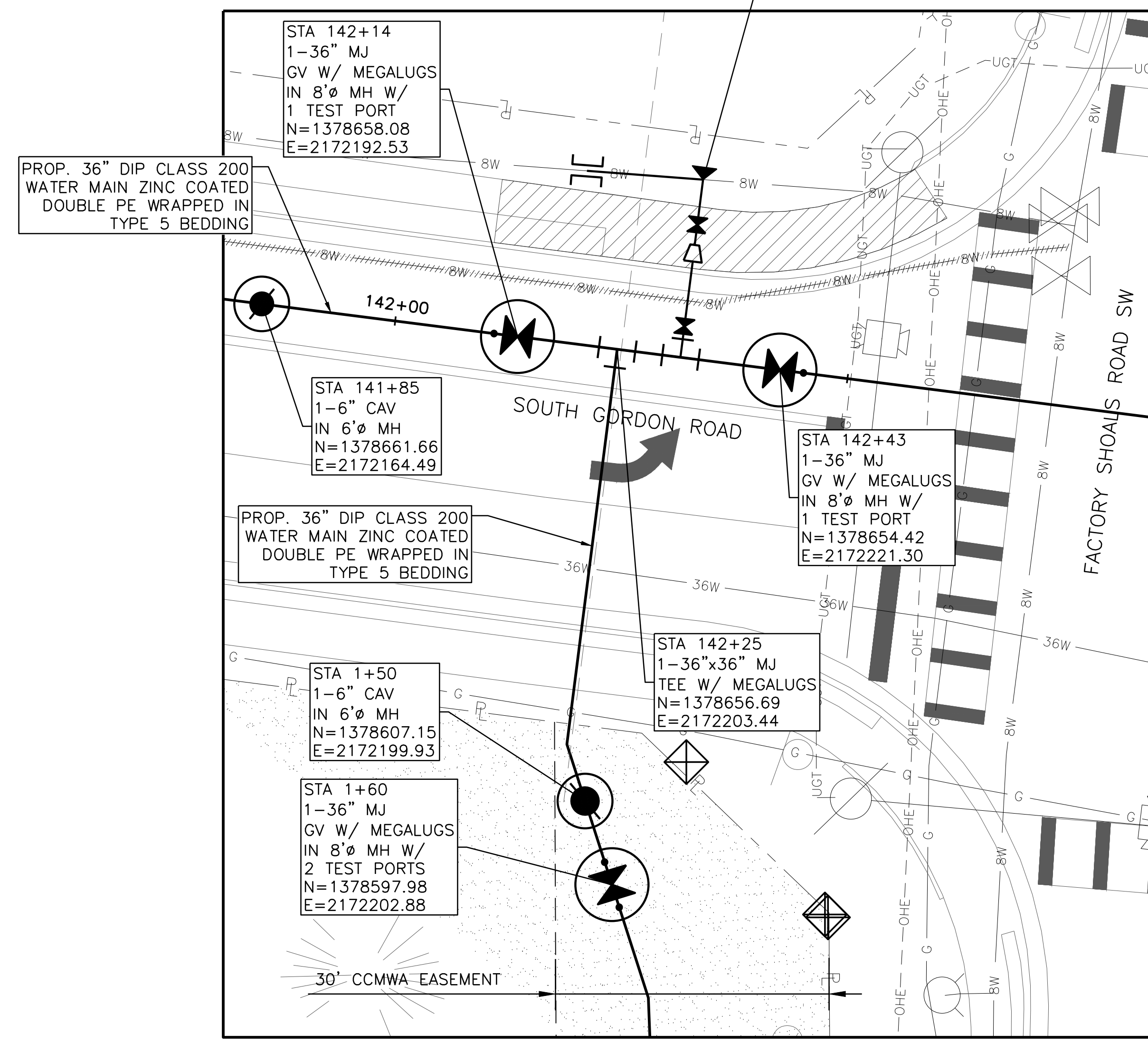
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360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone (404) 334-4310
Web - www.freese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
PLAN AND PROFILE
CONNECTION DETAILS (2 OF 4)

REV. NO.	DATE	DESIGNED	DRAWN	CHECKED	FILE NAME
0	03/01/19	JCS	JCS	JCS	CV-ALL-SHT_DTL.dwg
1	02/08/19	JCS	JCS	JCS	CV-ALL-SHT_DTL.dwg

SHEET
C-32
SEQ. 36

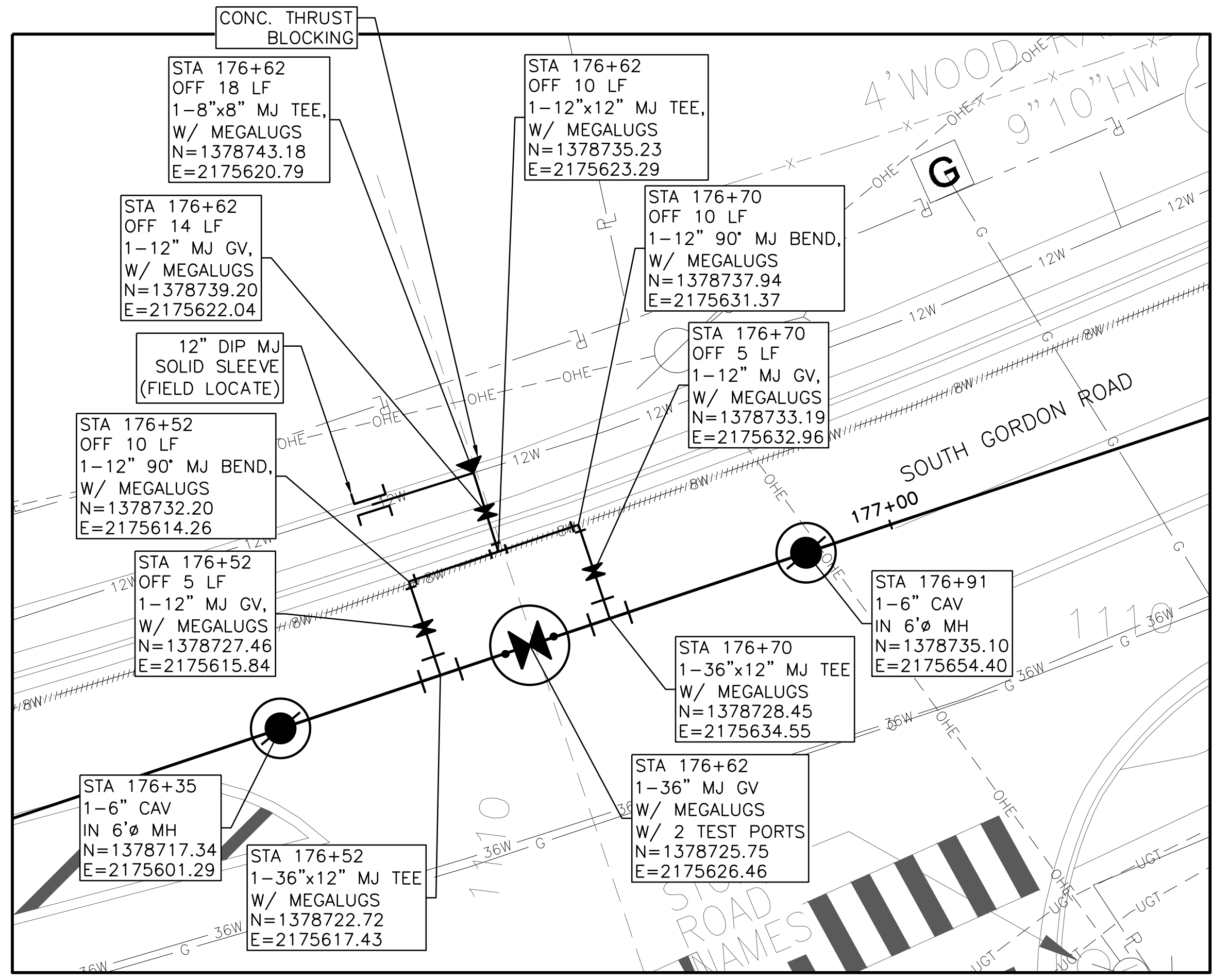
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 Last Saved: 3/1/2019 10:09 AM. Saved By: 02618



5
 C-29

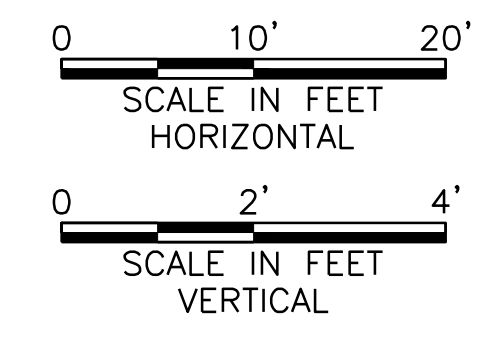
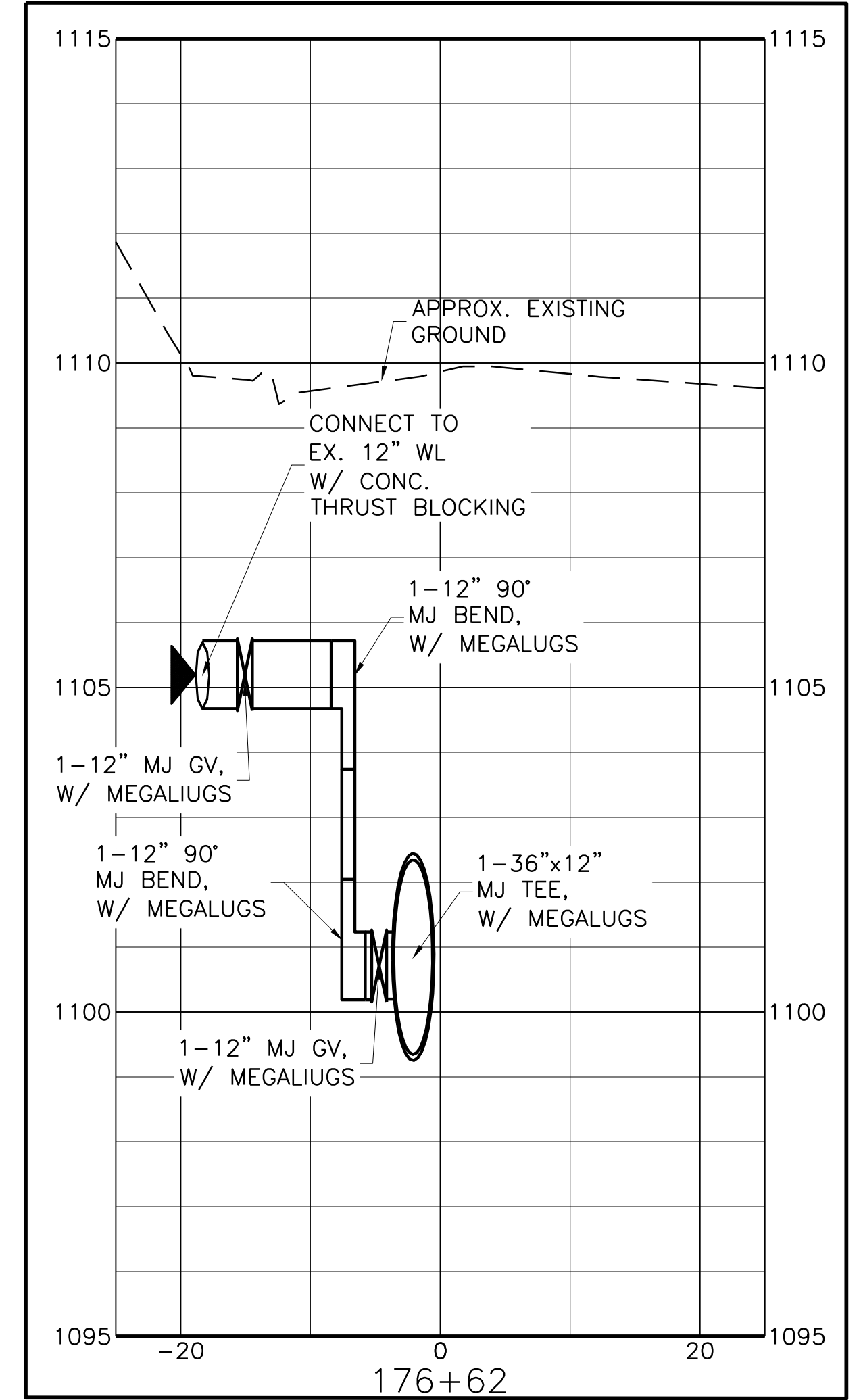
DETAIL CONNECTION #5
 STA 142+25±/1+00±

NOTE:
 REFER TO SHEET
 C-29 FOR PROFILE

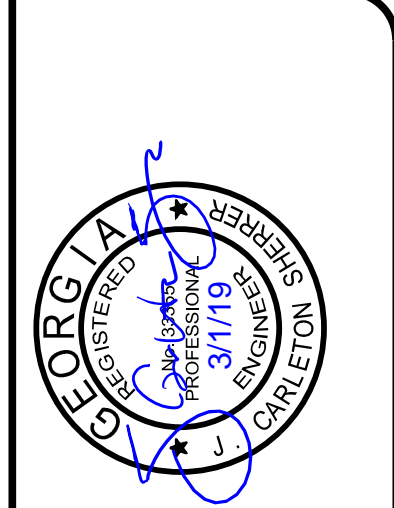


6
 C-26

DETAIL CONNECTION #6
 STA 176+62±



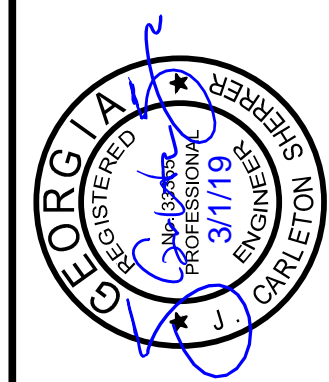
- NOTES:
- CONTRACTOR TO VERIFY EXISTING PIPE ELEVATIONS FOR CONNECTIONS PRIOR TO ORDERING MATERIALS.
 - ALL VALVE, FITTINGS, AND SPECIALS FOR CONNECTIONS TO BE MJ W/ MEGALUGS FOR RESTRAINT.



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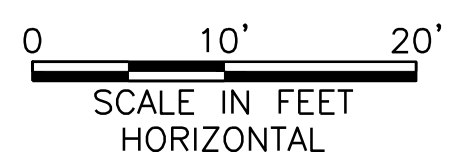
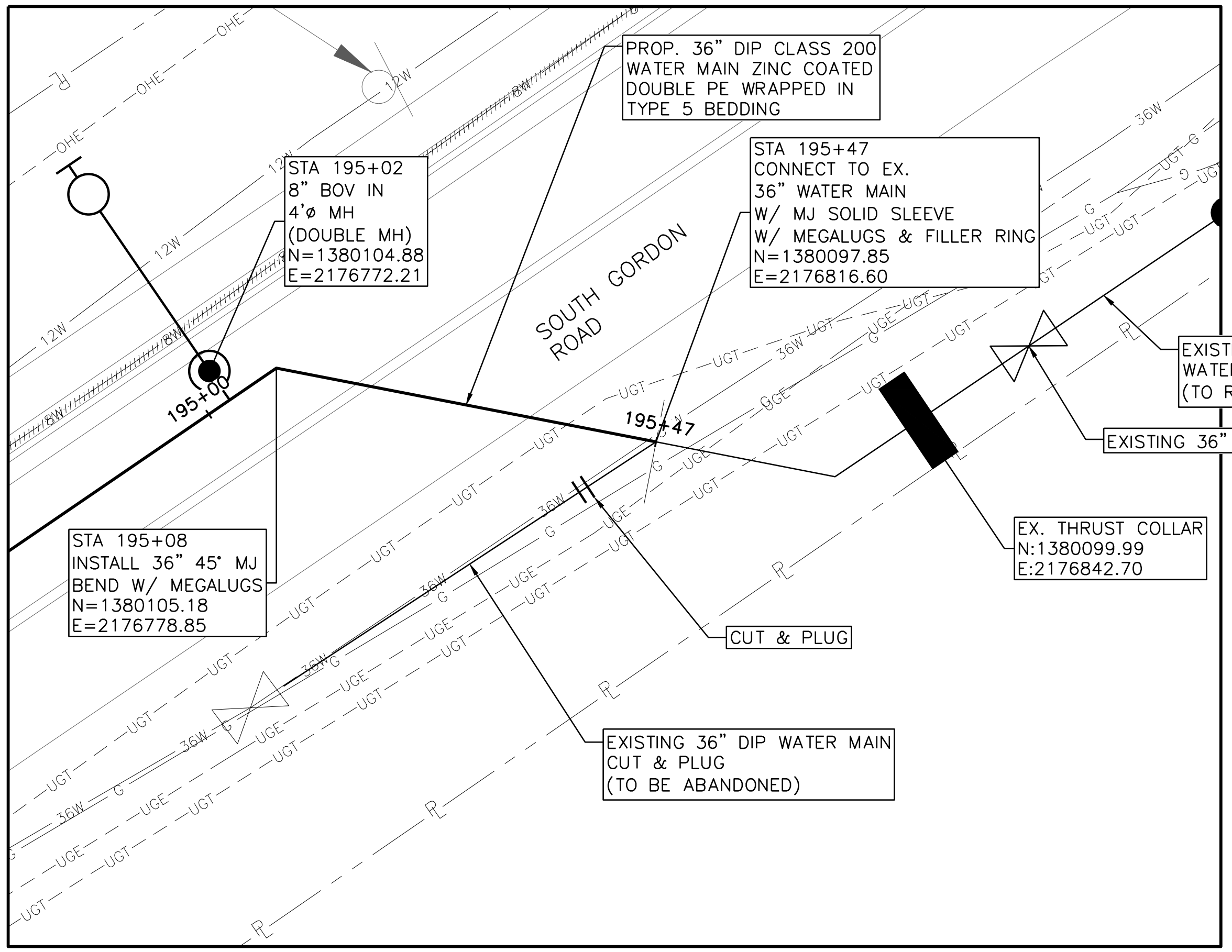
COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 CONNECTION DETAILS (3 OF 4)

PROJ. JOB NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19							
ISSUED FOR PERMIT	JCS	02/08/19							
ISSUE NO.		DATE		BY		FILE NAME			
0						CV-ALL-SHT_DTL.dwg			



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 Suite 250
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COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 PLAN AND PROFILE
 CONNECTION DETAILS (4 OF 4)



7
 C-28

DETAIL CONNECTION #7
STA 195+47±

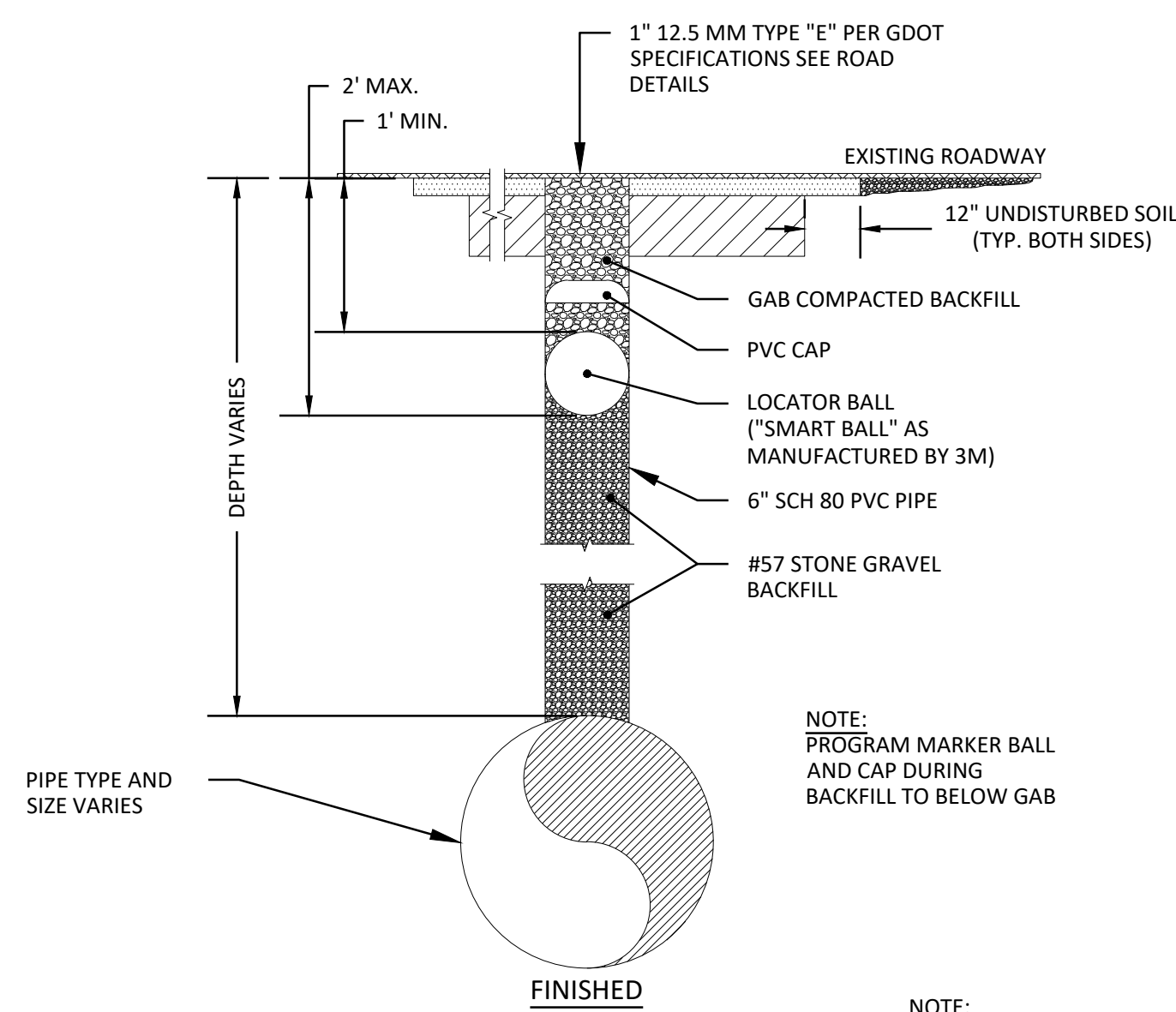
NORTH

NOTE:
 REFER TO SHEET
 C-28 FOR PROFILE

PROJ. NO.	CBR18213
DATE	3/7/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR BID	JCS
ISSUED FOR PERMIT	JCS
ISSUE NO.	02/08/19
ISSUE DATE	
ISSUE BY	
ISSUE CHECKED	JCS
ISSUE FILE NAME	CV-ALL-SHT_DTL.dwg

SHEET
C-34

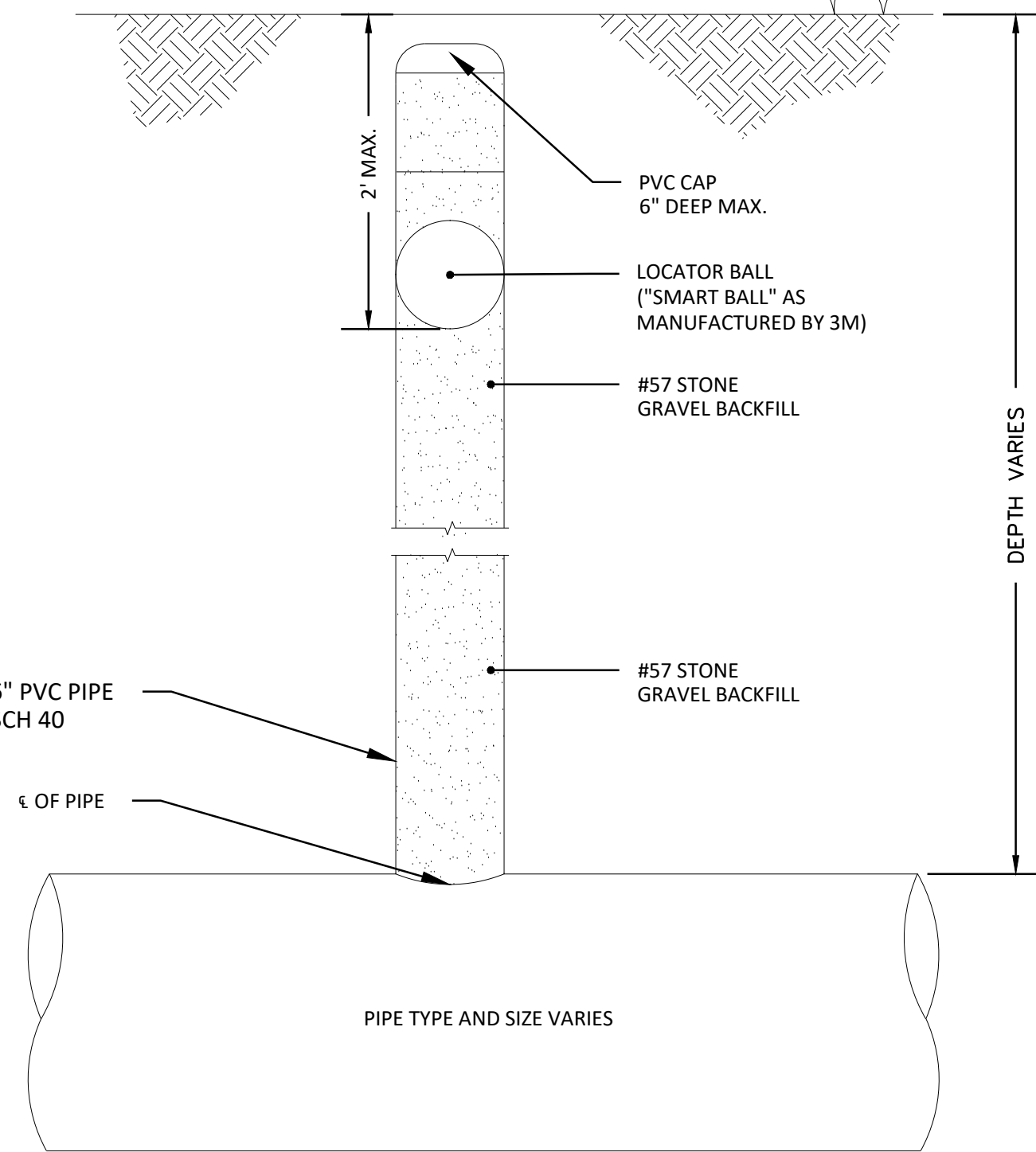
SEQ.
 38



PVC AS-BUILT LOCATOR INSTALLATION DETAIL (IN PAVEMENT)

N.T.S.

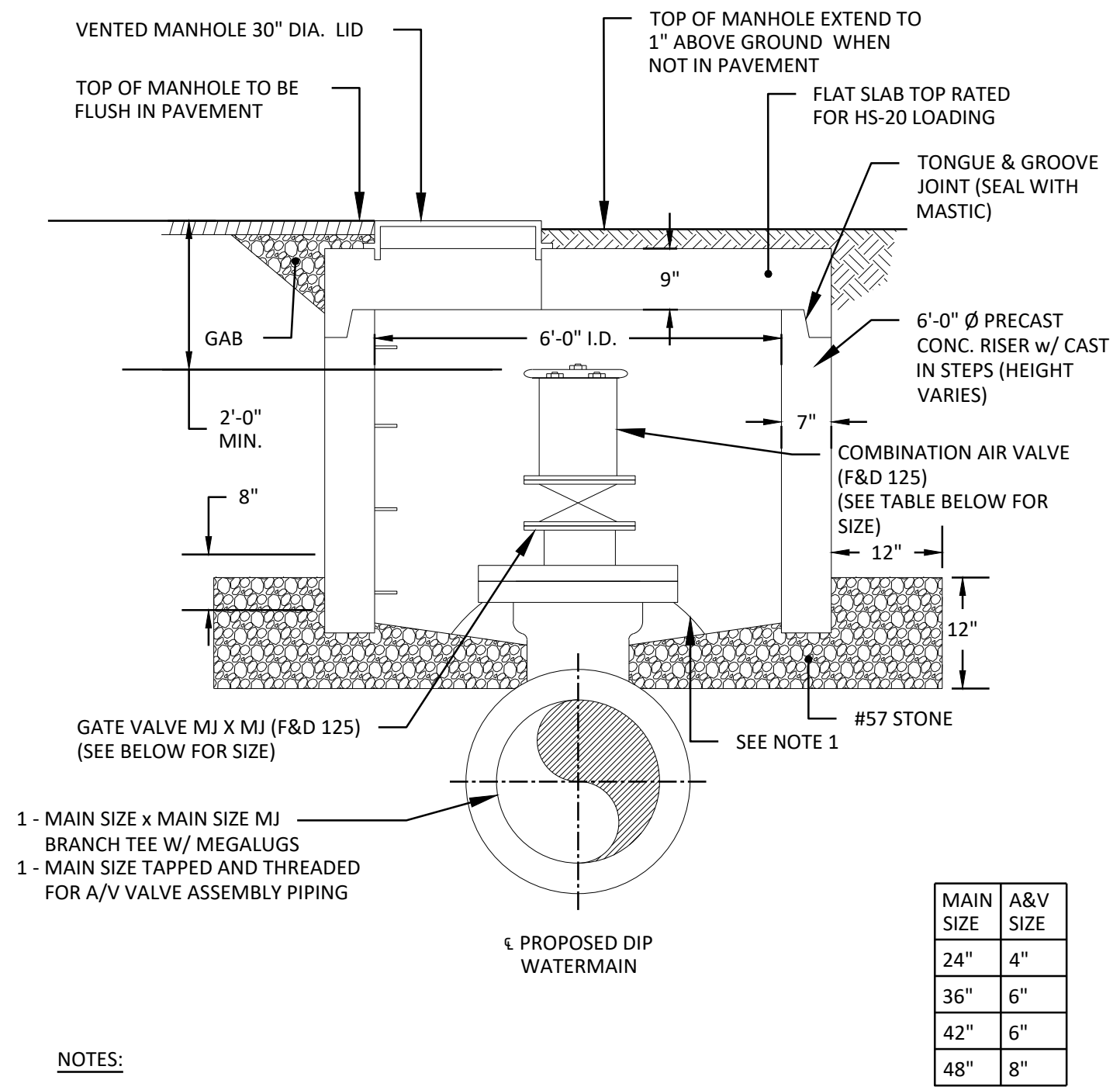
DETAIL 110



PVC AS-BUILT LOCATOR INSTALLATION DETAIL (OUTSIDE OF PAVEMENT)

N.T.S.

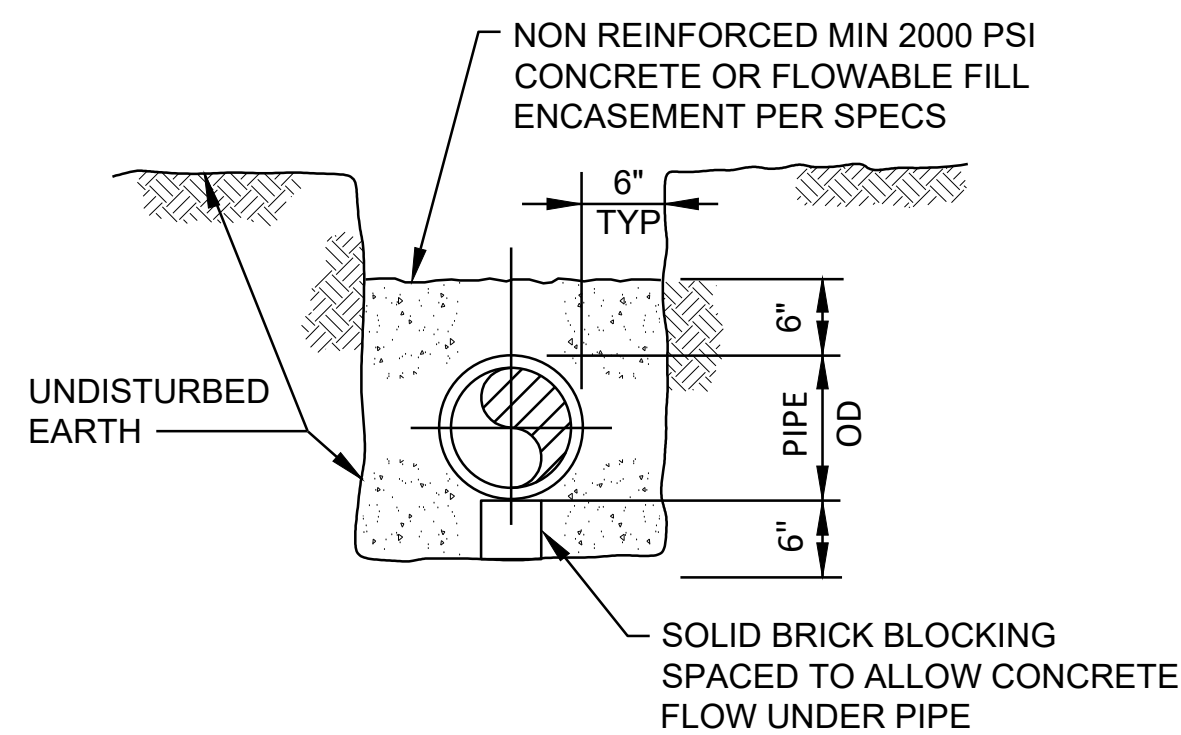
DETAIL 110



COMBINATION AIR & VACUUM ASSEMBLY WITH MANWAY DETAIL

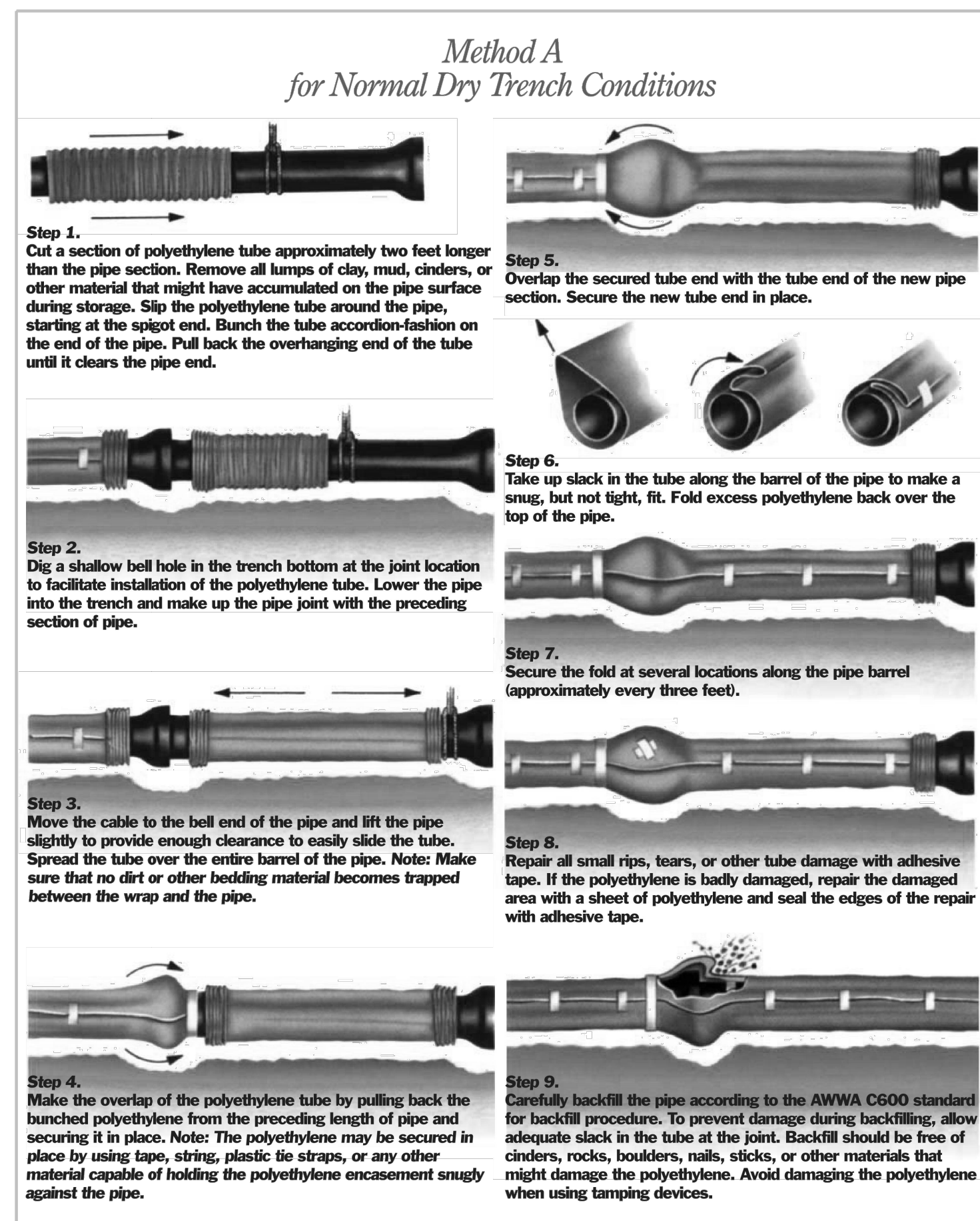
SCALE: N.T.S.

DETAIL 130

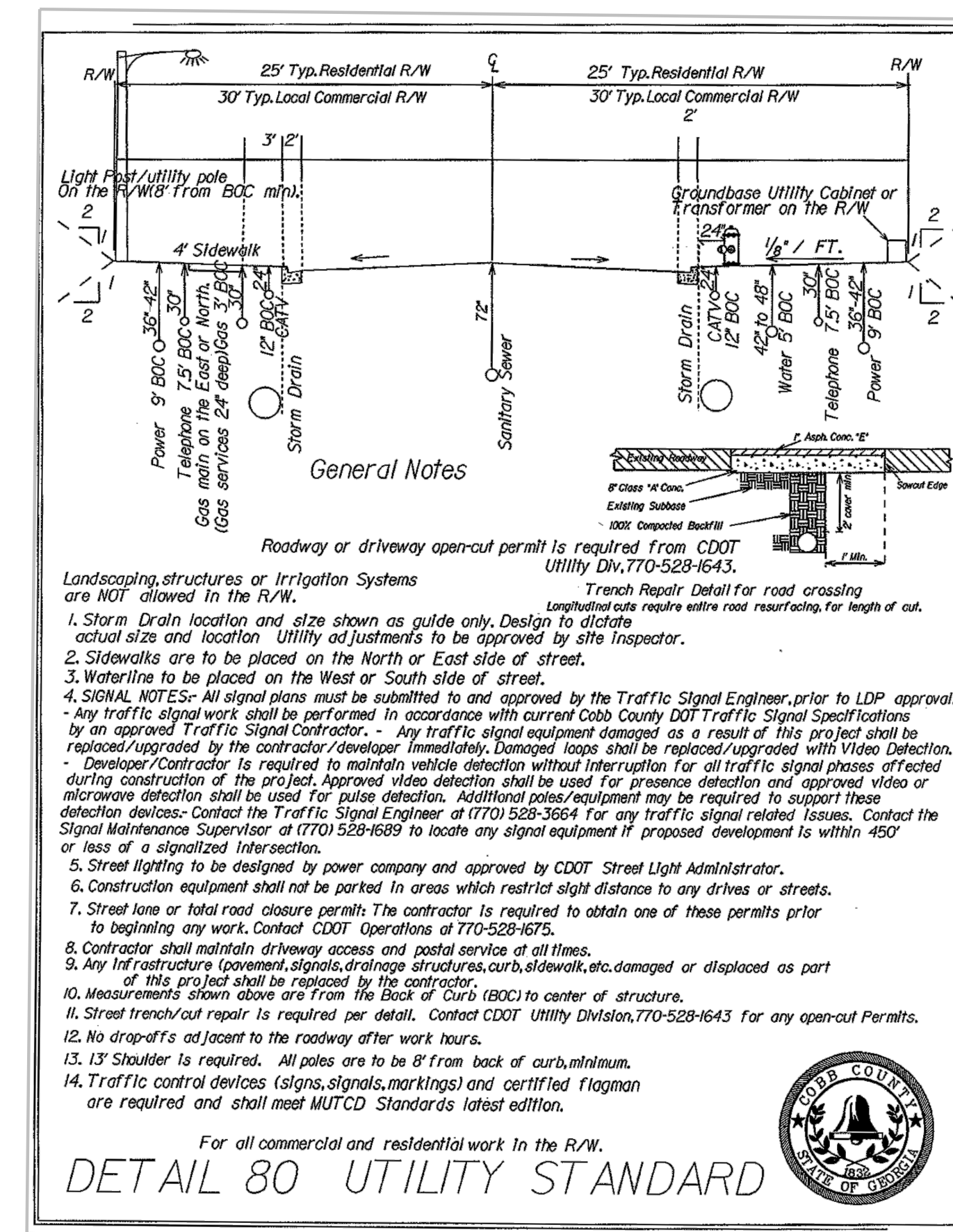
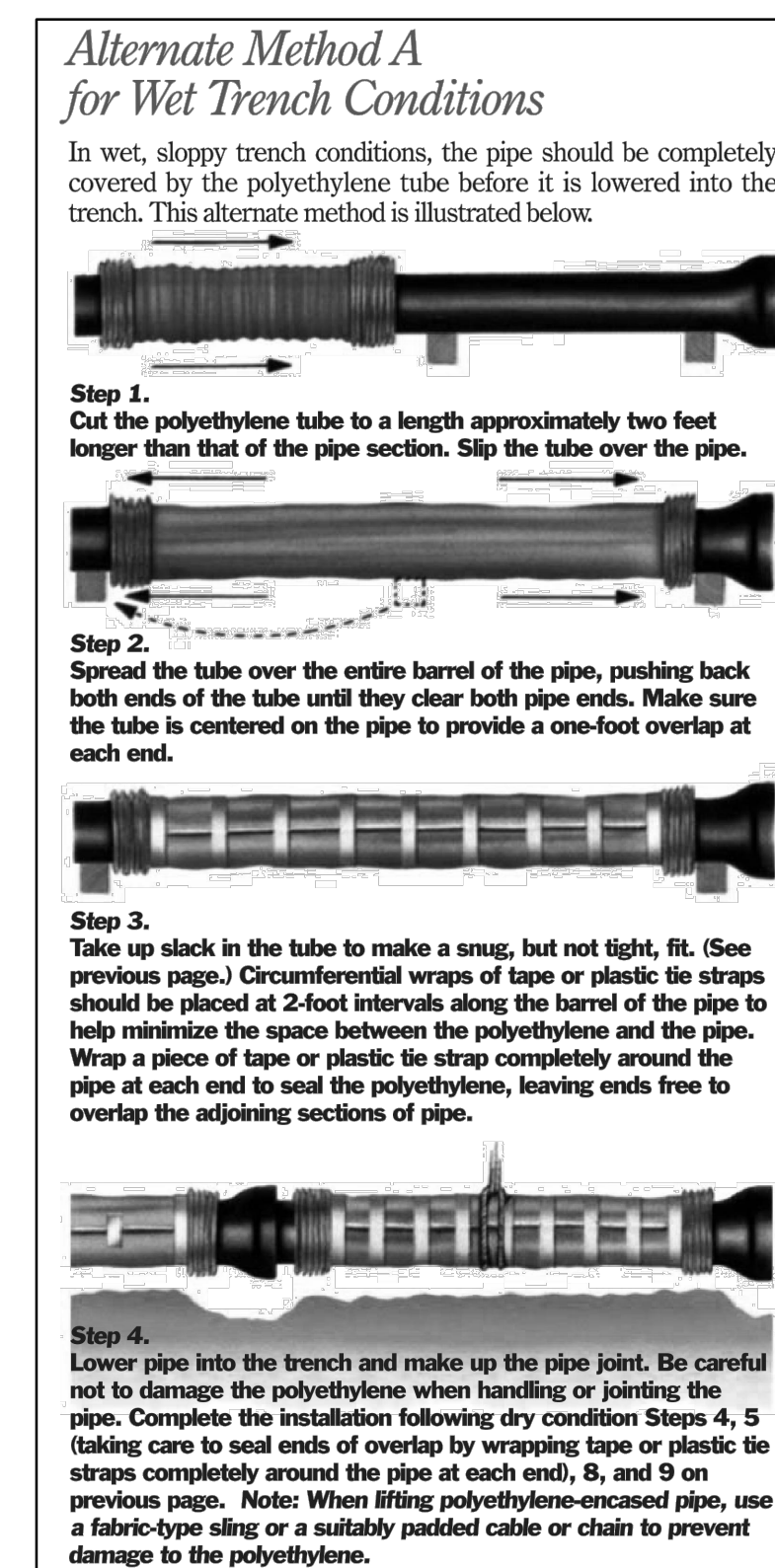


CONCRETE OR FLOWABLE FILL ENCASEMENT

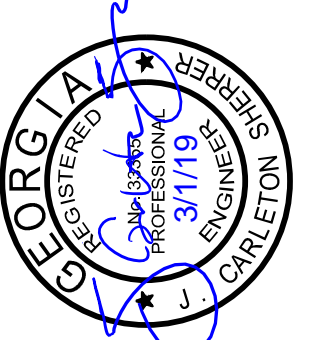
DETAIL 112



POLYETHYLENE ENCASEMENT INSTALLATION



COBB DOT STANDARD UTILITY DETAIL



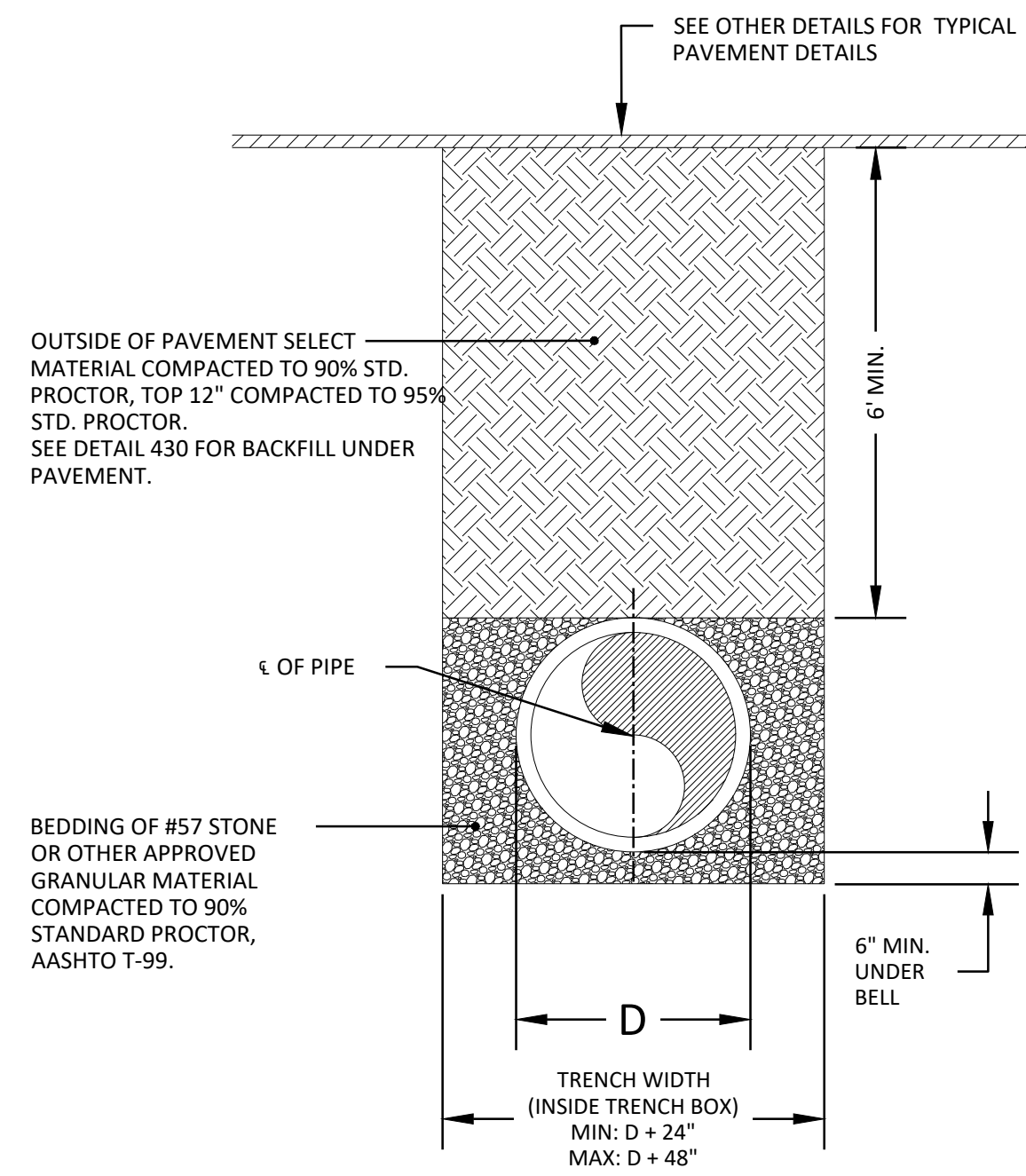
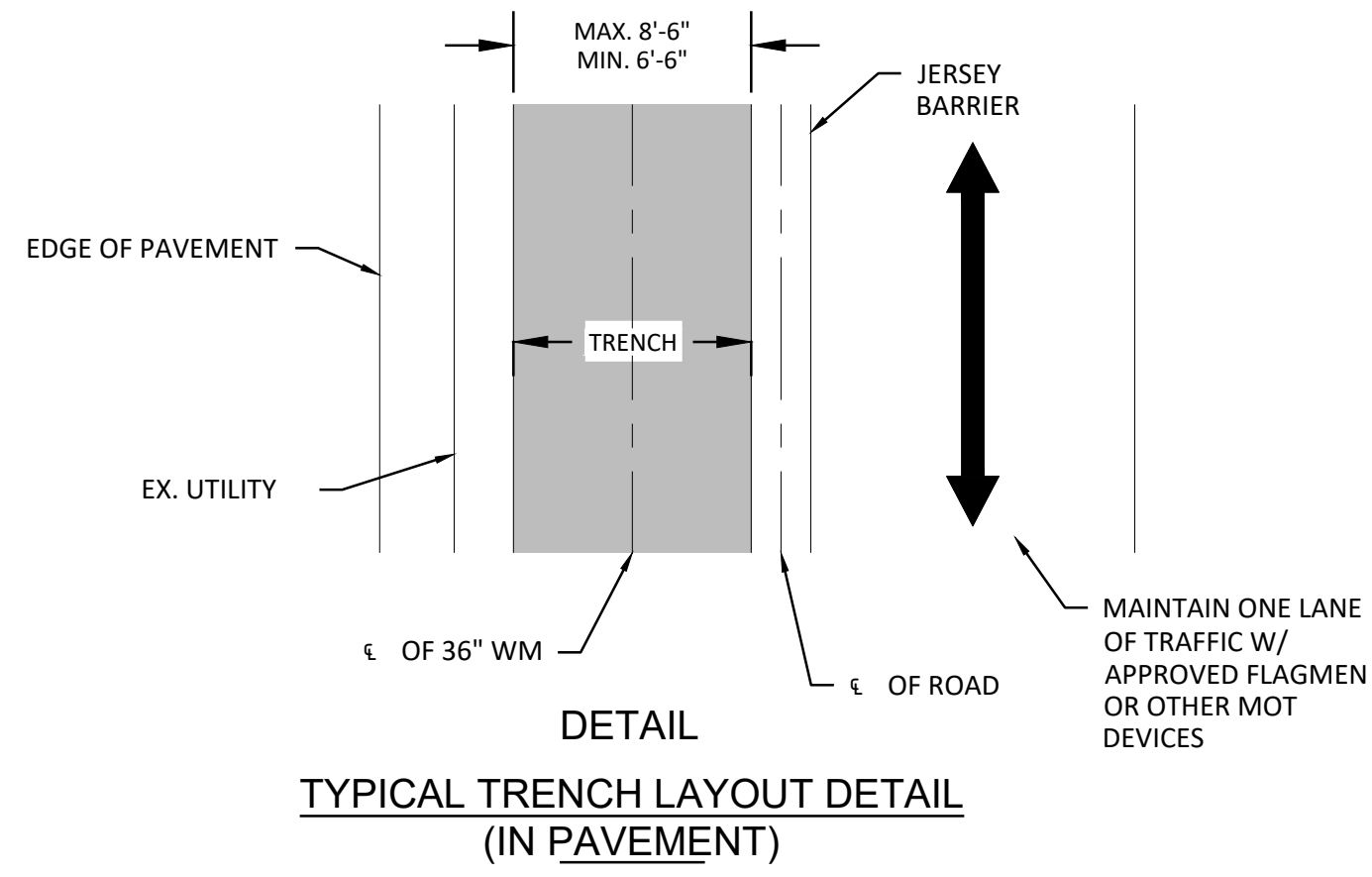
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COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL

REV.	DATE	DESIGNED	DRAWN	CHECKED	ISSUED FOR PERMIT	ISSUED FOR BID	VERIFY SCALE
1	03/01/19	JCS	CKM	JCS			1

SHEET D-1
 SEQ. 39

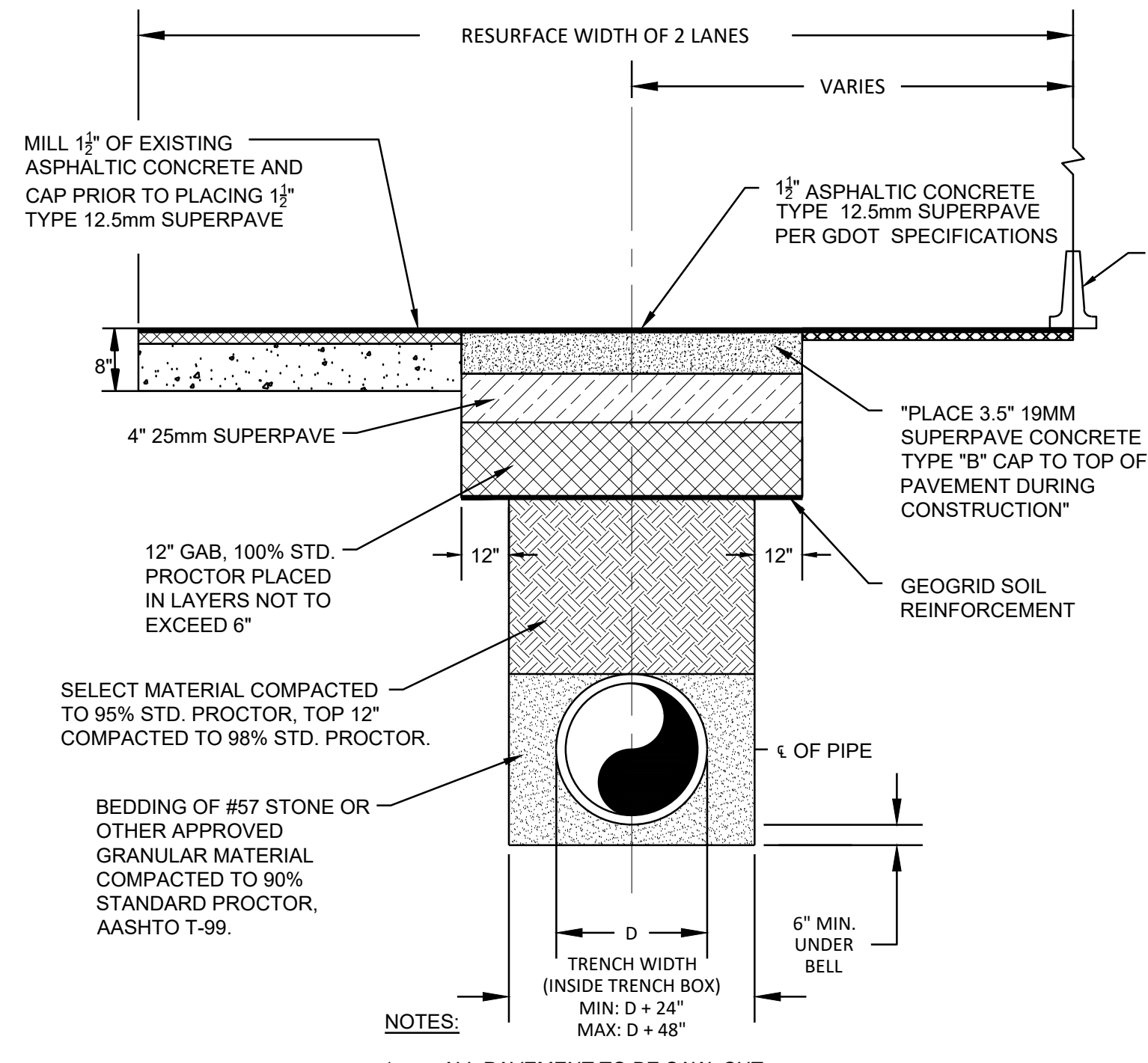
ACAD Ref: 23.08 (IMS Tech)
 Filename: n:\WTD\Drawings\GN-ALL-DTLS.dwg
 Last Saved: 3/1/2019 10:36 AM. Saved By: 02618



- NOTES:
1. TYPE 5 BEDDING SHALL BE USED FOR THE ENTIRE LENGTH OF THIS PROJECT.
 2. PLACE EARTHEN DAM EVERY 200' OF PIPE.

DETAIL 330

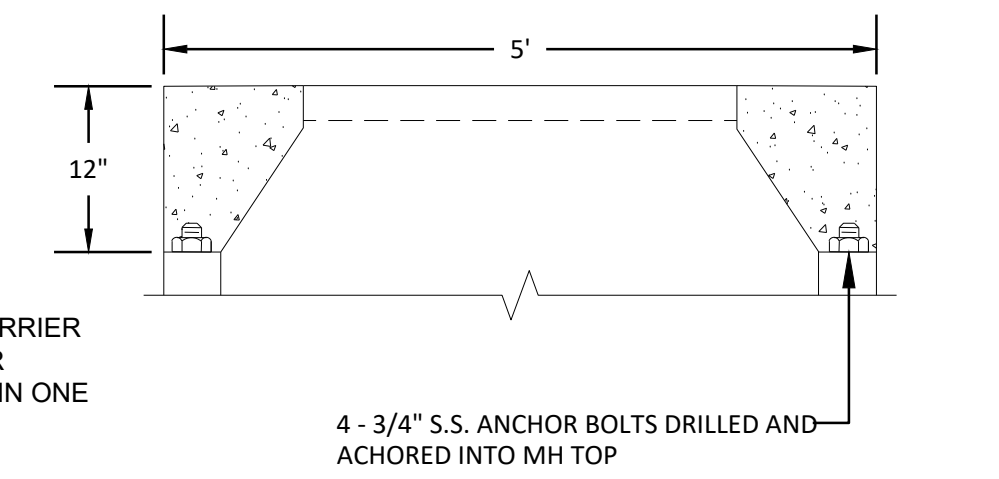
TYPE 5 BEDDING



- NOTES:
1. ALL PAVEMENT TO BE SAW CUT.
 2. D = NOMINAL PIPE DIAMETER
 3. SURFACES TO BE CLEANED AND BITUMINOUS TACK COAT APPLIED BEFORE PLACEMENT OF ASPHALTIC TOP.

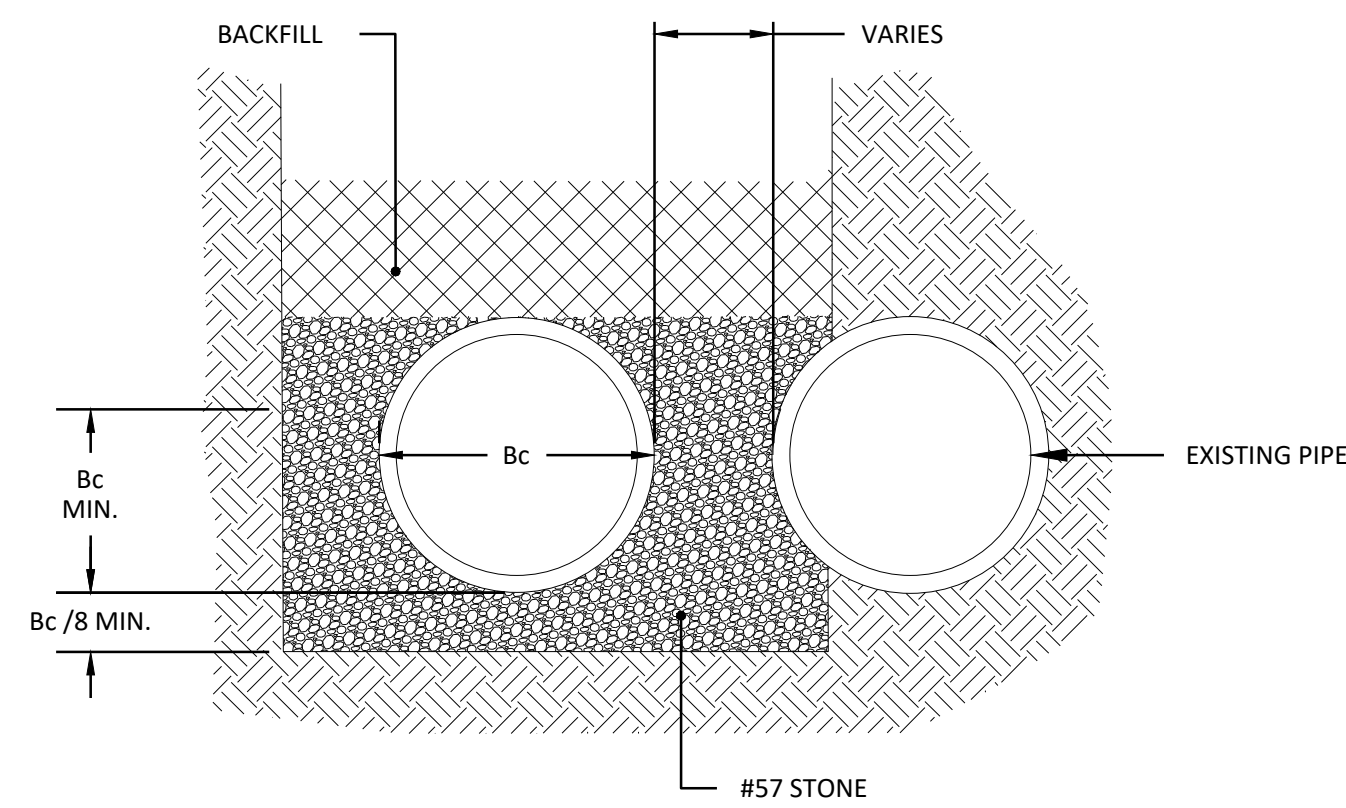
DETAIL 430

ASPHALT PAVEMENT REPLACEMENT DETAIL



DETAIL 450

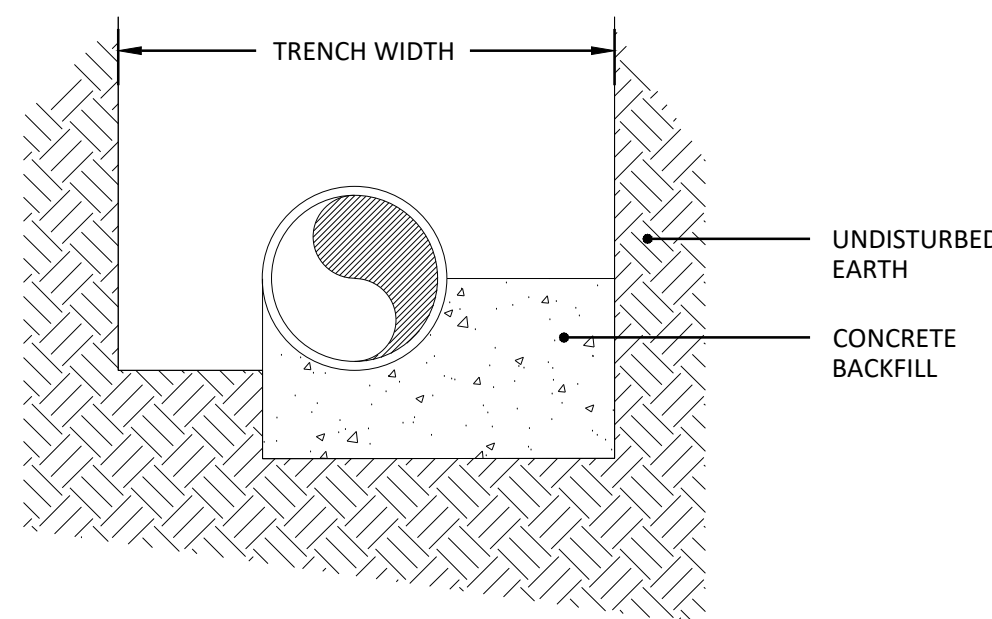
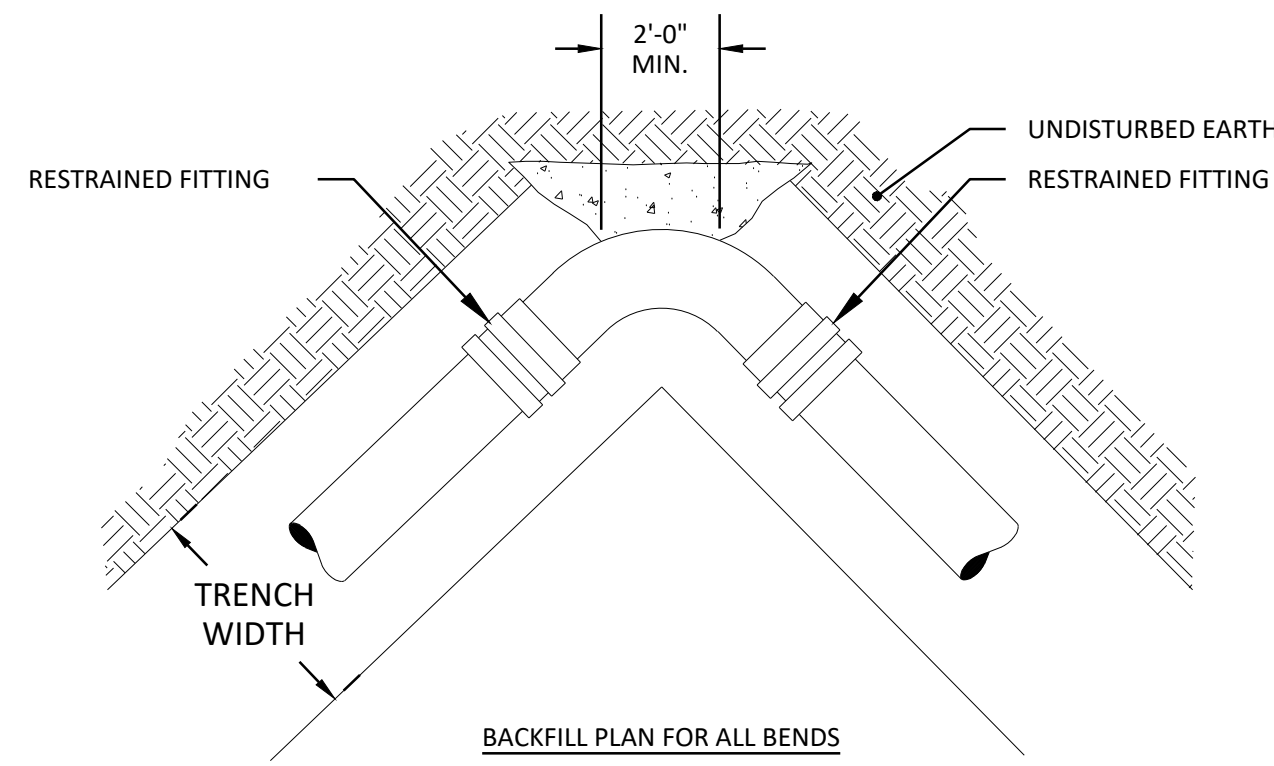
MANHOLE LID & CONCRETE PAD DETAIL #1



- NOTES:
1. AC PIPE ENCOUNTERED IN TRENCH SHALL BE HANDLED PER LAWS/REGULATIONS AND PROPERLY DISPOSED. REFER TO GENERAL NOTES.

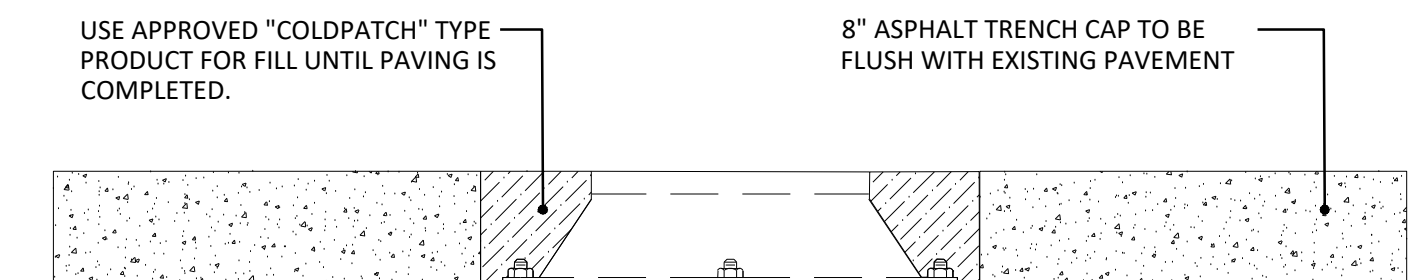
DETAIL 440

TYPICAL BEDDING DETAIL FOR PIPE INSTALLATION BESIDE EXISTING PIPE, WHEN EXPOSED

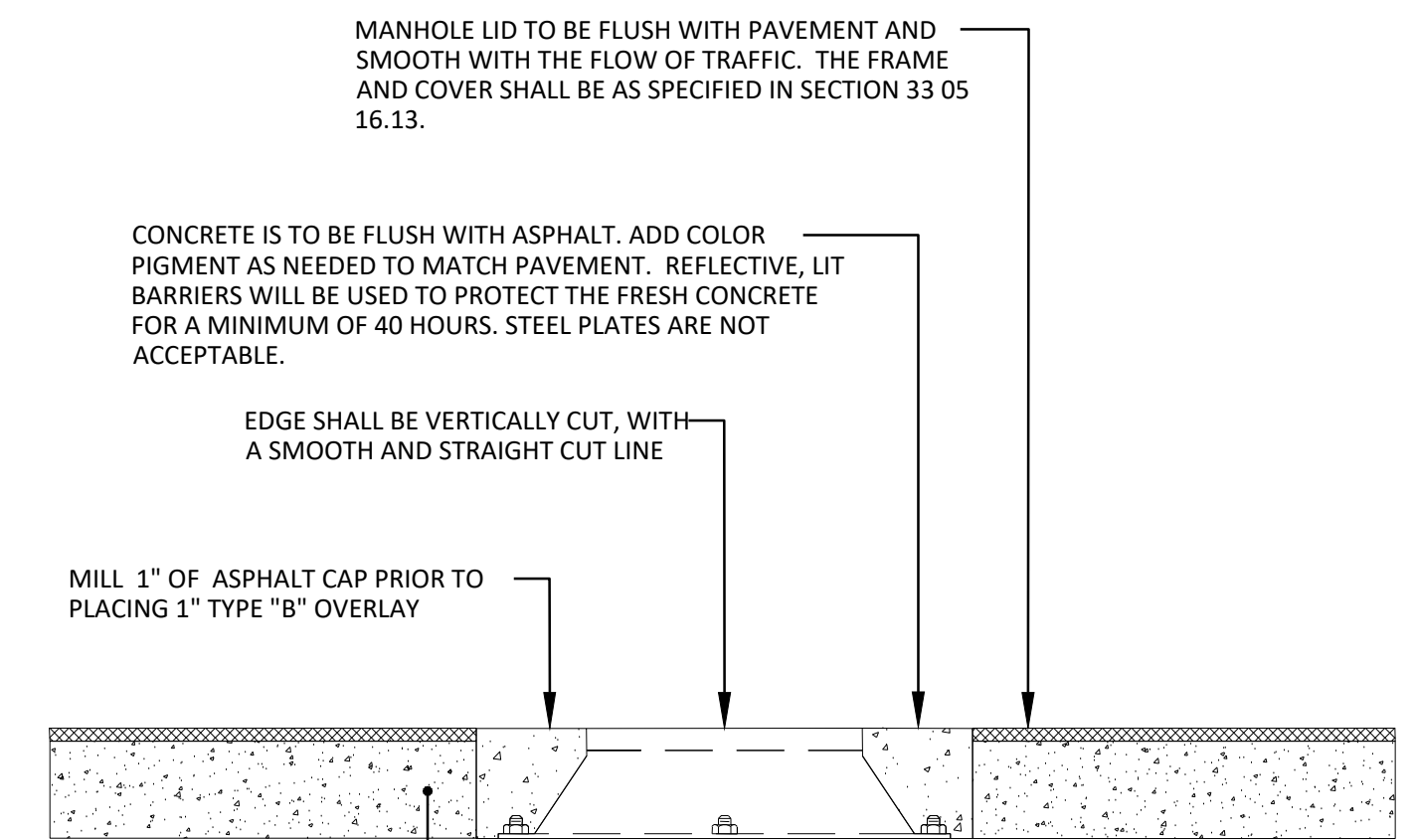


DETAIL 320

CONCRETE BACKFILL DETAIL



DETAIL FOR TEMPORARY - DURING CONSTRUCTION



DETAIL 460

MANHOLE LID & CONCRETE PAD DETAIL #2



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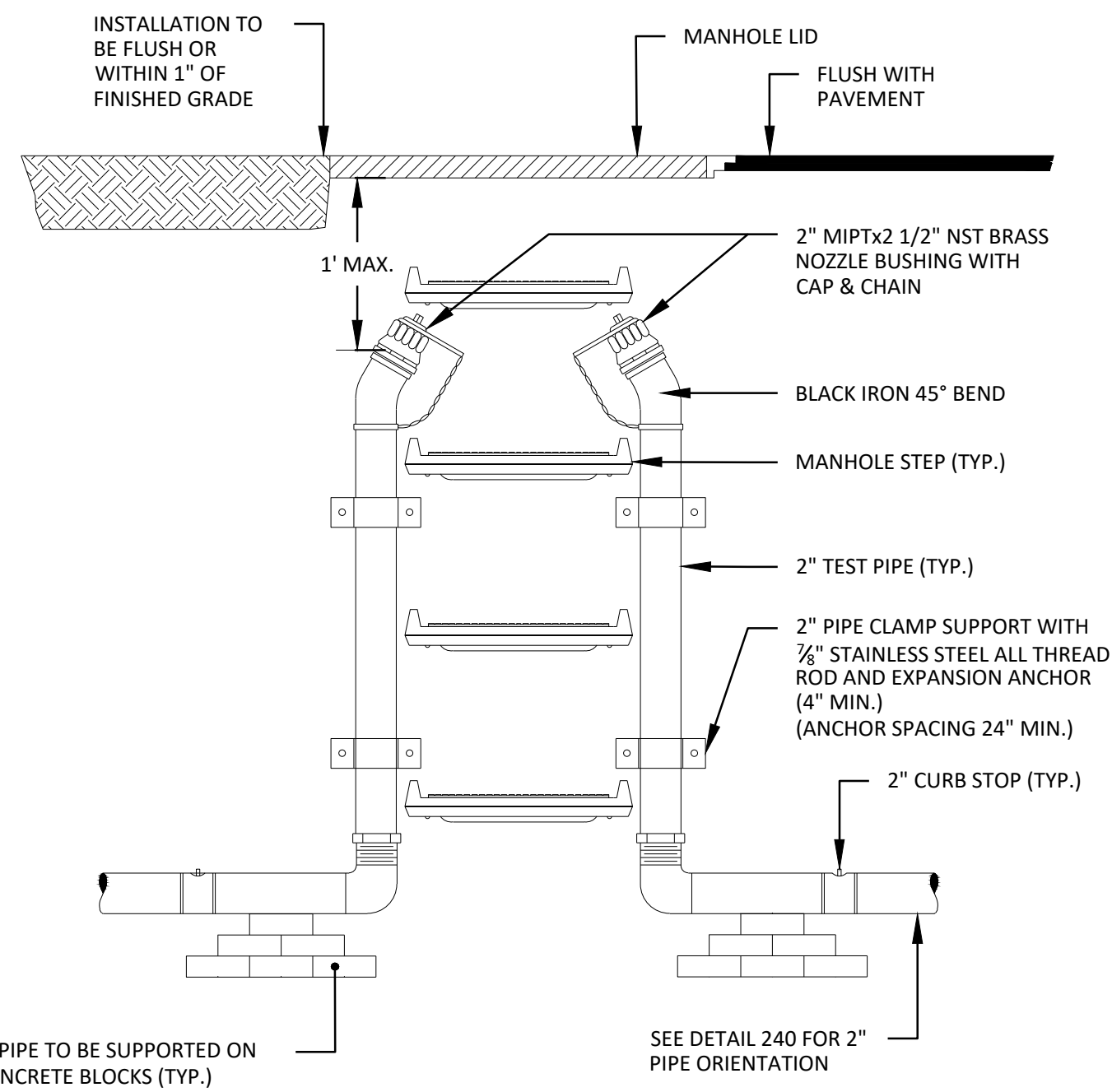
COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT

CIVIL

STANDARD DETAILS

PROJ. NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS	FILE NAME	GN-ALL-DTLS.dwg
ISSUED FOR BID	JCS	03/01/19									
ISSUED FOR PERMIT	JCS	02/08/19									
ISSUE NO.											
VERIFY SCALE											
NO.	0										

SHEET D-2
 SEQ. 40

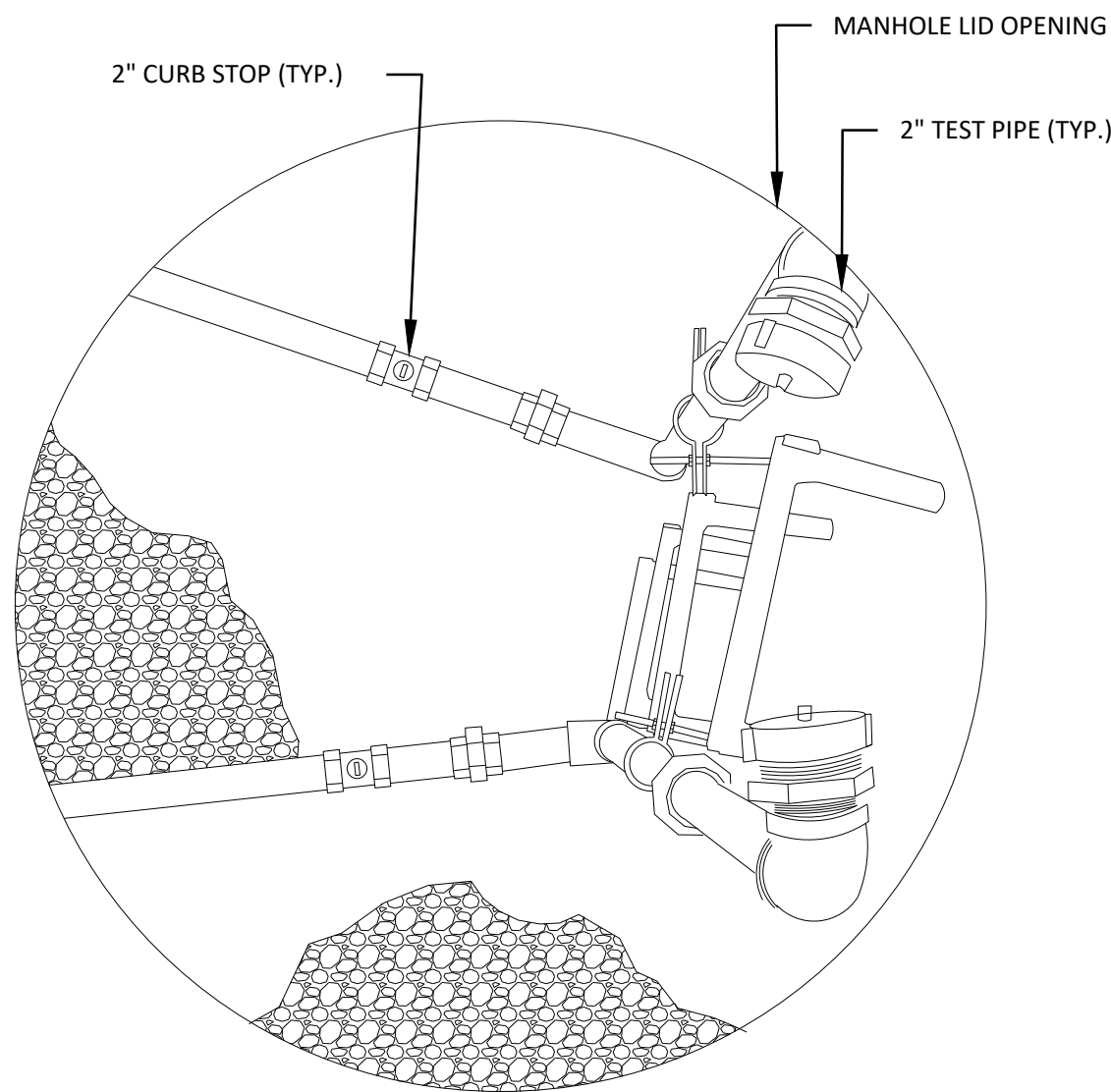


2" PIPE TO BE SUPPORTED ON CONCRETE BLOCKS (TYP.) SEE DETAIL 240 FOR 2" PIPE ORIENTATION

- NOTE:
- INSULATE BETWEEN DISSIMILAR METALS WITH RUBBER GASKET MATERIAL.
 - ALL 2" PIPE, FITTINGS AND HARDWARE SHALL BE RATED FOR WORKING PRESSURE OF MINIMUM 250 PSI.

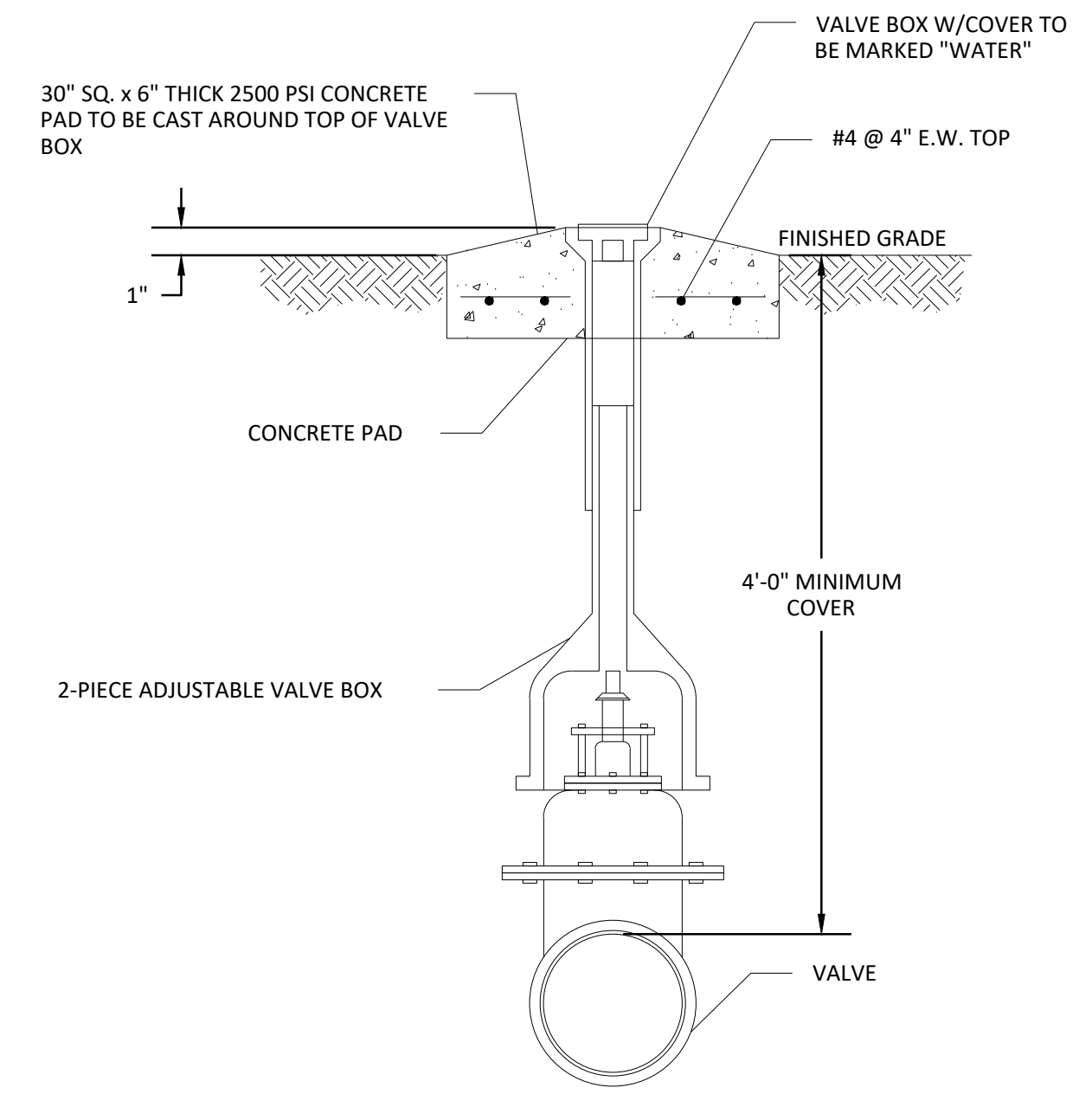
DETAIL 240A

IN-LINE VALVE MANHOLE AND TEST CONNECTIONS



DETAIL 240B

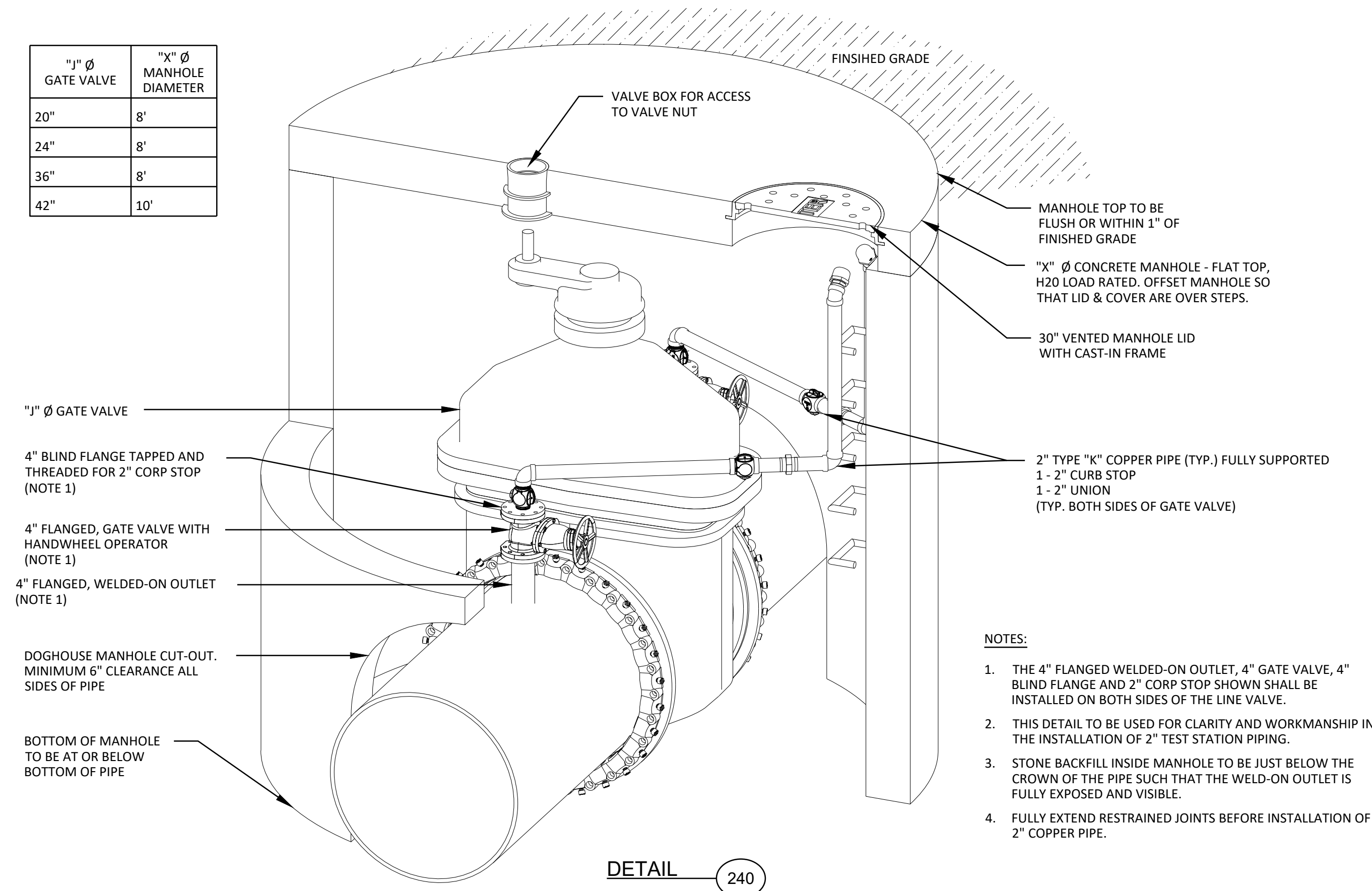
VALVE TEST CONNECTIONS
SCALE: N.T.S.



- NOTES:
- CAST AROUND THE TOP OF EACH VALVE BOX A CONCRETE PAD 2'-0" IN DIA. OR 2'-0" SQUARE AND 8" THICK WHEN VALVES ARE LOCATED IN UNPAVED AREAS. PAD NOT REQUIRED IN PAVED AREAS.
 - IF PRECAST PADS ARE USED, THE VOID BETWEEN THE PRECAST PAD AND THE VALVE BOX SHALL BE FILLED W/NON-SHRINK EPOXY GROUT.
 - VALVE DEEPER THAN 8' REQUIRES 4' MANHOLE.

TYPICAL VALVE BOX AND OPERATOR SETTING
SCALE: N.T.S.

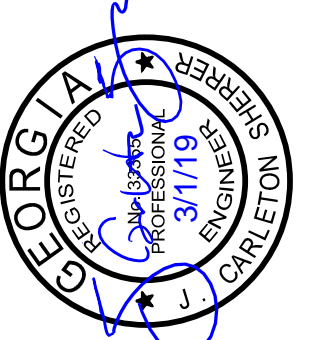
"J" Ø GATE VALVE	"X" Ø MANHOLE DIAMETER
20"	8'
24"	8'
36"	8'
42"	10'



- NOTES:
- THE 4" FLANGED WELDED-ON OUTLET, 4" GATE VALVE, 4" BLIND FLANGE AND 2" CORP STOP SHOWN SHALL BE INSTALLED ON BOTH SIDES OF THE LINE VALVE.
 - THIS DETAIL TO BE USED FOR CLARITY AND WORKMANSHIP IN THE INSTALLATION OF 2" TEST STATION PIPING.
 - STONE BACKFILL INSIDE MANHOLE TO BE JUST BELOW THE CROWN OF THE PIPE SUCH THAT THE WELD-ON OUTLET IS FULLY EXPOSED AND VISIBLE.
 - FULLY EXTEND RESTRAINED JOINTS BEFORE INSTALLATION OF 2" COPPER PIPE.

DETAIL 240

GATE VALVE TEST STATION PIPING ARRANGEMENT DETAILS
SCALE: N.T.S.

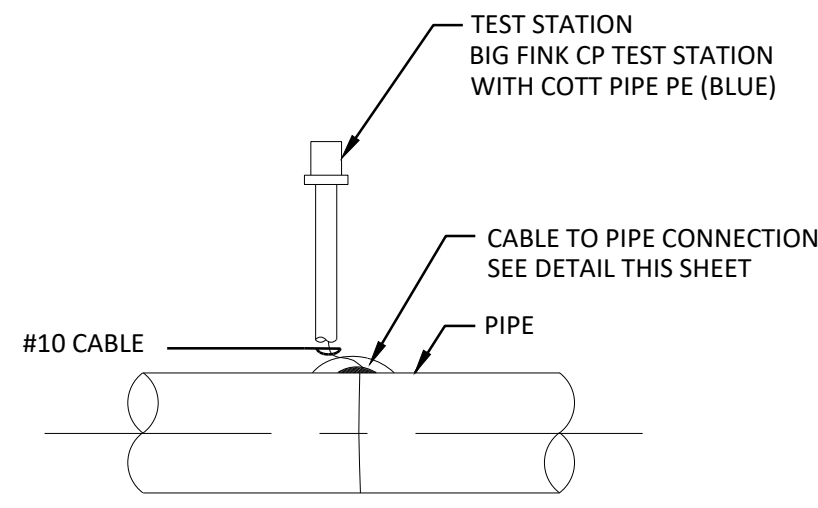


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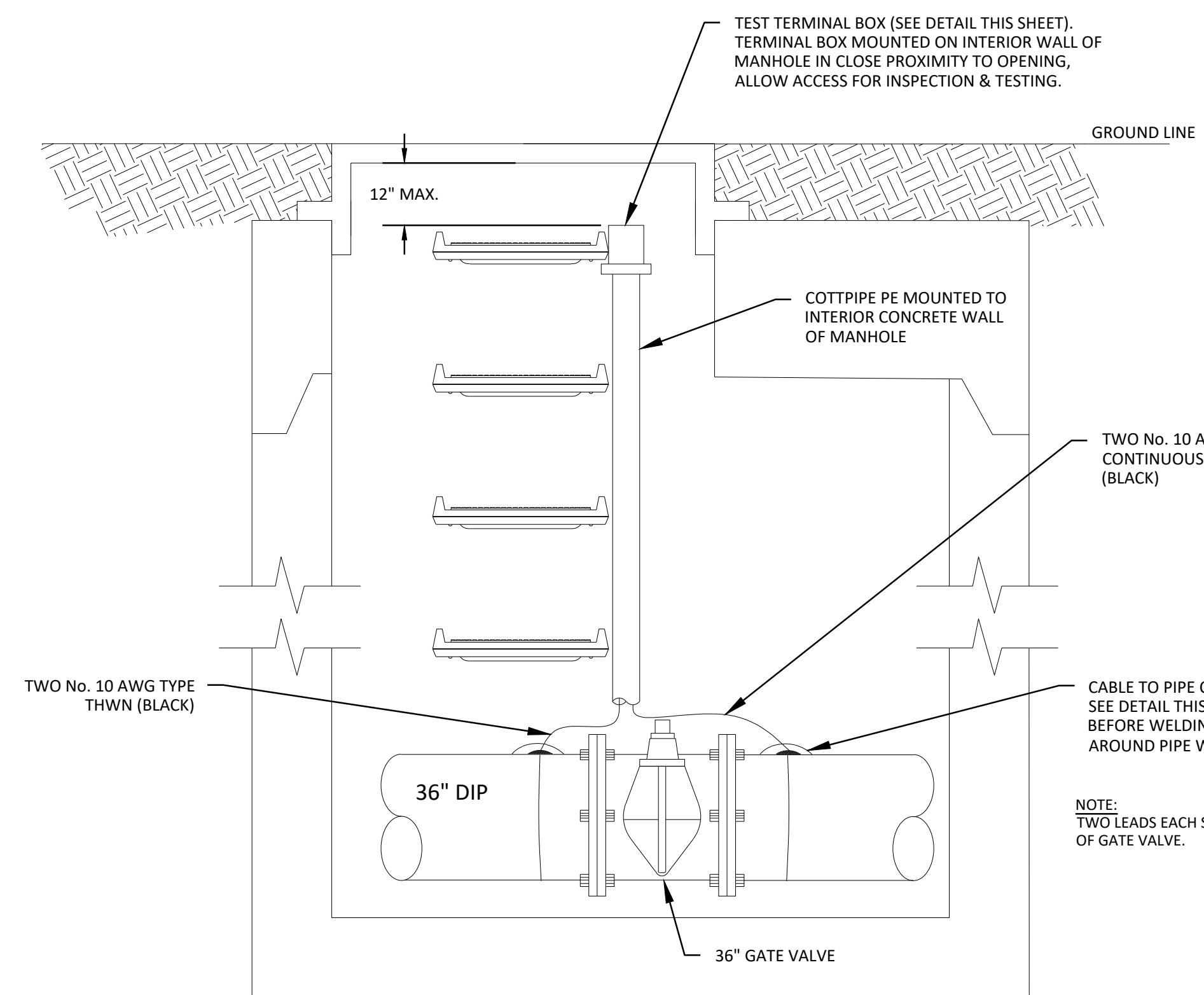
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
STANDARD DETAILS

PROJ. NO.	CBR18213	DATE	3/1/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID	JCS	03/01/19	BY	JCS	02/08/19	REVISION	DATE	FILE NAME	GN-ALL-DTLS.dwg
ISSUED FOR PERMIT	NO.	ISSUE	DATE	NO.	DATE	NO.	DATE	NO.	DATE
VERIFY SCALE	0	1	0	1	0	1	0	1	0

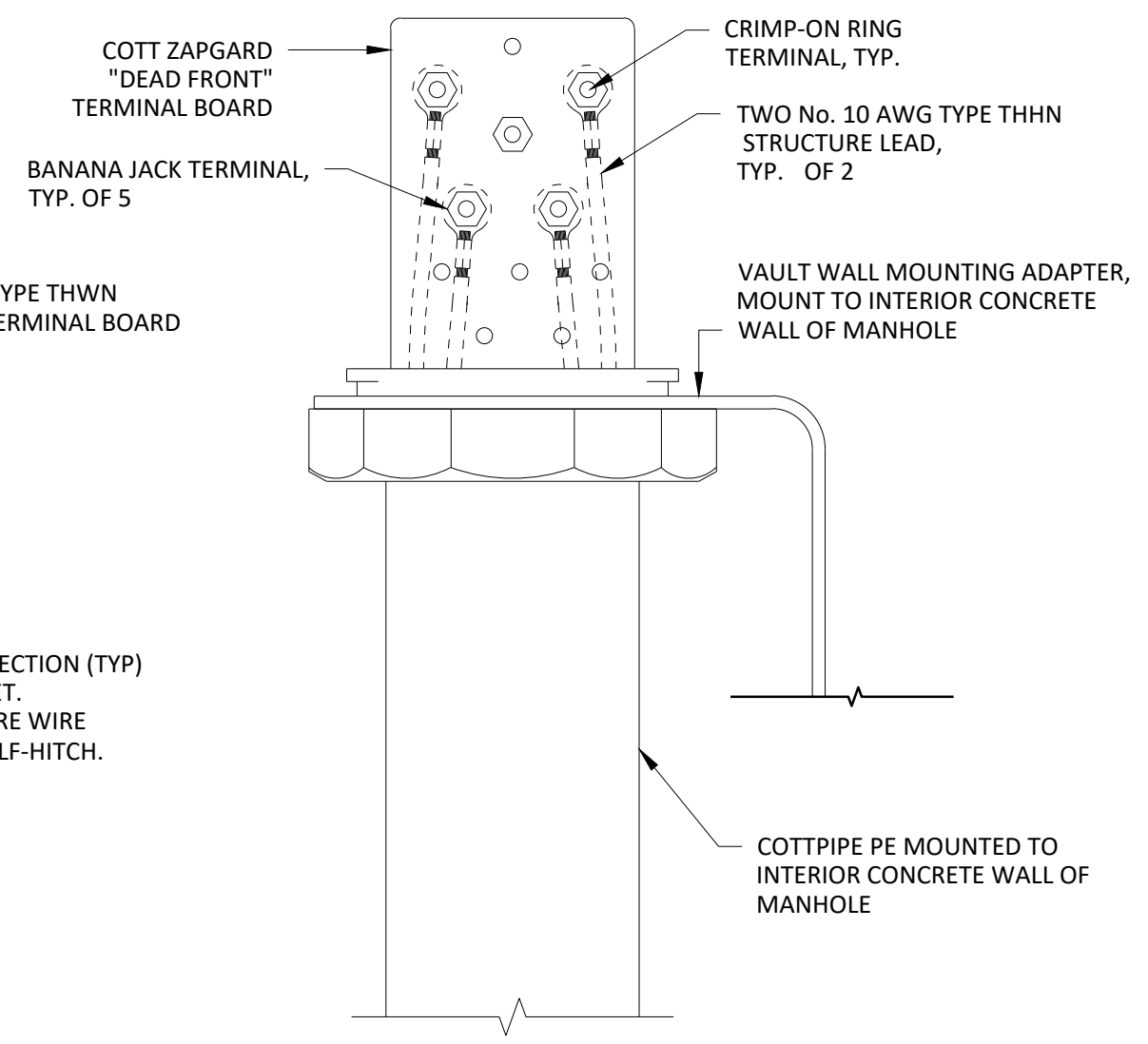
SHEET **D-3**
SEQ. 41



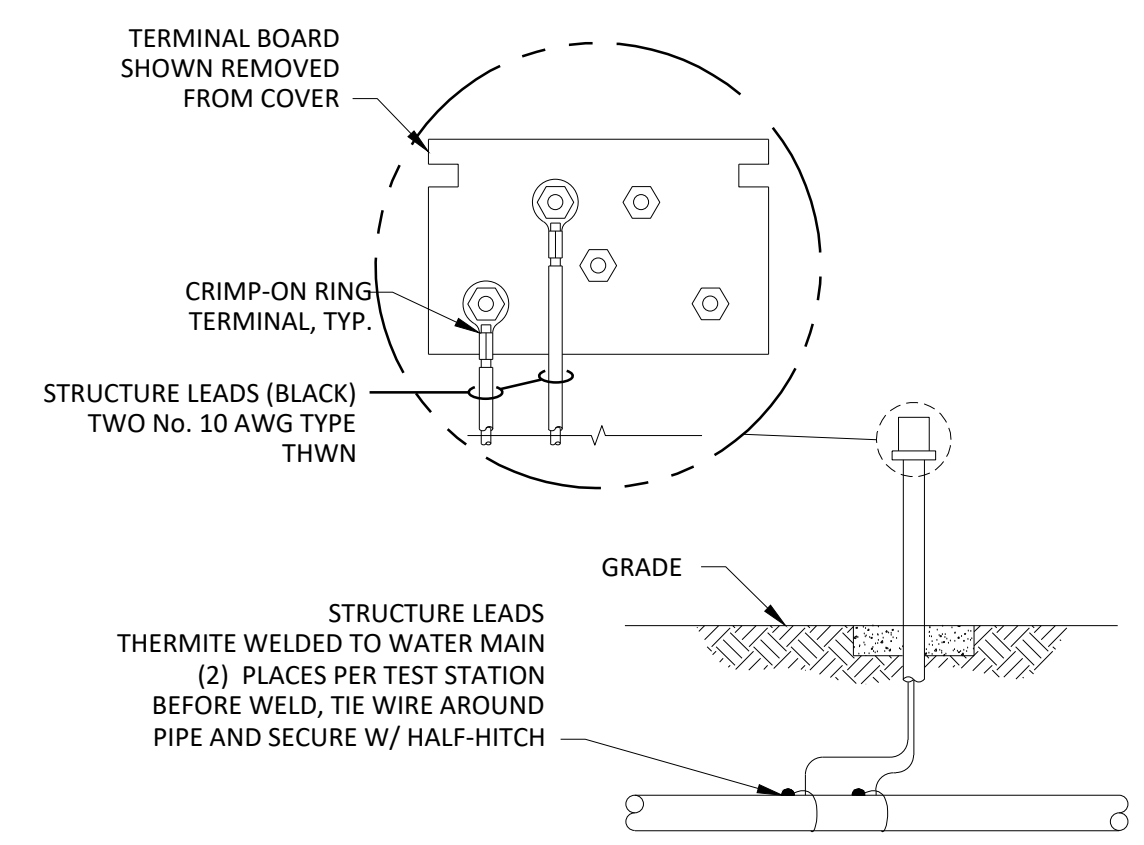
CATHODIC TEST STATION DETAIL
SCALE: N.T.S.



CATHODIC TEST STATION INSIDE MANHOLE
SCALE: N.T.S.



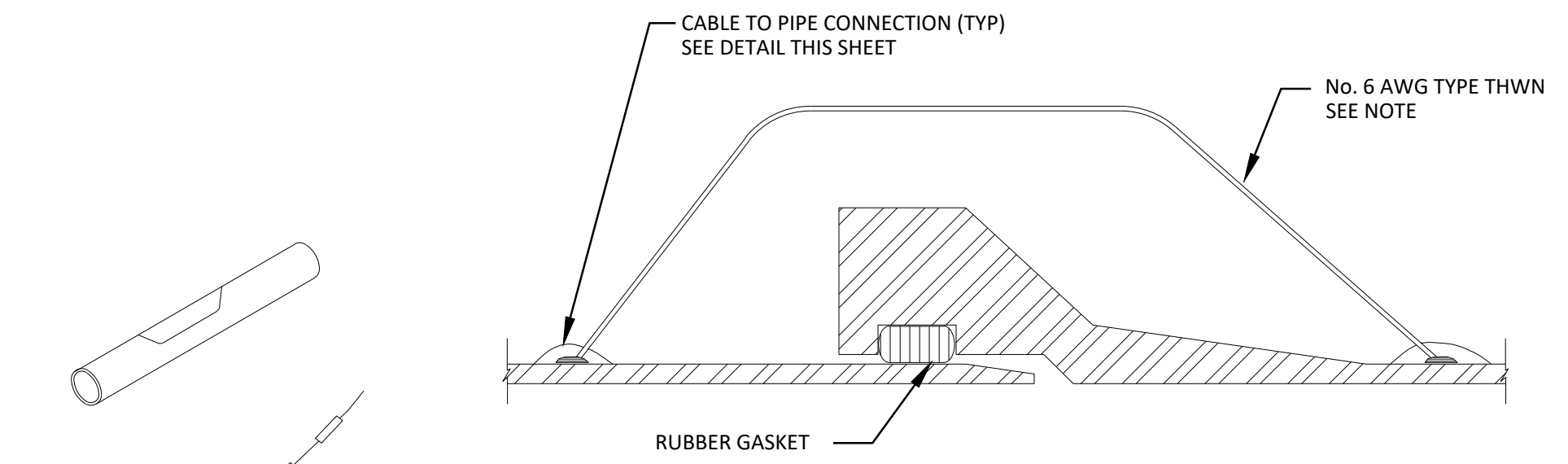
TEST TERMINAL BOX INSIDE MANHOLE
SCALE: N.T.S.



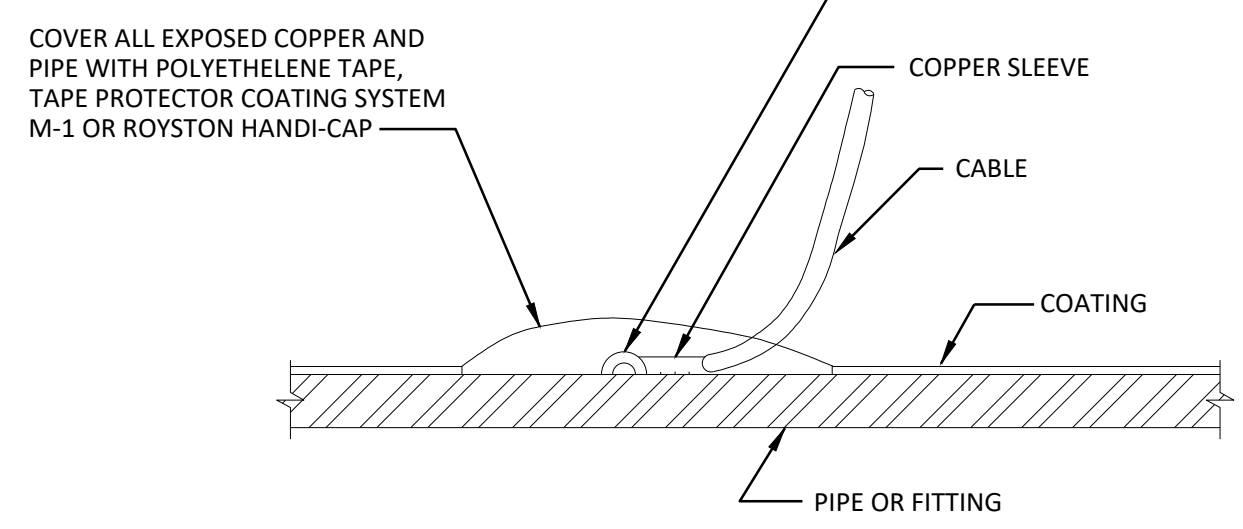
NOTES:
1. COTTPIPE PE CONCRETE TEST STATION MARKER TO BE USED AT TEST STATION LOCATIONS ONLY.
2. FOR STATIONS OUTSIDE PAVEMENT, ROUTE CABLES INSIDE ONE 6" SCH. 80 PVC PIPE TO 5-FEET MIN. BEHIND CURB, EDGE OF PAVEMENT OR SIDEWALK BURIED 4-FEET MINIMUM. PLACE 4" WIDE DETECTABLE MARKING TAPE, WITH A MINIMUM 5.0 MIL OVERALL THICKNESS, 12" ABOVE PVC PIPE, MARKED "CAUTION CATHODIC PROTECTION CABLE BURIED BELOW"

CATHODIC TEST STATION
SCALE: N.T.S.

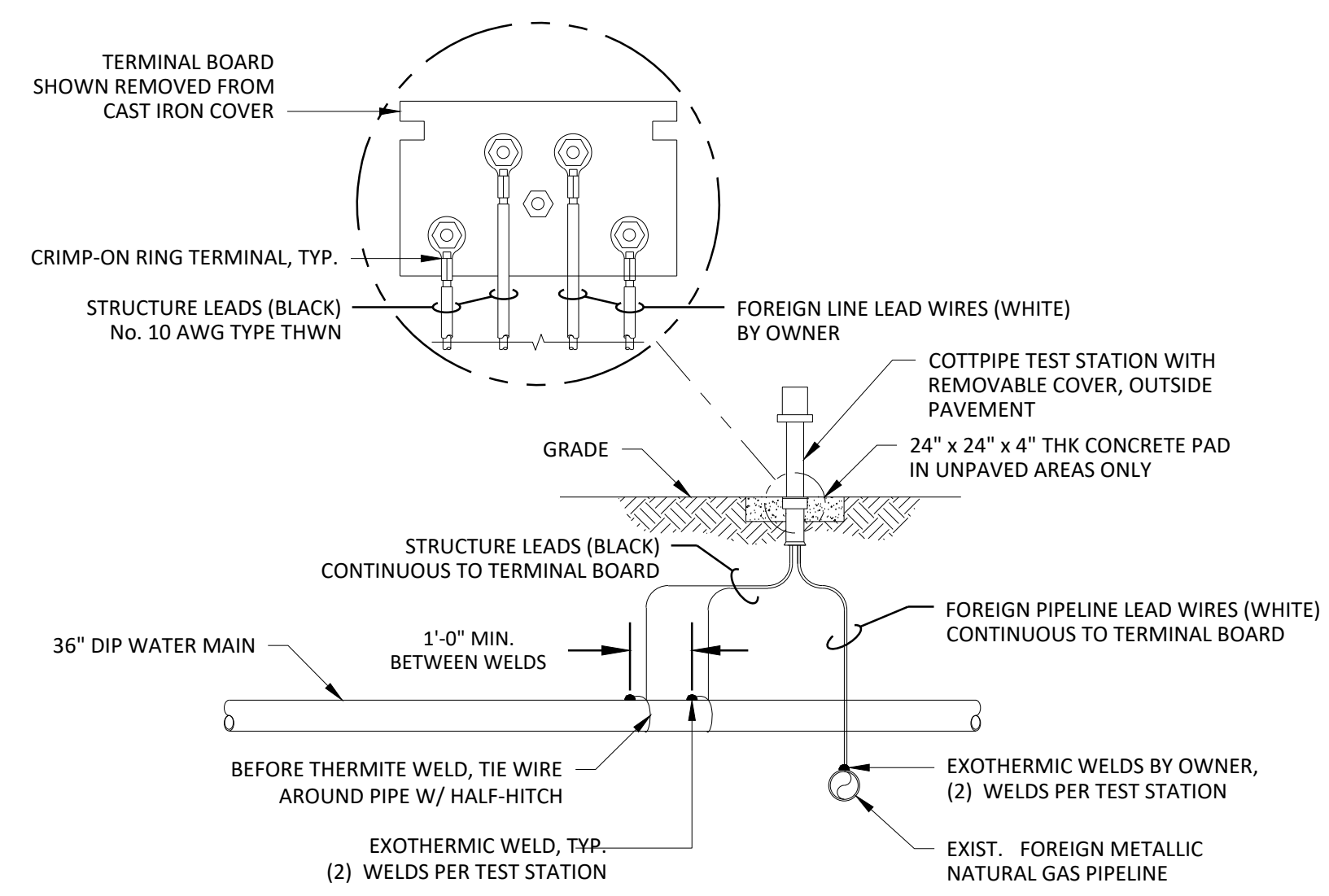
- STEP 1 FILE PIPE TO BARE METAL AND CLEAN WITH WIRE BRUSH
- STEP 2 STRIP INSULATION FROM WIRE AND SLIP ON COPPER SLEEVE PER MANUFACTURERS INSTRUCTIONS
- STEP 3 PLACE WIRE ON CLEAN PIPE AND HOLD WELDER OVER WIRE FIRMLY AGAINST PIPE AND IGNITE WITH FLINT GUN
- STEP 4 REMOVE SLAG, TEST CONNECTION AND APPLY ROYBOND 747 PRIMER TO WELD AREA
- STEP 5 INSTALL ROYSTON HANDY-CAP OVER WELD AND WRAP AREA WITH POLYETHYLENE TAPE, OR PROTECTOR MASTIC AND TAPE WRAP COATING SYSTEM M-1



PIPE JOINT DOUBLE BONDING DETAIL
SCALE: N.T.S.

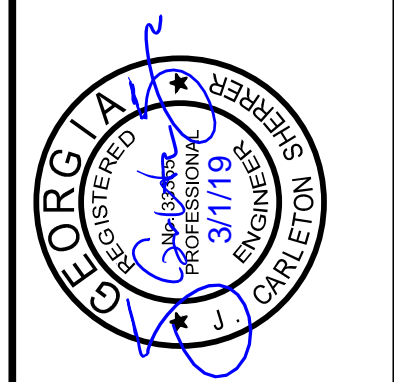


CABLE TO PIPE CONNECTION DETAIL
SCALE: N.T.S.



FOREIGN PIPELINE CROSSING TEST STATION

CATHODIC TEST STATION LOCATION TABLE			
CTS #	STATION	CTS TYPE	
1	0+77	GV	CTS
2	10+20	ARV	CTS
3	18+90	Blowoff	CTS
4	28+00	Ground	CTS
5	38+00	Ground	CTS
6	46+31	ARV	CTS
7	46+45	GV	CTS
8	46+62	GV	CTS
9	53+50	Ground	CTS
10	63+50	ARV	CTS
11	72+00	Ground	CTS
12	78+25	Blowoff	CTS
13	88+00	Ground	CTS
14	95+91	GV	CTS
15	103+25	Blowoff	CTS
16	110+00	Ground	CTS
17	118+00	Ground	CTS
18	125+50	Ground	CTS
19	132+00	ARV	CTS
20	139+40	Blowoff	CTS
21	142+14	GV	CTS
22	142+43	GV	CTS
23	153+50	Blowoff	CTS
24	161+00	Ground	CTS
25	166+00	Ground	CTS
26	176+62	GV	CTS
27	181+00	Ground	CTS
28	189+50	Ground	CTS
29	195+44	Ground	CTS
FACTORY SHOALS			
30	1+60	GV	CTS
31	8+52	Blowoff	CTS

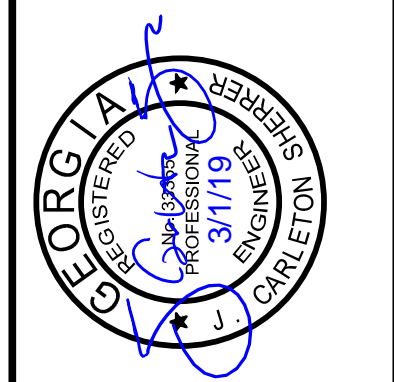


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WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
CIVIL
STANDARD DETAILS

PERM. JOB NO.	CBR18213	DATE	3/7/19	DESIGNED	FDH	DRAWN	CKM	CHECKED	JCS
ISSUED FOR BID		ISSUED FOR PERMIT		ISSUE		NO.		FILE NAME	GN-ALL-DTLS.dwg
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SHEET **D-4**
SEQ. 42

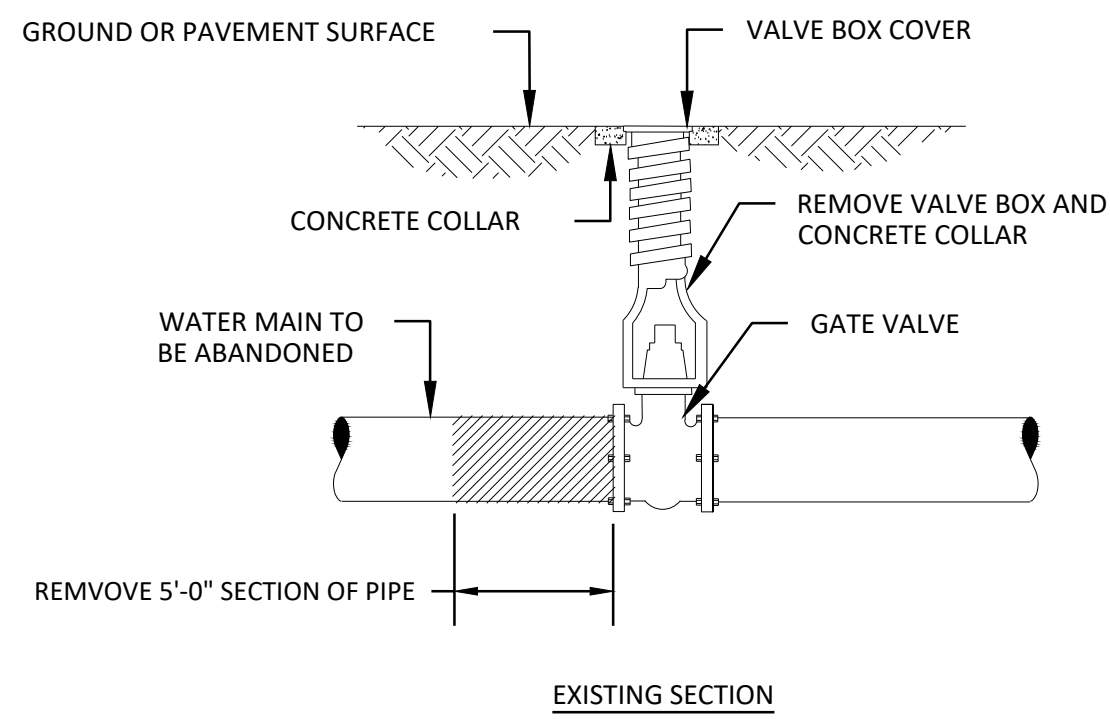


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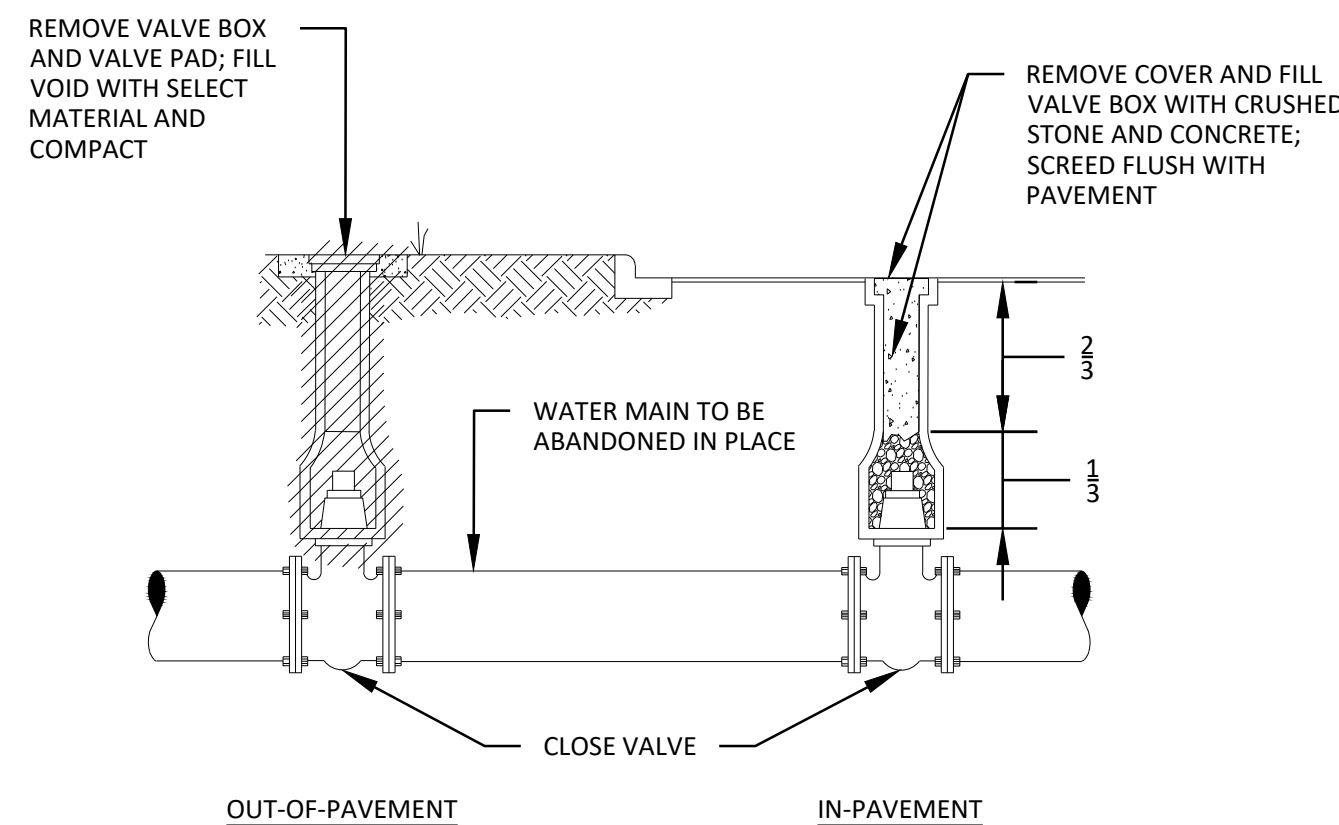
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 CIVIL
STANDARD DETAILS

PROJ. NO.	CBR18213
DATE	3/7/19
DESIGNED	FDH
DRAWN	CKM
ISSUED FOR PERMIT	JCS
ISSUED FOR BID	JCS
DATE	03/01/19
REVISION	02/08/19
CHECKED	JCS
FILE NAME	GN-ALL-DTLS.dwg
ISSUE NO.	0
SCALE	1" = 1'-0"
VERIFY SCALE	1

SHEET **D-5**
 SEQ. 43



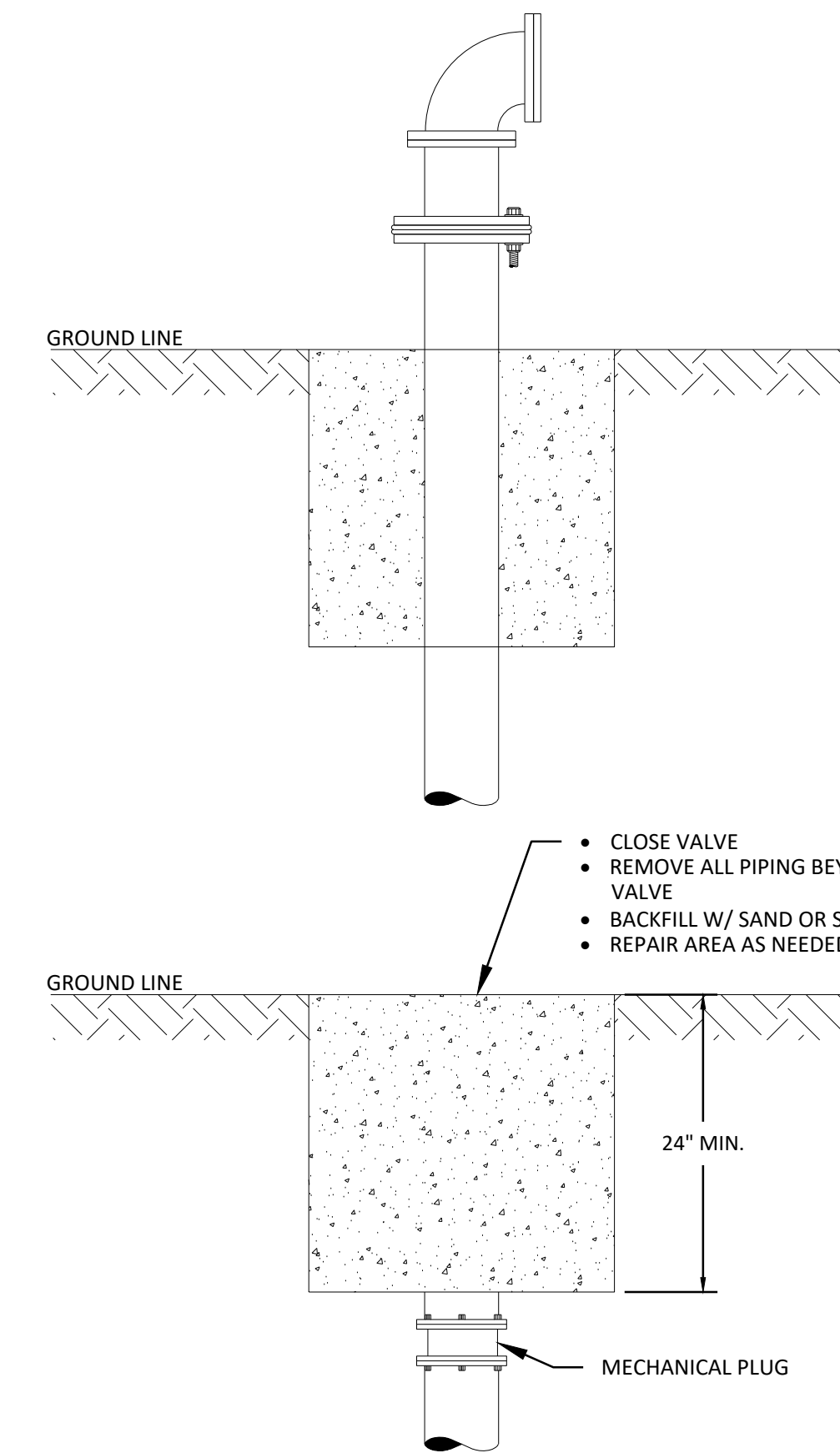
EXISTING SECTION



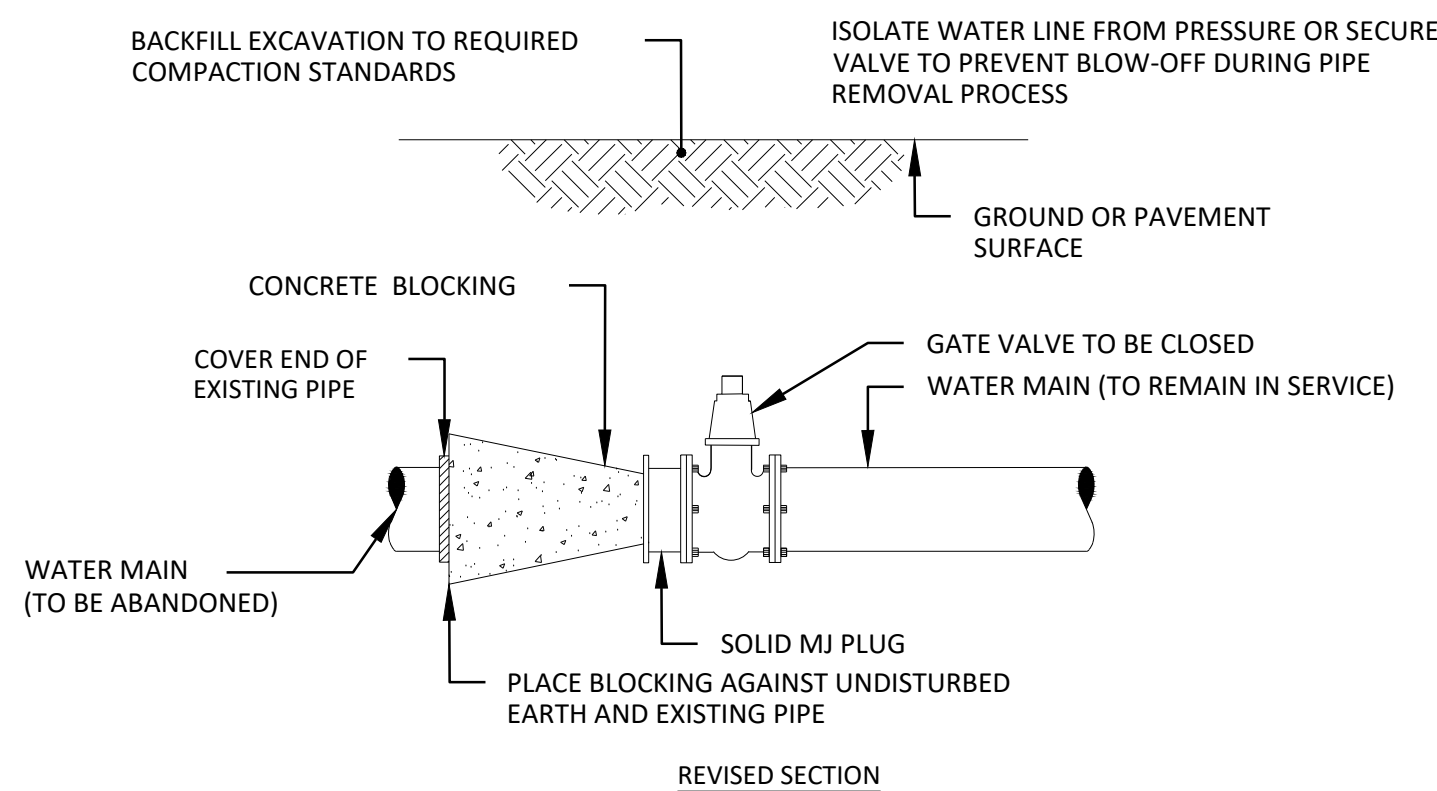
OUT-OF-PAVEMENT IN-PAVEMENT

NOTE:
 REMOVE ANY VALVE MARKERS ASSOCIATED WITH ABANDONED VALVES

MAINLINE VALVE ABANDONMENT DETAIL #2
 N.T.S. 160

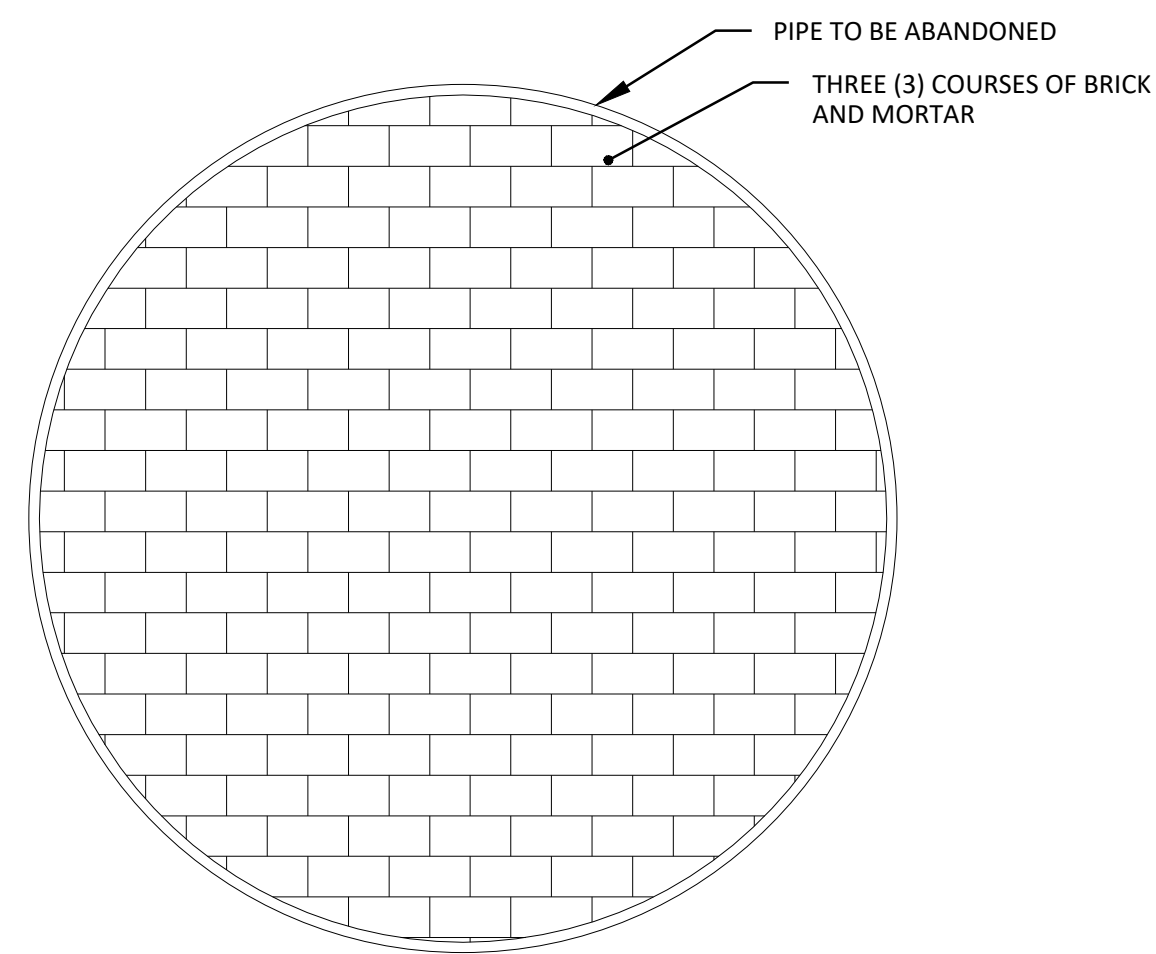


BLOWOFF VALVE ABANDONMENT DETAIL
 N.T.S. 170



REVISED SECTION

OUTLET VALVE ABANDONMENT DETAIL #1
 N.T.S. 150

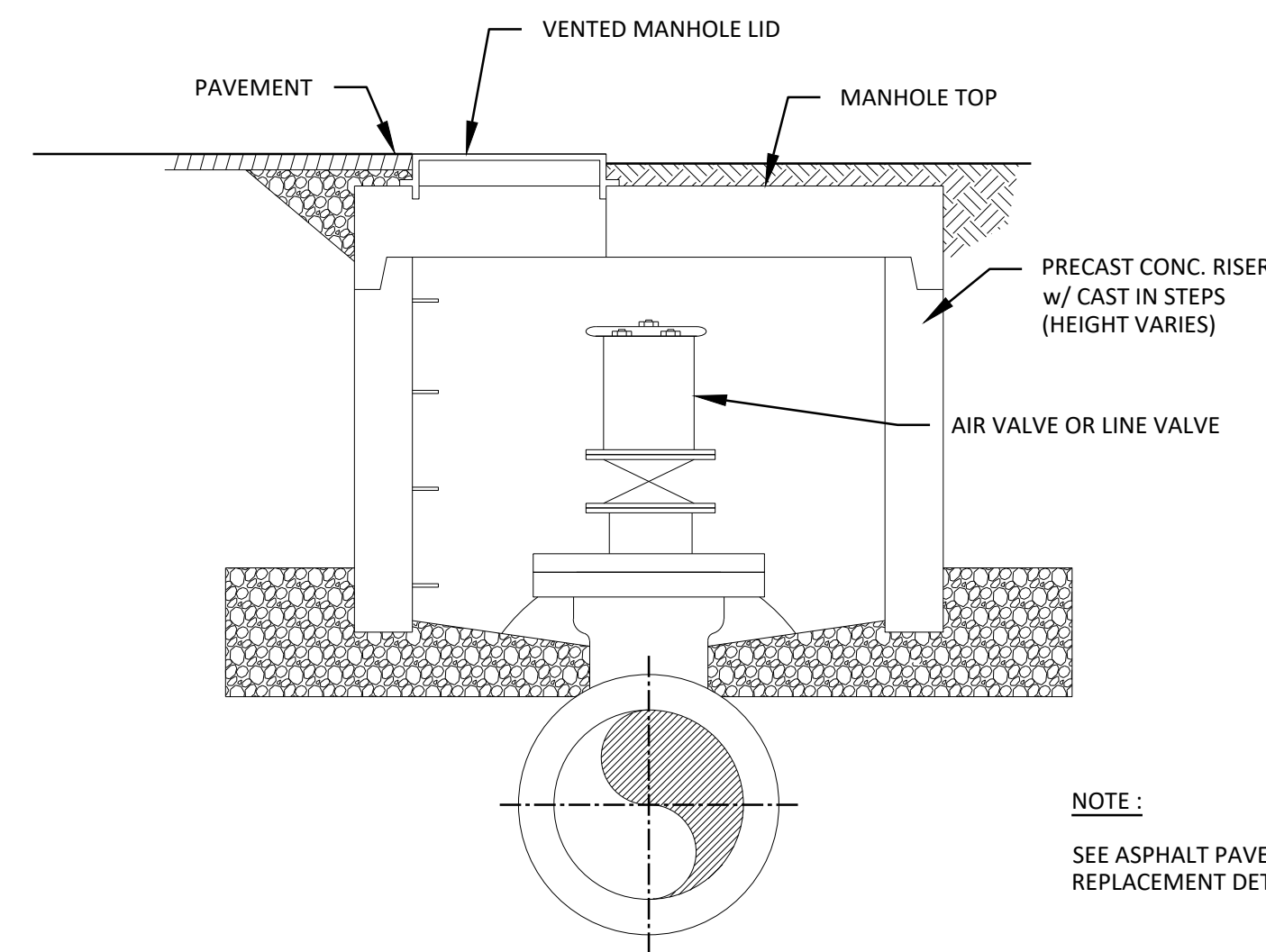


DETAIL 302

ABANDONED PIPE AND BULKHEAD BRICK

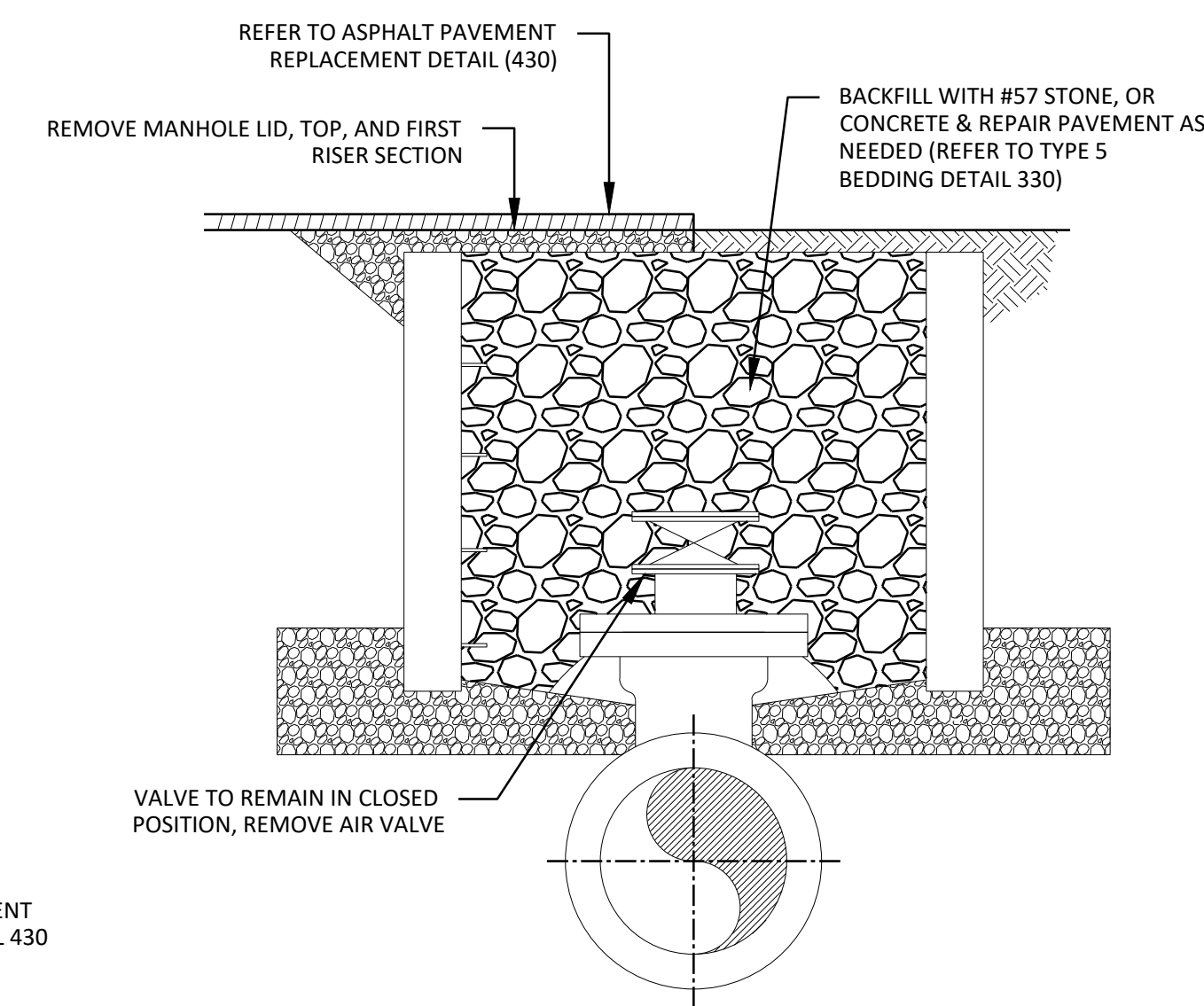
ABANDONMENT TABLE

ITEM #	ITEM	REFERENCE LOCATION STATION	NOTES
1	Blow Off Valve	4+25	CUT AND PLUG 6" BLOWOFF VALVE
2	Air Release Valve	10+00	ABANDON 4" ARV
3	Blow Off Valve	18+50	CUT AND REMOVE 8" BLOWOFF VALVE
4	Outlet Valve	39+50	ABANDON 6" OUTLET VALVE.
5	Pressure Monitoring Station	43+50	CUT AND PLUG ARV, 36" MAINLINE AND OUTLET VALVE.
6	Mainline Valve	46+50	CUT AND REMOVE 16" MAINLINE VALVE
7	Air Release Valve	57+00	CUT AND PLUG 4" ARV
8	Blow Off Valve	59+25	CUT AND PLUG 8" BLOWOFF VALVE
9	Air Release Valve	64+00	CUT AND PLUG 4" ARV
10	Blow Off Valve	78+50	CUT AND PLUG 6" BLOWOFF VALVE
11	Air Release Valve	83+50	CUT AND PLUG 4" ARV
12	Outlet Valve	96+00	CUT AND PLUG 10" OUTLET VALVE
13	Blow Off Valve	104+00	CUT AND PLUG 6" BLOWOFF VALVE
14	Mainline Valve	106+00	CUT AND PLUG 36" MAINLINE VALVE
15	Air Release Valve	131+50	CUT AND PLUG 4" ARV
16	Blow Off Valve	139+00	CUT AND PLUG 6" BLOWOFF VALVE
17	Mainline Valve	143+15	CUT AND PLUG 16" MAINLINE VALVE
18	Outlet Valve	143+50	CUT AND PLUG 8" OUTLET VALVE
19	Air Release Valve	144+00	CUT AND PLUG 4" ARV
20	Blow Off Valve	153+75	CUT AND PLUG 6" BLOWOFF VALVE
21	Air Release Valve	157+00	CUT AND PLUG 4" ARV
22	Blow Off Valve	161+00	CUT AND PLUG 6" BLOWOFF VALVE
23	Outlet Valve	165+00	CUT AND PLUG 8" OUTLET VALVE
24	Mainline Valve	176+00	CUT AND PLUG 36" MAINLINE VALVE
25	Outlet Valve	176+50	CUT AND PLUG 16" OUTLET VALVE
26	Air Release Valve	182+50	CUT AND PLUG 4" ARV
27	Outlet Valve	195+00	CUT AND PLUG 12" OUTLET VALVE
Factory Shoals			
28	Blow Off Valve	8+50	CUT AND REMOVE 20" BLOWOFF VALVE

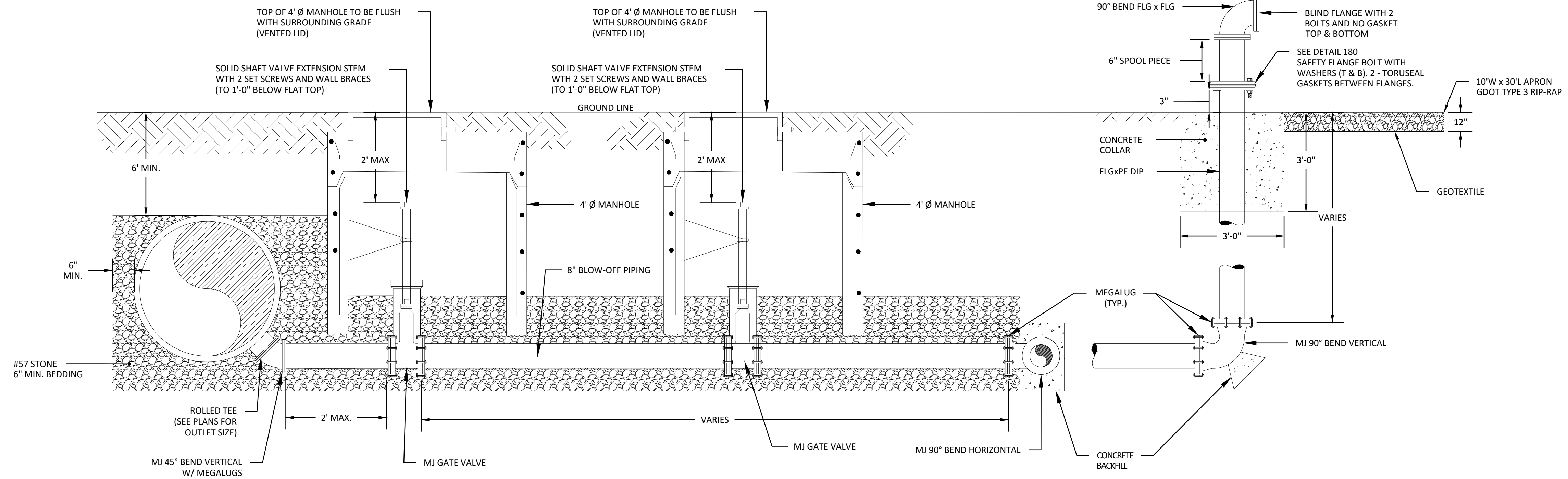


NOTE:
 SEE ASPHALT PAVEMENT REPLACEMENT DETAIL 430

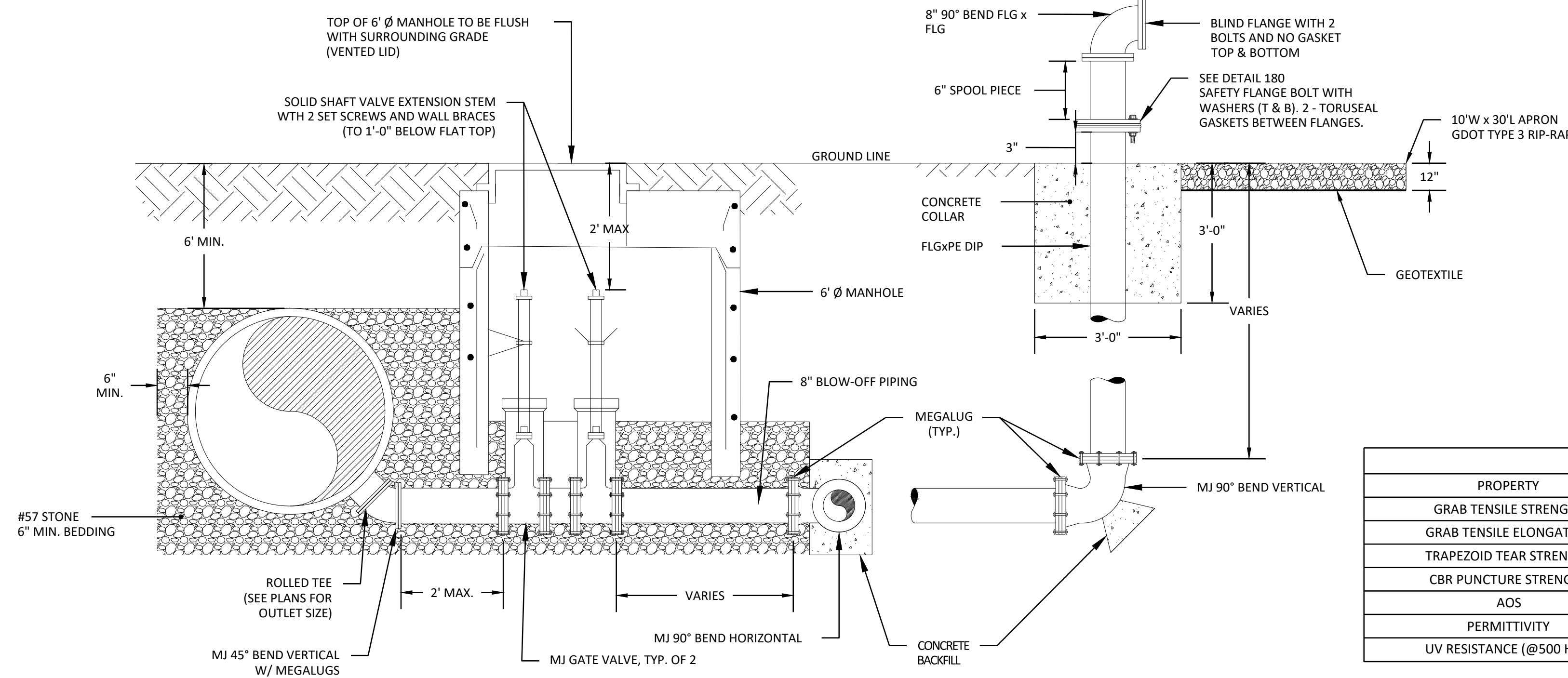
VALVE MANHOLE ABANDONMENT DETAIL
 N.T.S. 180



ACAD Ref: 23.0s (LMS Tech)
 Filename: n:\WTU\Drawings\GN-ALL-DTLS.dwg
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DOUBLE MH ABOVE GRADE



SINGLE MH ABOVE GRADE

TYPE 3 REQUIREMENTS		
SIZE BY VOLUME	APPROX. WEIGHT	PERCENT SMALLER THAN
1.0ft (0.12m)	165lbs (75kg)	100%
0.1ft (0.05m)	15lbs (7kg)	10% - 65%

GEOTEXTILE			
PROPERTY	TEST METHOD	UNITS	MRV
GRAB TENSILE STRENGTH	ASTM D4632-91	LB.	250
GRAB TENSILE ELONGATION	ASTM D4632-91	%	50
TRAPEZOID TEAR STRENGTH	ASTM D4632-91	LB.	100
CBR PUNCTURE STRENGTH	ASTM D62241	LB.	700
AOS	ASTM D4751-87	U.S. STANDARD SIEVE SIZE	#100
PERMITTIVITY	ASTM D4491-92	SEC-1	0.8000
UV RESISTANCE (@500 HRS)	ASTM D4355	% RETAINED	70

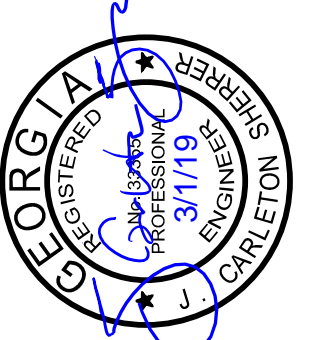
NOTES:

- MEGALUGS TO BE USED WITH ALL MECHANICAL JOINT FITTINGS. PUSH-ON JOINTS TO BE RESTRAINED WITH FAST GRIP GASKETS.
- TEES & BENDS SHALL BE MECHANICAL JOINT WITH MEGALUGS.
- ALL BLOW-OFF PIPING SHALL BE DOUBLE POLY WRAPPED.
- SAFETY FLANGE BOLTS SHALL BE 3/8" Ø GRADE 5 STEEL WITH MINIMUM TENSILE STRENGTH OF 120 KSI. BOLTS, NUTS, AND WASHERS SHALL BE ELECTRO ZINC PLATED. SAFETY FLANGE BOLTS AND ACCESSORIES SHALL BE MANUFACTURED BY BIRMINGHAM FASTENERS OR APPROVED EQUAL.
- USE AMERICAN RED RUBBER FLAT GASKET (TORUSEAL) OR APPROVED EQUAL.

BLOWOFF VALVE INSTALLATION DETAIL

N.T.S.

120



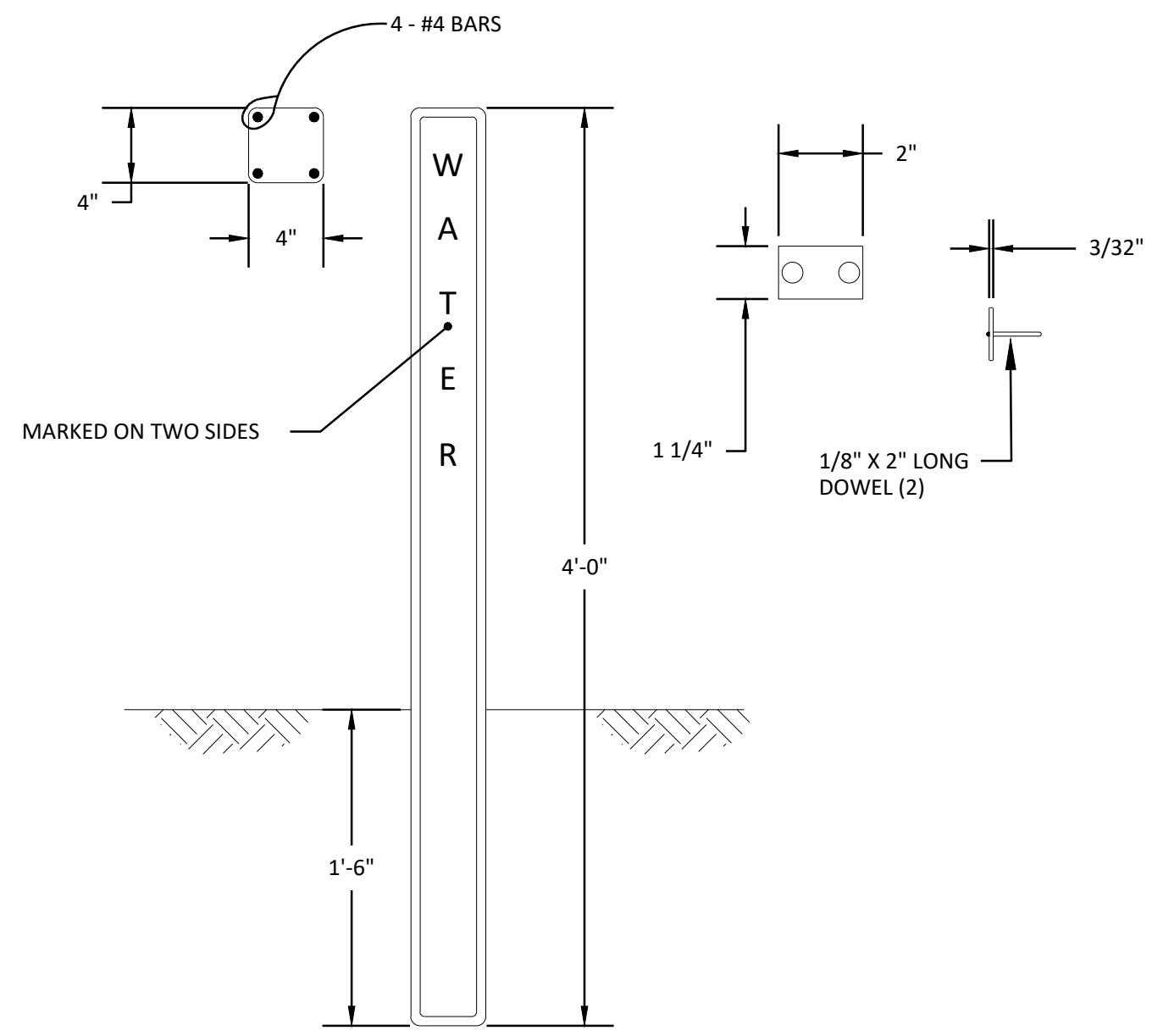
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COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT
 CIVIL
 STANDARD DETAILS

DATE	DESIGNED	DRAWN	REVISION	CHECKED	FILE NAME
3/7/19	FDH	CKM		JCS	GN-ALL-DTLS.dwg
ISSUED FOR BID	ISSUED FOR PERMIT	ISSUE	NO.	NO.	NO.

SHEET D-6
 SEQ. 44

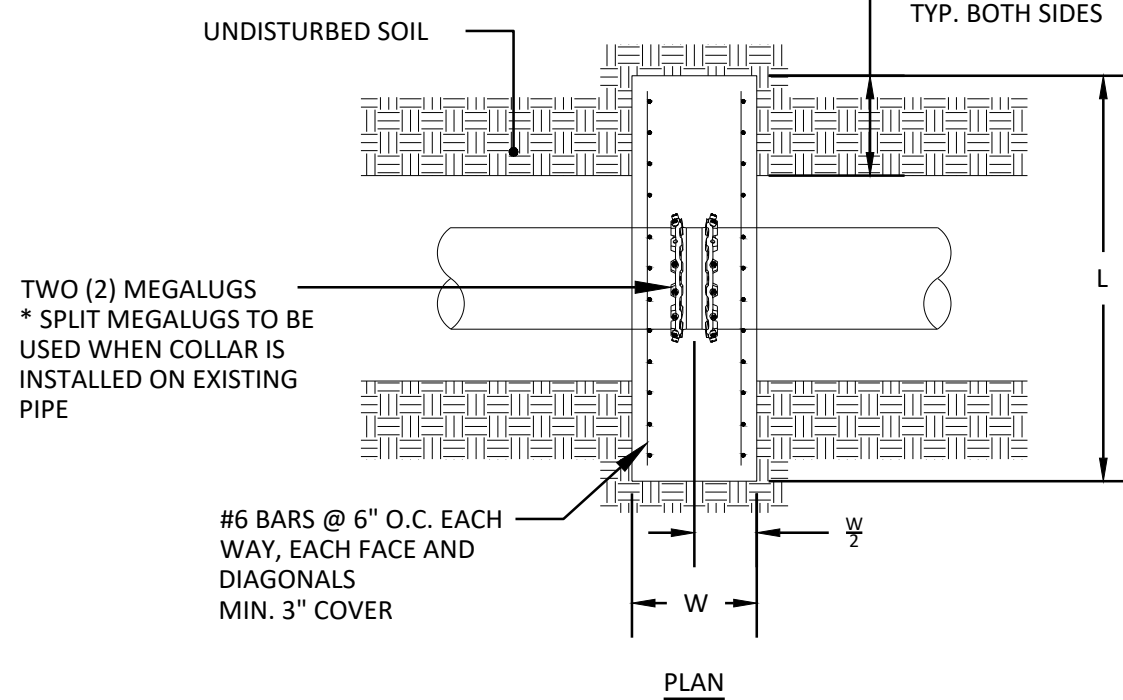
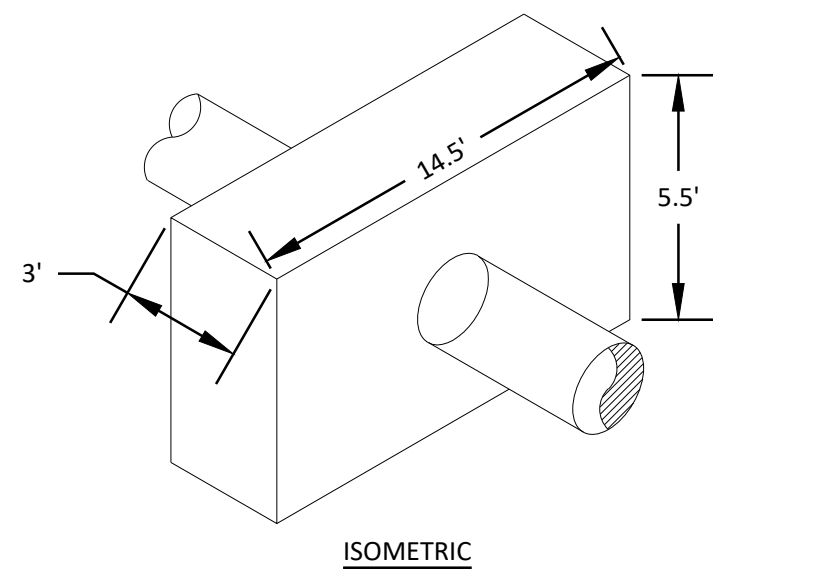
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 Last Saved: 2/28/2019 1:03 PM. Saved By: 02618



NOTE: ALUMINUM PLATE CAST IN SIDE OF MARKER POST. DISTANCE (NEAREST FOOT) FROM ϵ OF POST TO ϵ OF VALVE BOX AND DIRECTION ARROW TO BE STAMPED INTO PLATE WITH STEEL DIE AFTER MARKER IS SET.

CONCRETE VALVE MARKER

N.T.S. 413

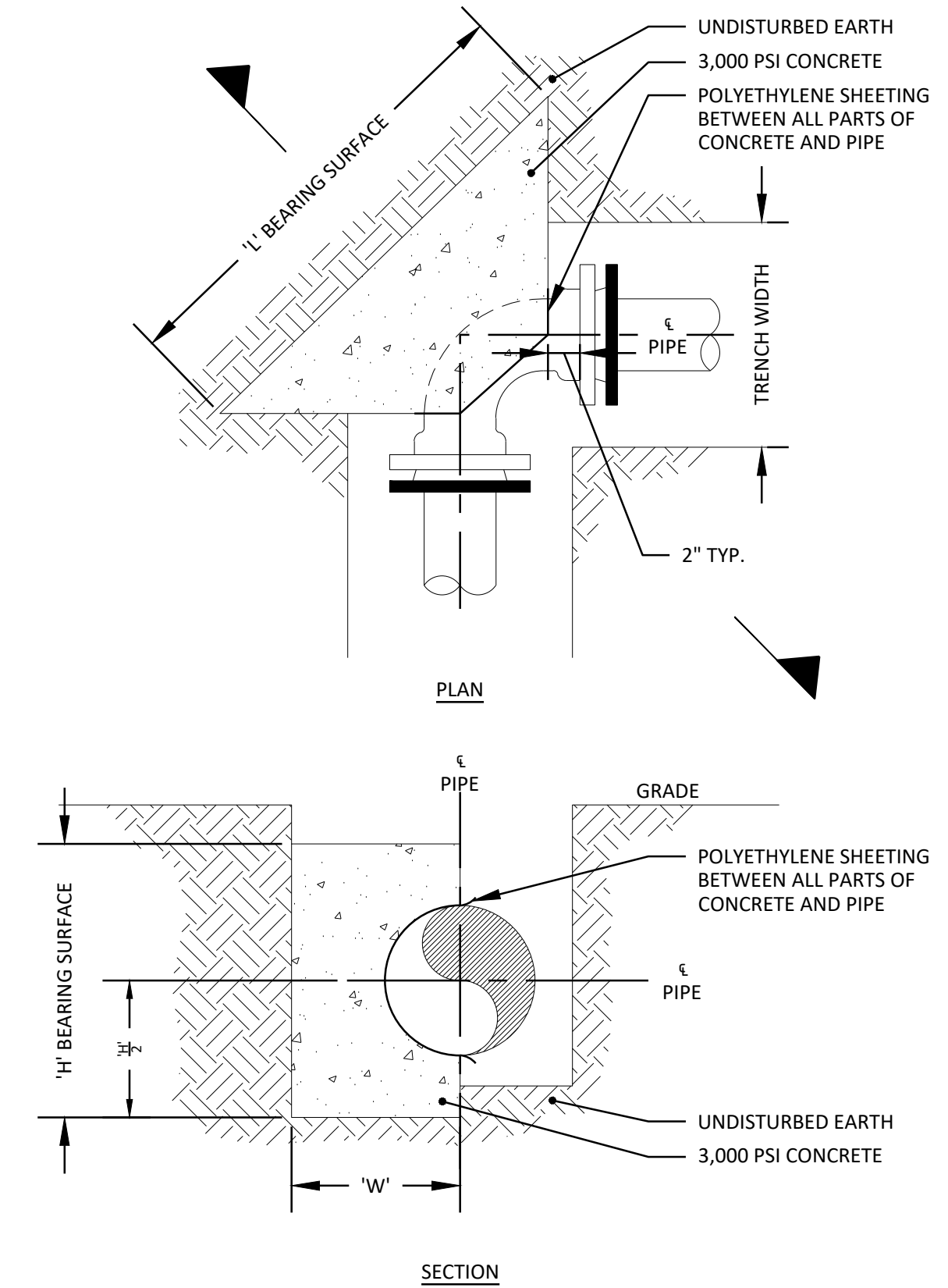


NOTES:

1. WHEN INSTALLED ON AN EXISTING DUCTILE IRON PIPE, COLLAR SHALL BE PLACED ON THE FIRST UNRESTRAINED JOINT OF PIPE.
2. CONCRETE SHALL BE POURED AGAINST UNDISTURBED EARTH EXCEPT WHERE FORMWORK IS A MUST. AFTER CONCRETE IS CURED THE FORMWORK SHALL BE REMOVED.
3. DIMENSIONS SHALL BE AS SHOWN ON THE DRAWINGS.
4. CONTRACTOR SHALL NOTIFY ENGINEER IF GROUNDWATER TABLE IS WITHIN TWO FEET BELOW THE BOTTOM OF THE PIPE.
5. CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
6. ALL REBARS TO BE ASTM A615 GRADE 60.

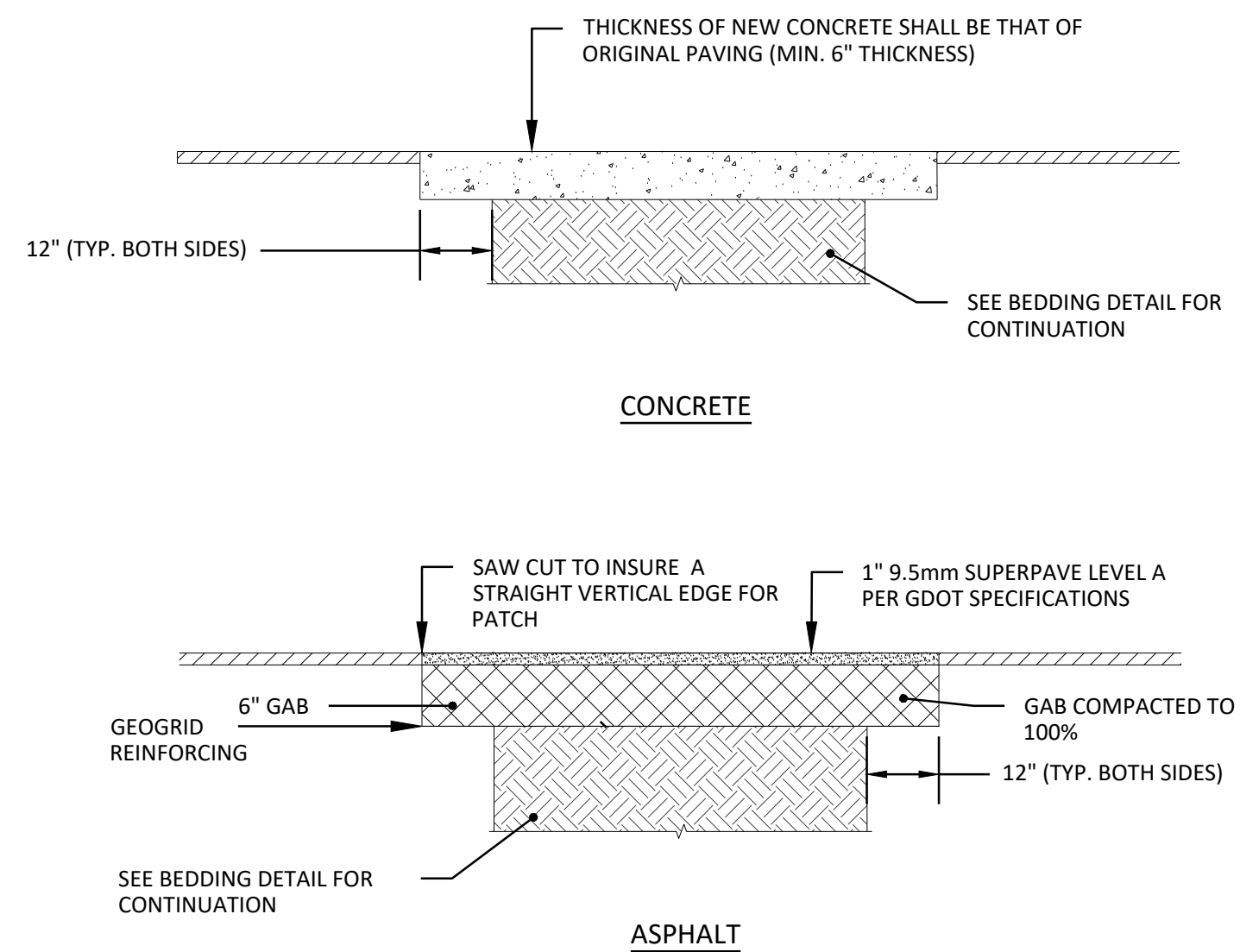
CONCRETE THRUST COLLAR DETAIL

N.T.S.



**CONCRETE THRUST BLOCKING DETAIL
(FOR CONNECTIONS TO EX. MAINS)**

N.T.S.

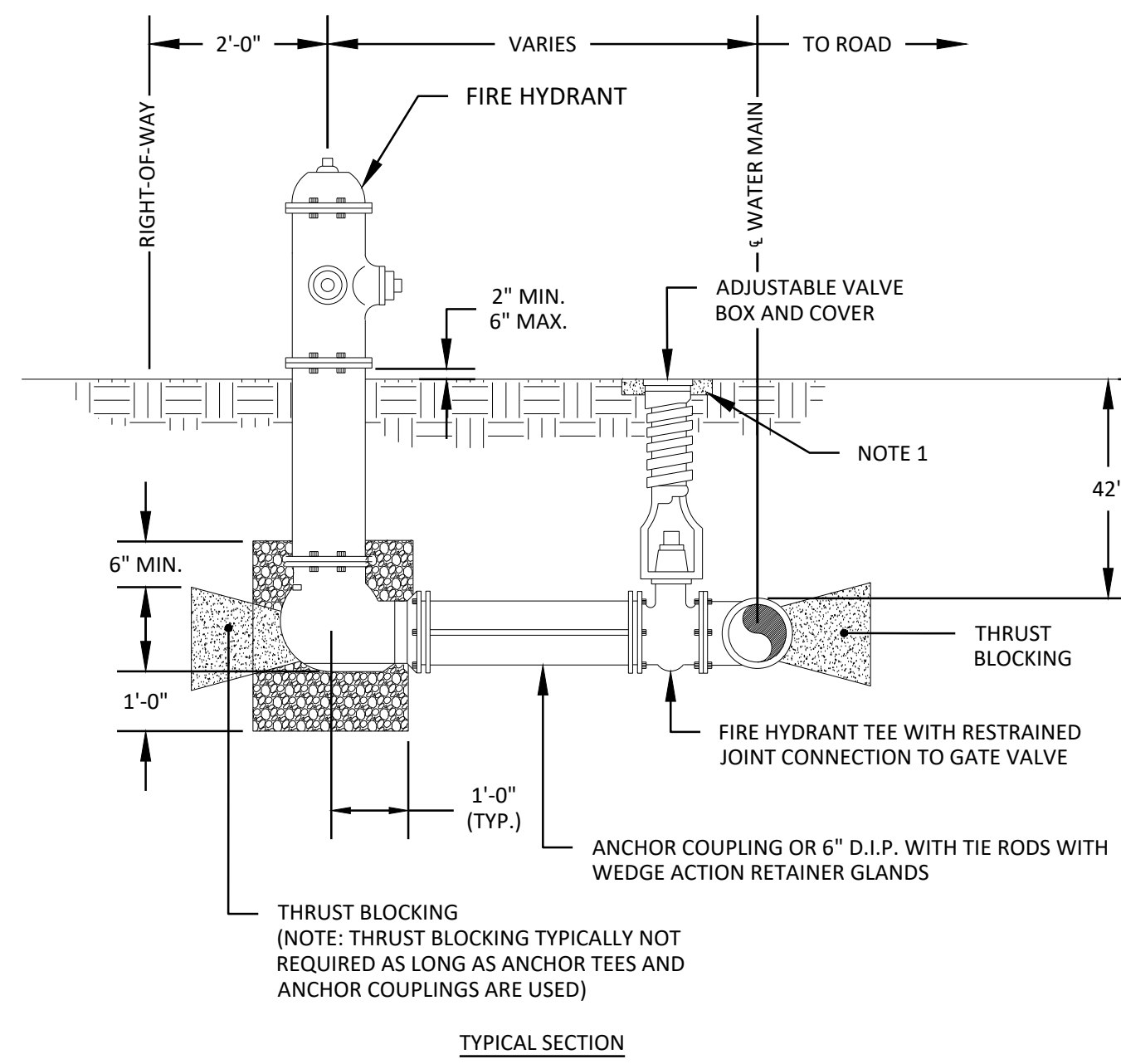


NOTES:

1. ALL PAVEMENT TO BE SAW CUT
2. SURFACES TO BE CLEANED AND BITUMINOUS TACK COAT PRIME APPLIED BEFORE PLACEMENT OF ASPHALTIC TOP.
3. DRIVEWAY RESURFACING TO BE PROVIDED TO PROPERTY/RIGHT-OF-WAY LINE TO MATCH EXISTING SURFACE.

DRIVEWAY REPAIR DETAIL

N.T.S. 470



NOTES:

1. 18" x 4" THICK (ROUND OR CIRCULAR CONCRETE COLLAR REQUIRED IN UNPAVED AREAS)
2. TIE RODS TO BE ALLOY STEEL WITH MIN. TENSILE STRENGTH OF 125,000 P.S.I. RODS TO BE COATED WITH BITUMINOUS PAINT AFTER INSTALLATION.
3. WEDGE ACTION RETAINER GLANDS SHALL BE EBAA IRON MEGALUB, FOR UNI-FLANGE SERIES 1400, OR EQUAL.

**FIRE HYDRANT INSTALLATION
(ROADWAY STANDARD) CCWS DETAIL 2713-3**

N.T.S.



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**COBB COUNTY-MARIETTA WATER AUTHORITY
 WEST SIDE LOOP SECTION 2
 36-INCH WATER MAIN REPLACEMENT**

CIVIL

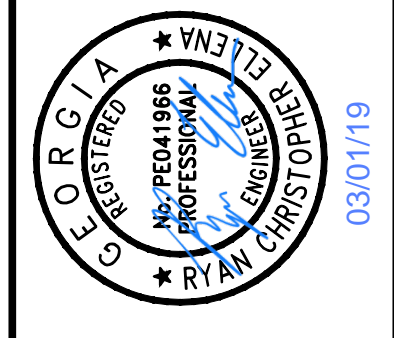
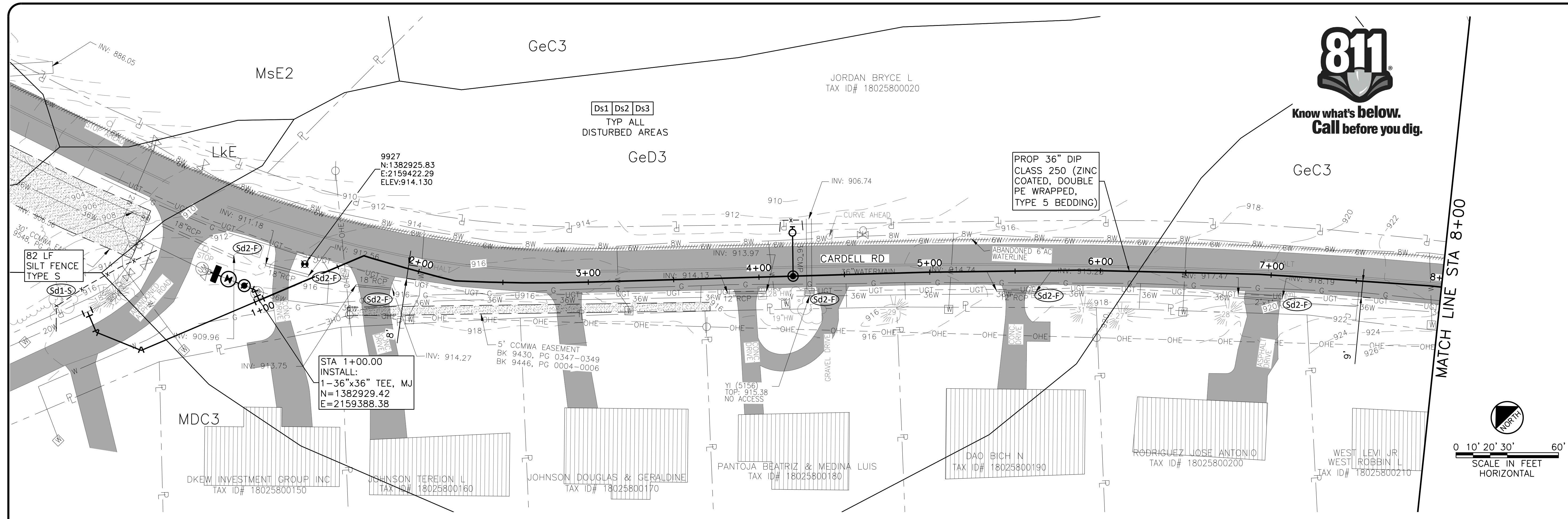
STANDARD DETAILS

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ISSUED FOR PERMIT	JCS	02/08/19									
ISSUE NO.											
VERIFY SCALE											
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SHEET **D-7**

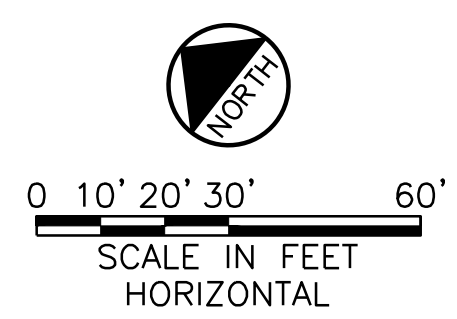
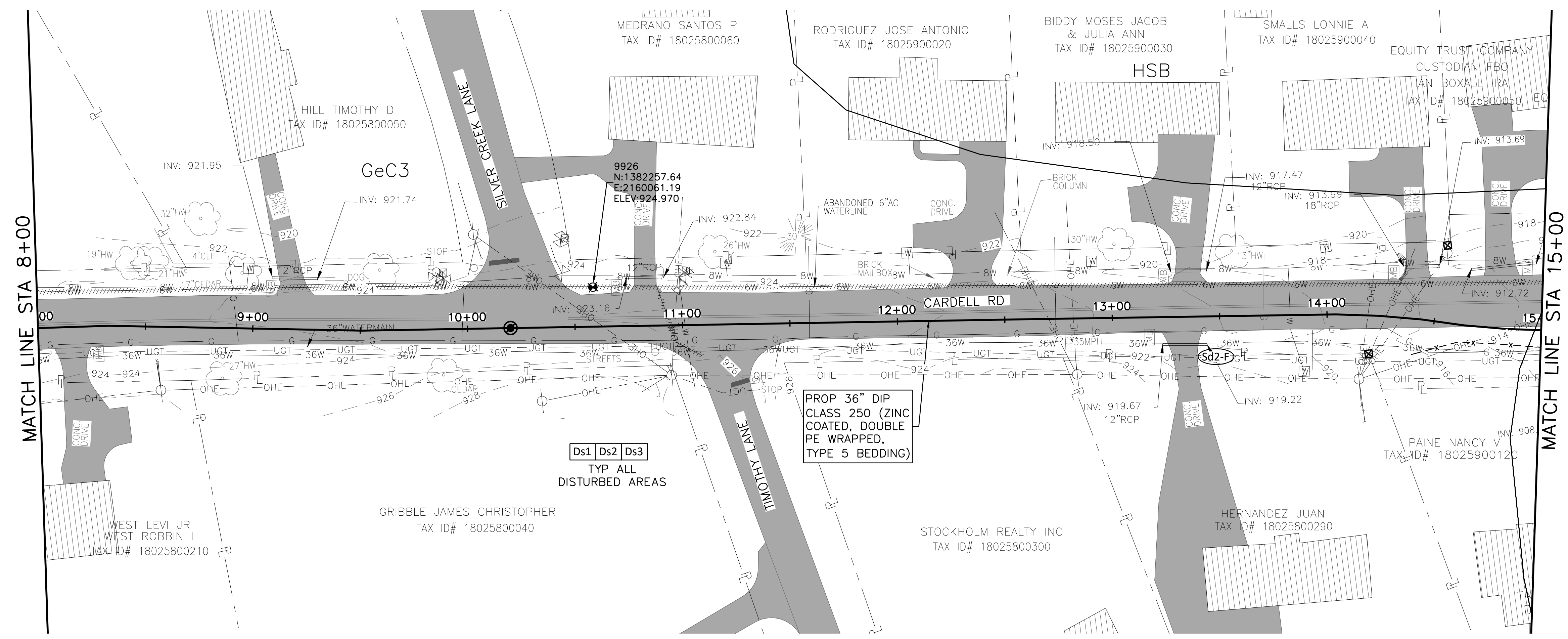
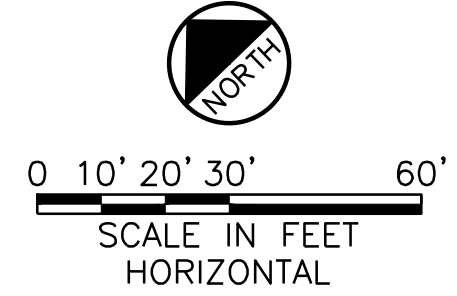
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WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 EROSION & SEDIMENT CONTROL
E&SC PLAN SHEET
 STA BEGIN TO STA 15+00



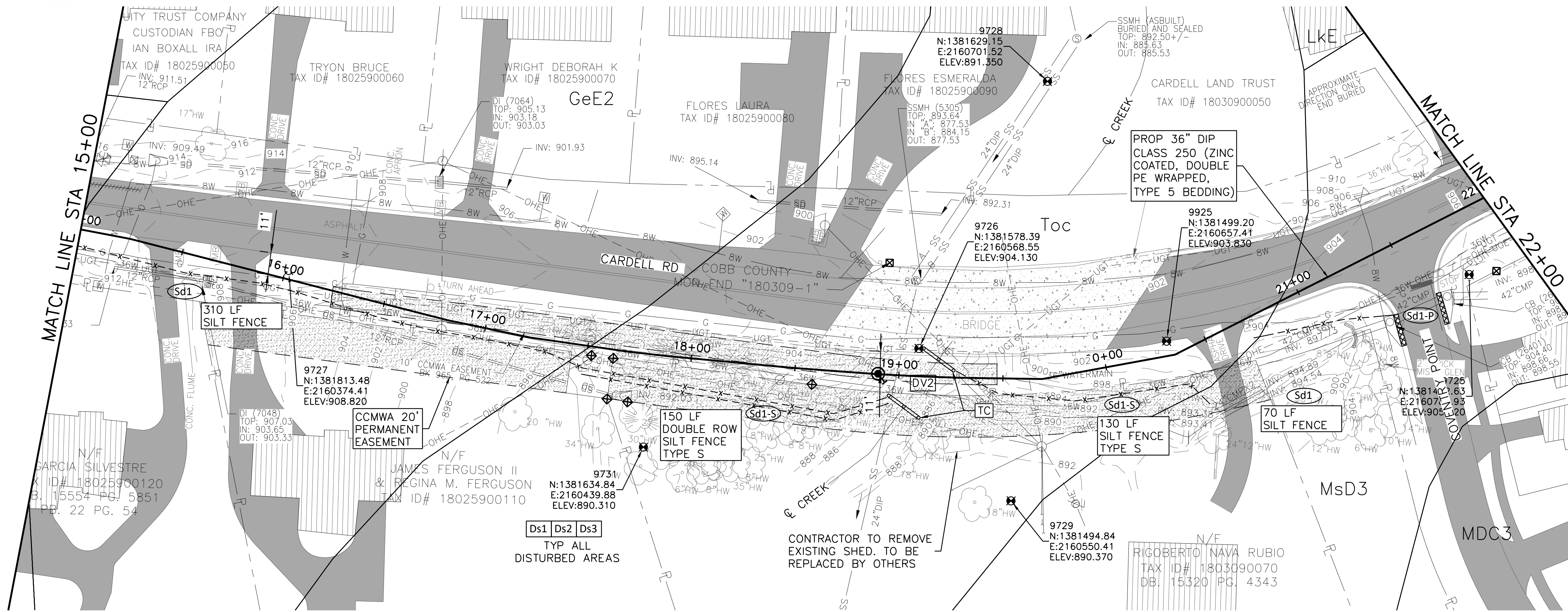
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FILE NAME: ES-ALL-SHTS01.dwg

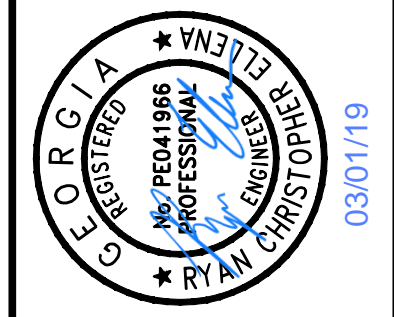
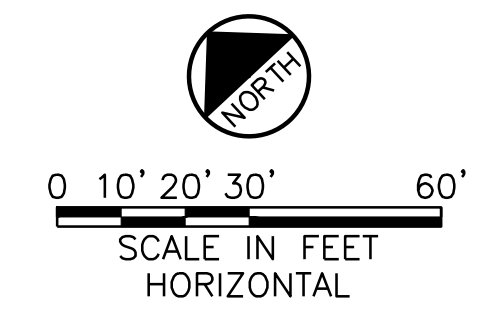
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 Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET **ES-1**
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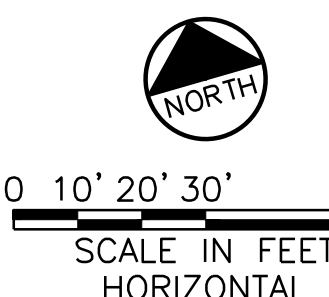
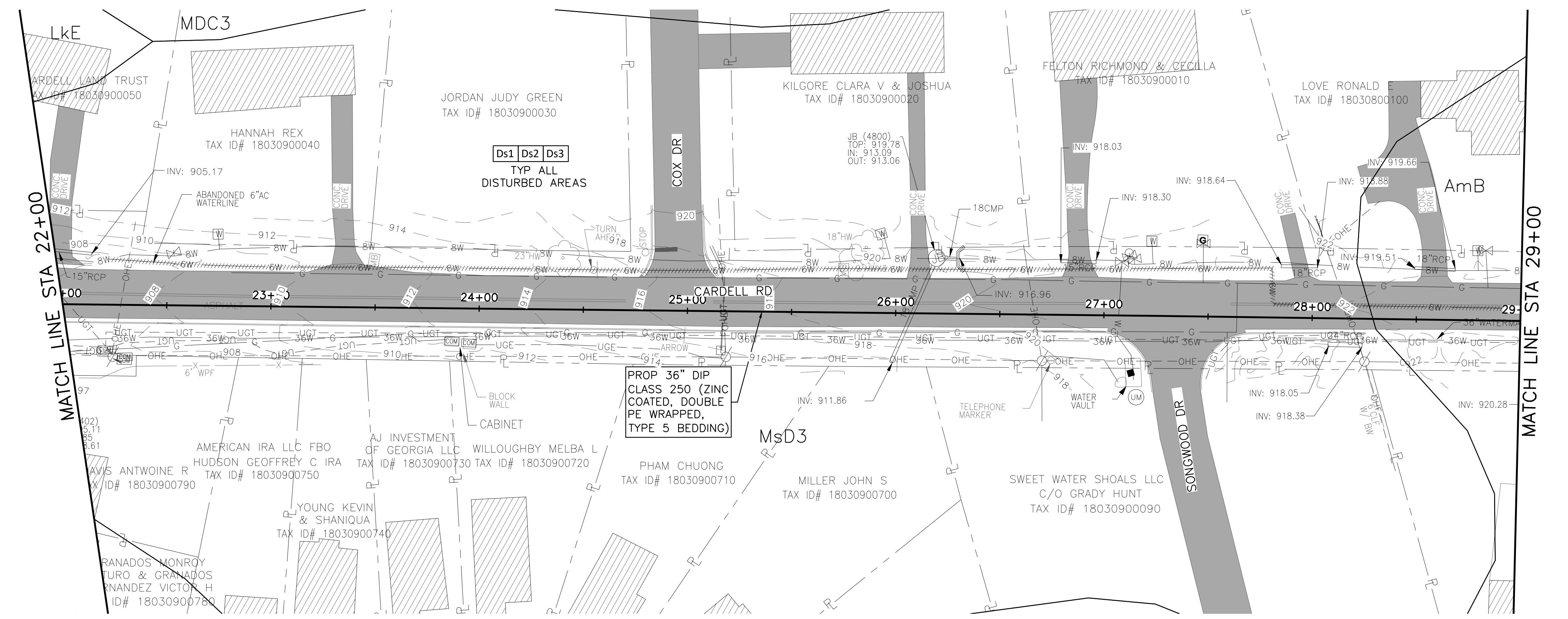
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STA 15+00 TO STA 29+00

REV	DATE	DESIGNED	FDH	DRAWN	CHKM	CHECKED	JCS
0	3/1/19						

FILE NAME: ES-ALL-SHTS01.dwg

SHEET **ES-2**
SEQ. 47

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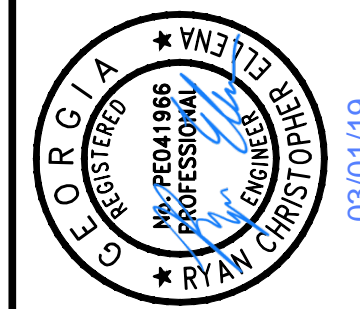
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0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL



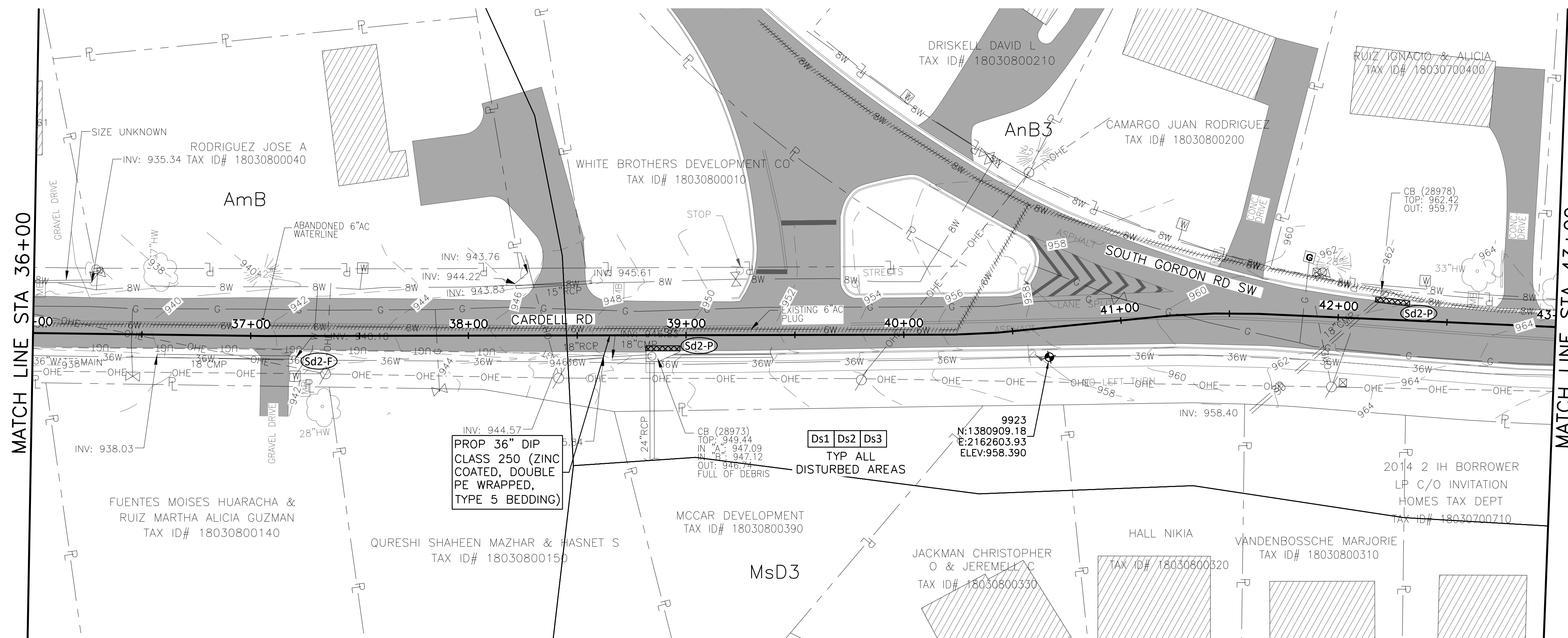
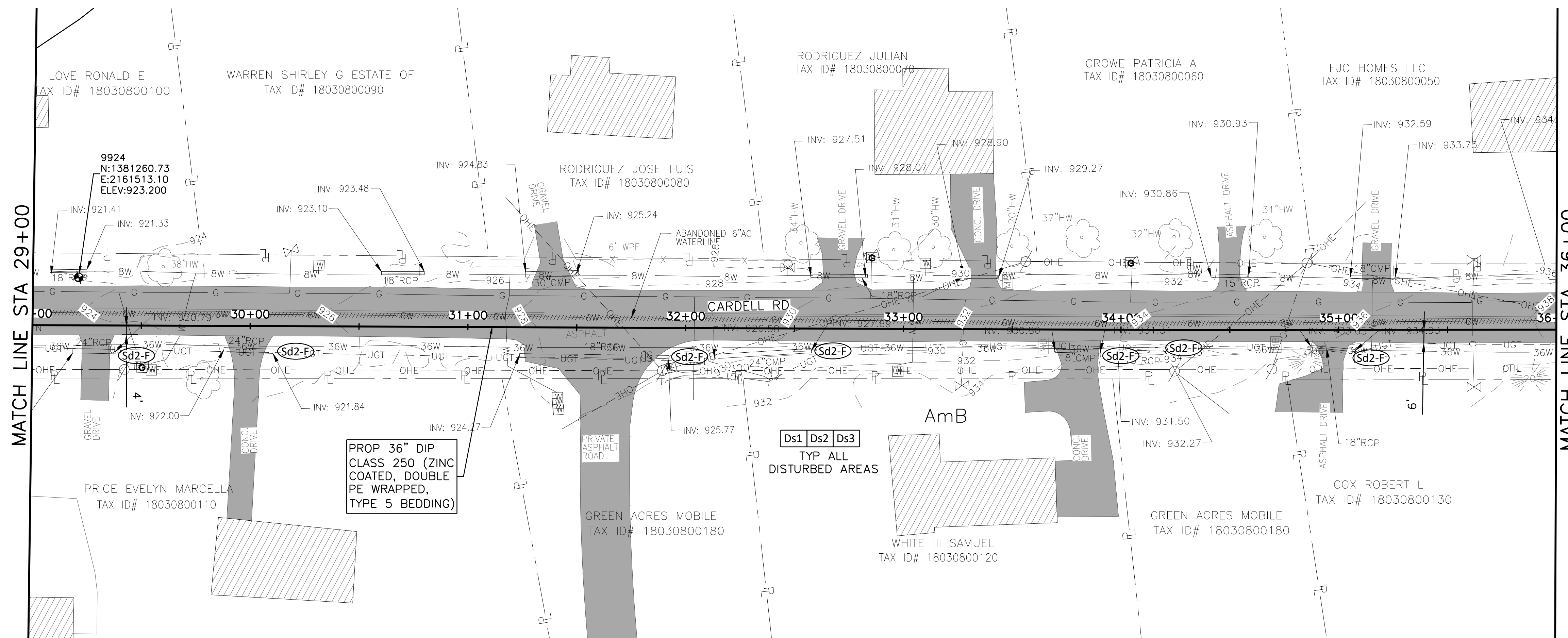
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STA 29+00 TO STA 43+00

PROJ. NO.	CBR18213	DATE	3/7/19	DESIGNED	FDH	DRAWN	CKM	REVISION	DATE	FILE NAME	ES-ALL-SHTS01.dwg
ISSUE	NO.	BY	DATE	CHECKED	JCS	FILE NAME	ES-ALL-SHTS01.dwg	VERIFY SCALE	1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

SHEET
ES-3
SEQ. 48

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SCALE IN FEET
HORIZONTAL

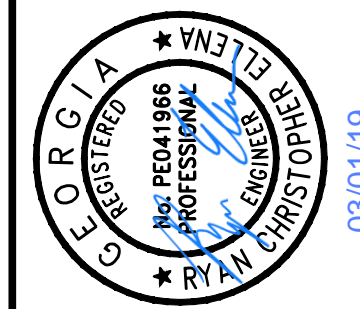
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SCALE IN FEET
HORIZONTAL



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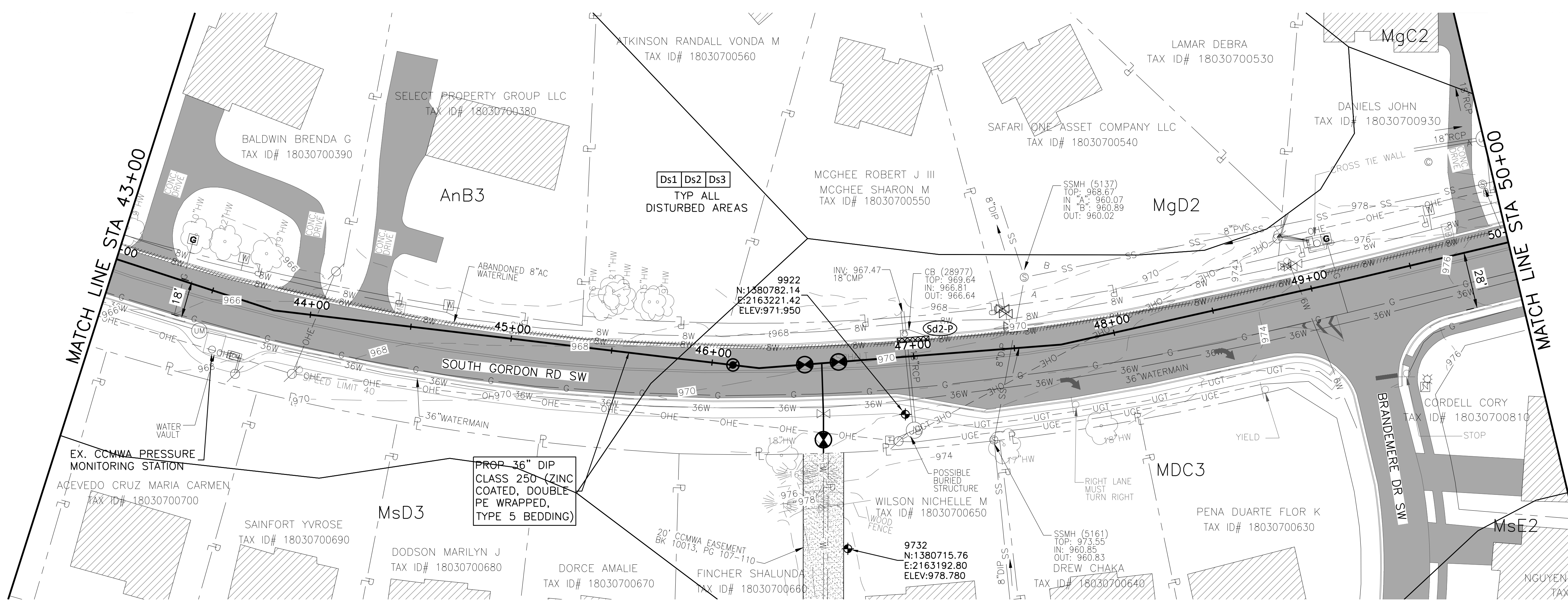
COBB COUNTY-MARIETTA WATER AUTHORITY
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STA 43+00 TO STA 57+00

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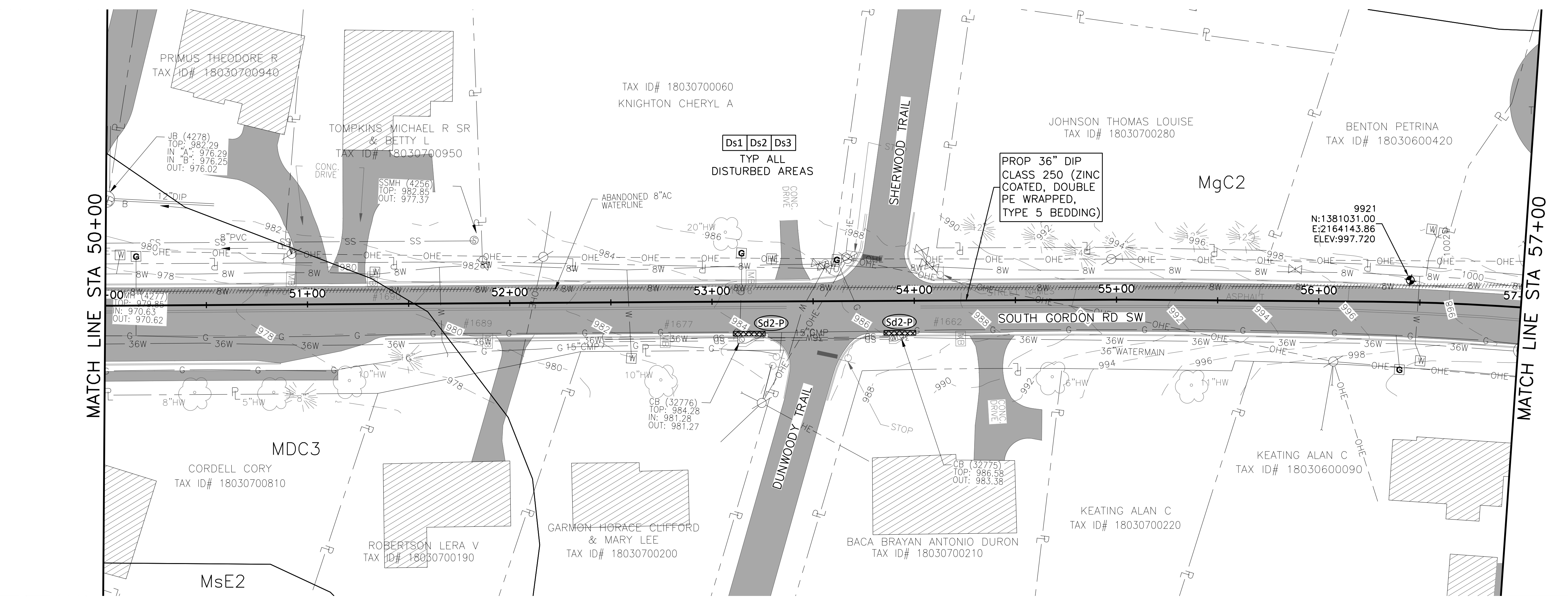
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SHEET
ES-4
SEQ. 49

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0 10' 20' 30' 60'
SCALE IN FEET
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SCALE IN FEET
HORIZONTAL



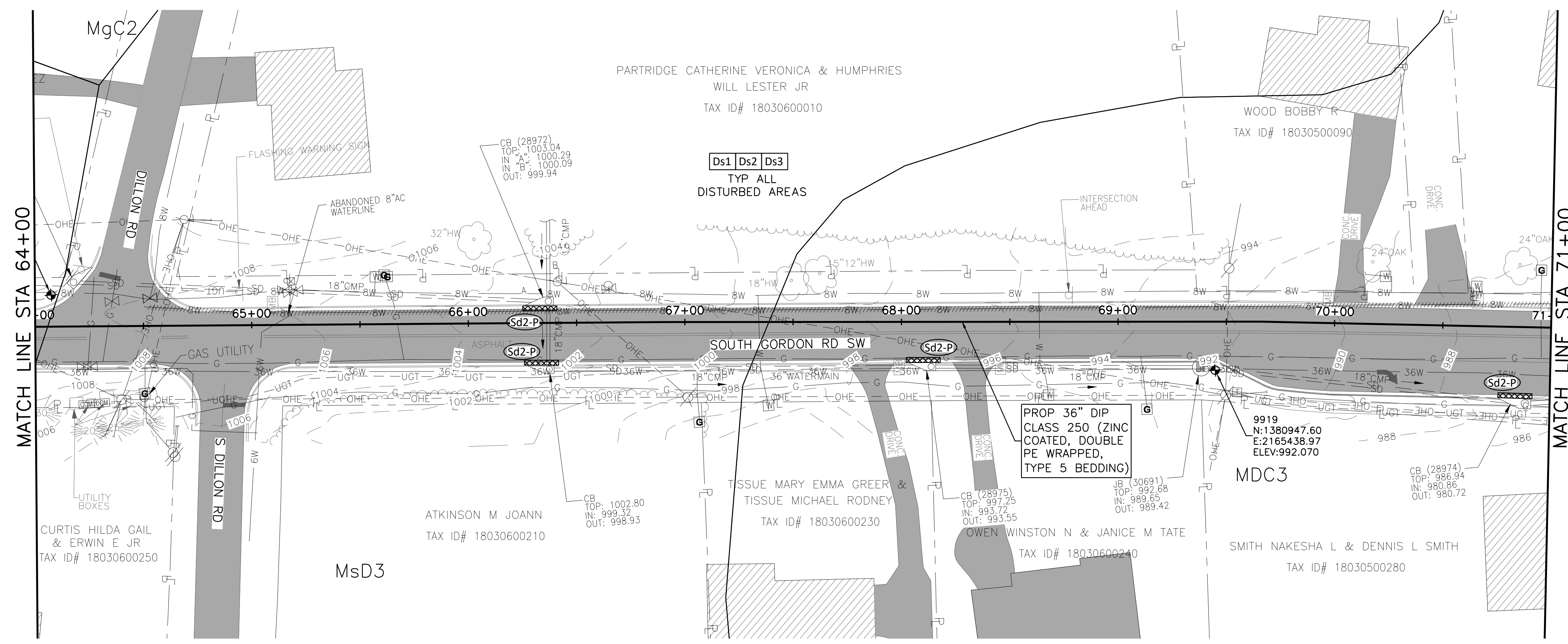
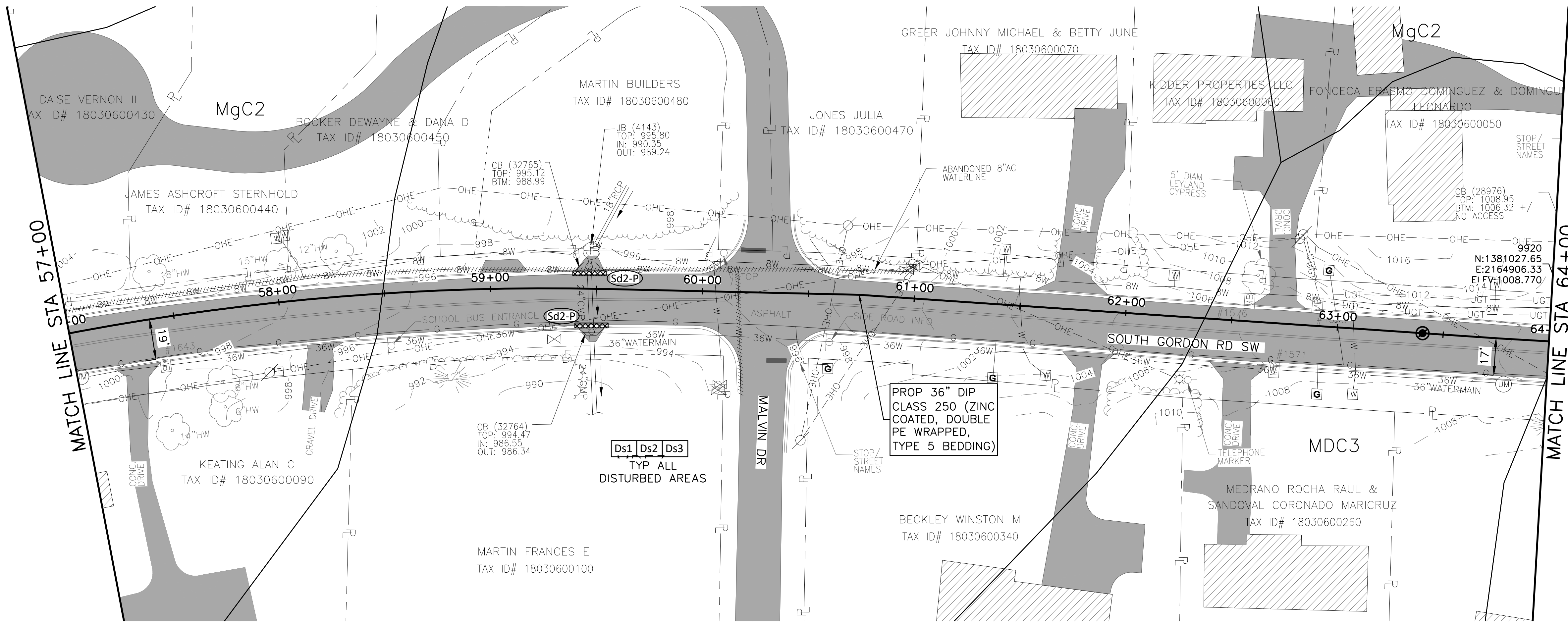
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REV	DATE	DESIGNED	FDH	DRAWN	CHKM	CHECKED	JCS
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SHEET
ES-5
SEQ. 50

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SCALE IN FEET
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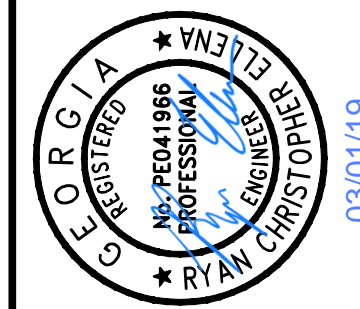
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SCALE IN FEET
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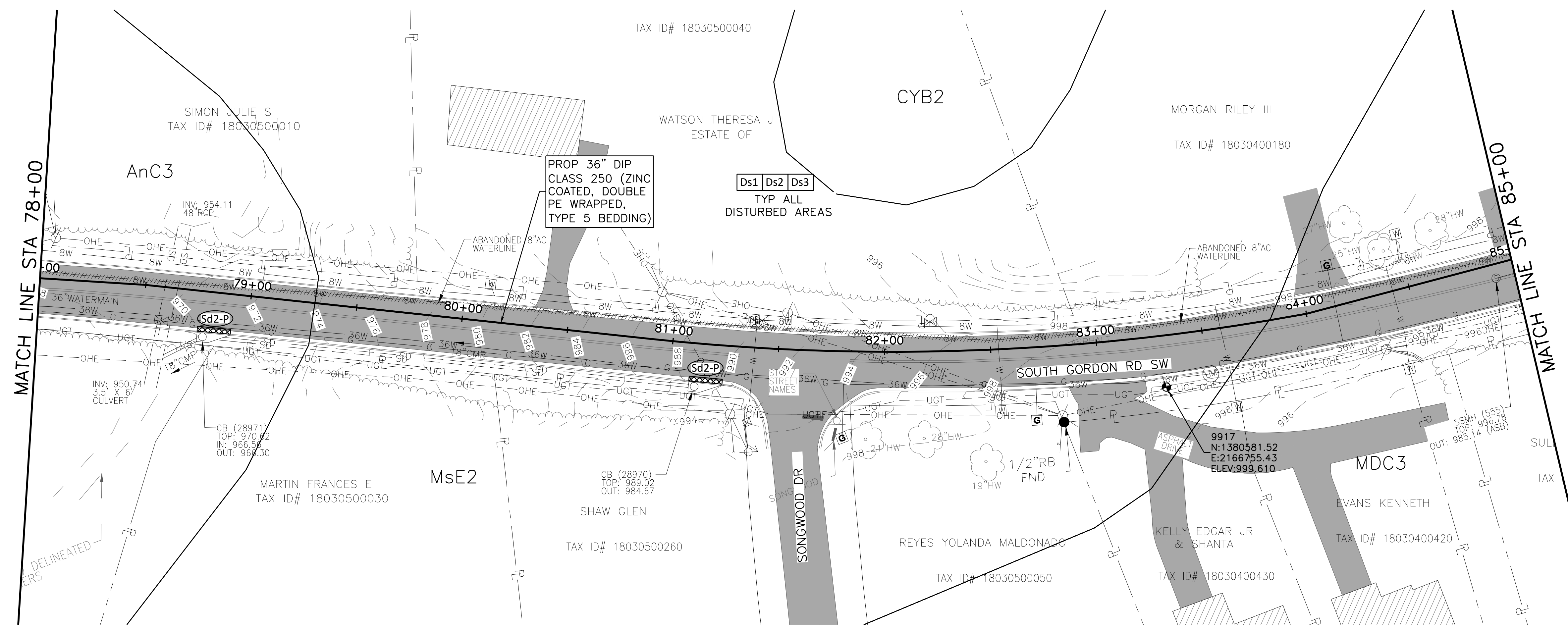
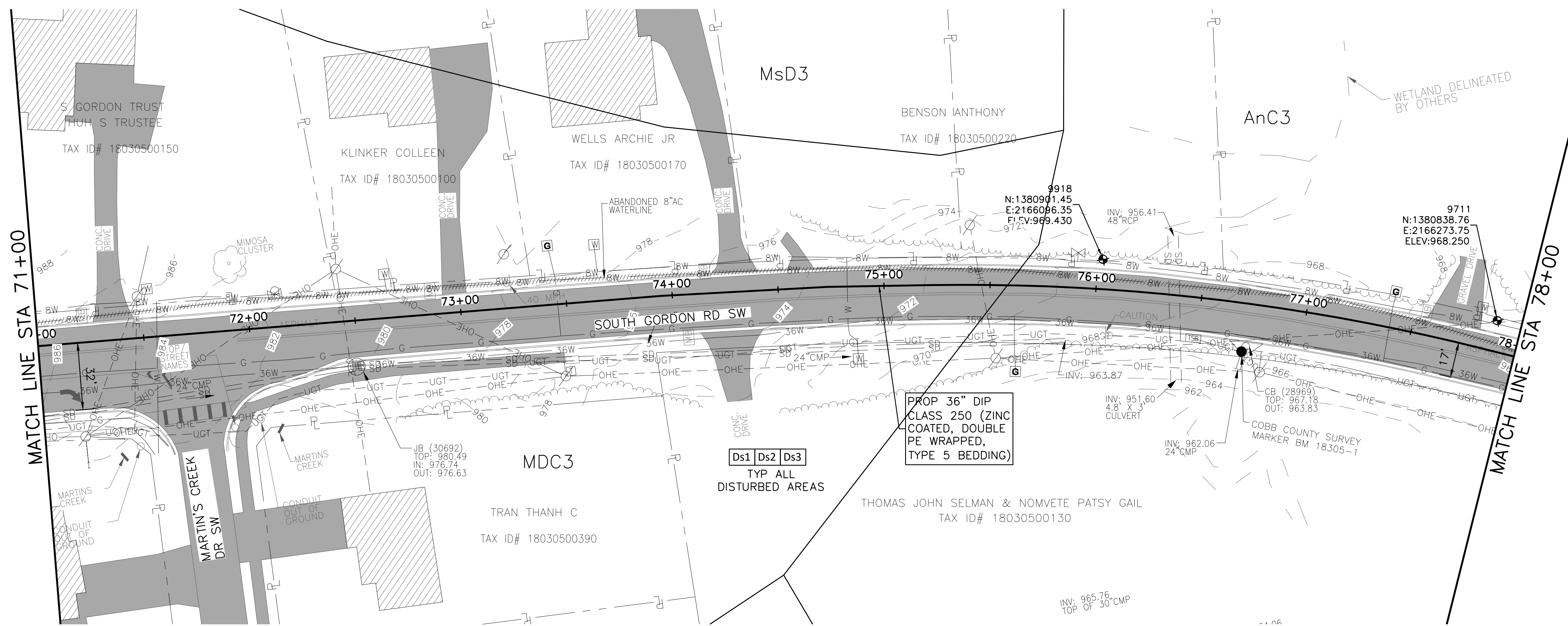
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ES-6
SEQ. 51

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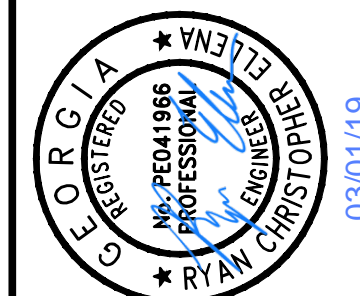
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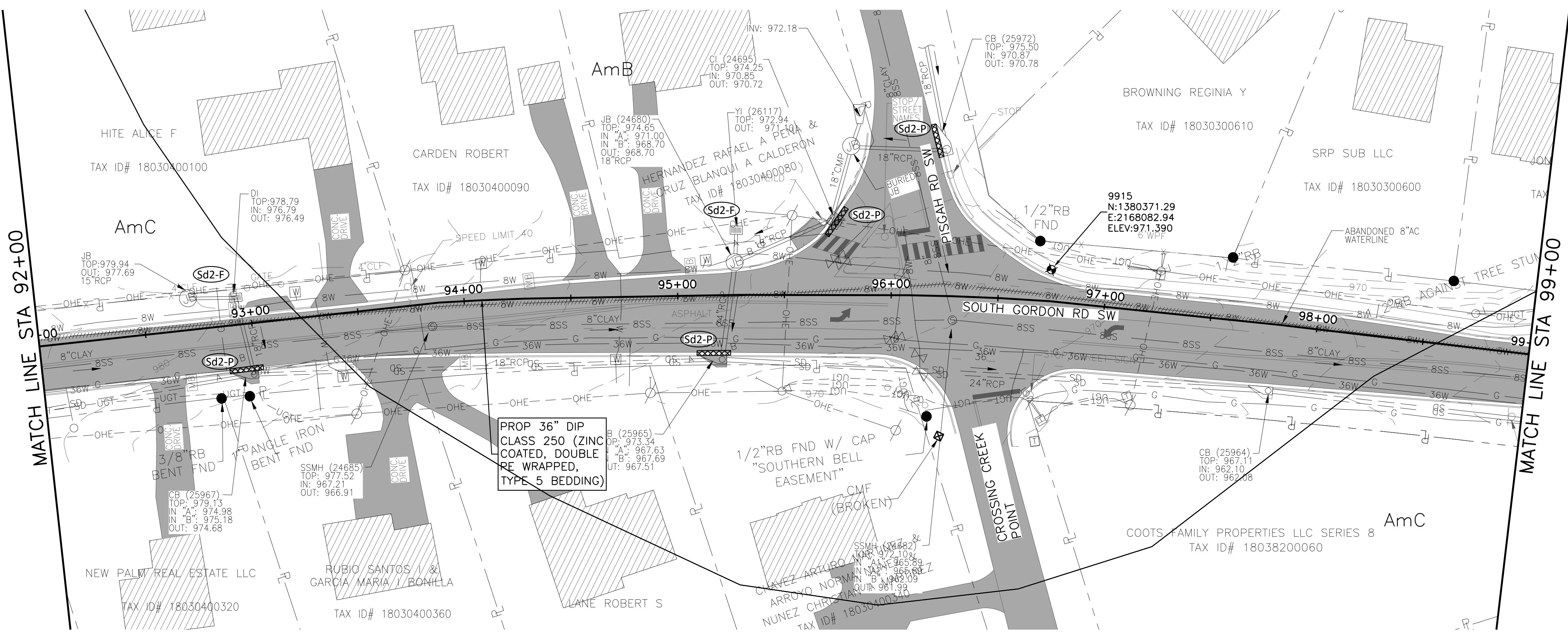
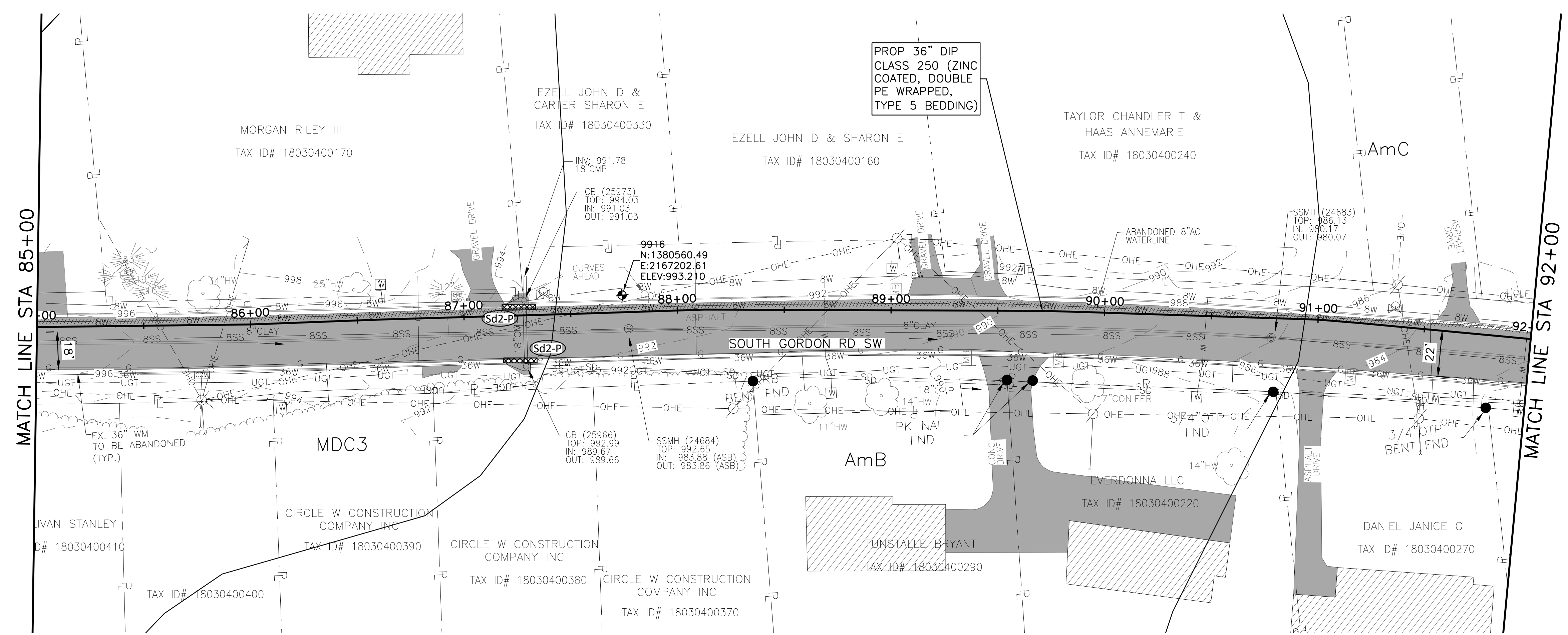
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STA 85+00 TO STA 99+00

REV	DATE	BY	ISSUE	FILE NAME
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1			DRAWN	
2			CHECKED	
3			REVISION	

SHEET
ES-7
SEQ. 52

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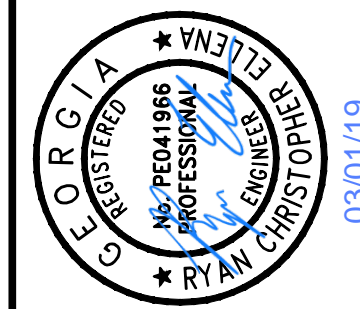
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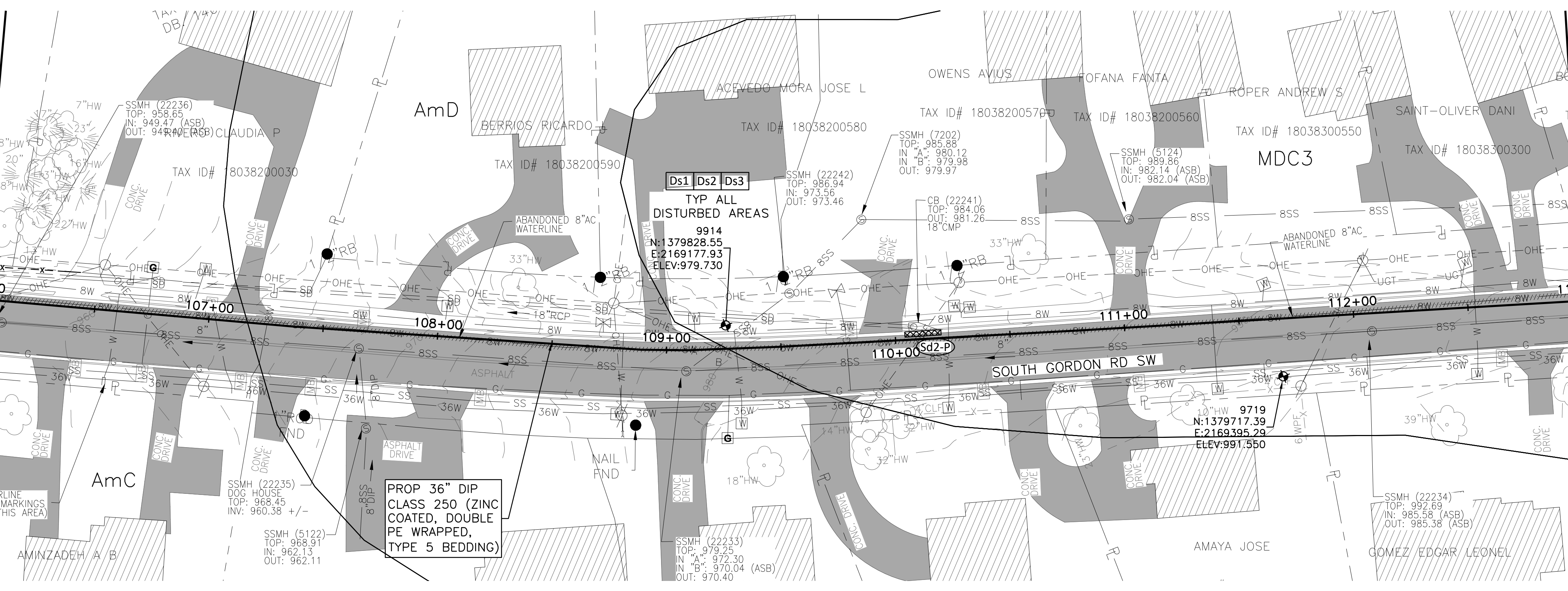
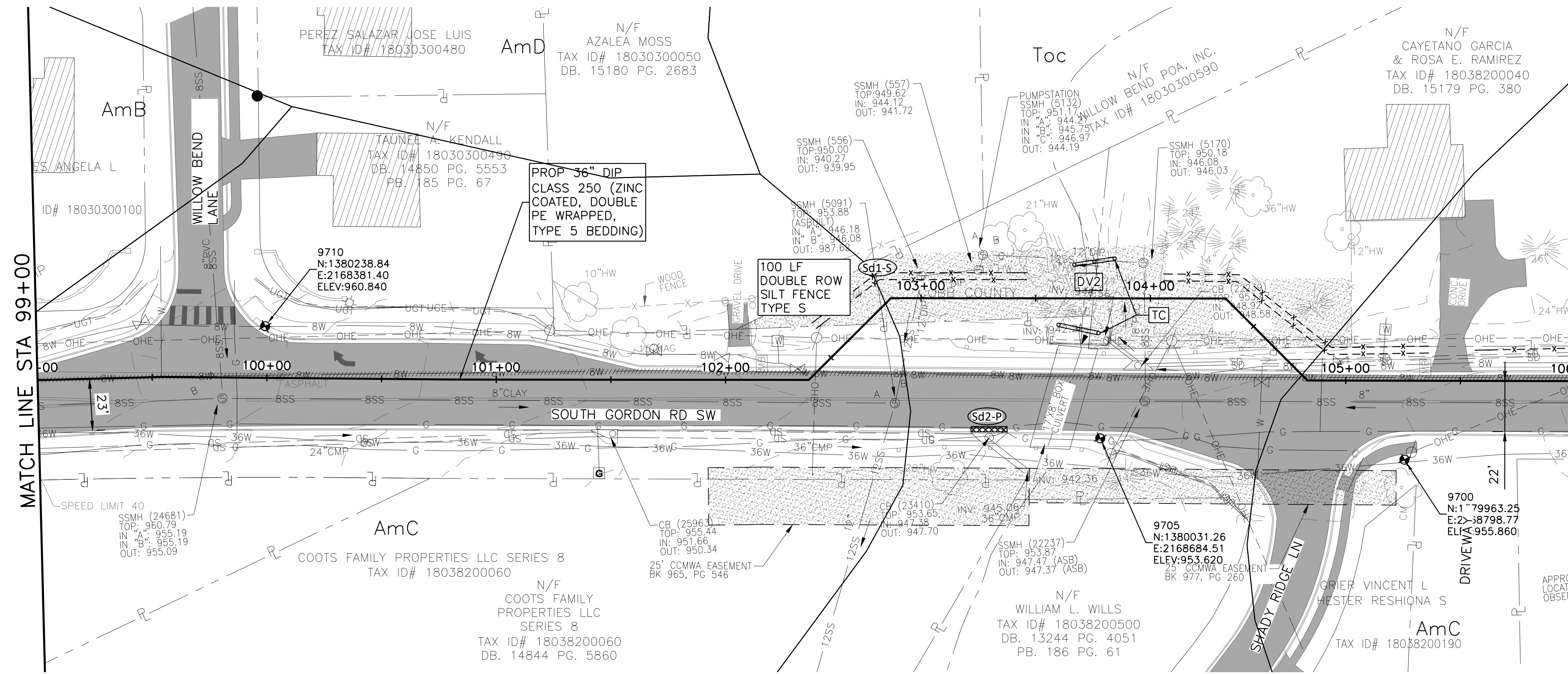
COBB COUNTY-MARIETTA WATER AUTHORITY
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EROSION & SEDIMENT CONTROL
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STA 99+00 TO STA 113+00

REV	DATE	DESIGNED	FDH	DRAWN	CHKM	CHECKED	UCS
1	3/1/19						

SHEET
ES-8
SEQ. 53

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CERTIFICATION NUMBER: 000081592

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SCALE IN FEET
HORIZONTAL



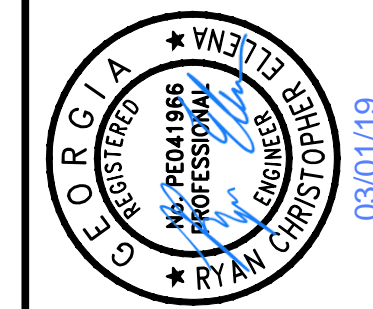
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0 10' 20' 30' 60'
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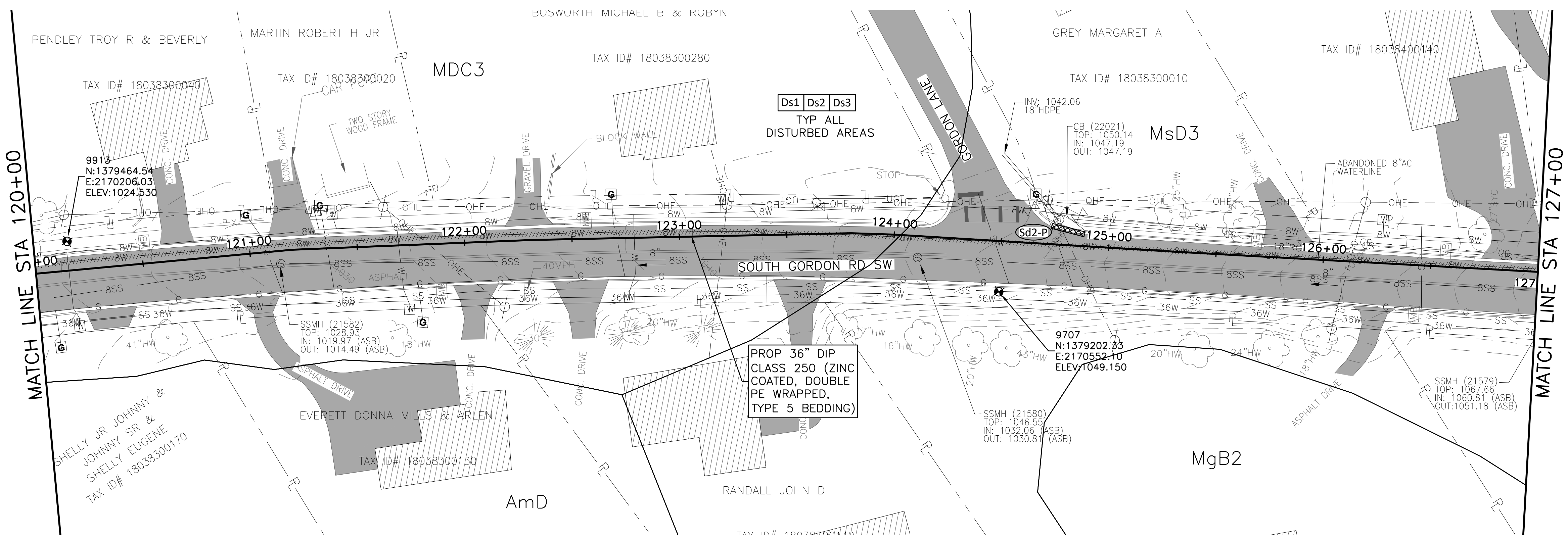
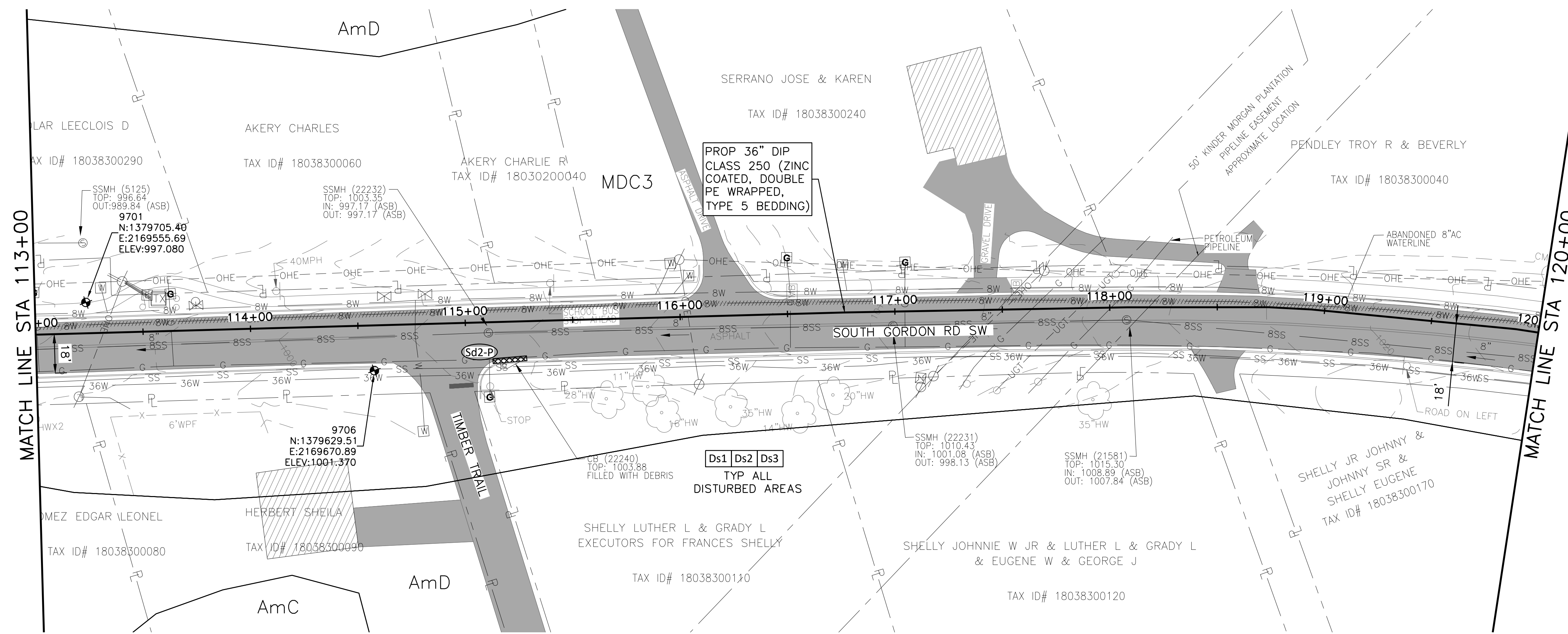
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STA 113+00 TO STA 127+00

REV	DATE	BY	ISSUE

SHEET
ES-9
SEQ. 54

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CERTIFICATION NUMBER: 000081592



0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL



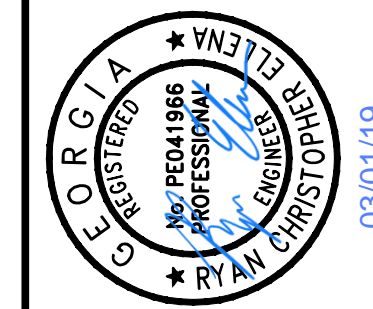
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SCALE IN FEET
HORIZONTAL



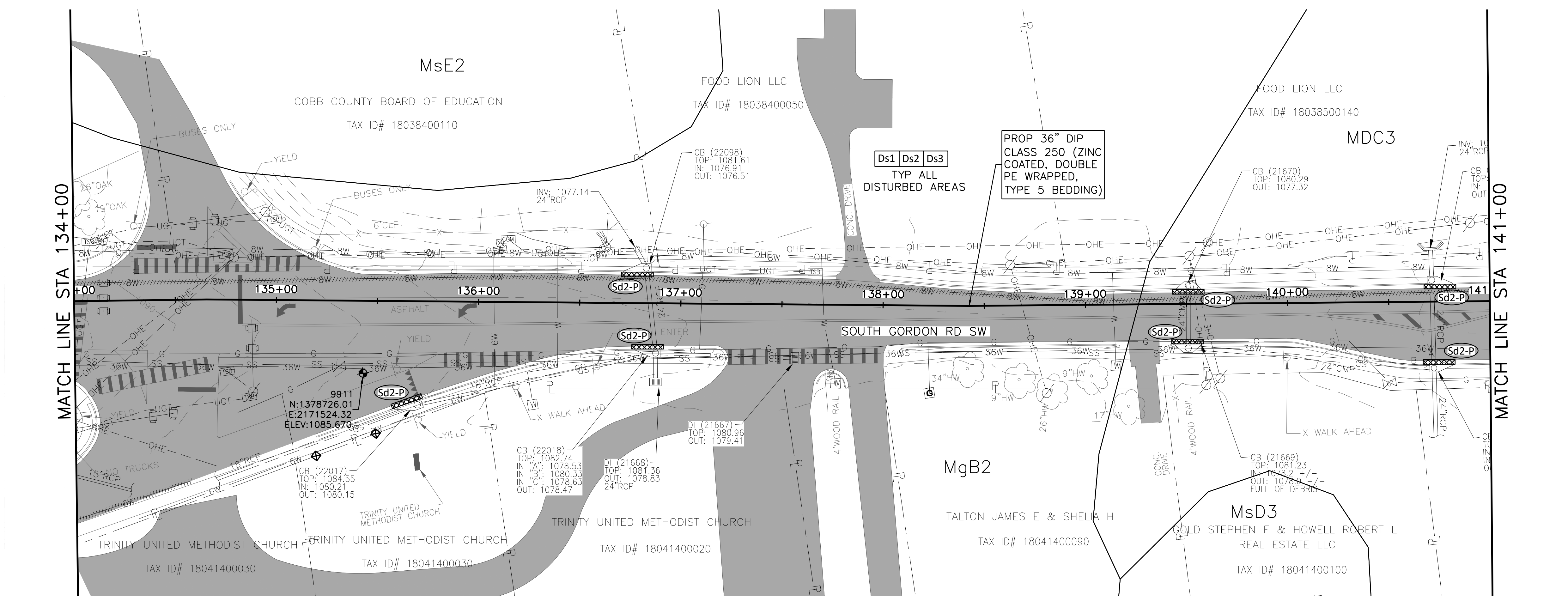
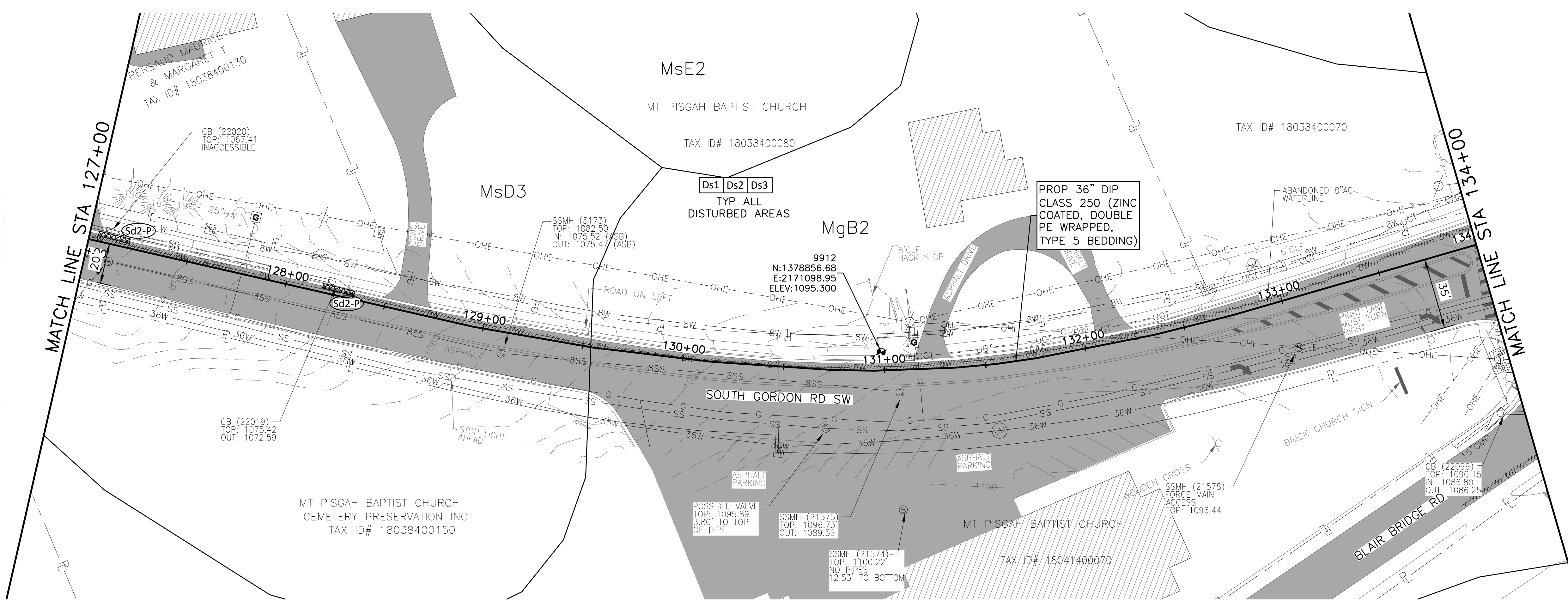
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STA 127+00 TO STA 141+00

PROJECT NO.	CBR18213
DATE	3/7/19
DESIGNED	FDH
DRAWN	CKM
REVISION	
CHECKED	JCS
FILE NAME	ES-ALL-SHTS01.dwg
NO.	0
ISSUE	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE	1

SHEET
ES-10
SEQ. 55

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0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

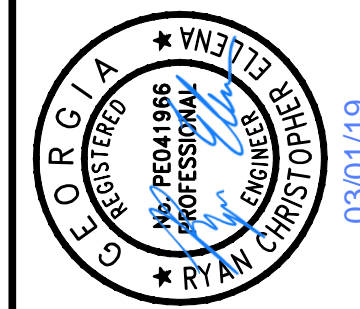
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0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

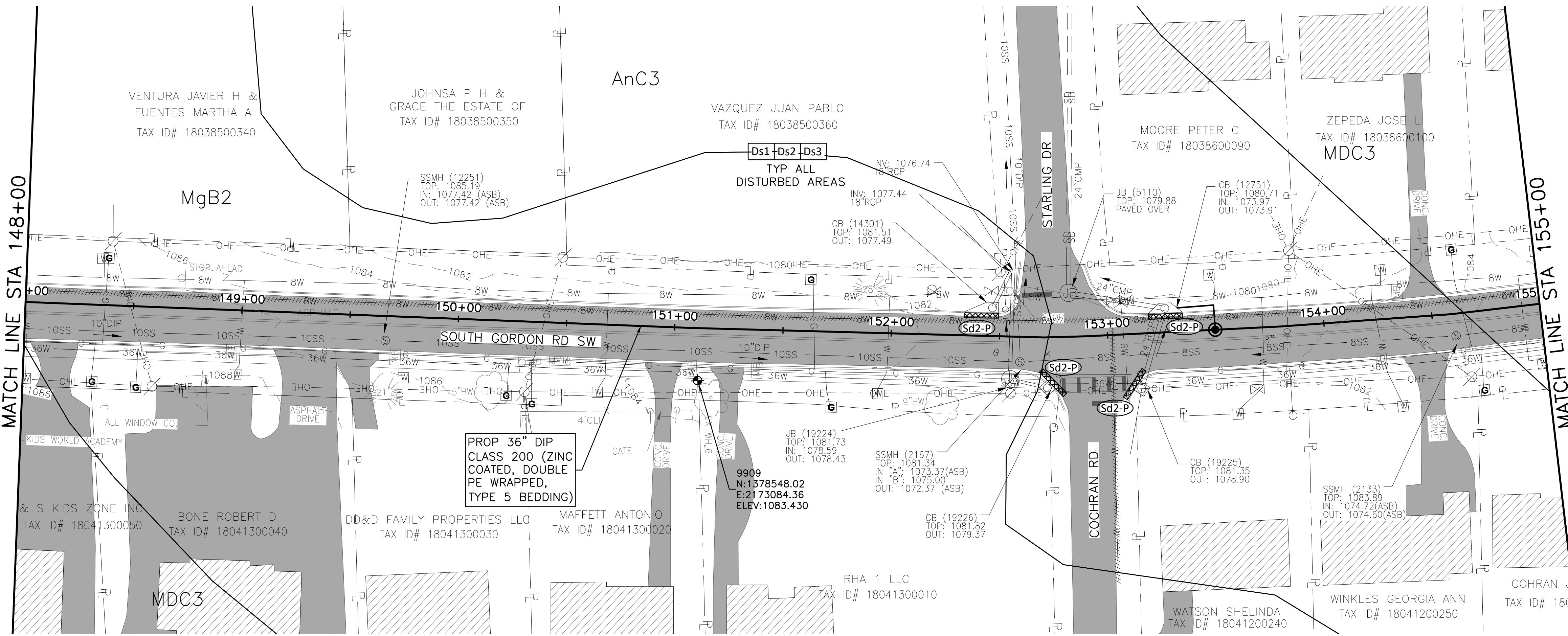
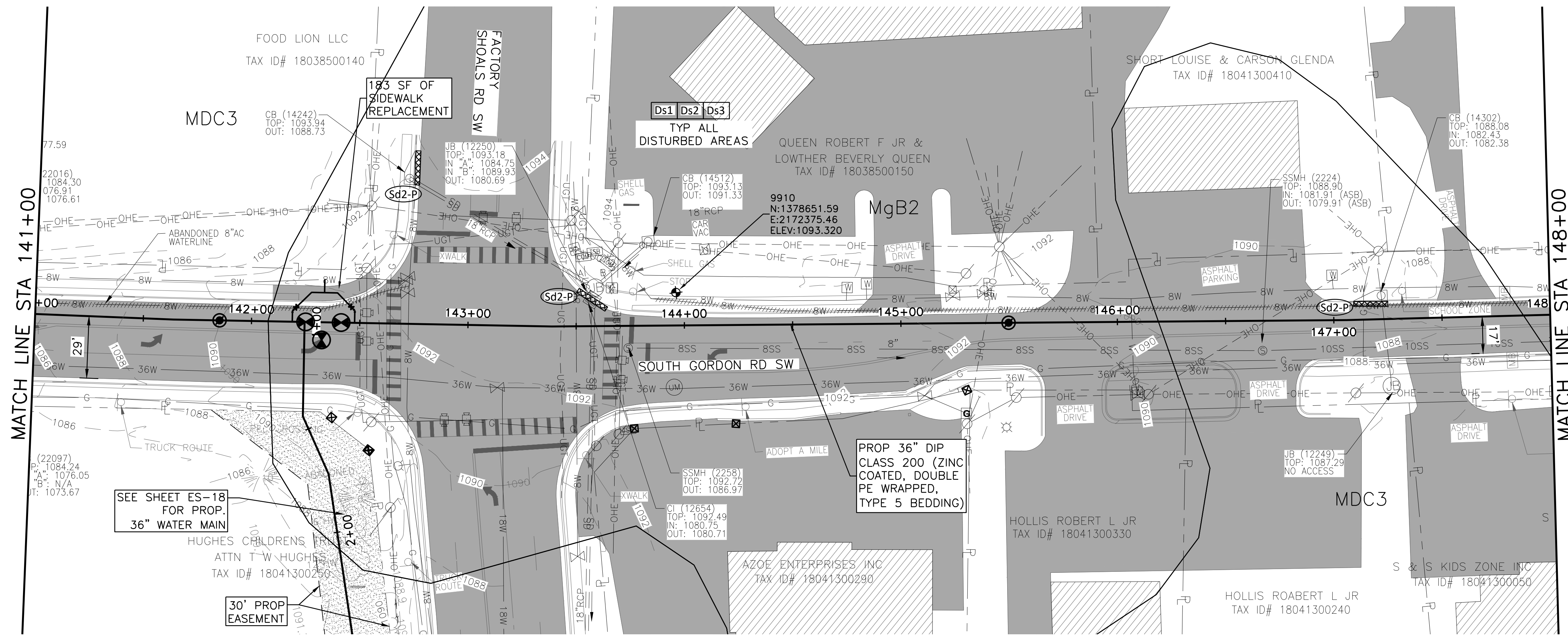


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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
EROSION & SEDIMENT CONTROL
E&SC PLAN SHEET
STA 141+00 TO STA 155+00

REVISED	DATE	BY	ISSUE
DESIGNED	3/7/19		
DRAWN			
CHECKED			
FILE NAME	ES-ALL-SHTS02.dwg		
NO.	0	VERIFY SCALE	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET
ES-11
SEQ. 56



0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL

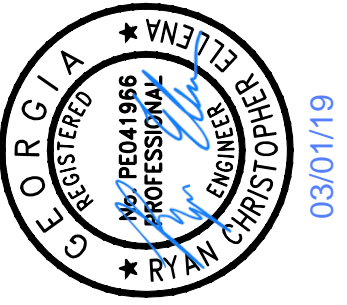
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Last Saved: 2/28/2019 4:22 PM. Saved By: 02618



Know what's below.
Call before you dig.



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SCALE IN FEET
HORIZONTAL

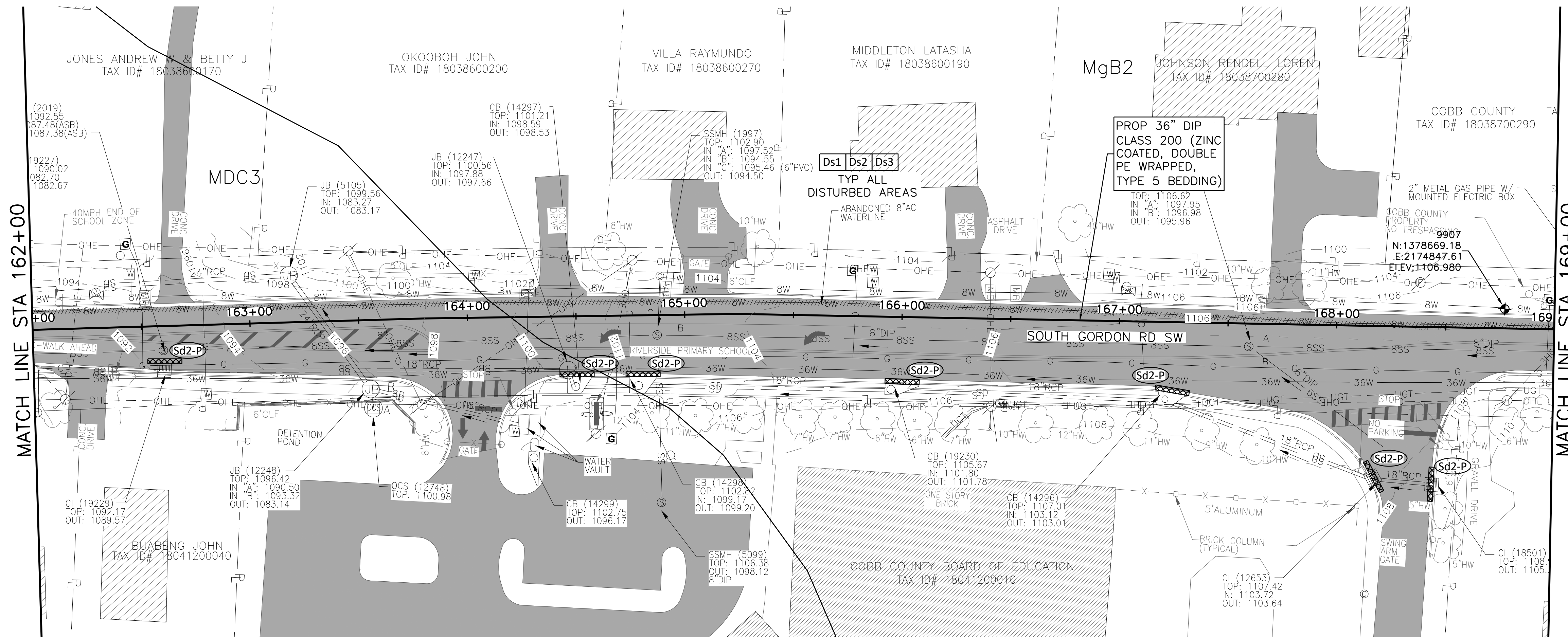
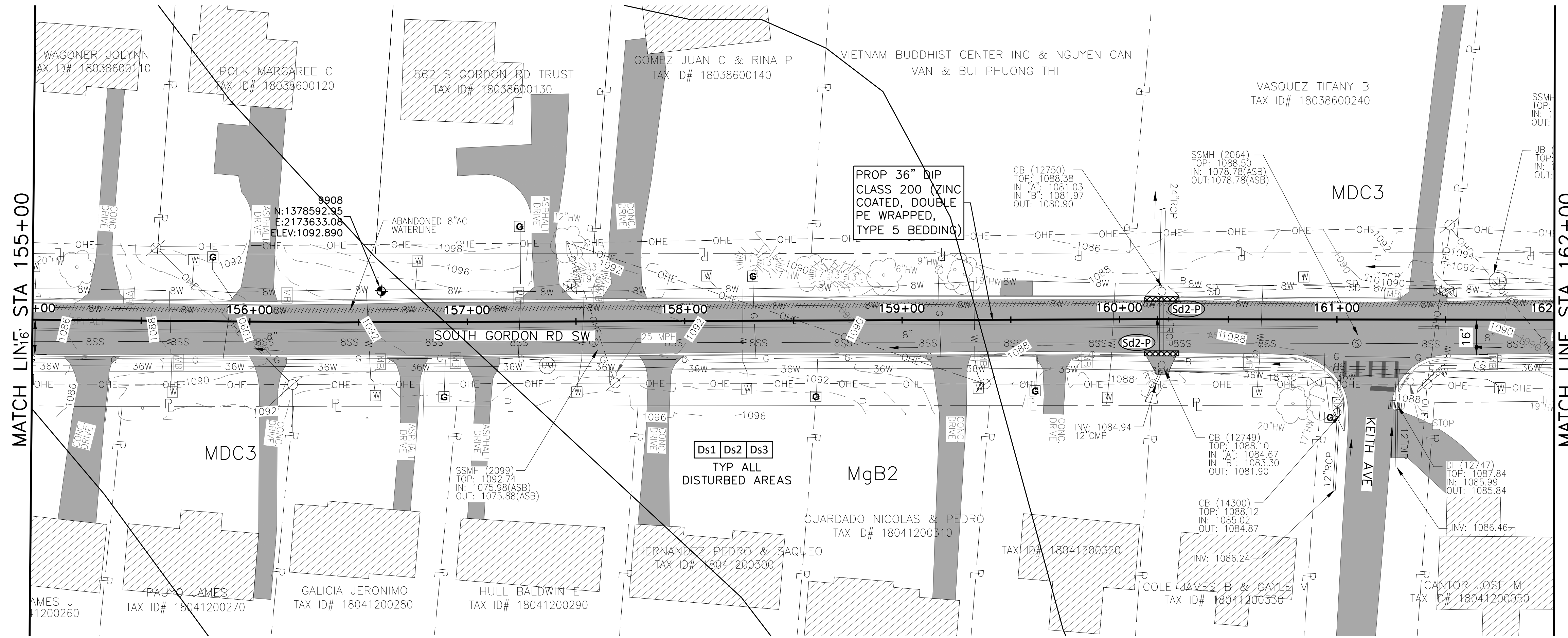


**FRESE
& NICHOLS**
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Suite 250
Atlanta, GA 30339
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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
EROSION & SEDIMENT CONTROL
E&SC PLAN SHEET
STA 155+00 TO STA 169+00

REV. NO.	DATE	DESIGNED	FDH	DRAWN	CHKM	ISSUE	FILE NAME
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SHEET
ES-12
SEQ. 57



0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL



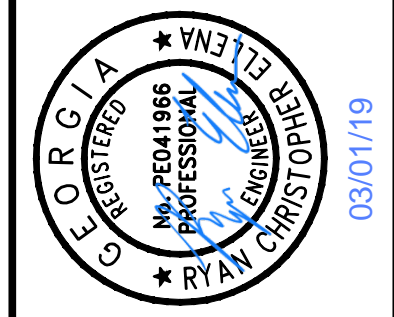
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0 10' 20' 30' 60'
SCALE IN FEET
HORIZONTAL



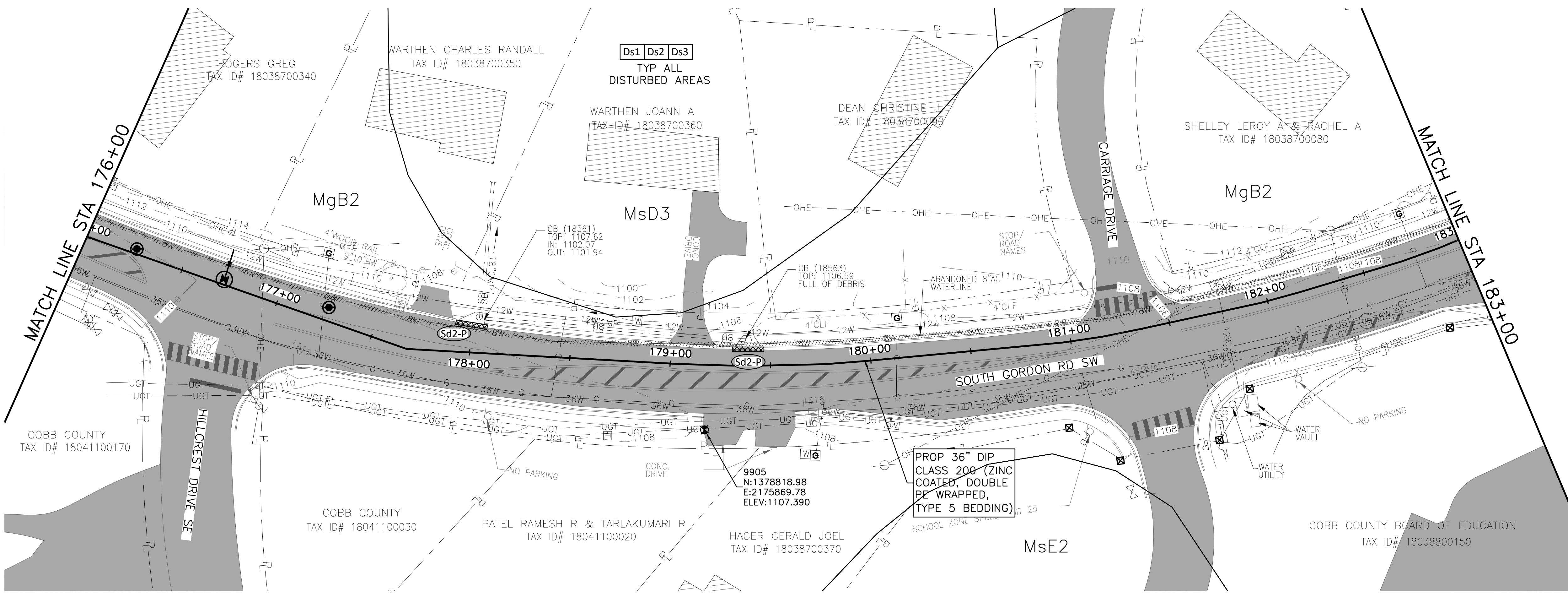
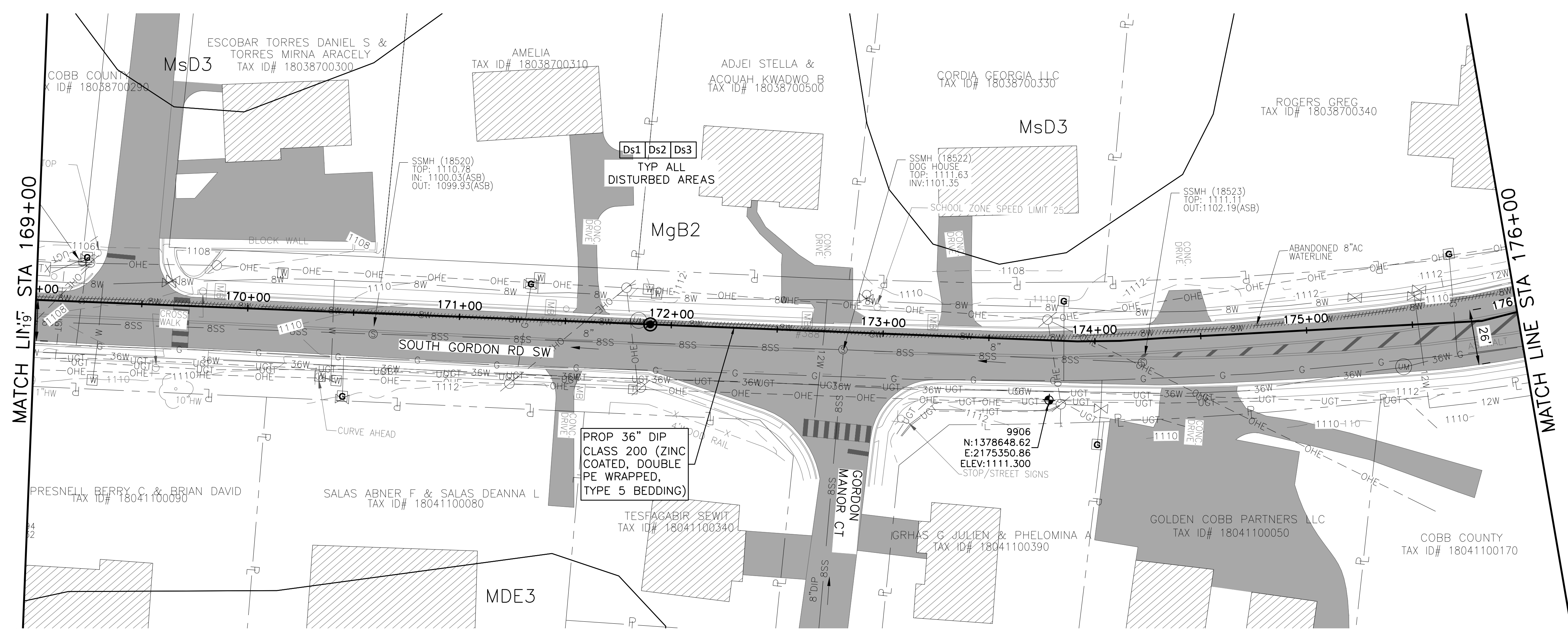
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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
EROSION & SEDIMENT CONTROL
E&SC PLAN SHEET
STA 169+00 TO STA 183+00

REV	DATE	BY	ISSUE	VERIFY SCALE
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Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET
ES-13
SEQ. 58



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HORIZONTAL

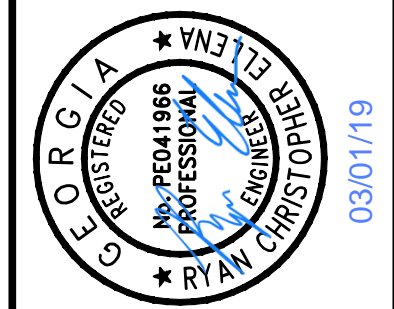
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SCALE IN FEET
HORIZONTAL



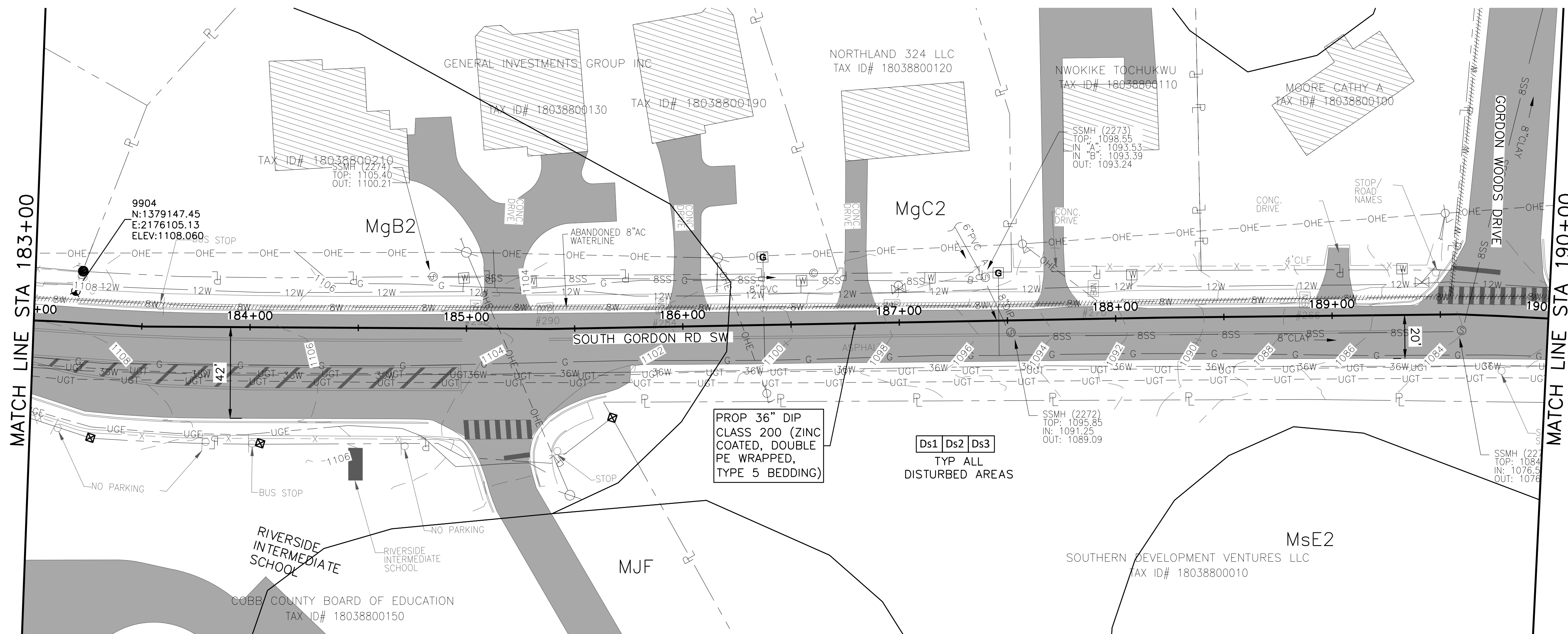
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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
EROSION & SEDIMENT CONTROL
E&SC PLAN SHEET
STA 183+00 TO END

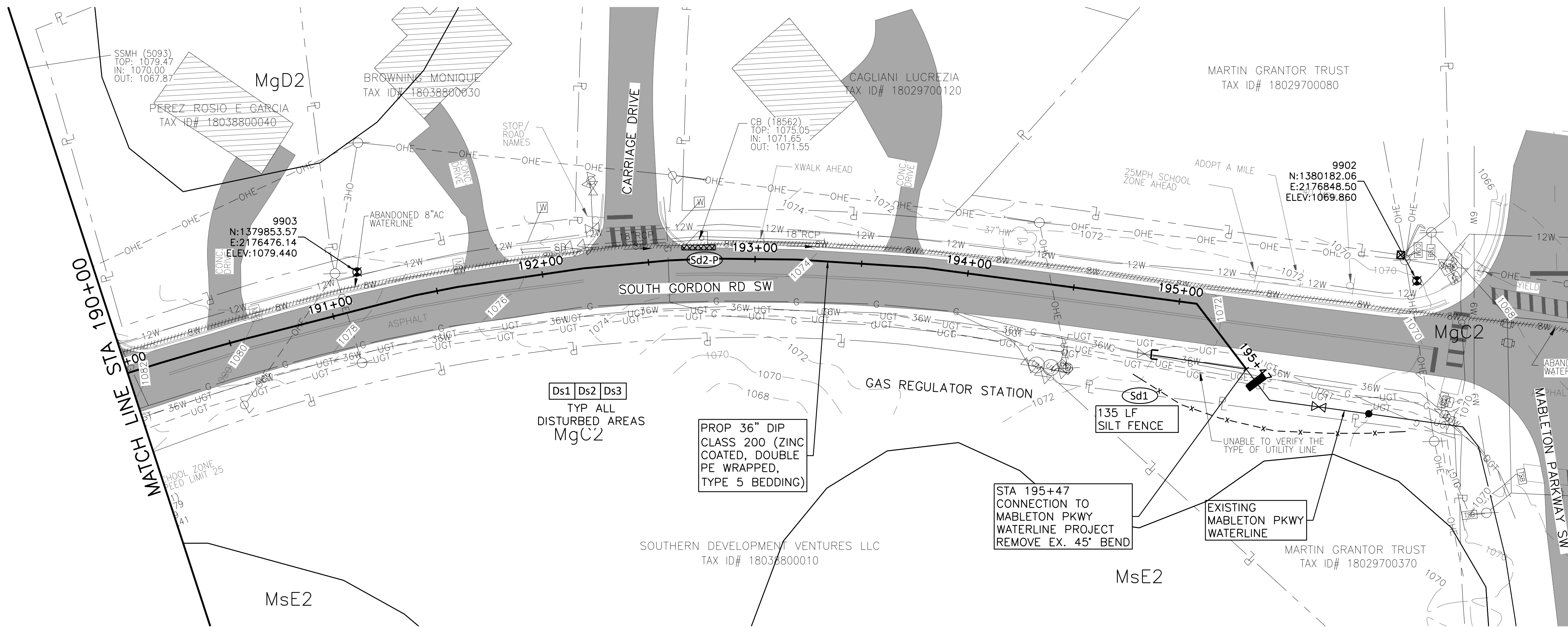
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59

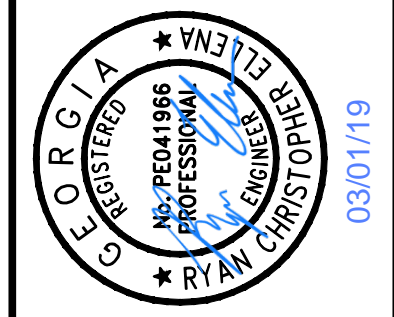


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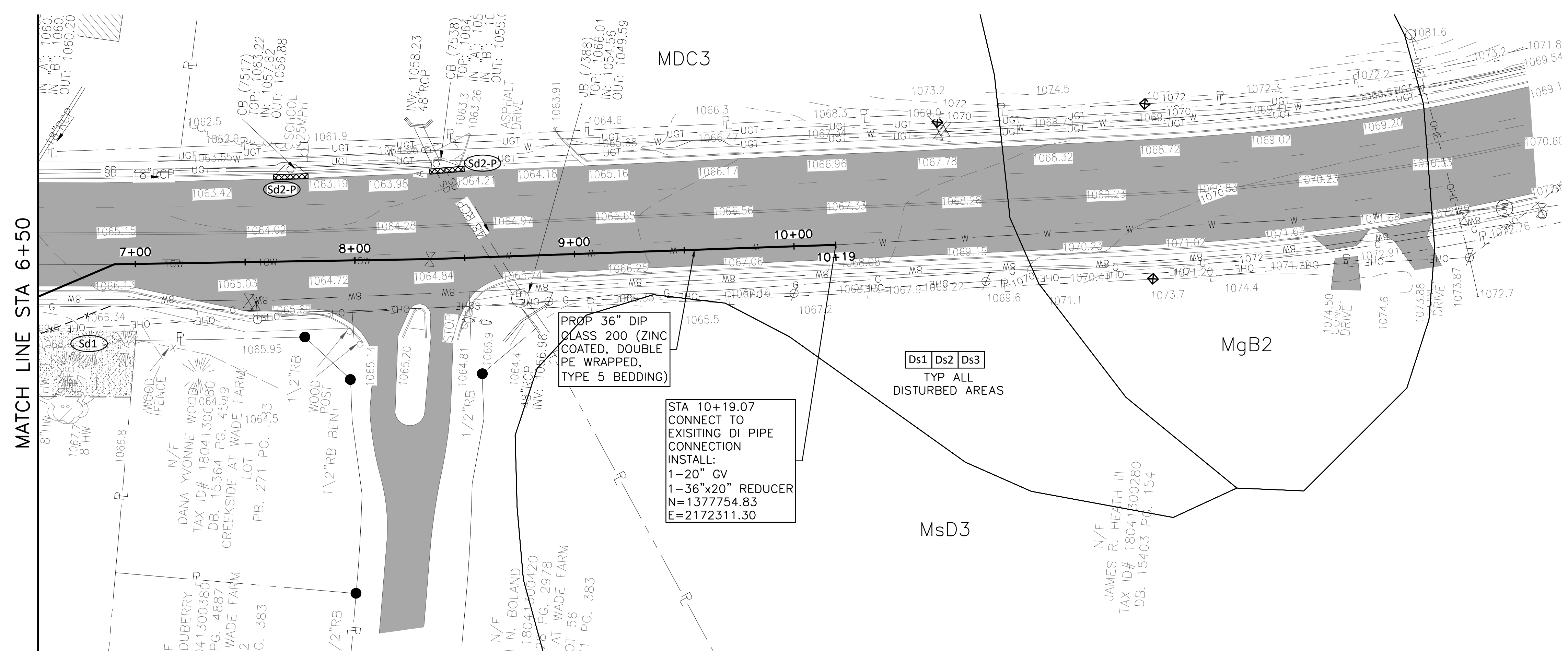
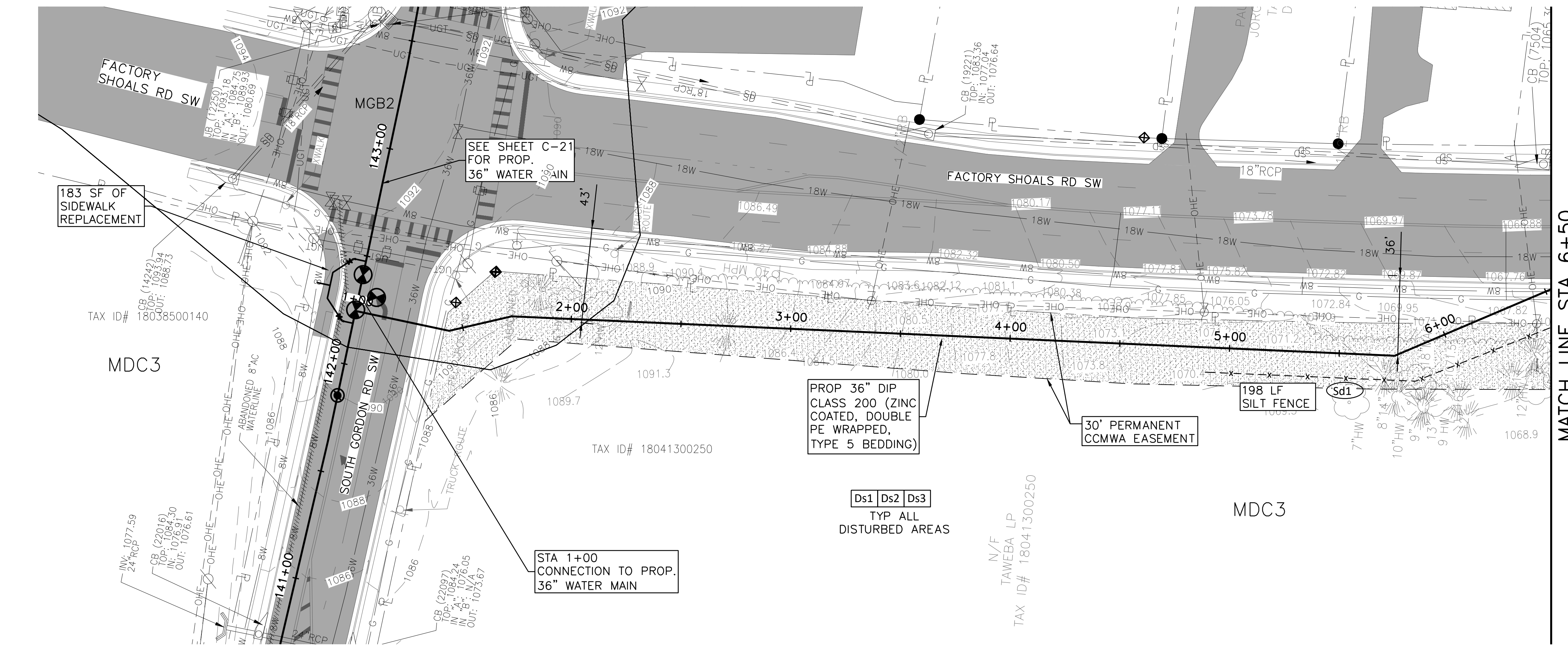
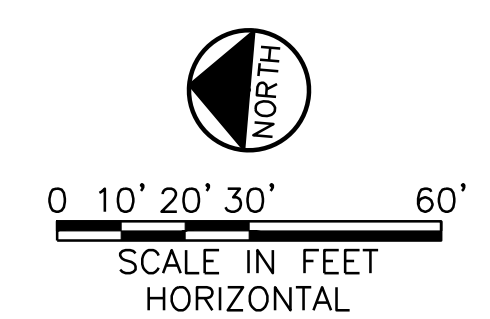
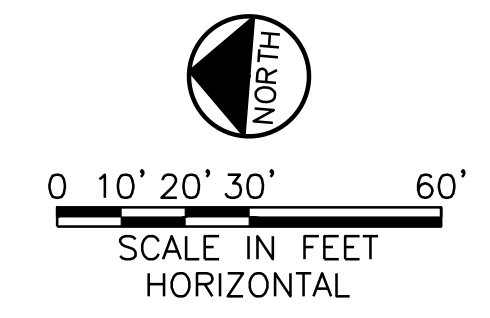
COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 EROSION & SEDIMENT CONTROL
 E&SC PLAN SHEET
 STA BEGIN TO END

NO.	ISSUE	DATE	BY	FILE NAME
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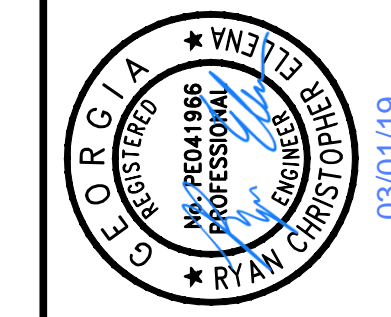
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SHEET **ES-15**
 SEQ. 60





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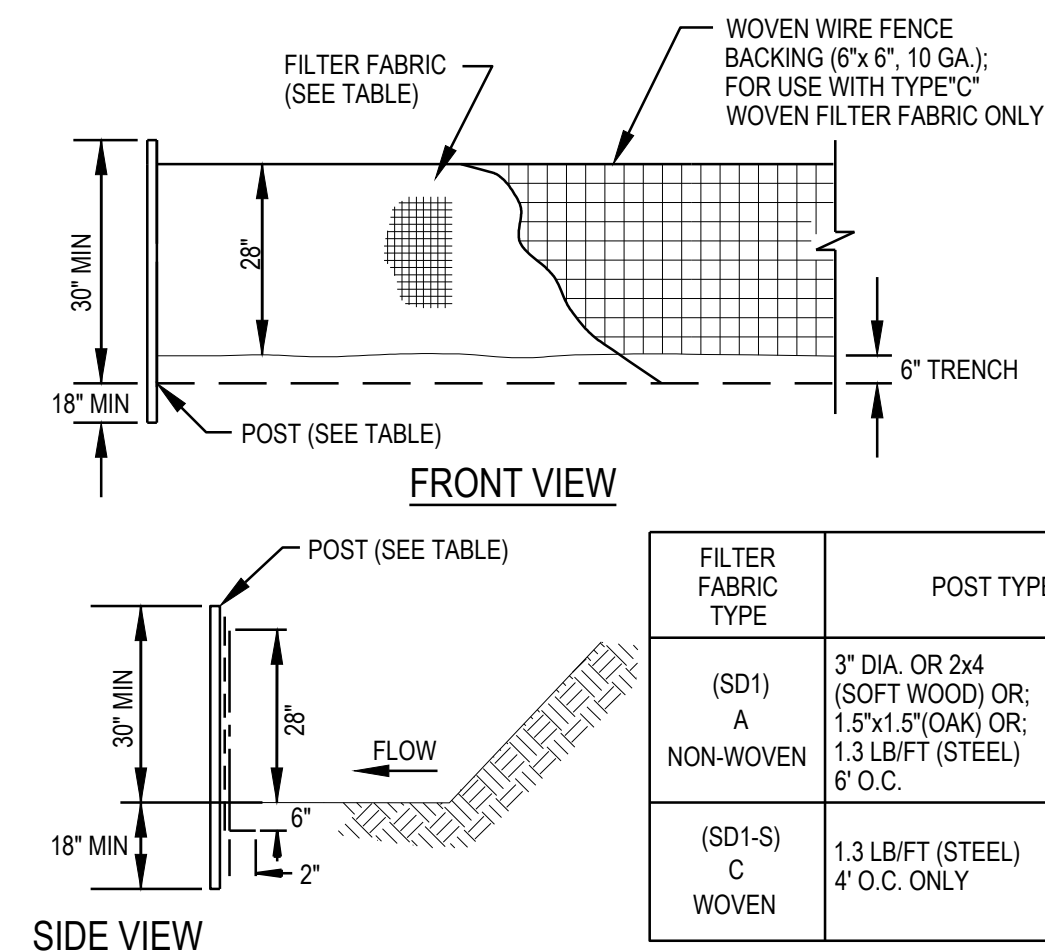
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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
EROSION & SEDIMENT CONTROL
EROSION & SEDIMENT CONTROL DETAILS

PROJ. JOB NO.	CBR18213	DATE	3/1/19	DESIGNED	JLJ	DRAWN	CKM	CHECKED	JCS	FILE NAME	ES-ALL-CHECKLIST.dwg
NO.	0	ISSUE		BY		DATE					

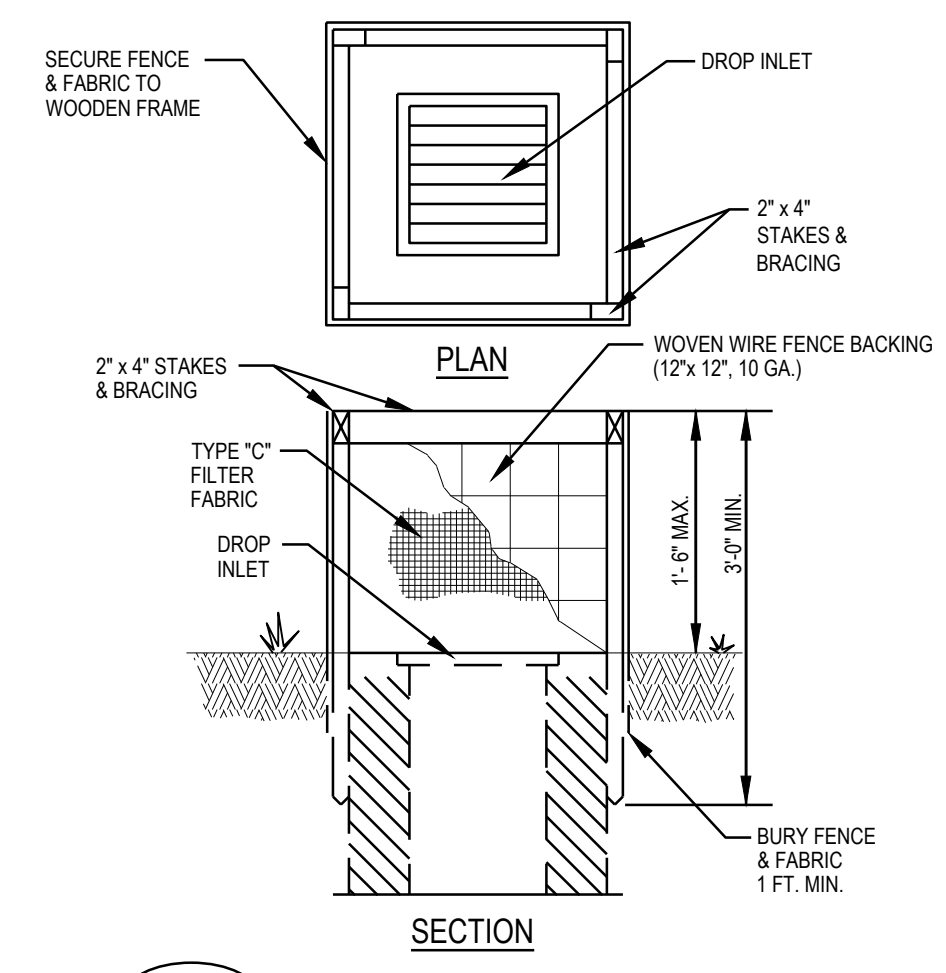
SHEET **ES-16**
SEQ. 61

CERTIFIED BY: RYAN ELLENA, P.E.
CERTIFICATION NUMBER: 000081592

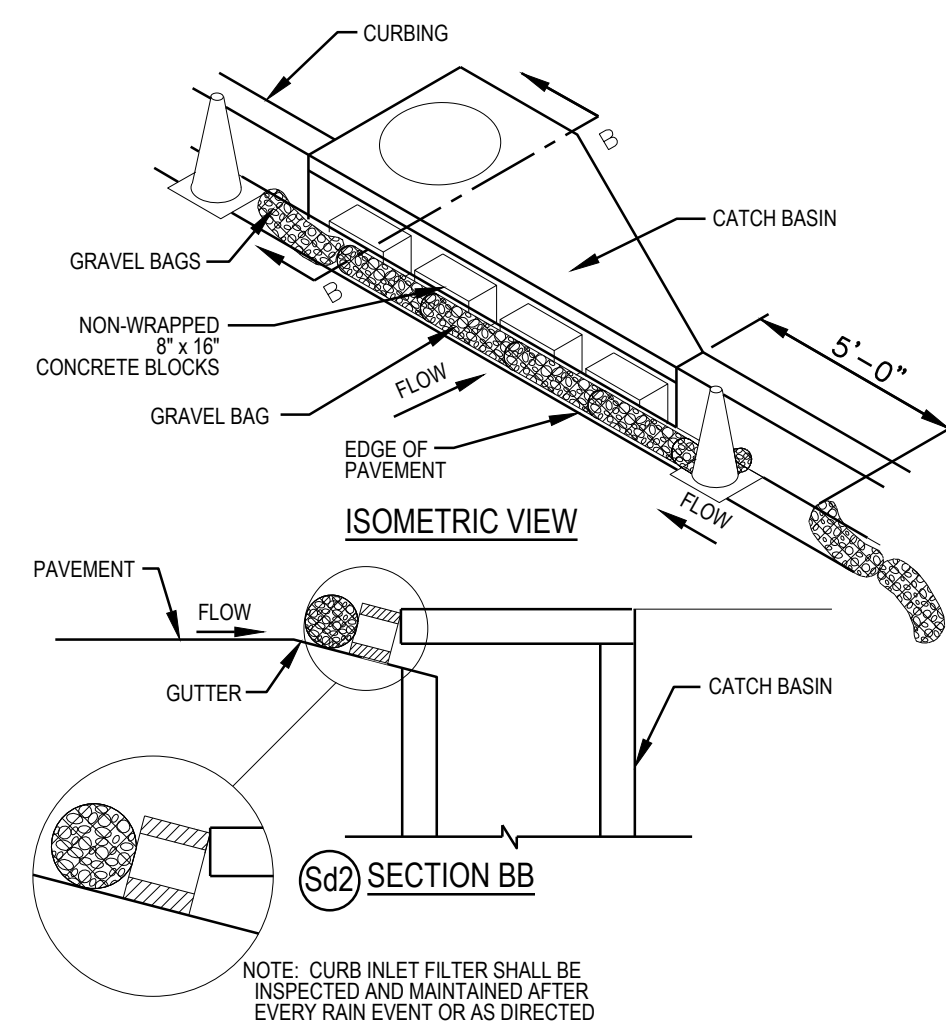


NOTE:
1. SILT FENCING TO BE TYPE "A" OR TYPE "C" AS NOTED ON EROSION CONTROL PLAN.
2. FABRIC (TYPE "A" OR "C") AS SPECIFIED IN GA. D.O.T. LIST #36

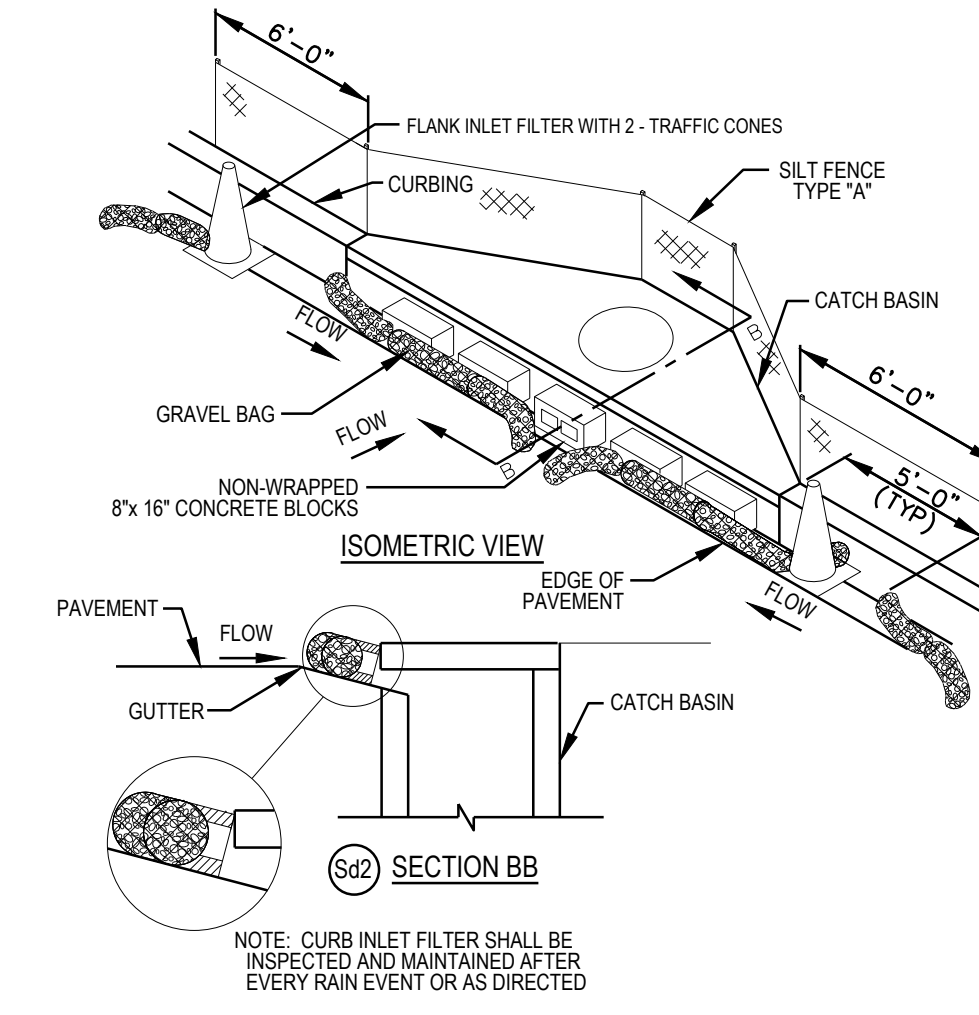
Sd1 Sd1-S
SEDIMENT BARRIER (SILT FENCE)
SCALE: N.T.S.



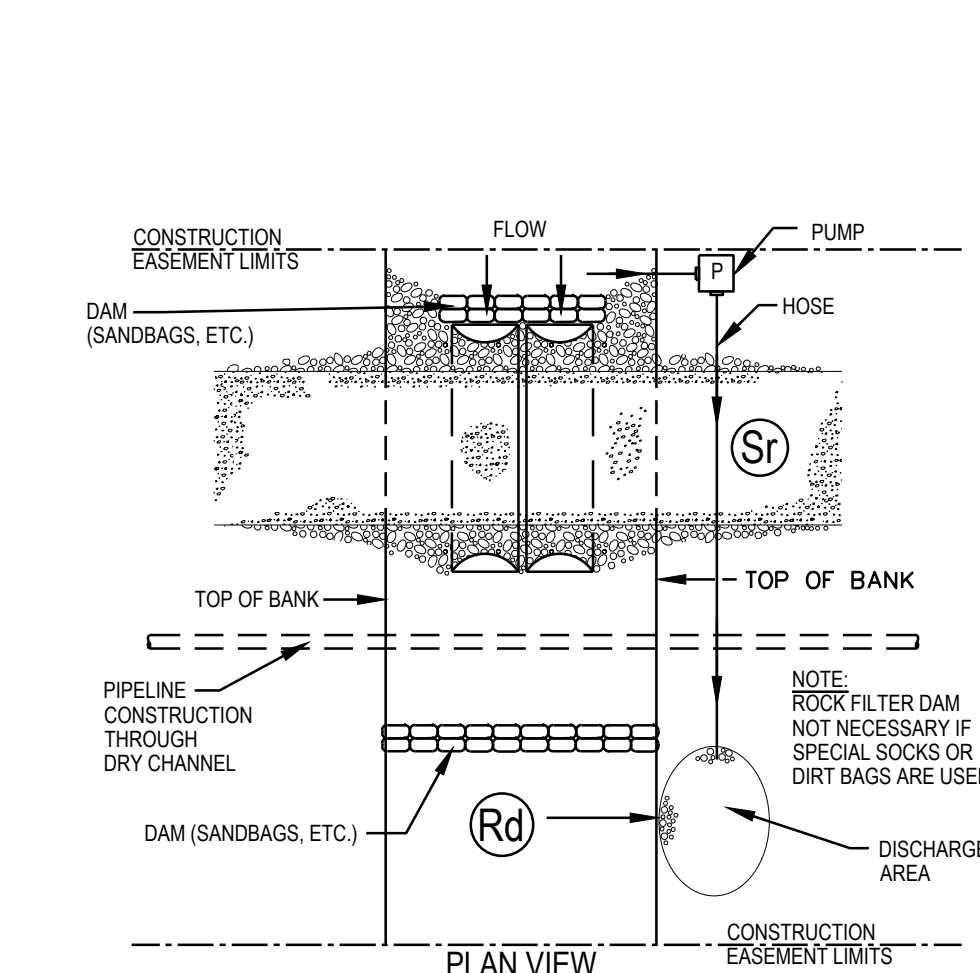
Sd2-F
INLET SEDIMENT TRAP
SCALE: N.T.S.



Sd2-P
CURB INLET FILTER TRAP (IN-LINE)
SCALE: N.T.S.

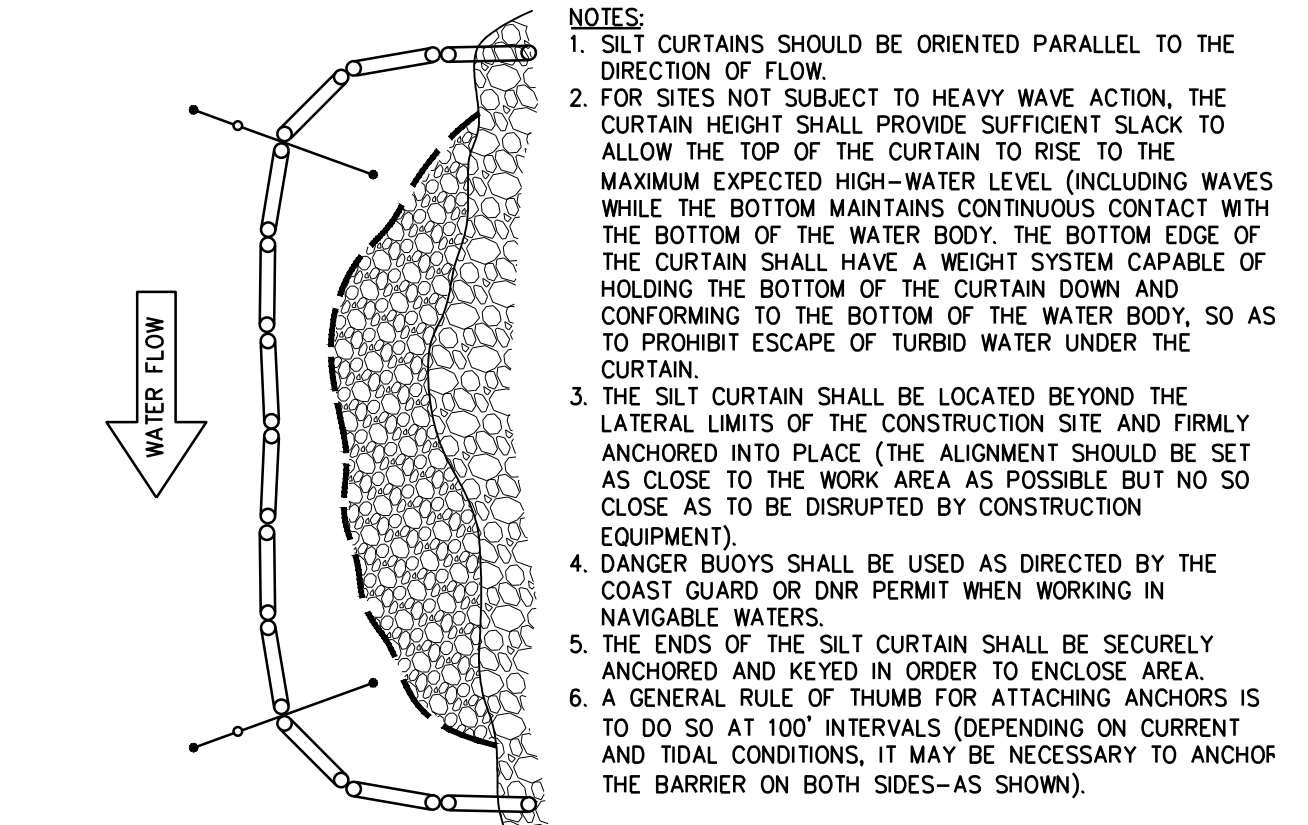


Sd2
CURB INLET FILTER TRAP (IN-SAG)
SCALE: N.T.S.

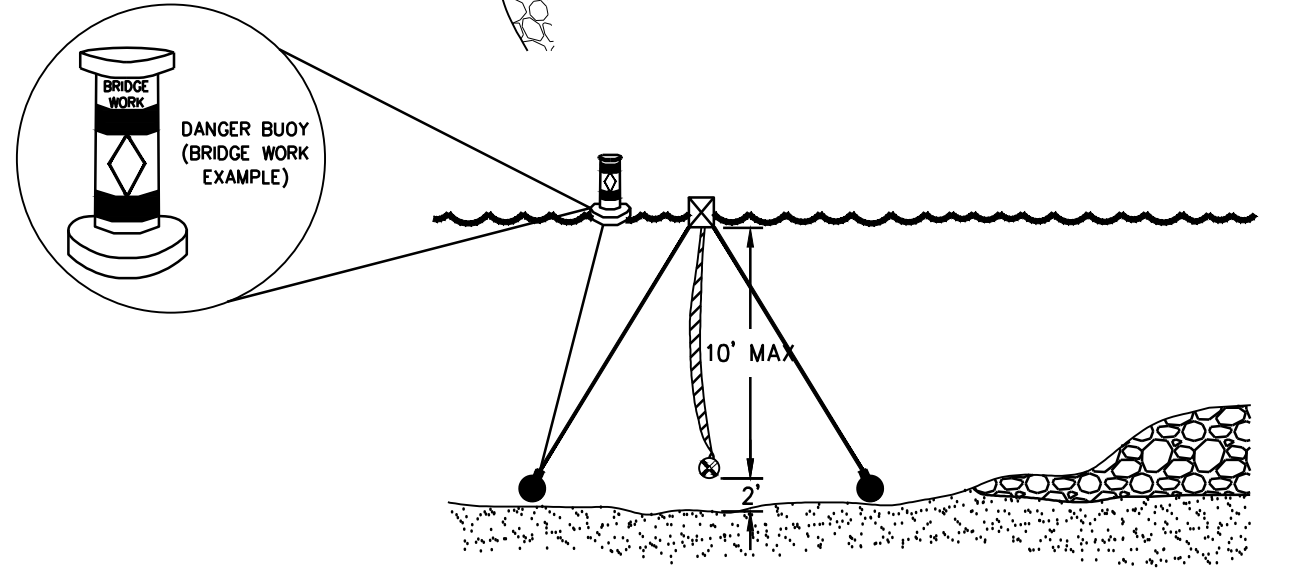


Dv2
DIVERSION (PUMPED)
SCALE: N.T.S.

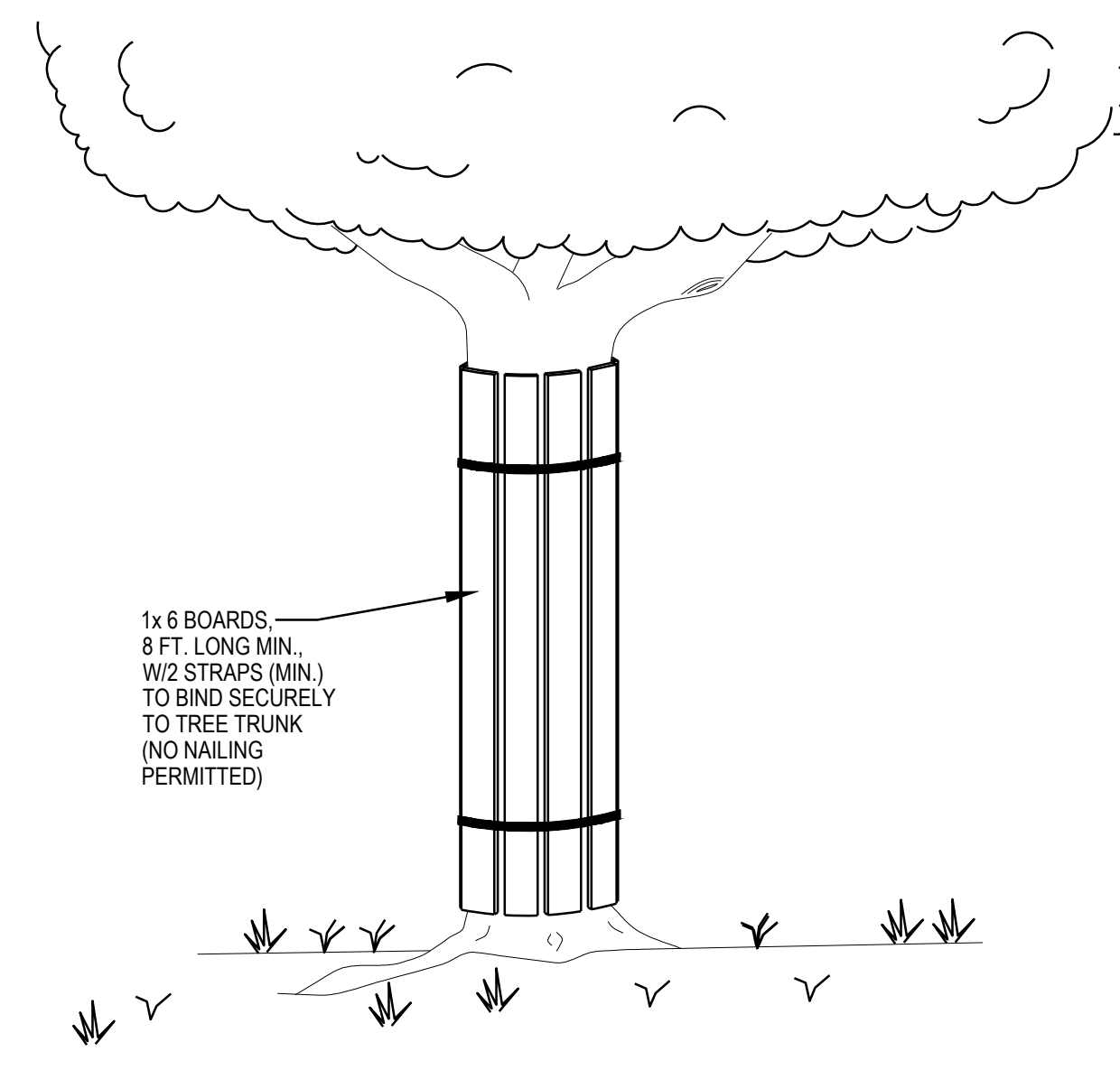
ANCHOR SYSTEM AND LAYOUT DETAILS



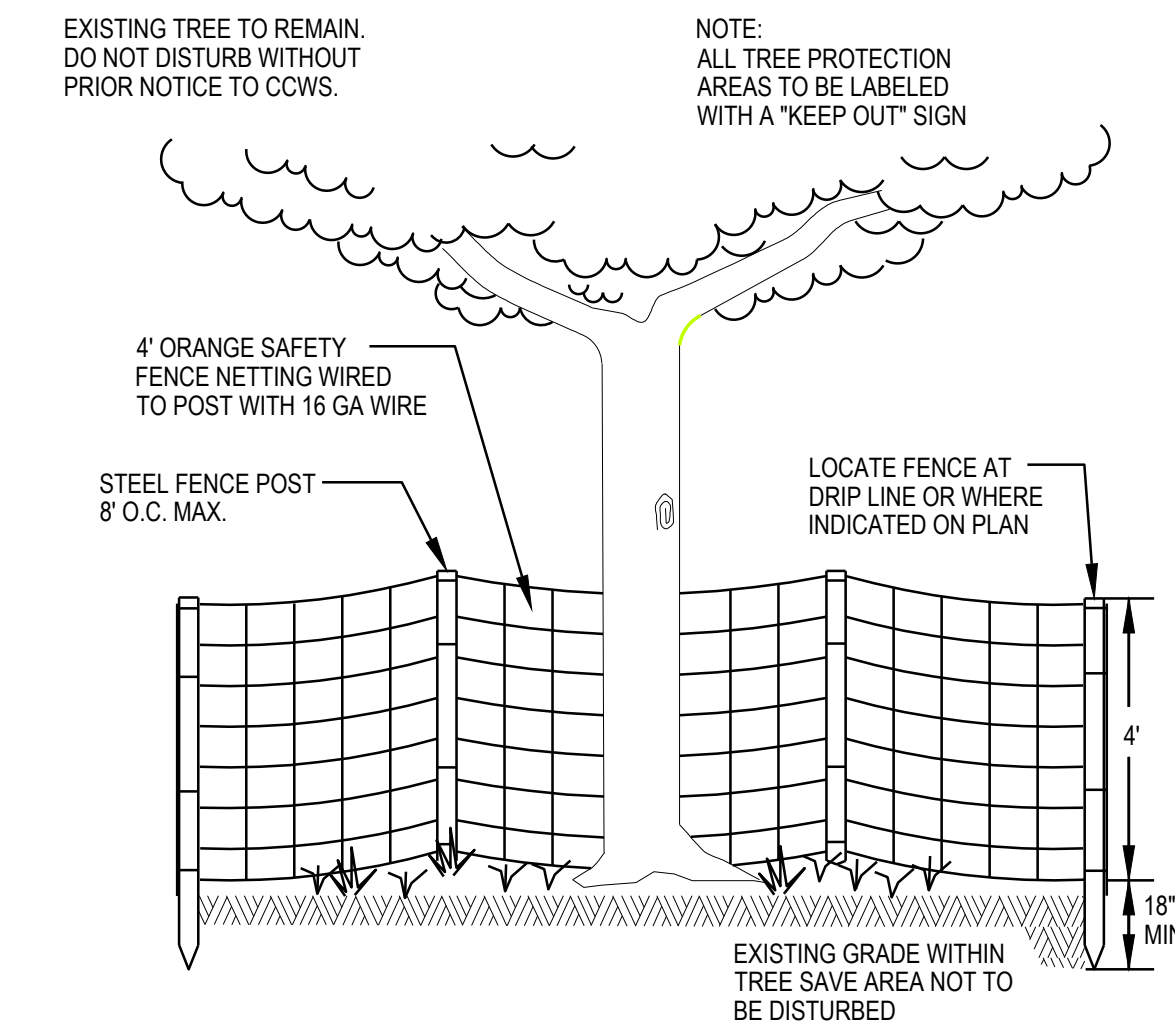
NOTES:
1. SILT CURTAINS SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF FLOW.
2. FOR SITES NOT SUBJECT TO HEAVY WAVE ACTION, THE CURTAIN HEIGHT SHALL PROVIDE SUFFICIENT SLACK TO ALLOW THE TOP OF THE CURTAIN TO RISE TO THE MAXIMUM EXPECTED HIGH-WATER LEVEL (INCLUDING WAVES) WHILE THE BOTTOM MAINTAINS CONTINUOUS CONTACT WITH THE BOTTOM OF THE WATER BODY. THE BOTTOM EDGE OF THE CURTAIN SHALL HAVE A WEIGHT SYSTEM CAPABLE OF HOLDING THE BOTTOM OF THE CURTAIN DOWN AND CONFORMING TO THE BOTTOM OF THE WATER BODY, SO AS TO PROHIBIT ESCAPE OF TURBID WATER UNDER THE CURTAIN.
3. THE SILT CURTAIN SHALL BE LOCATED BEYOND THE LATERAL LIMITS OF THE CONSTRUCTION SITE AND FIRMLY ANCHORED INTO PLACE (THE ALIGNMENT SHOULD BE SET AS CLOSE TO THE WORK AREA AS POSSIBLE BUT NO SO CLOSE AS TO BE DISRUPTED BY CONSTRUCTION EQUIPMENT).
4. DANGER BUOYS SHALL BE USED AS DIRECTED BY THE COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERS.
5. THE ENDS OF THE SILT CURTAIN SHALL BE SECURELY ANCHORED AND KEYED IN ORDER TO ENCLOSE AREA.
6. A GENERAL RULE OF THUMB FOR ATTACHING ANCHORS IS TO DO SO AT 100' INTERVALS (DEPENDENT ON CURRENT AND TIDAL CONDITIONS, IT MAY BE NECESSARY TO ANCHOR THE BARRIER ON BOTH SIDES-AS SHOWN).



Tc
TURBIDITY CURTAIN
SCALE: N.T.S.



1x6 BOARDS, 8 FT. LONG MIN., W/2" STRAPS (MIN.) TO BIND SECURELY TO TREE TRUNK (NO NAILING PERMITTED)
TREE TRUNK PROTECTION
SCALE: N.T.S.



4" ORANGE SAFETY FENCE NETTING WIRED TO POST WITH 16 GA WIRE
STEEL FENCE POST 8" O.C. MAX.
LOCATE FENCE AT DRIP LINE OR WHERE INDICATED ON PLAN
EXISTING GRADE WITHIN TREE SAVE AREA NOT TO BE DISTURBED
TREE PROTECTION FENCING
SCALE: N.T.S.

ACAD Ref: 23.0s (IMS Tech)
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**GEORGIA UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION**

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABIION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where overtake the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER			A buoyant device that releases/draws water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM			Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded, artificially constructed, or re-mounded.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

GeSWCC (Amended - 2013)

STORM WATER AND EROSION CONTROL NOTES

- FLOODPLAIN ON THIS PROPERTY FROM ALL WATER COURSES WITH A DRAINAGE AREA EXCEEDING 100 ACRES IS SHOWN. THIS PROJECT DOES NOT LIE WITHIN THE 100-YEAR FLOOD PLAIN PER FEMA FIRM PANEL 13067C0211H DATED MARCH 4, 2013.
- A 25-FOOT UNDISTURBED STATE STREAM BUFFER SHALL BE MAINTAINED ADJACENT TO ALL STREAMS.
- TOTAL WETLAND AREA = 0.00 ACRES.
- SOURCE OF TOPOGRAPHY IS PROVIDED BY TERRAMARK PROFESSIONAL LAND SURVEYING RECEIVED BY FREESE AND NICHOLS OCTOBER, 2018.
- EROSION AND SEDIMENT CONTROL DEVICES SHOWN ARE THE MINIMUM REQUIRED. ADDITIONAL DEVICES MAY BE REQUIRED AS NECESSARY.
- MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.
- PERMANENT GRASSING AND/OR LANDSCAPING SHALL BE INSTALLED WITHIN TWO WEEKS AFTER THE COMPLETION OF ANY LAND DISTURBING ACTIVITY, OR IF ACTIVITY IS DISCONTINUED FOR A PERIOD OF TWO WEEKS OR LONGER. IN CERTAIN AREAS THE PLANS CLEARLY NOTE THAT NO LAND DISTURBANCE WILL BE ALLOWED UN-STABILIZED OVERNIGHT. THESE AREAS NEED TO HAVE THE NECESSARY TEMPORARY AND PERMANENT MEASURES IDENTIFIED ON THE PLANS INSTALLED WITHIN 24-HOURS.
- A TEMPORARY COVER OF HEAVY MULCH OR MULCH WITH TEMPORARY SEEDING SHALL BE PLACED ON ALL AREAS WHERE PERMANENT COVER CAN NOT BE ESTABLISHED IMMEDIATELY DUE TO SEASONAL LIMITATIONS.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION AND SEDIMENT CONTROL DEVICES IN GOOD WORKING CONDITION AND CLEANING OUT THE DEVICES BEFORE THEY ARE HALF-FULL OF SEDIMENT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT UNDER NO CIRCUMSTANCES ANY SEDIMENT, TRASH, OR DEBRIS BE ALLOWED ONTO ADJACENT PROPERTIES, PUBLIC LANDS, OR OUTSIDE OF THE CONSTRUCTION LIMITS.
- CONTRACTOR SHALL BUILD, MAINTAIN, AND USE A CONSTRUCTION EXIT AT ALL SITE ENTRY/EXIT LOCATIONS ADJACENT TO PAVED ROADS.
- ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE USED ARE DETAILED ON THE EROSION CONTROL PLAN OR EROSION CONTROL DETAILS.
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL MEET THE MINIMUM REQUIREMENTS OF THE SPECIFICATIONS AND ALL LOCAL, STATE, AND FEDERAL LAWS AS APPLICABLE TO THIS PROJECT. ALL DEVICES SHALL BE PROPERLY INSTALLED AND BE OF SUITABLE MATERIALS. ANY DEVICES JUDGED TO BE INADEQUATE IN MATERIAL AND/OR CONSTRUCTION WILL IMMEDIATELY BE REPLACED WITH NEW OR ADDITIONAL DEVICES TO ENSURE PROPER CONTROL.
- ALL TEMPORARY SILT CONTROL FENCING SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL INSPECT FENCE DAILY AND AFTER EVERY RAIN. ACCUMULATED SILT SHALL BE REMOVED AS SOON AS PRACTICAL, BUT NO LATER THAN WHEN FENCE IS HALF FULL. CONTRACTOR SHALL REMOVE THE SILT FENCE WHEN PERMANENT GRASSING HAS BEEN ESTABLISHED.
- ALL EROSION CONTROL DEVICES, THAT ARE NOT DIRECTLY SPECIFIED AS TO INSTALLATION AND MATERIALS, SHALL MEET THE REQUIREMENTS OF THE GA. DEPT. OF TRANSPORTATION, SPECIFICATIONS FOR THE CONSTRUCTION OF ROADS AND BRIDGES, CURRENT EDITION, AND LATEST SUPPLEMENT IN EFFECT AT THE TIME OF BID OPENING OR THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, 2016 EDITION.
- CONSTRUCTION EXITS (Co) SHALL BE REQUIRED AT ALL OTHER LOCATIONS USED FOR INGRESS/EGRESS FROM THE CONSTRUCTION AREA. CONSTRUCTION MATERIAL STORAGE AREAS WILL REQUIRE THE INSTALLATION OF A CONSTRUCTION EXIT TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE AREA. SILT FENCE SHALL ALSO BE INSTALLED TO PREVENT SEDIMENT FROM LEAVING THE MATERIAL STORAGE AREA. AFTER DEMOBILIZATION, THE MATERIAL STORAGE AREA SHALL BE SEEDED AND MULCHED, AND THE SILT FENCE SHALL REMAIN UNTIL THE AREA IS PERMANENTLY STABILIZED.
- MAXIMUM SLOPE FOR CUT OR FILL IS 2H:1V EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 2.5H:1V.
- ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE TOE OF THE SLOPE.

CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

I CERTIFY THAT THE PERMITEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001, GAR 100002, AND GAR 100003.

THE PROPOSED EROSION AND RUNOFF CONTROL MEASURES ARE IN COMPLIANCE WITH THE COBB COUNTY SEDIMENT CONTROL AND FLOOD PROTECTION REGULATIONS AND WILL NOT INCREASE THE RUNOFF RATE FROM THE SITE FOR RAINSTORMS WITH A RETURN PERIOD OF 2, 5, 10, 25, 50 AND/OR 100 YEARS.

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

03/01/19

RYAN ELLENA, P.E.
LEVEL II CERTIFIED DESIGN PROFESSIONAL # 0000081592
EXP. DATE: 09/15/2020

EROSION CONTROL NOTES

- THE EXISTING AND PROPOSED LAND USE OF THE PROJECT SITE IS EITHER STATE ROUTE RIGHT-OF-WAY, ARTERIAL AND LOCAL COLLECTOR ROADS, WITHIN PROPERTY CURRENTLY OWNED BY THE COBB COUNTY OR IN EASEMENT OWNED BY COBB COUNTY MARIETTA WATER AUTHORITY.
- OWNER/DEVELOPER/PRIMARY PERMITEE: COBB COUNTY MARIETTA WATER AUTHORITY, 1170 ATLANTA INDUSTRIAL DRIVE, MARIETTA, GA 30066
- 24-HOUR CONTACT: CCMWA PROJECT MANAGER CHRIS DILLARD (770) 514-5350
- THIS PROJECT LIES WITHIN DISTRICT 18, LAND LOTS 201, 258, 259, 304-309, 382-388, AND 411-414 IN COBB COUNTY, GEORGIA. THE PROJECT EXTENDS FROM OLD ALABAMA ROAD (LAT: N33.8009, LONG: W84.6183) TO MABLETON PARKWAY (LAT: N33.7933, LONG: W84.5609)
- TOTAL PROJECT AREA: 9.25± ACRES.
- TOTAL DISTURBED AREA: 9.25± ACRES
- EROSION CONTROL PRACTICES SHALL COMPLY WITH THE STANDARDS/SPECIFICATIONS IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO ANY GRADING ON SITE.
- DISTURBED AREAS LEFT IDLE FOR MORE THAN FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION (DS2). MULCH, TEMPORARY VEGETATION OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION IMMEDIATELY UPON COMPLETION.
- WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREAS WITHIN 24 HOURS OF SEEDING.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. PLEASE CALL WITH ENOUGH LEAD-TIME FOR AN INSPECTION TO MEET YOUR SCHEDULE.
- SEDIMENT AND EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE-HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
- EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- MULCH TEMPORARY VEGETATION ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.
- CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AND POSTAL SERVICE THROUGHOUT THE DURATION OF THE PROJECT.
- WHEN PLANTING VEGETATION, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING.
- IN CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER (DOES NOT APPLY TO RETAINING WALLS), AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS. MULCH SHALL BE USED AS A TEMPORARY COVER.
- THE PROFESSIONAL WHO SEALS THIS PLAN CERTIFIES UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATION DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.
- THE USE OF POLYMERS IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONJUNCTION WITH MULCHING AND OR HYDRO SEEDING.
- UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER AND/OR CONTRACTOR, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS RESPONSIBLE FOR INSPECTING THE INSTALLATION OF THE BMP'S WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGIN.
- RECEIVING WATER FOR THIS PROJECT IS SWEETWATER CREEK.

EROSION CONTROL PROJECT NARRATIVE

THE PROPOSED PROJECT CONSISTS OF APPROXIMATELY 20,000 LINEAR FEET OF 36-INCH DUCTILE IRON TRANSMISSION WATER MAIN FROM OLD ALABAMA ROAD ALONG CARDELL ROAD AND SOUTH GORDON ROAD AND CONNECTING TO THE EXISTING WATER MAIN AT MABLETON PARKWAY. THE TOTAL AREA OF THE SITE IS 9.25 ACRES. THE TOTAL DISTURBED AREA IS 9.25 ACRES.

FIVE (5) TYPES OF EROSION CONTROL MEASURES WILL BE UTILIZED IN THE CONSTRUCTION OF THE PROJECT

- SILT FENCE - TYPE SENSITIVE (SD1-S) SHALL BE INSTALLED AT APPROPRIATE LOCATIONS TO PREVENT SEDIMENT FROM BEING WASHED OFF OF THE SITE.
- MULCHING, TEMPORARY AND PERMANENT GRASSING (DS1, DS2 & DS3) SHALL BE USED TO RE-ESTABLISH VEGETATION ON THE DISTURBED AREAS AS CONSTRUCTION PROCEEDS.
- CONSTRUCTION EXITS (CO) WILL BE USED TO PREVENT SEDIMENT FROM LEAVING THE SITE VIA THE TIRES OF TRUCKS AND CONSTRUCTION EQUIPMENT.
- INLET SEDIMENT TRAPS WILL BE INSTALLED TO PREVENT SEDIMENT FROM ESCAPING THROUGH EXISTING STORM DRAIN PIPES LEADING AWAY FROM THE PROJECT SITE.
- HAYBALE AND STONE CHECKDAMS (CD) SHALL BE PLACED IN ROADSIDE DITCHES AND CHANNELS TO PREVENT SEDIMENT FROM BEING WASHED OFF OF THE SITE.

ALL DISTURBED AREAS WILL BE STABILIZED WITH EITHER TEMPORARY OR PERMANENT MEASURES WITHIN 48 HOURS OR PRIOR TO ANY EXPECTED RAINFALL EVENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF A STRONG STAND OF GRASS BEFORE BEING RELEASED FROM HIS CONTRACTUAL OBLIGATIONS. HE WILL BE HELD RESPONSIBLE FOR A PERIOD OF TWELVE MONTHS AFTER ACCEPTANCE OF THE PROJECT TO REPAIR ANY WASHOUT AREAS, ETC.



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
EROSION & SEDIMENT CONTROL
EROSION NOTES & UNIFORM CODE

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CERTIFIED BY: RYAN ELLENA, P.E.
CERTIFICATION NUMBER: 0000081592

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INTRODUCTION

THIS EROSION SEDIMENTATION AND POLLUTION CONTROL PLAN (ESPCP) IS FOR THE PROJECT KNOWN AS THE COBB COUNTY MARIETTA WATER AUTHORITY (CCMWA) WEST SIDE LOOP, SECTION 2, WATER MAIN REPLACEMENT PROJECT LOCATED IN COBB COUNTY, GEORGIA. THE CCMWA IS IN CHARGE OF ADMINISTRATING THE PROJECT. THE PROJECT INVOLVES THE INSTALLATION OF APPROXIMATELY 20,000 LINEAR FEET OF 36-INCH DUCTILE IRON TRANSMISSION WATER MAIN. THE TOTAL AREA OF THE SITE IS 9.25 ACRES. THE TOTAL DISTURBED AREA IS 9.25 ACRES.

THE INTENT OF THIS ESPCP IS TO COMPLY WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NUMBER GAR 100002 (PERMIT) BY PROVIDING BEST MANAGEMENT PRACTICES (BMPs) TO MINIMIZE AND MANAGE STORM WATER DISCHARGE FROM THE CONSTRUCTION SITE.

THE PERMIT AUTHORIZES STORM WATER DISCHARGES TO WATERS OF THE STATE FROM INFRASTRUCTURE CONSTRUCTION ACTIVITIES SUBJECT TO LIMITATIONS, MONITORING REQUIREMENTS AND OTHER CONDITIONS SET FORTH IN THE PERMIT. REQUIREMENTS OF THIS ESPCP ARE INCORPORATED BY REFERENCE INTO THE CONSTRUCTION CONTRACT DOCUMENTS FOR THE PROJECT.

IMPLEMENTATION

THE CONTRACTOR FOR CONSTRUCTION OF THE PROJECT IS CONTRACTUALLY OBLIGATED TO CARRY OUT ALL RESPONSIBILITIES OF THE PERMIT OPERATOR AS DEFINED IN THE PERMIT. THE BMPs AND CONTROL ELEMENTS WILL BE IMPLEMENTED TO COMPLY WITH THOSE RECOMMENDED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION FOUND IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION (MANUAL). THE CONTRACTOR WILL INSTALL, INSPECT, MAINTAIN, AND DOCUMENT THE BMPs AND CONTROL ELEMENTS IN ACCORDANCE WITH THIS DOCUMENT, THE CONTRACT DOCUMENTS AND THE CONSTRUCTION PLANS. GEORGIA LAW STIPULATES THAT ANY INCREASE IN TURBIDITY ABOVE THE STIPULATED AMOUNTS IN THE PERMIT IS A VIOLATION OF THE PERMIT UNLESS THE BMPs HAVE BEEN PROPERLY INSTALLED AND MAINTAINED. VIOLATIONS OF THE PERMIT DESCRIBED IN THE GEORGIA WATER QUALITY CONTROL ACT INCLUDE SIGNIFICANT FINES AND/OR IMPRISONMENT.

CONTROLS

THIS ESPCP CONTAINS THE FOLLOWING BMPs AND CONTROL ELEMENTS:

- EROSION AND SEDIMENT CONTROL BMPs
- CONTROLS FOR OTHER CONSTRUCTION-RELATED POLLUTANTS

TO COMPLY WITH THE PERMIT, BMPs AND CONTROL ELEMENTS DESCRIBED BELOW WILL BE IMPLEMENTED FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROJECT.

EROSION AND SEDIMENT CONTROL BMPs:

EROSION AND SEDIMENT CONTROL BMPs WILL BE USED TO REDUCE EROSION AT LAND-DISTURBING ACTIVITIES AND TO LIMIT THE DEPOSITION OF SEDIMENT ONTO ADJACENT LANDS AND/OR WATERSHEDS.

THE CONTRACTOR WILL IMPLEMENT THE EROSION AND SEDIMENT CONTROL BMPs LISTED BELOW AND THE BMPs SPECIFIED IN THE CONTRACT DOCUMENTS AND CONSTRUCTION PLANS. THE SPECIFIED EROSION AND SEDIMENT CONTROL BMPs ARE DESCRIBED IN THE MANUAL. EXAMPLES OF EROSION AND SEDIMENT CONTROL BMPs THAT WILL BE USED FOR THIS PROJECT INCLUDE, BUT ARE NOT LIMITED TO:

- TEMPORARY SEEDING
- PERMANENT SEEDING
- MULCHING
- SILT FENCE
- HAYBALE CHECKDAMS
- CONSTRUCTION EXITS

THE STANDARD CONFIGURATION AND DEFINITIONS OF ADDITIONAL BMPs CAN BE FOUND ON SHEETS ES-17, ES-19 AND ES-20. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL INCLUDE:

- USING ANIONIC POLYACRYLAMIDE (PAM) AND/OR MULCH TO STABILIZE AREAS LEFT DISTURBED FOR MORE THAN SEVEN (7) CALENDAR DAYS IN ACCORDANCE WITH PART III.D.1 OF THE PERMIT.
- CONDUCT TURBIDITY AND TOTAL SUSPENDED SOLIDS (TSS) SAMPLING AFTER EVERY RAIN EVENT OF 0.5 INCH OR GREATER WITHIN ANY 24 HOUR PERIOD, RECOGNIZING THE EXCEPTIONS SPECIFIED IN PART IV.D.6.d OF THE PERMIT.
- LIMIT THE AMOUNT OF DISTURBED AREA AT ANY ONE TIME TO NO GREATER THAN 25 ACRES OR 50% OF THE TOTAL PLANNED SITE, WHICHEVER IS LESS.
- CERTIFIED PERSONNEL SHALL CONDUCT INSPECTIONS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 25 HOURS OF THE END OF THE STORM THAT IS 0.5 INCHES RAINFALL OR GREATER IN ACCORDANCE WITH PART IV.D.4.a.(2), (a) - (c) OF THE PERMIT.
- USING STAGED CONSTRUCTION TO MINIMIZE THE EXPOSURE TO NATURAL EROSION ELEMENTS; · STABILIZING DISTURBED SOILS WITH GRASS SEEDING AND HAY MULCH DAILY AS CONSTRUCTION OF THE PIPELINE PROGRESSES.

ON A LINEAR AND NARROW INFRASTRUCTURE PROJECT, SUCH AS THE PIPELINES THAT ARE THE SUBJECT OF THIS ESPCP, IT IS DIFFICULT TO PROVIDE BASINS TO STORE SEDIMENT DUE TO THE DRAINAGE PATTERNS CROSSING A 20' TO 30' SWATH. NORMALLY, EROSION IS PREVENTED WITH VEGETATIVE MEASURES AND THEN SILT FENCE IS USED TO PROVIDE STORAGE FOR ANY SEDIMENT RELEASED. THE TYPICAL STORAGE IN SILT FENCE ACCEPTED BY MOST JURISDICTIONS IS 0.2 CY PER LINEAR FOOT OF SILT FENCE.

THE CONTRACTOR WILL IMPLEMENT THE FOLLOWING CONTROLS FOR POTENTIAL CONSTRUCTION-RELATED POLLUTANTS:

- ADEQUATE WASTE CONTAINERS WILL BE PROVIDED AT APPROPRIATE LOCATIONS ON THE PROJECT SITE AWAY FROM STREETS, GUTTERS, WATER COURSES AND STORM DRAINS, AND WILL HAVE PROPER DISPOSAL. WORKERS WILL BE REQUIRED TO UTILIZE WASTE CONTAINERS.
- LIQUID WASTE COLLECTION AREAS SHALL BE LOCATED WITHIN SECONDARY CONTAINMENT STRUCTURES TO MINIMIZE THE RISK OF CONTAMINATED DISCHARGES.
- ALL SANITARY SEWER OR SEPTIC SYSTEM WASTE SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH THE STATE AND/OR LOCAL REGULATIONS.
- CONSTRUCTION MATERIALS STORED AT THE SITE WILL BE MONITORED AND KEPT IN A LOCATION WHERE CONTACT WITH STORM WATER, WELLS, AND ANY OTHER BODY OF WATER CAN BE PREVENTED.
- STORAGE CONTAINERS FOR OIL, FUEL AND OTHER HAZARDOUS SUBSTANCES WILL BE LOCATED IN DESIGNATED AREAS PROTECTED WITH IMPERVIOUS CONTAINMENT BERMS.
- THE CONTRACTOR WILL NOTIFY GEORGIA EPD (404-656-4863) AND THE NATIONAL RESPONSE CENTER (NRC) (800-424-8802) UPON AWARENESS OF A RELEASE CONTAINING A HAZARDOUS SUBSTANCE OR OIL IN AN AMOUNT EQUAL TO OR GREATER THAN A REPORTING QUANTITY ESTABLISHED UNDER THE GEORGIA OIL OR HAZARDOUS MATERIAL SPILL OR RELEASE ACT (O.C.G.A. 12-14-2, ET SEQ.), 40 CFR 117 AND 40 CFR 302, AS SOON AS THE CONTRACTOR HAS KNOWLEDGE OF THE DISCHARGE.
- DISCHARGE OF CONSTRUCTION MATERIALS INTO ANY BODY OF WATER WILL BE PREVENTED.
- ANY SPILL WILL BE CLEANED UP IMMEDIATELY. · WHEN WASHING VEHICLES BEFORE THEY LEAVE THE SITE, ANY HAZARDOUS SUBSTANCES THAT HAVE BEEN IN CONTACT WITH THE CONSTRUCTION VEHICLES WILL NOT BE WASHED INTO ANY STREAMS, LAKES, WELLS, ETC.
- THERE IS NO CONCRETE WORK ANTICIPATED FOR THIS PROJECT.

AMMENDMENTS/REVISIONS TO THE ES & PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

INSPECTIONS

EACH EROSION AND SEDIMENT CONTROL AND STORM WATER MANAGEMENT DEVICE WILL BE INSPECTED IN ACCORDANCE WITH THIS ESPCP, CONTRACT DOCUMENTS AND CONSTRUCTION PLANS. ALL INSPECTIONS REQUIRED BY THIS ESPCP SHALL BE CONDUCTED BY QUALIFIED PERSONNEL, AS DEFINED BY THE PERMIT. FOR THIS PROJECT THE CONTRACTOR IS OBLIGATED, BY AGREEMENT WITH THE OWNER, TO PROVIDE QUALIFIED PERSONNEL FOR ALL INSPECTIONS.

REQUIREMENTS FOR INSPECTION AND MAINTENANCE INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING; AND (C) MEASURE RAINFALL ONCE EACH 24-HOUR PERIOD AT THE SITE. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
2. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCH OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NONWORKING SATURDAY, NONWORKING SUNDAY, OR ANY NONWORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.a.(3). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
3. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS RECEIVED BY THE EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
4. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
5. A REPORT OF EACH INSPECTION THAT INCLUDES NAME(S) OF PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.a.(4). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT.

MAINTENANCE

THE CONTRACTOR WILL IMPLEMENT ROUTINE MAINTENANCE PROCEDURES, SUCH AS REMOVING SILT AT SILT BARRIERS WHEN THE ACCUMULATION REACHES FIFTY PERCENT OF CAPACITY, TO ENSURE THAT THE BMPs WILL FUNCTION AS INTENDED THROUGHOUT THE DURATION OF THE PROJECT. WITHIN 48 HOURS FOLLOWING EACH INSPECTION, ANY REQUIRED MAINTENANCE MUST BE COMPLETED. MAINTENANCE OF EACH EROSION AND SEDIMENT CONTROL DEVICE WILL BE PERFORMED THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL FINAL STABILIZATION IS ACHIEVED.

SAMPLING REQUIREMENTS

THE PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THE PERMIT.

RECEIVING WATER SAMPLES AND STORM WATER DISCHARGE SAMPLES WILL BE COLLECTED BY GRAB SAMPLES AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES SPECIFIED BY THE PERMIT. THE FREQUENCY OF SAMPLING WILL BE AS DESCRIBED IN THE FOLLOWING SECTION. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED BELOW WILL BE REPORTED TO THE EPD.

1. SAMPLE CONTAINERS WILL BE LABELED BEFORE COLLECTING SAMPLES.
2. SAMPLES WILL BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
3. CLEAN GLASS OR PLASTIC JARS WITH LARGE MOUTHS WILL BE USED TO COLLECT SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.
4. MANUAL, AUTOMATIC OR RINSING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THE PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
5. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALL BEYOND THE MINIMUM FREQUENCY STATED IN THE PERMIT MUST BE REPORTED TO EPD.

SAMPLING POINTS

THE CONTRACTOR WILL SAMPLE UNNAMED TRIBUTARIES AND CREEKS AT THE LOCATIONS LISTED BELOW. THE PLAN SHEETS WITHIN THESE CONSTRUCTION PLANS SHOW THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED, AND THE SAMPLING LOCATIONS FOR EACH REPRESENTATIVE STORM WATER OUTFALL.

· SAMPLE LOCATION 1 - AT THE CENTERLINE OF PINE CREEK
UPSTREAM SAMPLE LOCATION (NORTH OF CARDELL ROAD): LATITUDE = N33.7982, LONGITUDE = W84.6131
DOWNSTREAM SAMPLE LOCATION (SOUTH OF CARDELL ROAD): LATITUDE = N33.7963 LONGITUDE = W84.6159

· SAMPLE LOCATION 1 - AT THE CENTERLINE OF GORDON CREEK
UPSTREAM SAMPLE LOCATION (NORTH OF SOUTH GORDON ROAD): LATITUDE = N33.7938, LONGITUDE = W84.5865
DOWNSTREAM SAMPLE LOCATION (SOUTH OF SOUTH GORDON ROAD): LATITUDE = N33.7924 LONGITUDE = W84.5886

IT SHOULD BE NOTED THAT ALL OF THE ABOVE SAMPLING LOCATIONS MAY NOT BE ACTIVE AT ALL TIMES DURING CONSTRUCTION OF THE PIPELINE. A SAMPLING LOCATION WILL BE ACTIVE FROM THE TIME CONSTRUCTION ACTIVITY STARTS IN THE WATERSHED THAT FEEDS THE SAMPLING LOCATION UNTIL FINAL STABILIZATION IS ACHIEVED IN THAT WATERSHED. THE TIMING OF THE CONSTRUCTION ACTIVITY WITHIN A WATERSHED DEPENDS ON CONSTRUCTION STAGING. HOWEVER, CONSTRUCTION STAGING HAS NOT YET BEEN DETERMINED. THE CONTRACTOR MAY STAGE THE CONSTRUCTION SO THAT 1) CONSTRUCTION BEGINS AT ONE END OF THE PROJECT AND PROGRESSES SYSTEMATICALLY TO THE OTHER END; 2) CONSTRUCTION BEGINS AT BOTH ENDS OF THE PROJECT AND PROGRESSES TO A COMMON MEETING POINT; OR 3) MULTIPLE CREWS BEGIN CONSTRUCTION AT DIFFERENT SECTIONS OF THE PROJECT AND EVENTUALLY LINK UP WITH EACH OTHER.

MANUAL SAMPLING

- SAMPLING WILL BEGIN AT THE DESIGNATED REPRESENTATIVE RECEIVING WATER(S) AT THE DOWNSTREAM LOCATION. THIS SAMPLE WILL BE TAKEN AT THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PROJECT. FOR LARGE STREAMS WHERE VARIATIONS IN COLOR ARE VISIBLE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES MAY BE USED FOR THE DOWNSTREAM VALUE.
- UPSTREAM SAMPLES WILL BE TAKEN AFTER DOWNSTREAM SAMPLES HAVE BEEN ACQUIRED. THE UPSTREAM SAMPLE WILL BE TAKEN AT THE DISCHARGE FARTHEST UPSTREAM AT THE SITE BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PROJECT. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES MAY BE USED FOR THE UPSTREAM VALUE.
- THE SAMPLES WILL BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
- CARE WILL BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
- THE SAMPLING CONTAINER WILL BE HELD SO THAT THE OPENING FACES UPSTREAM.
- THE SAMPLES WILL BE KEPT FREE OF FLOATING DEBRIS.
- ONCE THE SAMPLE JAR OR BOTTLE IS FULL AND CAPPED, IT WILL BE TRANSPORTED TO THE LOCATION WHERE THE TURBIDITY TESTING WILL BE CONDUCTED. ALL TURBIDITY TESTS WILL BE CONDUCTED IMMEDIATELY, BUT NO LATER THAN 48 HOURS AFTER THE TIME THE SAMPLE WAS OBTAINED.

SAMPLING FREQUENCY

THE CONTRACTOR MUST SAMPLE IN ACCORDANCE WITH THIS ES&PCP AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW:

- a. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS* (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM, EXCLUDING ALL NONWORKING FEDERAL HOLIDAYS, WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION;
- b. IN ADDITION TO ITEM A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS* THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION, WHICHEVER COMES FIRST;
- c. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO ITEMS A) AND B) ABOVE, IF BMPs ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED, AND MAINTAINED, NO FURTHER ACTION IS REQUIRED. IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED, AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED, AND MAINTAINED.
- d. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT THAT HAVE MET THE SAMPLING REQUIRED BY (a) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (b). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (b) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (c) ABOVE.

*NOTE THAT THE CONTRACTOR MAY CHOOSE TO MEET THE REQUIREMENTS OF A) AND B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING AT ANY TIME OF THE DAY OR WEEK.

RAINFALL DATA

MEASUREMENT OF RAINFALL DATA WILL BE RECORDED DAILY (ONCE DURING EACH 24-HOUR PERIOD) AT THE DOWNSTREAM MONITORING POINT FOR EACH ACTIVE CONSTRUCTION STAGE IN WHICH STREAM MONITORING IS UTILIZED AND NEAR THE CENTER OF EACH ACTIVE CONSTRUCTION STAGE IN WHICH OUTFALL MONITORING IS UTILIZED. THE CONTRACTOR WILL ESTABLISH A RAIN GAUGE ON EACH ACTIVE CONSTRUCTION STAGE FOR THIS PURPOSE. FURTHERMORE, THE CONTRACTOR WILL COLLECT AND RECORD THE RAINFALL DATA ON THE DAILY RAINFALL MONITORING DATA FORM.

TESTING

THE CONTRACTOR WILL EMPLOY QUALIFIED PERSONNEL WHO SHALL GATHER SAMPLES OF STORM WATER AS OUTLINED IN THE PERMIT PART IV, D.5 AND AS FURTHER DEFINED IN THIS ESPCP. THE CONTRACTOR WILL HAVE THE TURBIDITY OF EACH SAMPLE TESTED BY A QUALIFIED TESTING LABORATORY.

ALL TURBIDITY TESTS WILL BE CONDUCTED IN ACCORDANCE WITH 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001 AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

NTU LIMIT RATIONAL

THE CONTRACTOR SHALL SAMPLE THE RECEIVING STREAM BOTH UPSTREAM OF THE PROJECT AREA AND DOWNSTREAM OF THE PROJECT AREA. THE TOTAL INCREASE IN TURBIDITY FROM SAMPLE LOCATIONS UPSTREAM AND DOWNSTREAM OF THE CONSTRUCTION SITE SHALL NOT EXCEED 25 NTU.

REPORTING

THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE MONITORING RESULTS TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE LIST IN APPENDIX A OF THE PERMIT BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THE PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, THE EPD MAY REQUIRE THE CONTRACTOR TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G OF THE PERMIT. SAMPLING REPORTS MUST BE SUBMITTED TO THE EPD UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI OF THE PERMIT.

IN ADDITION TO OTHER RECORD-KEEPING REQUIREMENTS, THE MONITORING INFORMATION SHALL INCLUDE:

- a. THE DATE, EXACT PLACE, AND TIME OF SAMPLING OR MEASUREMENTS;
 - b. THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
 - c. THE DATE(S) ANALYSES WERE PERFORMED;
 - d. THE TIME(S) ANALYSES WERE INITIATED;
 - e. THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE ANALYSES;
 - f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
 - g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS; AND
 - h. RESULTS THAT EXCEED 1,000 NTU SHALL BE REPORTED AS "EXCEEDS 1,000 NTU."
- THE CONTRACTOR MUST RETAIN COPIES OF ALL MONITORING RESULTS AND SHALL PROVIDE THE OWNER WITH COPIES OF ALL MONITORING RESULTS.

RETENTION OF RECORDS

THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI:

- a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
 - b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
 - c. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
 - d. A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
 - e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.a. OF THIS PERMIT;
 - f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
 - g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.a.(1)(c) OF THIS PERMIT.
- COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOTICE IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

REPORT SUBMITTAL

ALL WRITTEN CORRESPONDENCE REQUIRED BY THE PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THE PERMIT.

COPIES OF THE DATA SENT TO GEORGIA EPD, INCLUDING THE RETURN RECEIPTS, WILL BE PROVIDED TO THE OWNER AND THE ENGINEER ON A MONTHLY BASIS.



03/01/19



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COBB COUNTY-MARIETTA WATER AUTHORITY

WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT

EROSION & SEDIMENT CONTROL

EROSION NOTES

REV	DATE	BY	ISSUE	FILE NAME	
				DATE	ISSUE

SHEET
ES-18
SEQ.
63

CERTIFIED BY: RYAN ELLENA, P.E.
CERTIFICATION NUMBER: 000081592

ACAD Ref: 23.0s (LMS Tech)
Filename: n:\WU\Drawings\ES-ALL-CHECKLIST.dwg
Last Saved: 3/1/2019 2:47 PM. Saved By: D2618

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: REGION 1

Project Name: CCMWA WSL 2 36" WM Replacement **Address:** 1431 S Gordon Rd, Austell, GA, 30168
City/County: Cobb County **Date on Plans:** February 2019
Name & email of person filling out checklist: Ryan Ellena; ryan.ellena@freese.com

Plan # Included

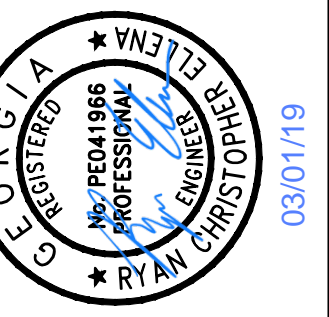
TO BE SHOWN ON ES&PC PLAN

- | | | |
|--------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Page # | Y/N | |
| ES-18 | <input checked="" type="checkbox"/> | 1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed) |
| ALL ES | <input checked="" type="checkbox"/> | 2 Level II certification number issued by the Commission, signature and seal of the certified design professional.
(Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed) |
| ES-17 | <input checked="" type="checkbox"/> | 3 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls. |
| ES-17 | <input checked="" type="checkbox"/> | 4 Provide the name, address, email address, and phone number of primary permittee. |
| ES-17 | <input checked="" type="checkbox"/> | 5 Note total and disturbed acreage of the project or phase under construction. |
| ES-17 | <input checked="" type="checkbox"/> | 6 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees. |
| ALL ES | <input checked="" type="checkbox"/> | 7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions. |
| ES-17 | <input checked="" type="checkbox"/> | 8 Description of the nature of construction activity. |
| COVR | <input checked="" type="checkbox"/> | 9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary. |
| ES-18 | <input checked="" type="checkbox"/> | 10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected. |
| ES-17 | <input checked="" type="checkbox"/> | 11 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 21 of the permit. |
| ES-17 | <input checked="" type="checkbox"/> | 12 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 20 of the permit.* |
| ES-17 | <input checked="" type="checkbox"/> | 13 Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on Part IV D.6.c.(3) page 37 of the permit as applicable.* |
| ES-18 | <input checked="" type="checkbox"/> | 14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins within 7 days after installation," in accordance with Part IV A.5 page 26 of the permit.* |
| ES-17 | <input checked="" type="checkbox"/> | 15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of waded vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits." |
| | <input type="checkbox"/> | 16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required. |
| ES-18 | <input checked="" type="checkbox"/> | 17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." |
| ES-18 | <input checked="" type="checkbox"/> | 18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." |

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|--------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ES-17 | <input checked="" type="checkbox"/> | 19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities." |
| ES-17 | <input checked="" type="checkbox"/> | 20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source." |
| ES-17 | <input checked="" type="checkbox"/> | 21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding." |
| | <input type="checkbox"/> | 22 Any construction activity which discharges storm water into an Impaired Stream Segment or within 1 linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.* |
| | <input type="checkbox"/> | 23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.* |
| ES-17 | <input checked="" type="checkbox"/> | 24 BMPs for concrete washdown of boots, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.* |
| ES-18 | <input checked="" type="checkbox"/> | 25 Provide BMPs for the remediation of all petroleum spills and leaks. |
| ES-18 | <input checked="" type="checkbox"/> | 26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.* |
| ES-18 | <input checked="" type="checkbox"/> | 27 Description of practices to provide cover for building materials and building products on site.* |
| ES-18 | <input checked="" type="checkbox"/> | 28 Description of the practices that will be used to reduce the pollutants in storm water discharges.* |
| ES-20 | <input checked="" type="checkbox"/> | 29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization). |
| ES-18 | <input checked="" type="checkbox"/> | 30 Provide complete requirements of inspections and record keeping by the primary permittee.* |
| ES-18 | <input checked="" type="checkbox"/> | 31 Provide complete requirements of sampling frequency and reporting of sampling results.* |
| ES-18 | <input checked="" type="checkbox"/> | 32 Provide complete details for retention of records as per Part IV.F. of the permit.* |
| ES-18 | <input checked="" type="checkbox"/> | 33 Description of analytical methods to be used to collect and analyze the samples from each location.* |
| ES-18 | <input checked="" type="checkbox"/> | 34 Appendix B rationale for NTU values at all outfall sampling points where applicable.* |
| ES-20 | <input checked="" type="checkbox"/> | 35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable.* |
| ES-17 | <input checked="" type="checkbox"/> | 36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase.* |
| ALL ES | <input checked="" type="checkbox"/> | 37 Graphic scale and North arrow. |
| ALL ES | <input checked="" type="checkbox"/> | 38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: |
- | | |
|-------------------|-------------------------------------|
| Existing Contours | USGS 1": 2000' Topographical Sheets |
| Proposed Contours | 1": 400' Centerline Profile |

- | | | | |
|--------|-------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <input type="checkbox"/> | N/A | 39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org. |
| | <input type="checkbox"/> | N/A | 40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.* |
| ES-20 | <input checked="" type="checkbox"/> | Y | 41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. |
| ES-20 | <input checked="" type="checkbox"/> | Y | 42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site. |
| ES-17 | <input checked="" type="checkbox"/> | Y | 43 Delineation and acreage of contributing drainage basins on the project site. |
| ES-20 | <input checked="" type="checkbox"/> | Y | 44 Delineate on-site drainage and off-site watersheds using USGS 1": 2000' topographical sheets. |
| | <input type="checkbox"/> | N/A | 45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. |
| | <input type="checkbox"/> | N/A | 46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. |
| ALL ES | <input checked="" type="checkbox"/> | Y | 47 Soil series for the project site and their delineation. |
| | <input type="checkbox"/> | N/A | 48 The limits of disturbance for each phase of construction. |
| ES-17 | <input checked="" type="checkbox"/> | Y | 49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. |
| ALL ES | <input checked="" type="checkbox"/> | Y | 50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend. |
| ES-21 | <input checked="" type="checkbox"/> | Y | 51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia. |
| ES-20 | <input checked="" type="checkbox"/> | Y | 52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia. |
- *If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 feet of a perennial stream the * checklist items would be N/A.

Effective January 1, 2019



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COBB COUNTY-MARIETTA WATER AUTHORITY
WEST SIDE LOOP SECTION 2
36-INCH WATER MAIN REPLACEMENT
 EROSION & SEDIMENT CONTROL
CHECKLIST

PERM JOB NO.	CBR18213
DATE	3/1/19
DESIGNED	JLU
DRAWN	CKM
REVISED	
CHECKED	JCS
FILE NAME	ES-ALL-CHECKLIST.dwg
ISSUE	
NO.	
BY	
DATE	
VERIFY SCALE	1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	

CERTIFIED BY: RYAN ELLENA, P.E.
CERTIFICATION NUMBER: 000081592

