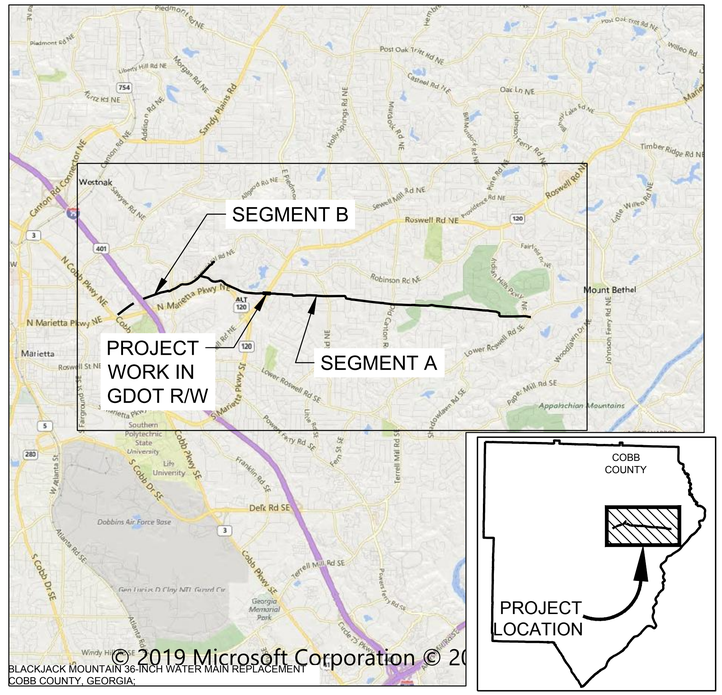
CONSTRUCTION PLANS FOR:

COBB COUNTY-MARIETTA WATER AUTHORITY

SPR-2020-00022

ISSUED FOR BID

COBB COUNTY-MARIETTA WATER AUTHORITY
REGIONAL WATER RESOURCE MANAGEMENT



BLACKJACK MOUNTAIN 36-INCH WATER MAIN REPLACEMENT
COBB COUNTY, GEORGIA;

PROJECT LOCATION MAP

PROJECT:

BLACKJACK MOUNTAIN 36-INCH PIPELINE REPLACEMENT

505-9005-30-19-0000

DISTURBED AREA: 36.1 AC.

PROJECT BID DATE: 04/28/2020
PROJECT COMPLETION DATE: XX/XX/XXXX
CONTRACTOR:
CONTRACTOR'S SUPERINTENDENT:
ENGINEER'S FIELD REP.:
CCMWA PROJECT MANAGER: JACOB WILSON

GEORGIA REGISTERED No. PE041[illegible] PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLEM
GEORGIA REGISTERED PROFESSIONAL ENGINEER CARLETON SHERRER 3/12/20
3/12/20

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
0	ISSUED FOR BID	RCE	3/12/2020

CONSULTING ENGINEER:

FREESE AND NICHOLS

Phone: (404) 334-4310

MARCH 2020

24 HOUR CONTACT:

JACOB WILSON, PE
(678) 372-8158

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

GENERAL INFORMATION

1. OWNER:
   COBB COUNTY-MARIETTA WATER AUTHORITY
   1170 ATLANTA INDUSTRIAL DRIVE
   MARIETTA, GEORGIA 30066
   (770) 514-5300
2. THE COBB COUNTY-MARIETTA WATER AUTHORITY 24-HOUR TELEPHONE NUMBER IS (770) 514-5350.
3. ENGINEER:
   FREESE & NICHOLS, INC.
   360 INTERSTATE NORTH PARKWAY, SUITE 250
   ATLANTA, GEORGIA 30339
   (404) 334-4310
4. THE CONTRACTOR SHALL GIVE A 24-HOUR EMERGENCY TELEPHONE NUMBER AND NAME OF PERSON TO CONTACT IN AN EMERGENCY.
5. ALL CONSTRUCTION AND MATERIALS SHALL BE TO COBB COUNTY-MARIETTA WATER AUTHORITY STANDARDS.
6. THE CONSTRUCTION EASEMENT REPRESENTS THE LIMITS OF CLEARING FOR THE COMPLETE JOB. THE CONTRACTOR SHALL NOT CLEAR BEYOND THIS LIMIT.
7. 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.
8. AS-BUILTS ARE REQUIRED TO BE SUBMITTED UPON COMPLETION OF CONSTRUCTION.
9. 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.
10. 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

1. 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.
2. 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.
3. 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

1. 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.
2. 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.
3. ALL CONSTRUCTION TRAILERS ARE TO BE PERMITTED THROUGH THE PLANNING AND ZONING DEPARTMENT.
4. ALL SIGNS ON THIS PROJECT ARE TO BE PERMITTED THROUGH CODE ENFORCEMENT/SIGN DIVISION.
5. 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.
6. 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.
7. 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".
8. 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.
9. COBB COUNTY ACCEPTS NO RESPONSIBILITY FOR THE AMERICANS WITH DISABILITIES ACT (ADA), EXCEPT FOR NOTIFICATION REQUIREMENT.
10. ALL CONSTRUCTION TO CONFORM TO APPLICABLE COBB COUNTY DOT SPECIFICATIONS AND IN ACCORDANCE WITH COBB COUNTY ORDINANCES.

WORKMANSHIP

1. 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.
2. CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IN THE RIGHT-OF-WAY AT ANY TIME OTHER THAN WORK HOURS; UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM COBB COUNTY DOT.
3. CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IN AREAS WHICH RESTRICT SIGHT DISTANCE AT ANY TIME.
4. ROADWAYS ARE TO BE KEPT FREE OF DIRT, MUD, AND OTHER DEBRIS AT ALL TIMES.
5. 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.
6. CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AND POSTAL SERVICE THROUGHOUT THE DURATION OF THE PROJECT.
7. THE CONTRACTOR SHALL INSTALL TREE PROTECTION DEVICES AT THE SAME TIME AS EROSION CONTROL DEVICES.
8. 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.
9. CONTRACTOR IS RESPONSIBLE FOR REPLACING AND MATCHING TO ORIGINAL CONDITION ANY PERMANENT OR TEMPORARY GRASSING THAT HAS BEEN DESTROYED OR REMOVED DUE TO INSTALLATION OF THE WATER MAIN. ALL OTHER LANDSCAPING ITEMS (SOD, PAVERS, BRICK, LANDSCAPING, ETC) DESTROYED OR REMOVED DUE TO CONSTRUCTION OF THE WATER MAIN WILL BE REIMBURSED TO THE PROPERTY OWNER BY CCMWA.
10. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY STORM DRAINAGE INFRASTRUCTURE DAMAGED OR DISTURBED DURING THE CONSTRUCTION PROCESS.

PIPELINE CONSTRUCTION

1. 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 AND MARIETTA WATER.
2. 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.
3. 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.
4. ALL PIPES, FITTINGS, VALVES, AND RESTRAINT SYSTEMS SHALL BE ABLE TO WITHSTAND A FIELD TEST PRESSURE AS SHOWN ON SHEET G-6 AND G-7.
5. ALL PIPE JOINTS TO HAVE DOUBLE BONDING CABLES. (SEE SHEET D-4 FOR DETAIL).
6. 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).
7. 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.
8. EXISTING CCMWA 30" PCCP WATER MAIN TO BE REMOVED UNLESS INDICATED OTHERWISE. ENDS TO BE PLUGGED (SEE SHEET D-7 FOR DETAIL).

SITE INFORMATION

1. THE TOTAL ACREAGE IMPACT OF THIS PROJECT IS 36.1 AC.
2. THERE WILL BE NO PERMANENT EFFECTS CAUSED BY THIS PROJECT, WHICH WOULD RESULT IN THE POTENTIAL OF DOWNSTREAM FLOOD HAZARDS.
3. ZONING REGULATIONS OBTAINED FROM COBB PLANNING AND ZONING INDICATE THAT THE PROJECT WILL BE LOCATED IN R, GC, NS AND V ZONED AREAS.
4. 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

1. LANE CLOSURES WILL BE PERMITTED DURING THE TYPICAL HOURS, 9:00 A.M. TO 4:00 P.M., MONDAY THROUGH FRIDAY. SPECIAL CONSIDERATION MAY BE GIVEN DEPENDING ON SPECIFIC CIRCUMSTANCES TO EXTEND THESE HOURS DURING THE WEEKDAY OR TO WEEKEND DAYS. ADEQUATE JUSTIFICATION IS REQUIRED FOR EACH VARIANCE REQUEST AND SHOULD NOT BE EXPECTED FOR THE DURATION OF THE PROJECT.

2. NO WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 9:00 P.M. AND 7:00 A.M., MONDAY THROUGH SATURDAY, UNLESS SPECIFICALLY AUTHORIZED BY THE COBB COUNTY DOT DIRECTOR OR DEPUTY DIRECTOR. CONTRACTOR SHALL ADHERE TO THE COBB COUNTY NOISE ORDINANCE WHICH PROHIBITS LOUD OR UNUSUAL NOISE BETWEEN THE HOURS OF 9:00 P.M. AND 7:00 A.M.

3. NO ROAD OR INTERSECTION CLOSURES WILL BE PERMITTED ALONG COBB COUNTY MAJOR THOROUGHFARE PLAN ROADWAYS (CLASSIFIED AS ARTERIAL OR COLLECTOR), EXCEPT FOR THE LOCATIONS DESCRIBED BELOW. WHERE REFERENCED, SUMMER 2021 AND SUMMER 2022 DATES ARE SPECIFICALLY 6/1/2021 – 7/31/2021 AND 5/31/2022 – 7/31/2022, RESPECTIVELY.
   A. BARNES MILL RD, FROM MERRITT RD TO EAST PROJECT LIMITS (EAST OF BENTLEY LAKE RD): RESTRICTED TO SUMMER DATES; DETOUR ROUTE INCLUDES WALLACE RD, N MARIETTA PKWY, ROSWELL RD; DETOUR SIGN PLAN MUST BE DEVELOPED IN ACCORDANCE WITH MUTCD REQUIREMENTS AND IS SUBJECT TO REVIEW/APPROVAL BY COBB DOT AND GDOT; CCDOT ROAD CLOSURE PERMIT MUST BE SUBMITTED NO LATER THAN 3 WEEKS BEFORE PROPOSED ROAD CLOSURE IS TO BEGIN, WITH ADDITIONAL TIME RECOMMENDED FOR GDOT REVIEW OF SIGN PLAN.
   B. OLD CANTON RD, SOUTH OF CLEARBROOK DR: RESTRICTED TO WEEKEND CLOSURE BETWEEN 7PM FRIDAY AND 6AM MONDAY, WITHIN SUMMER DATES; DETOUR ROUTE INCLUDES LOWER ROSWELL RD, JOHNSON FERRY RD, ROSWELL RD; DETOUR SIGN PLAN MUST BE DEVELOPED IN ACCORDANCE WITH MUTCD REQUIREMENTS AND IS SUBJECT TO REVIEW/APPROVAL BY COBB DOT AND GDOT; CCDOT ROAD CLOSURE PERMIT MUST BE SUBMITTED NO LATER THAN 3 WEEKS BEFORE PROPOSED ROAD CLOSURE IS TO BEGIN, WITH ADDITIONAL TIME RECOMMENDED FOR GDOT REVIEW OF SIGN PLAN.
   C. HOLT RD, SOUTH OF MONTCLAIR PARK LN: RESTRICTED TO WEEKEND CLOSURE BETWEEN 7PM FRIDAY AND 6AM MONDAY, WITHIN SUMMER DATES; DETOUR ROUTE INCLUDES LOWER ROSWELL RD, OLD CANTON RD, ROBINSON RD; DETOUR SIGN PLAN MUST BE DEVELOPED IN ACCORDANCE WITH MUTCD REQUIREMENTS AND IS SUBJECT TO REVIEW/APPROVAL BY COBB DOT, WHICH MAY ALSO INCLUDE COORDINATION WITH COBB COUNTY SCHOOL DISTRICT (CCSD) / WHEELER HIGH SCHOOL; CCDOT ROAD CLOSURE PERMIT MUST BE SUBMITTED NO LATER THAN 3 WEEKS BEFORE PROPOSED ROAD CLOSURE IS TO BEGIN, WITH ADVANCED NOTIFICATION OF PROPOSED DATE(S) FOR CCSD COORDINATION PROVIDED NO LATER THAN 2 MONTHS BEFORE SUBMITTAL.
   D. RIDGEWATER DR, NORTH OF INDIAN HILLS DR: RESTRICTED TO SUMMER DATES; DETOUR ROUTE IS INDIAN HILLS DR, PINEHURST LN, LOWER ROSWELL RD, INDIAN HILLS PKWY, CLUBLAND DR; DETOUR SIGN PLAN MUST BE DEVELOPED IN ACCORDANCE WITH MUTCD REQUIREMENTS AND IS SUBJECT TO REVIEW/APPROVAL BY COBB DOT; CCDOT ROAD CLOSURE PERMIT MUST BE SUBMITTED NO LATER THAN 3 WEEKS BEFORE PROPOSED ROAD CLOSURE IS TO BEGIN
   E. CLUBLAND DR, NORTH OF CLUBWOOD TRL: RESTRICTED TO SUMMER DATES; DETOUR ROUTE IS INDIAN HILLS PKWY; DETOUR SIGN PLAN MUST BE DEVELOPED IN ACCORDANCE WITH MUTCD REQUIREMENTS AND IS SUBJECT TO REVIEW/APPROVAL BY COBB DOT; CCDOT ROAD CLOSURE PERMIT MUST BE SUBMITTED NO LATER THAN 3 WEEKS BEFORE PROPOSED ROAD CLOSURE IS TO BEGIN

4. ROAD CLOSURES ARE PERMITTED ALONG NON-THOROUGHFARE PLAN ROADWAYS (CLASSIFIED AS LOCAL), WITH APPROPRIATE DETOUR SIGN PLAN (IN ACCORDANCE WITH MUTCD FOR LOW-VOLUME ROADWAYS) AND ROAD CLOSURE PERMIT SUBMITTED NO LATER THAN 3 WEEKS BEFORE PROPOSED ROAD CLOSURE IS TO BEGIN.

5. FOR ALL ROAD CLOSURES, COORDINATION WITH AFFECTED PROPERTY OWNERS IS REQUIRED BEFORE AND THROUGHOUT CLOSURE TO PROVIDE UNINTERRUPTED ACCESS TO AND FROM AFFECTED PROPERTIES. IN PARTICULAR, THIS IS REQUIRED DAILY ALONG BARNES MILL RD AS THE LOCATION OF THE CLOSURE CHANGES.

6. REFER TO CCDOT ROAD CLOSURE PERMIT AND DETOUR GENERAL NOTES FOR ADDITIONAL ROAD CLOSURE REQUIREMENTS.

7. WEEKLY COORDINATION WITH CCDOT TMC IS REQUIRED THROUGHOUT THE PROJECT, WITH MORE FREQUENT COMMUNICATION NEEDED FOR ROAD CLOSURES, PARTICULARLY ALONG BARNES MILL RD. THE PURPOSE OF THIS COMMUNICATION WILL BE TO PROVIDE REGULAR UPDATES TO CCDOT ON LOCATION(S) OF IMPACTS WITHIN AND/OR NEAR THE ROADWAY, WHICH ARE USED TO NOTIFY EMERGENCY PERSONNEL, SCHOOL CONTACTS, AND OTHERS.

8. 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 ⅄" PER LF (2%, PER ADA).
   - A GEORGIA DEPARTMENT OF TRANSPORTATION (GDOT) PERMIT IS REQUIRED. APPROVAL OF WORK WITHIN OR ADJACENT TO GDOT RIGHT-OF-WAY IS DEFERRED TO GDOT, 770-216-3893 OR 3891, CHAMBLEE PERMITTING OFFICE.
   - THE CONTRACTOR SHALL CONTACT THE COBB DOT, OPERATIONS DISTRICT SUPERINTENDENT, AT 528-1600 PRIOR TO ANY DISTURBANCE WITHIN 50' OF ANY STRUCTURE TO SCHEDULE A PRECONSTRUCTION MEETING. THE CONTRACTOR SHALL IMPLEMENT ANY RECOMMENDATIONS AND MODIFICATIONS MADE BY COBB DOT TO MINIMIZE IMPACT OR DAMAGE AS A RESULT OF THIS INSTALLATION. THIS REQUIREMENT SHALL BE STRICTLY MAINTAINED.
   - PLANS ARE SUBJECT TO THE REVIEW AND APPROVAL FROM THE CITY OF MARIETTA.

DRAWING INDEX

SHEET #	SHEET TITLE	SEQ.
	GENERAL	
--	COVER	--
G-1	INDEX AND GENERAL NOTES	1
G-2	ABREVIATIONS, SYMBOLS, AND LEGEND	2
G-3	SEGMENT A - KEY MAP AND SURVEY CONTROL I	3
G-4	SEGMENT A - KEY MAP AND SURVEY CONTROL II	4
G-5	SEGMENT B - KEY MAP AND SURVEY CONTROL	5
G-6	SEGMENT A - HYDRAULIC GRADE LINE	6
G-7	SEGMENT B - HYDRAULIC GRADE LINE	7
G-8	EASEMENT DATA	8
G-9	EASEMENT DATA	9
	CIVIL	
C-1	SEGMENT A - STA START TO STA 12+50	10
C-2	SEGMENT A - STA 12+50 TO STA 25+00	11
C-3	SEGMENT A - STA 25+00 TO STA 37+50	12
C-4	SEGMENT A - STA 37+50 TO STA 50+00	13
C-5	SEGMENT A - STA 50+00 TO STA 62+50	14
C-6	SEGMENT A - STA 62+50 TO STA 75+00	15
C-7	SEGMENT A - STA 75+00 TO STA 87+50	16
C-8	SEGMENT A - STA 87+50 TO STA 100+00	17
C-9	SEGMENT A - STA 100+00 TO STA 113+00	18
C-10	SEGMENT A - STA 113+00 TO STA 125+00	19
C-11	SEGMENT A - STA 125+00 TO STA 137+50	20
C-12	SEGMENT A - STA 137+50 TO STA 150+00	21
C-13	SEGMENT A - STA 150+00 TO STA 162+50	22
C-14	SEGMENT A - STA 162+50 TO STA 175+00	23
C-15	SEGMENT A - STA 175+00 TO STA 187+50	24
C-16	SEGMENT A - STA 187+50 TO STA 200+00	25
C-17	SEGMENT A - STA 200+00 TO STA 212+50	26
C-18	SEGMENT A - STA 212+50 TO STA 225+00	27
C-19	SEGMENT A - STA 225+00 TO STA 236+50	28
C-20	SEGMENT A - STA 236+50 TO END	29
C-21	SEGMENT B - STA 1+00 TO STA 12+00	30
C-22	SEGMENT B - STA 12+00 TO STA 25+00	31
C-23	SEGMENT B - STA 25+00 TO STA 35+50	32
C-24	SEGMENT B - STA 35+50 TO STA 48+00	33
C-25	SEGMENT B - STA 48+00 TO STA 60+50	34
C-26	SEGMENT B - STA 60+50 TO STA 73+00	35
C-27	SEGMENT B - STA 73+00 TO END	36
	CONNECTION DETAILS	
CD-1	CONNECTION DETAILS I	37
CD-2	CONNECTION DETAILS II	38
CD-3	CONNECTION DETAILS III	39
CD-4	CONNECTION DETAILS IV	40
CD-5	CONNECTION DETAILS V	41
CD-6	CONNECTION DETAILS VI	42
CD-7	TANK VALVE CONTROL VAULT REPLACEMENT DETAIL	43
CD-8	BARNES MILL METER REPLACEMENT DETAIL	44
CD-9	BONNIE DELL METER REPLACEMENT DETAIL	45
CD-10	I-75 CROSSING EXISTING PLAN (1 OF 2)	46
CD-11	I-75 CROSSING EXISTING PLAN (2 OF 2)	47

	DETAILS	
D-1	DETAILS I	48
D-2	DETAILS II	49
D-3	DETAILS III	50
D-4	DETAILS IV	51
D-5	DETAILS V	52
D-6	DETAILS VI	53
D-7	DETAILS VII	54
D-8	DETAILS VIII	55
	EROSION & SEDIMENT CONTROL	
ES-1	EROSION & SEDIMENT CONTROL NOTES	56
ES-2	LEGEND & NOTES	57
ES-3	CHECKLIST	58
ES-4	DRAINAGE MAP & SOILS MAP	59
ES-5	START TO STA 25+00	60
ES-6	STA 25+00 TO STA 50+00	61
ES-7	STA 50+00 TO STA 75+00	62
ES-8	STA 75+00 TO STA 100+00	63
ES-9	STA 100+00 TO STA 125+00	64
ES-10	STA 125+00 TO STA 150+00	65
ES-11	STA 150+00 TO STA 175+00	66
ES-12	STA 175+00 TO STA 200+00	67
ES-13	STA 200+00 TO STA 225+00	68
ES-14	STA 225+00 TO END	69
ES-15	START TO STA 25+00	70
ES-16	STA 25+00 TO STA 48+00	71
ES-17	STA 48+00 TO STA 73+00	72
ES-18	STA 73+00 TO END	73
ES-19	DETAILS	74
ES-20	DETAILS	75

TREE PROTECTION NOTES:

1. A PRE-CONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO THE ISSUANCE OF THE ON-SITE CONSTRUCTION PERMIT. CALL THE COBB COUNTY SITE INSPECTIONS SECTION AT (770) 528-2142 TO ARRANGE A MEETING AT THE SITE.
2. TREE PROTECTION DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY CLEARING, GRUBBING OR GRADING.
3. ROOT SYSTEMS OF SIGNIFICANT TREES, AS INDICATED ON THE PLANS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE FREE-BORED UNDER.
4. 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.
5. 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.
6. 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.
7. PRUNING OF TREE LIMBS TO PROVIDE CLEARANCE FOR EQUIPMENT AND MATERIALS SHALL BE DONE ACCORDING TO STANDARD ARBORICULTURAL PRACTICE (SEE ANSI A300-1995).
8. PROTECT THE TRUNKS OF ANY TREES BEING PRESERVED WITHIN THE TEMPORARY OR PERMANENT UTILITY EASEMENTS WITH STRAPPED-ON PLANKING OR SIMILAR PROTECTIVE DEVICE.

COBB COUNTY CEMETERY PRESERVATION COMMISSION:

1. 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 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.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WISE 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL

INDEX AND GENERAL NOTES

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	FDH
DRAWN	CKM
CHECKED	JCS
REVISED	-
DATE	03/12/20
BY	RCE
ISSUE	ISSUED FOR BID
NO.	1
FILE NAME	GN-ALL-NOTES.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET G-1

SEQ. 1

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-NOTES.dwg
Last Saved: 3/12/2020 11:24 AM Saved By: 02618

Plot Date: 3/12/2020 2:36 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-NOTES.dwg

ABBREVIATIONS

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
BOV	BLOW OFF VALVE
CAV	COMBINATION AIR/VACCUUM VALVE
CI	CAST IRON
CIRS	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

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	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
RED	REDUCER
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	TEMPETURE
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	VERTICLE
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
6W	WATER LINE & SIZE	24" WL
8SS	SEWER LINE & SIZE	8" SS
G	UNDERGROUND GAS LINE	G
UT	UNDERGROUND TELEPHONE LINE	UT
F/O	UNDERGROUND FIBER OPTIC LINE	F/O
OHE	OVERHEAD ELECTRIC	OHE
CATV	UNDERGROUND CABLE TV	CATV
	GATE VALVE	GV
	MISC. VALVE & TYPE	
	REDUCER	
	FIRE HYDRANT	
	COMBINATION AIR RELEASE/VACUUM VALVE	AV
	BLOW OFF VALVE	BO
G W	WATER METER OR GAS METER	W G
	VAULT	
	SEWER OR WATER ACCESS MANHOLE	
	STORM DRAIN MANHOLE	
	WATER SERVICE & SIZE	
	PLUG	
PL	PROPERTY LINE AND/OR R.O.W.	
	EASEMENT	
	CITY LIMIT AND/OR COUNTY LINE	
I.P.	IRON PIN/PIPE & SIZE	I.P.
	CREEK CENTERLINE ℄	
	PIPE CENTERLINE ℄	
X X	BARBED WIRE FENCE	X X
	CHAIN LINK FENCE	
// // //	WOOD FENCE	// // //
	CONCRETE CURB & GUTTER	
	EDGE of ASPHALT	
	CONCRETE CULVERT (SIZE R.C.C.P.)	
	CONCRETE DRIVEWAY & SIDEWALK	
	GRAVEL DRIVEWAY	
10'	CONCRETE INLET (SIZE NOTED)	10'

EXISTING	PROFILE VIEW	PROPOSED/FUTURE
16" CL. 150 PRET. CONC. CYL. PIPE	WATER MAIN & SIZE	24" CL. 150 PRES. CONC. CYL. PIPE
	GATE VALVE	
	BUTTERFLY VALVE	
	CHECK VALVE	
6" WATER 8" SEWER	UTILITIES	6" WATER 8" SEWER
6" 1.00 %	SEWER FLOW LINE	6" 1.00 %

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WISE 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL

ABBREVIATIONS, SYMBOLS, AND LEGEND

F&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	FDH				
DRAWN	CKM				
CHECKED	JCS				
REVISED	-				
BY	RCE				
DATE	03/12/20				
FILE NAME	GN-ALL-NOTES.dwg				

NO.	ISSUE
1	ISSUED FOR BID

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

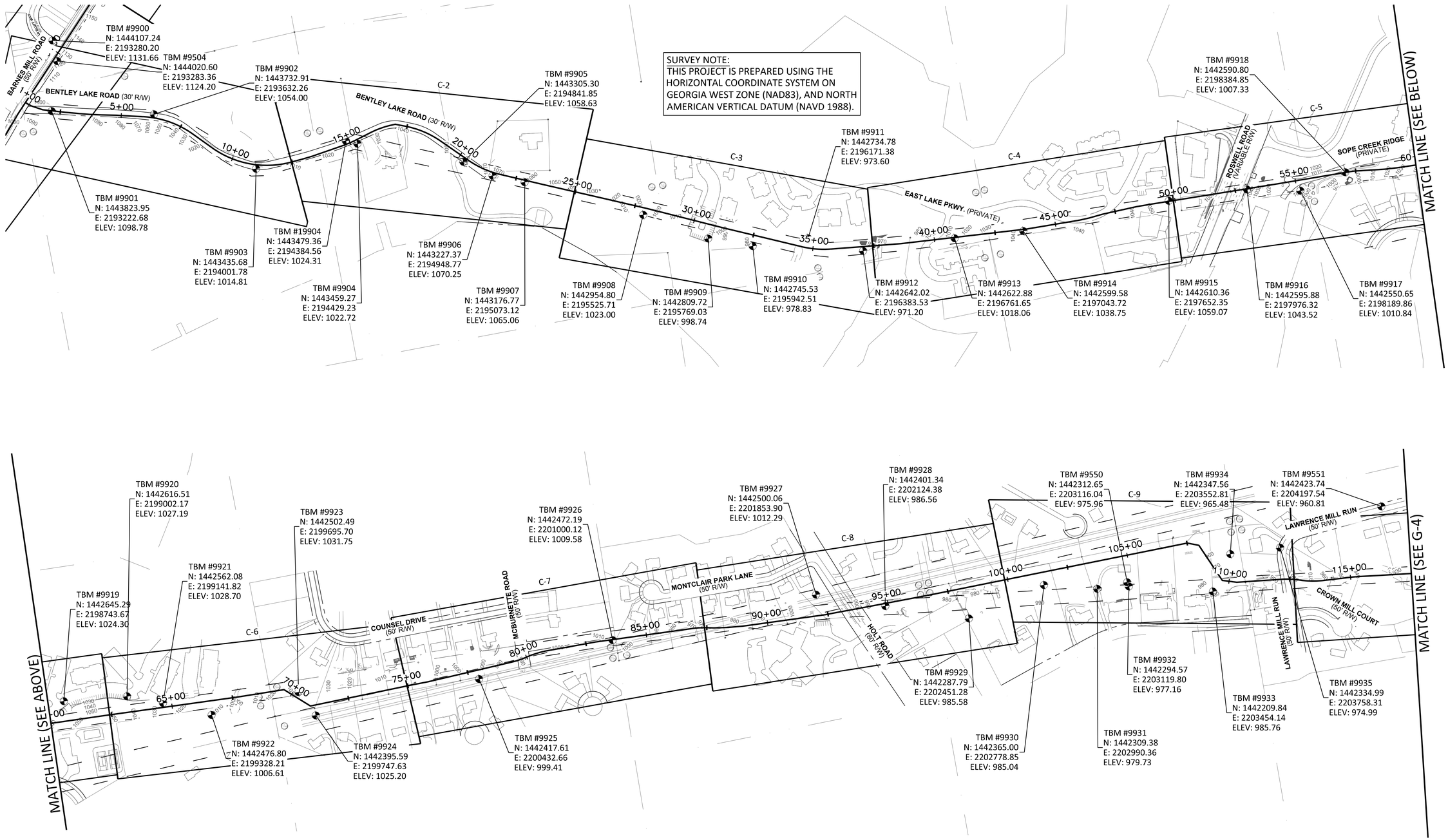
0 VERIFY SCALE 1

SHEET G-2

SEQ. 2

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-NOTES.dwg
Last Saved: 3/12/2020 11:24 AM Saved By: 02618

Plot Date: 3/12/2020 2:36 PM Plot By: 02618 File: N:\WTU\Drawings\GN-ALL-NOTES.dwg



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WILLIS
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL

SEGMENT A
KEY MAP AND SURVEY CONTROL I

FRN /OB NO.	CBR18759
DATE	03/12/20
DESIGNED	FDH
DRAWN	CKM
CHECKED	JCS
REVISED	-
DATE	03/12/20
BY	RCE
FILE NAME	GN-ALL-INDEX.dwg

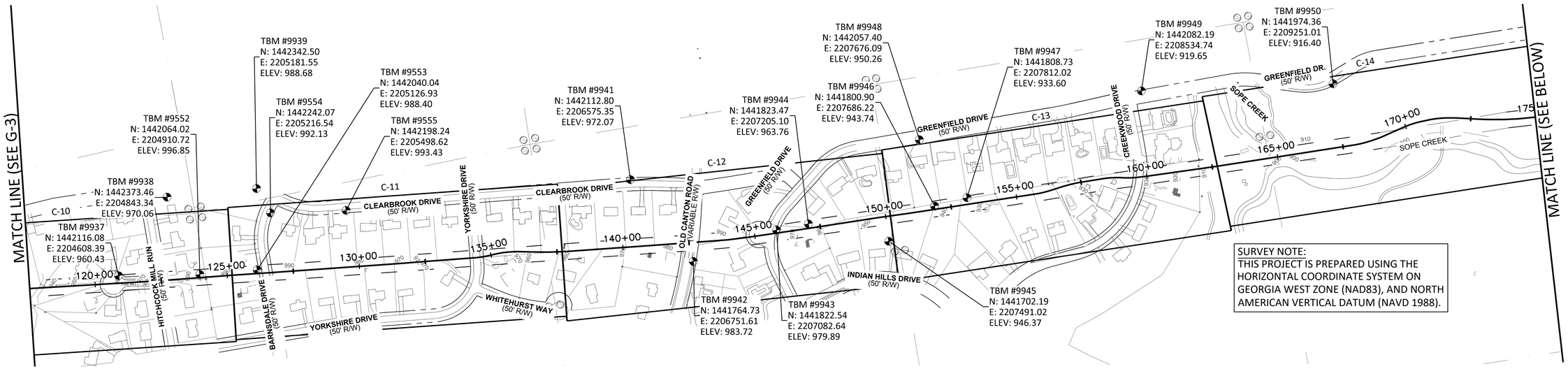
NO.	ISSUE
1	ISSUED FOR BID

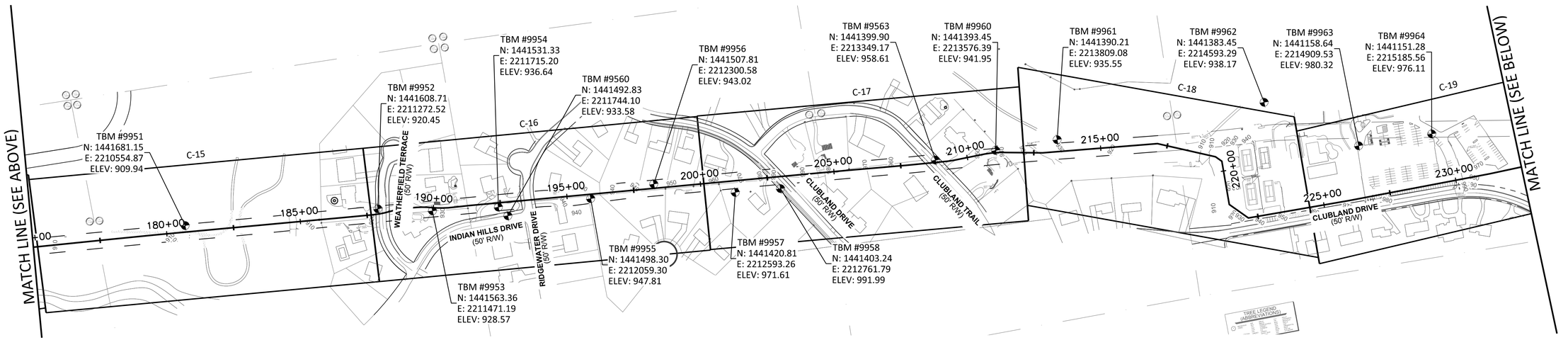
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

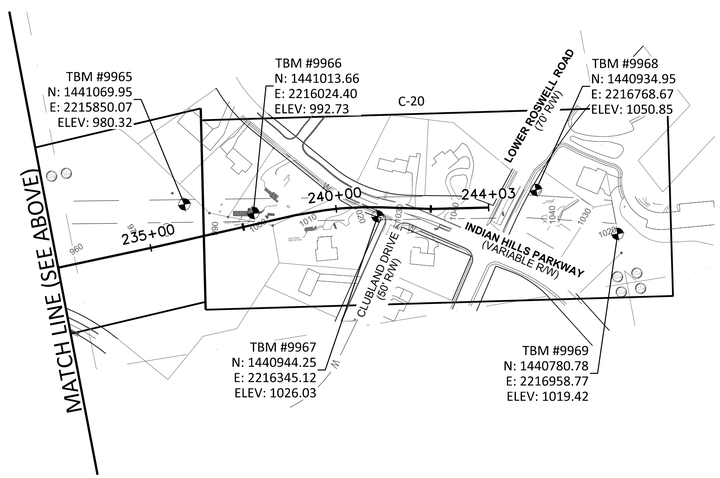
SHEET G-3
SEQ. 3

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg
Last Saved: 2/27/2020 3:56 PM Saved By: 90196

Plot Date: 3/12/2020 2:37 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg







NORTH

0 200' 400'

SCALE IN FEET

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CARLSTOPHER 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL
SEGMENT A
KEY MAP AND SURVEY CONTROL II

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	FDH
DRAWN	CKM
REVISED	-
CHECKED	JCS
FILE NAME	GN-ALL-INDEX.dwg

NO.	BY	DATE	ISSUE
1	RCE	03/12/20	ISSUED FOR BID

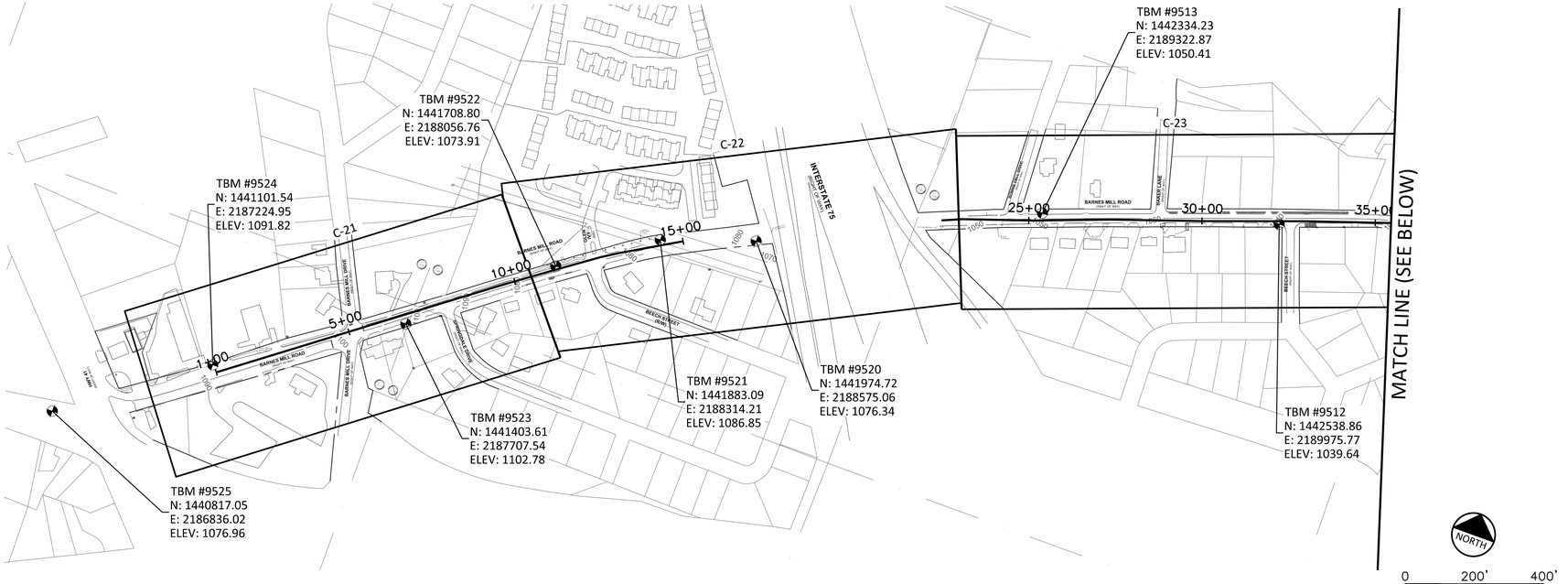
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET G-4

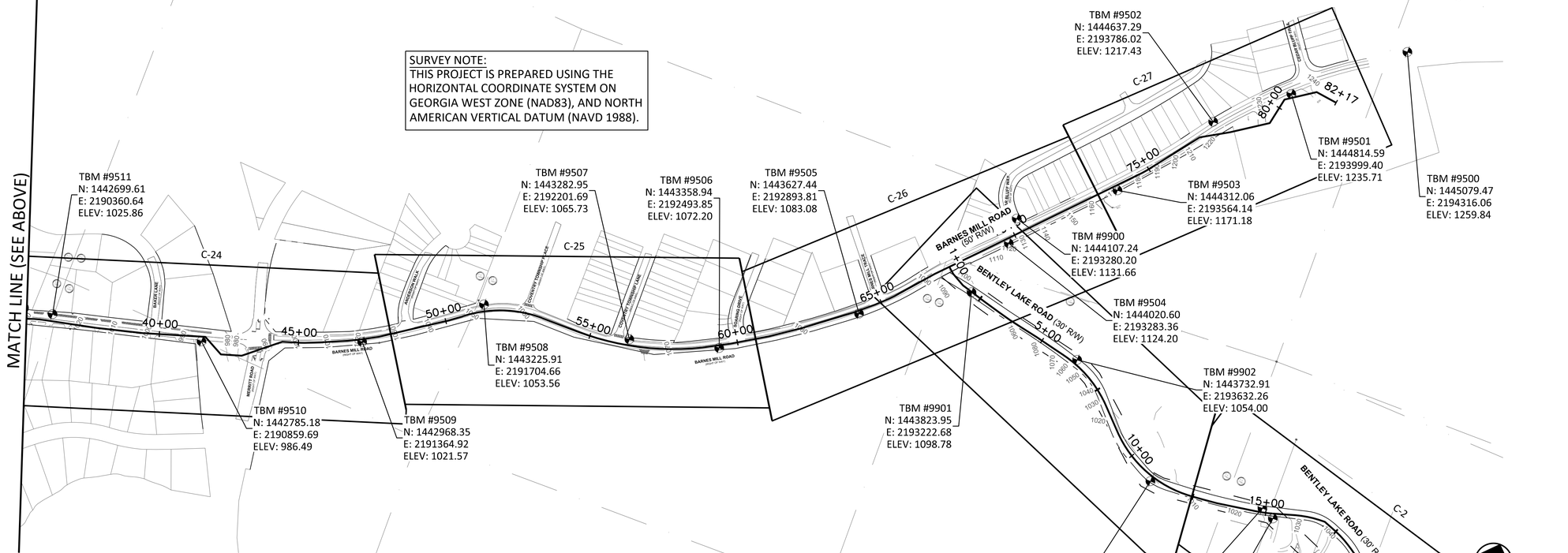
SEQ. 4

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg
Last Saved: 2/27/2020 3:56 PM Saved By: 90196

Plot Date: 3/12/2020 2:37 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg



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



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WISE
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL
SEGMENT B
KEY MAP AND SURVEY CONTROL

F&N JOB NO.	CBR18759			
DATE	03/12/20	DESIGNED	FDH	
DRAWN	CKM	CHECKED	JCS	
REVISED	-			
DATE		FILE NAME	GN-ALL-INDEX.dwg	
BY				

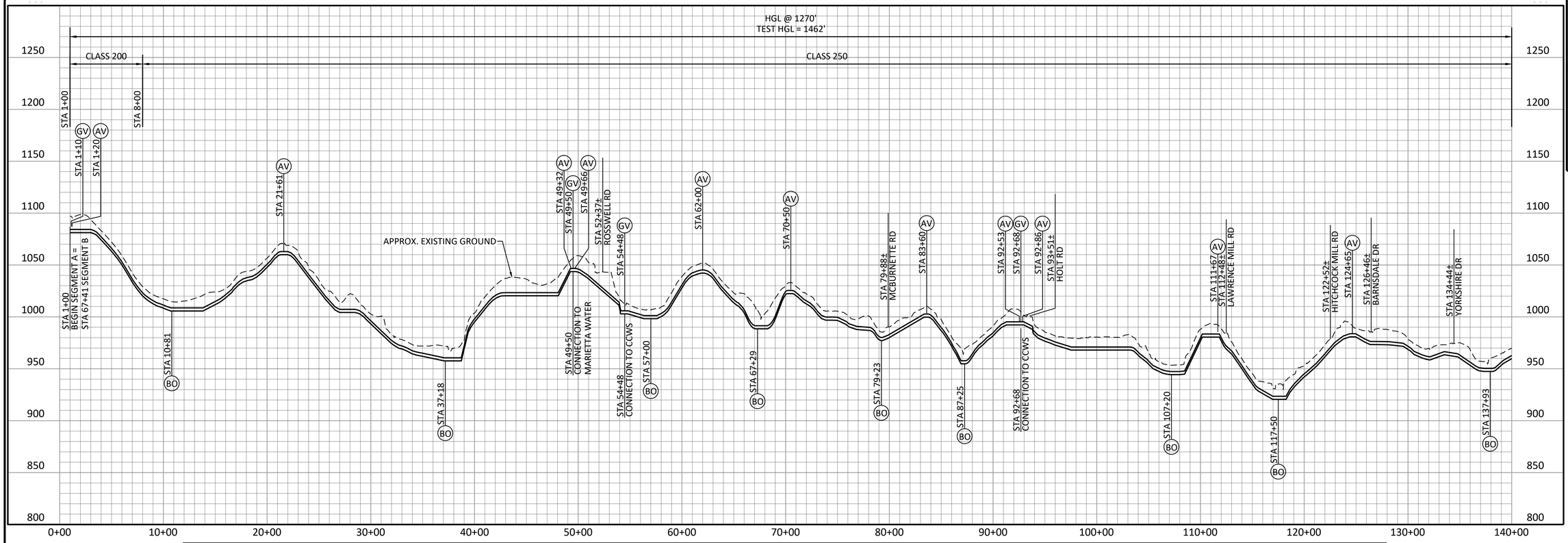
NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

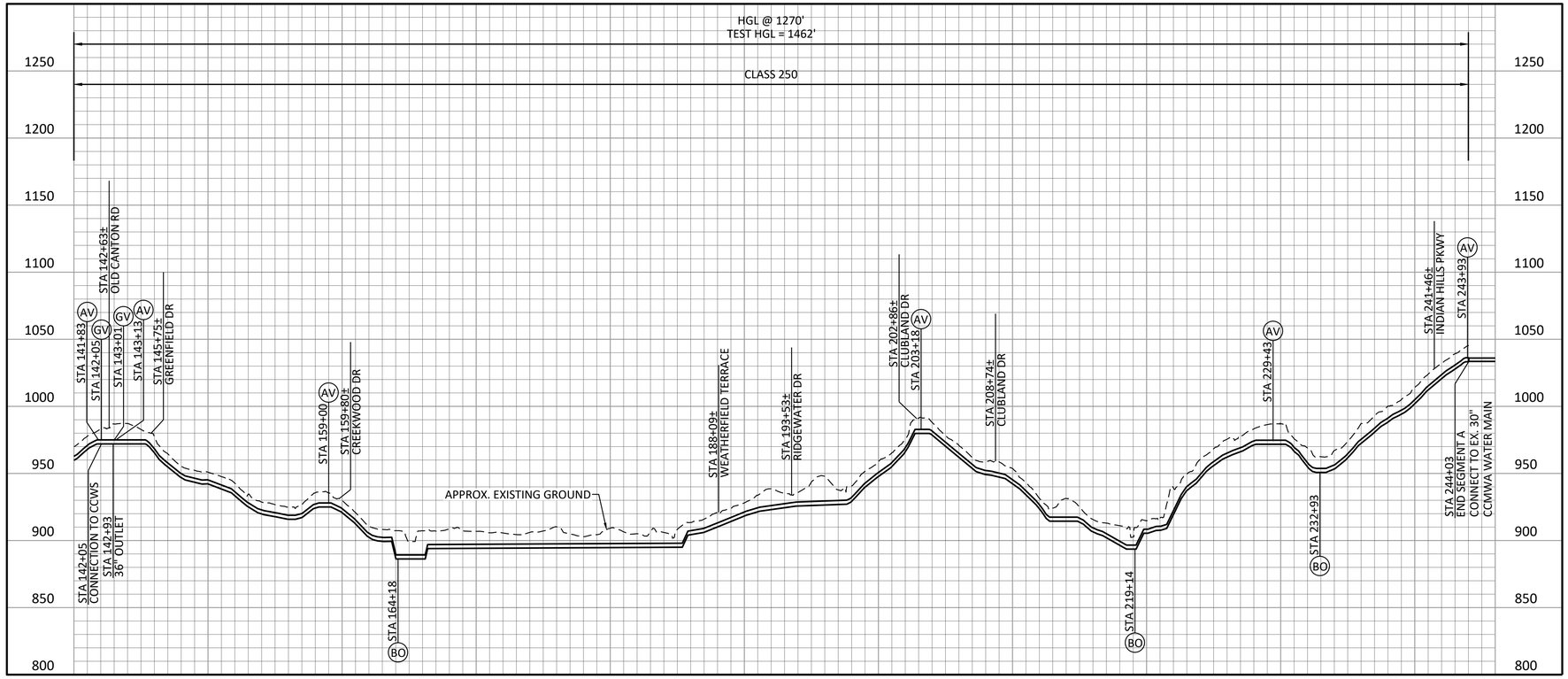
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET G-5
SEQ. 5

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg
Last Saved: 2/27/2020 3:56 PM Saved By: 90196

Plot Date: 3/12/2020 2:38 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-INDEX.dwg





0 500' 1000'
SCALE IN FEET
HORIZONTAL

0 50' 100'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED WILLIAM RYAN CHRISTOPHER PROFESSIONAL ENGINEER
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

SEGMENT A
HYDRAULIC GRADE LINE

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS
FILE NAME GN-ALL-HGL.dwg

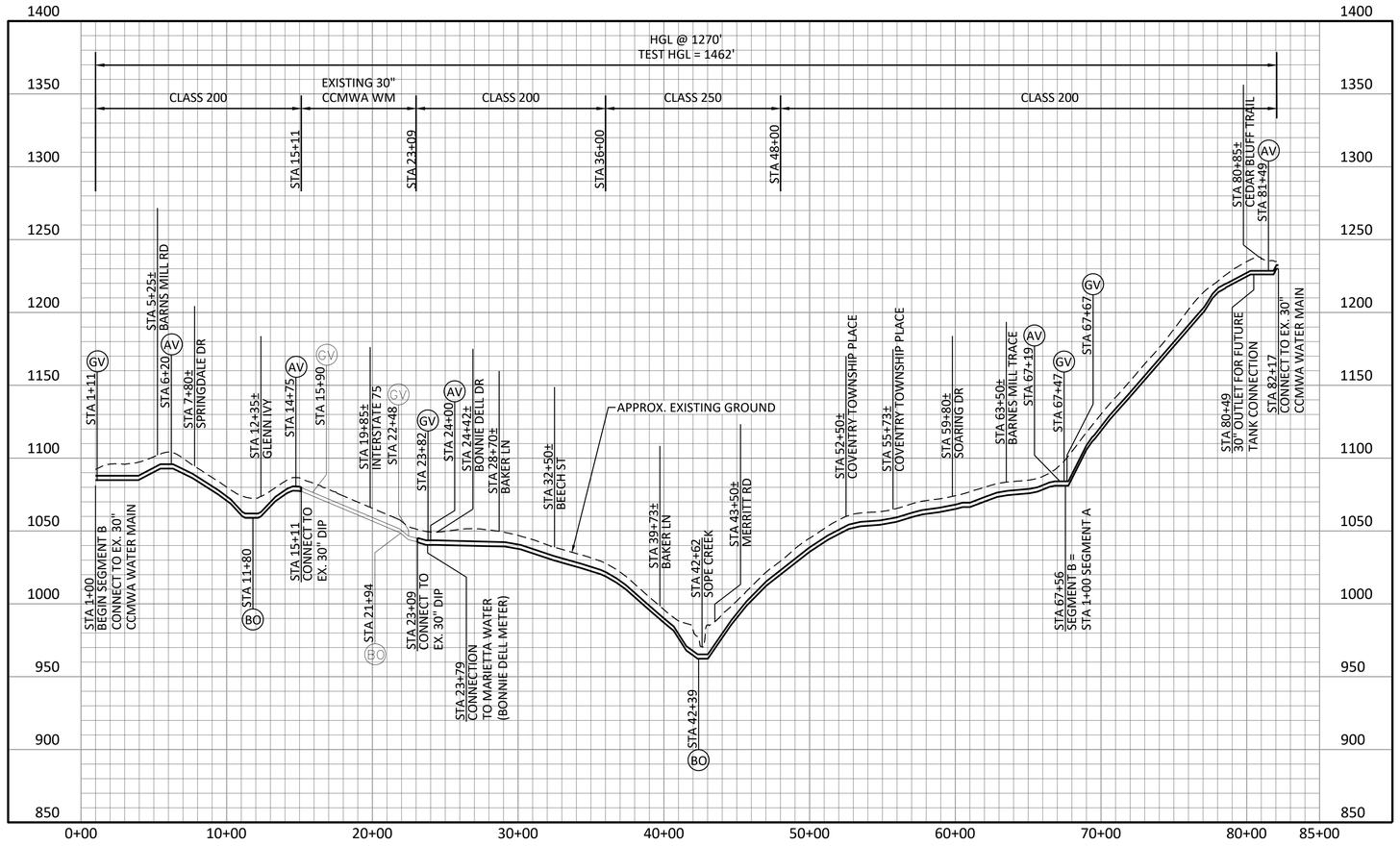
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 VERIFY SCALE 1

SHEET G-6
SEQ. 6

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-HGL.dwg
Last Saved: 3/12/2020 3:43 PM Saved By: 02618

Plot Date: 3/12/2020 3:43 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-HGL.dwg



0 500' 1000'
SCALE IN FEET
HORIZONTAL

0 50' 100'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER PETSKE
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
HYDRAULIC GRADE LINE

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20
		REVISED	----

FILE NAME GN-ALL-HGL.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET G-7
SEQ. 7

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-HGL.dwg
Last Saved: 3/12/2020 11:52 AM Saved By: 02618

Plot Date: 3/12/2020 2:38 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-HGL.dwg

TM PARCEL #	OWNER NAME	MAILING/OWNER ADDRESS	STIPULATIONS/NOTES
1	BENTLEY FARM PROP LLLP & JAMES W. BENTLEY JR & SUMMEROUR FARM LLLP	363 SEMINOLE RD. MARIETTA, GA 30060	Easement Exchange - Acquisition Ongoing
2	BENTLEY FARM PROP LLLP & JAMES W. BENTLEY JR & SUMMEROUR FARM LLLP	363 SEMINOLE RD. MARIETTA, GA 30060	
3	SUMMEROUR FARM LLLP	1330 BARNES MILL RD. MARIETTA, GA 30062	Additional Easement Area - Acquisition Ongiong
4	BENTLEY FARM PROP LLLP & JAMES W. BENTLEY JR & SUMMEROUR FARM LLLP	363 SEMINOLE RD. MARIETTA, GA 30060	
5	SUMMEROUR PROPERTIES LLLP	1330 BARNES MILL RD. MARIETTA, GA 30062	Easement Exchange - Acquisition Ongoing
6	GALILEE MISSIONARY BAPTIST CHURCH	2050 BENTLEY LAKE RD. MARIETTA, GA 30062	
7	BRE JEFFERSON EAST COBB OWNER LLC	CHICAGO, IL 60690	
8	BENTLEY FARM PROP LLLP & JAMES W. BENTLEY JR & SUMMEROUR FARM LLLP	363 SEMINOLE RD. MARIETTA, GA 30060	
9	BENTLEY FARM PROP LLLP & JAMES W. BENTLEY JR & REBECCA B. SUMMEROUR	363 SEMINOLE RD. MARIETTA, GA 30060	
10	GA. POWER COMPANY & TAX DEPARTMENT	ATLANTA, GA 30308	
11	SZS HOLDINGS LLC.	1062 MERRIVALE CHASE DR, ROSWELL GA 30075	
12	VICTORIA L BRASFIELD	7 GLEN OAK CT, MEDFORD OR 97504	
13	ARAGON 2012 AZALEA SPRINGS	9595 WILSHIRE BLVD Suite 604, BEVERLY HILLS CA 90212	
14	SOPE CREEK LLC & C/O FSSR	P.O. Box 450233 ATLANTA, GA. 31145	
15	DUCE FAMILY HOLDINGS LLC & ATTN: JULIE PERLSON	1892 WASHINGTON RD. EAST POINT, GA. 30344	
16	DEANNA L. & JOHN C. RADICH	475 GUILFORD CIR. MARIETTA, GA. 30068	
17	MICHAEL L. & LINDA J. FURLONG	477 GUILFORD CIR. MARIETTA, GA. 30068	
18	HANOVER WOODS SWIM & TENNIS ASSOCIATION	P. O. Box 9252 MARIETTA, GA. 30065	
19	F.M. & JIMMIE NELL HARRIS	633 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
20	ROSA A. ARCE & CHARLES E. & MARIA D. NAZARIO	631 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing Shed has been paid for - contractor to remove.
21	HAROLD D. & LAZETTA Z. HANKERSON	629 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
22	DOROTHY P. & WALTER W. WILLIFORD	627 COUNSEL DR. MARIETTA, GA. 30068	Shed has been paid for - contractor to remove.
23	MANUELA GANCHOSO & MANUEL GARCIA	625 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
24	SARAH TABER SZADAJ & NELSON ECK LAMBERT	623 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
25	LINDA T. BECK	621 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing Shed has been paid for - contractor to remove.
26	SARA WITMER	619 COUNSEL DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
27	NO OWNER RECORD		
28	YING ZHOU	2403 MONTCLAIR PARK LN. MARIETTA, GA 30068	
29	JUAN BONILLA	2404 MONTCLAIR PARK LN. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
30	MING LING ZHU	2408 MONTCLAIR PARK LN. MARIETTA, GA. 30068	
31	SHERMAN DAVISON	2412 MONTCLAIR PARK LN. MARIETTA, GA. 30068	
32	SUSAN REYNOLDS	2416 MONTCLAIR PARK LN. MARIETTA, GA. 30068	
33	LAN BANH & DANNY VUONG	2420 MONTCLAIR PARK LN. MARIETTA, GA. 30068	
34	HUA VU TUONG & THOA NGUYN	2424 MONTCLAIR PARK LN. MARIETTA, GA. 30068	
35	COLFIN AL-GA1, LCC	8665 E HARTFORD DR SCOTTSDALE, AZ 85255	
36	MARILYN MOULDS	2432 MONTCLAIR PARK LN. MARIETTA, GA. 30068	
37	ST. CATHERINES EPISCOPAL CHURCH	681 HOLT RD. MARIETTA, GA. 30068	
38	SAMUEL R. BURROUS	580 HOLT RD. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
39	DOMINEQUE, RANDY, & VRANIKA SOPHABMIXAY	574 HOLT RD. MARIETTA, GA. 30068	
40	BRIAN THOMAS MALONEY & FAYE SPECTOR MALONEY	2595 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
41	HARRY S. TEAGUE & DEBRA J. BERG	2601 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
42	KERMIT & BEVERLY HALL	2621 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
43	KERMIT REID HALL, SR.	2621 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
44	SARAH & EARL MARTIN, JR.	2635 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
45	C.D. & ANN BROWNLOW	2651 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing
46	DIANA COCHRAN	2681 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing Septic tank and field drain lines to be located prior to construction. Any damage to septic system to be repaired by contractor. Beware of dog.
47	RICHARD J. & JANE G. MCCLOUD	2693 ARROWOOD DR. MARIETTA, GA. 30068	Easement Exchange - Acquisition Ongoing Encroachment Permitted - Do Not Disturb
48	JAMES P. & BARBARA J. GREENE	2785 LAWRENCE MILL RUN MARIETTA, GA 30068	
49	JEFF SOMERS	2660 MARILEE LN. HOUSTON, TX. 77057 2783 LAWRENCE MILL RUN MARIETTA, GA 30068	Encroachment Permitted - Do Not Disturb
50	JONATHAN & JENNIFER STUCKERT	2789 CROWN MILL CT. MARIETTA, GA. 30068	
51	WAYNE G. & BARBARA SUWAY	2788 LAWRENCE MILL RUN MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb Portion of house in easement not to be disturbed. Any concrete that is disturbed to be replaced by contractor.
52	NATHANIEL & AMANDA BURROUGHS	2790 LAWRENCE MILL RUN MARIETTA, GA. 30068	
53	MALLORY D. PERDUE	2791 CROWN MILL CT. MARIETTA, GA. 30068	
54	JONATHAN & AMANDA MCCANTS	2792 LAWRENCE MILL RUN MARIETTA, GA. 30068	
55	BOB & BETSY WOLF	2793 CROWN MILL CT. MARIETTA, GA. 30068	
56	JUDITH K. & ROBERT V. HERRICK	2794 LAWRENCE MILL RUN MARIETTA, GA. 30068	
57	DAWSON A. & TERRI P. HENDERSON	745 HOLYOKE MILL CT. MARIETTA, GA. 30068	
58	DAWSON A. & TERRI P. HENDERSON	745 HOLYOKE MILL CT. MARIETTA, GA. 30068	
59	ANGELA & KEVIN SAUTER	746 HOLYOKE MILL CT. MARIETTA, GA. 30068	
60	DARLENE E. PARKER	747 HOLYOKE MILL CT. MARIETTA, GA. 30068	
61	MATTHEW ROGOWSKI	750 HOLYOKE MILL CT. MARIETTA, GA. 30068	
62	JAMES ROBERT & LENA JAN SEWELL	2822 HITCHCOCK MILL RUN MARIETTA, GA. 30068	
63	TRACI & CRAIG BROWN	2829 HITCHCOCK MILL RUN MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
64	CATHERINE J. BOURN & STEVEN E. BOURN	2831 HITCHCOCK MILL RUN MARIETTA, GA. 30068	
65	NASDA, LLC	571 BARNESDALE DR. MARIETTA, GA. 30068	
66	JASON & MELINDA BATTON	561 BARNSDALE DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
67	JUDY LIMING	6690 CHELSEA GARDENS WAY CUMMING, GA 30040	
68	JOSE A. & SUSANA M. RICARDO	745 MCBURNETTE RD. MARIETTA, GA. 30068	Shed has been paid for - contractor to remove.
69	JAMES H. STEELE, JR. & SUZANNE S. BARNARD	2916 CLEARBROOK DR. MARIETTA, GA. 30068	
70	VAN M. CHERRY & CRYSTAL G. HUMPHREY	511 YORKSHIRE DR. MARIETTA, GA. 30068	Shed has been paid for. Contractor to remove.
71	CHRIS & CATHERINE BERTRAND	2926 CLEARBROOK DR. MARIETTA, GA. 30068	
72	KEVIN VANDERPOOL	521 YORKSHIRE DR. MARIETTA, GA. 30068	
73	YESENIA & JOSE CIBRIAN	2936 CLEARBROOK DR. MARIETTA, GA. 30068	
74	STEPHANIE A. & DANIEL L. KILLEN	531 YORKSHIRE DR. MARIETTA, GA. 30068	
75	WILLIAM D. WHITE	2946 CLEARBROOK DR. MARIETTA, GA. 30068	
76	SHARON S. HALL CYRIL MALIAKAL	541 YORKSHIRE DR. MARIETTA, GA. 30068	
77	JULIO HUGO PENZA RUSO	2956 CLEARBROOK DR. MARIETTA, GA. 30068	
78	PRETIUM MORTGAGE ACQUISITION TRUST	500 DELAWARE AVE, WILMINGTON DE 19801	
79	RONNIE E. & CAROL A. BOYD	2966 CLEARBROOK DR. MARIETTA, GA. 30068	
80	MARY JEAN WRIGHT	P.O. Box 13241 MACON, GA. 31208	
81	ELIZABETH F. & JOSE J. CERVANTES	570 YORKSHIRE DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
82	THOMAS F. KREBSBACH	2998 CLEARBROOK DR. MARIETTA, GA. 30068	(1) Iron pins for property corners must be replaced if disturbed. (2) Owner's dog is in fenced yard. Contractor to relocate/install temporary fencing along easement limit for dog during construction that is suitable to owner.
83	JOSHUA & KELLY McCORKLE MALINEE AND TEERAPON CHALOEISAK	3021 WHITEHURST WAY MARIETTA, GA. 30068	
84	LARA D. HUTSON	3010 CLEARBROOK DR. MARIETTA, GA. 30068	
85	WILLIAM JASON & HEATHER MARIE WISE	3031 WHITEHURST WAY MARIETTA, GA. 30068	
86	JAMES & DOROTHY MARASCO	3020 CLEARBROOK DR. MARIETTA, GA. 30068	
87	ROBERT C. & SALLY SCOT GILES	3030 CLEARBROOK DR. MARIETTA, GA. 30068	
88	GUY & HELEN F. SWIFT	511 WINDGROVE RD. MARIETTA, GA. 30067	
89	ADAM BOOK	11 ARBOR END SE, SMYRNA GA 30080	Shed has been paid for - contractor to remove.
90	DANIEL F. & SHARON P. FRISBIE	525 OLD CANTON RD. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
91	MOON BYUNG HO	1757 BELMONT CREEK POINTE, SUWANEE GA 30024	
92	GEORGE & LORRAINE OSBORNE	3119 GREENFIELD DR. MARIETTA, GA. 30068	
93	ARCHIE R. & CYNTHIA G. CRAIN	3113 GREENFIELD DR. MARIETTA, GA. 30068	
94	MICHAEL E. & JANET L ZOINO	3128 GREENFIELD DR. MARIETTA, GA. 30068	
95	PAUL & LAURA Z. VITT DANIEL & MICHELLE WEST	3112 GREENFIELD DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
96	MICHAEL & PATRICIA OTOOLE	3135 INDIAN HILLS DR. MARIETTA, GA. 30068	
97	CHARLES & JENNIFER WOODS	3136 GREENFIELD DR. MARIETTA, GA. 30068	
98	BRANDON & CARRYN WYRICK	3144 GREENFIELD DR. MARIETTA, GA. 30068	
99	MATTHEW & JESSICA WINTERS	3145 INDIAN HILLS DR. MARIETTA, GA. 30068	
100	CAROLYN B. BARRETT	3152 GREENFIELD DR. MARIETTA, GA. 30068	
101	BONNIE MIN	3155 INDIAN HILLS DR. MARIETTA, GA. 30068	
102	ANNA M. GILL	3164 GREENFIELD DR. MARIETTA, GA. 30068	
103	WENDEL KENT & SUSAN PATRICIA BLUE	3165 INDIAN HILLS DR. MARIETTA, GA. 30068	
104	TRACE A. RADLER	3176 GREENFIELD DR. MARIETTA, GA. 30068	
105	RONALD A. & RHONDA G. LUCADAMO	501 CREEKWOOD DR. MARIETTA, GA. 30068	
106	JODI ALLIS & TODD D. PODHAISKY	3188 GREENFIELD DR. MARIETTA, GA. 30068	
107	ALOK R. & NALINI KATARIA	3200 GREENFIELD DR. MARIETTA, GA. 30068	
108	KRISTIAN JONES & JULIA FLOYD	511 CREEKWOOD DR. MARIETTA, GA. 30068	
109	SAMANTHA J. NICHOLS	3212 GREENFIELD DR. MARIETTA, GA. 30068	
110	JILL CHOATE OZKAN	4550 FIRESTONE DR SE MARIETTA, GA 30067	
111	MONROE B. THROWER III	3224 GREENFIELD DR. MARIETTA, GA. 30068	
112	SCOTT ADAMS	531 CREEKWOOD DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
113	YDL PROPERTIES ATL 15 LLC	5825 GLENRIDGE DR NE, SANDY SPRINGS GA 30328	
114	JAMES K. & SUSAN C. CHEN	561 CREEKWOOD DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
115	RONALD C. HANSEN	1295 HILTON DR, MARIETTA GA 30062	
116	BOYD P. & SOPHIE T. GUMPERT	570 CREEKWOOD DR. MARIETTA, GA. 30068	
117	ILENE W. BAKER	560 CREEKWOOD DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
118	INDIAN HILLS INC. & C/O FUTREN CORP.	1985 N. PARK PLACE ATLANTA, GA. 30339	Indian Hills Country Club Parcel - See language in Easement Document regarding seasonal restrictions on construction and coordination requirements.
119	JAMES C. & ROBERTA B. VAUGHN BOB & KELLY ROWLEY	525 WEATHERFIELD TERRACE MARIETTA, GA. 30068	

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTE 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL

EASEMENT DATA

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

FILE NAME CV-ALL-PROP-DATA.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET G-8
SEQ. 8

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-PROP-DATA.dwg
Last Saved: 3/12/2020 11:31 AM Saved By: 02618

Plot Date: 3/12/2020 2:38 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-PROP-DATA.dwg

TM PARCEL #	OWNER NAME	PROPERTY ADDRESS	STIPULATIONS
120	CLAUDIA & CLIFFORD GRANGER	535 WEATHERFIELD TERRACE MARIETTA, GA. 30068	
121	JOSHUA & SKYLA BURTON	530 WEATHERFIELD TERRACE MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
122	GEORGE W. & VIRGINIA NAOMI PETERSEN	520 WEATHERFIELD TERRACE MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
123	HENRY M. & BETTIE L. HOLLEY	567 RIDGEWATER DR. MARIETTA, GA. 30068	
124	ROBERT J. HOLLOWAY	570 RIDGEWATER DR. MARIETTA, GA. 30068	
125	CHRISTOPHER WHITTINGTON & TIFFANY CUNDITH	560 RIDGEWATER DR. MARIETTA, GA. 30068	
126	CHARLES E. & JAN I. HINE	621 CLUBWOOD CT. MARIETTA, GA. 30068	
127	MICHAEL J. & LINDA J. IDACAVAGE	3670 CLUBLAND DR. MARIETTA, GA. 30068	
128	JAMES L. & ANNE B. SHOOP	620 CLUBWOOD CT. MARIETTA, GA. 30068	
129	HAROLD E. HUDDLESTUN	3680 CLUBLAND DR. MARIETTA, GA. 30068	
130	LAURA S. VINK & CARL WOLINSKY	3690 CLUBLAND DR. MARIETTA, GA. 30068	
131	MIRIAM KELLY FERREL REVOCABLE TRUST & RICHARD J. FERREL & MIRIAM K. TRUSTEES	610 CLUBWOOD CT. MARIETTA, GA. 30068	
132	CHRISTOPHER & COURTNEY BARNES	3700 CLUBLAND DR. MARIETTA, GA. 30068	
133	ERIC & SHAMIM F. CHRISTMAN	3720 CLUBLAND DR. MARIETTA, GA. 30068	
134	LINDA A. AHRENDS	3738 CLUBLAND TRL. MARIETTA, GA. 30068	
135	JESSICA & MARTIN EATON	3731 CLUBLAND DR. MARIETTA, GA. 30068	
136	TIMOTHY P. SHARKEY	3752 CLUBLAND DR. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
137	CARLTON R. & SHARON B. NEWMAN	3770 CLUBLAND TRL. MARIETTA, GA. 30068	
138	ARCHIE & CONSTANCE JAMES	3786 CLUBLAND TRL. MARIETTA, GA. 30068	
139	SCOTT & JULIE VARON	3785 CLUBLAND TRL. MARIETTA, GA. 30068	
140	THOMAS J. BYRD, JR.	3795 CLUBLAND TRL. MARIETTA, GA. 30068	Encroachment Permitted - Do Not Disturb
141	INDIAN HILLS INC. & C/O FUTREN CORP.	1985 N. PARK PLACE ATLANTA, GA. 30339	Indian Hills Country Club Parcel - See language in Easement Document regarding seasonal restrictions on construction and coordination requirements.
142	CHRISTOPHER & AMELIA F. BUSSJAGER MOSHE DICKERMAN	549 INDIAN HILLS PKWY. MARIETTA, GA. 30068	
143	MARIA I. LOPEZ	3518 PRESERVE DR. ATLANTA, GA. 30339	Easement Exchange - Acquisition Ongoing Encroachment Permitted - Do Not Disturb
144	LIHI & OHAD SHABTAI	4141 CLUBLAND DR. MARIETTA, GA. 30068	Additional Easement Area - Acquisition Ongiong
145	DAVID F. GAMBLE	510 INDIAN HILLS PKWY MARIETTA, GA. 30068	

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLIS 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
GENERAL

EASEMENT DATA

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

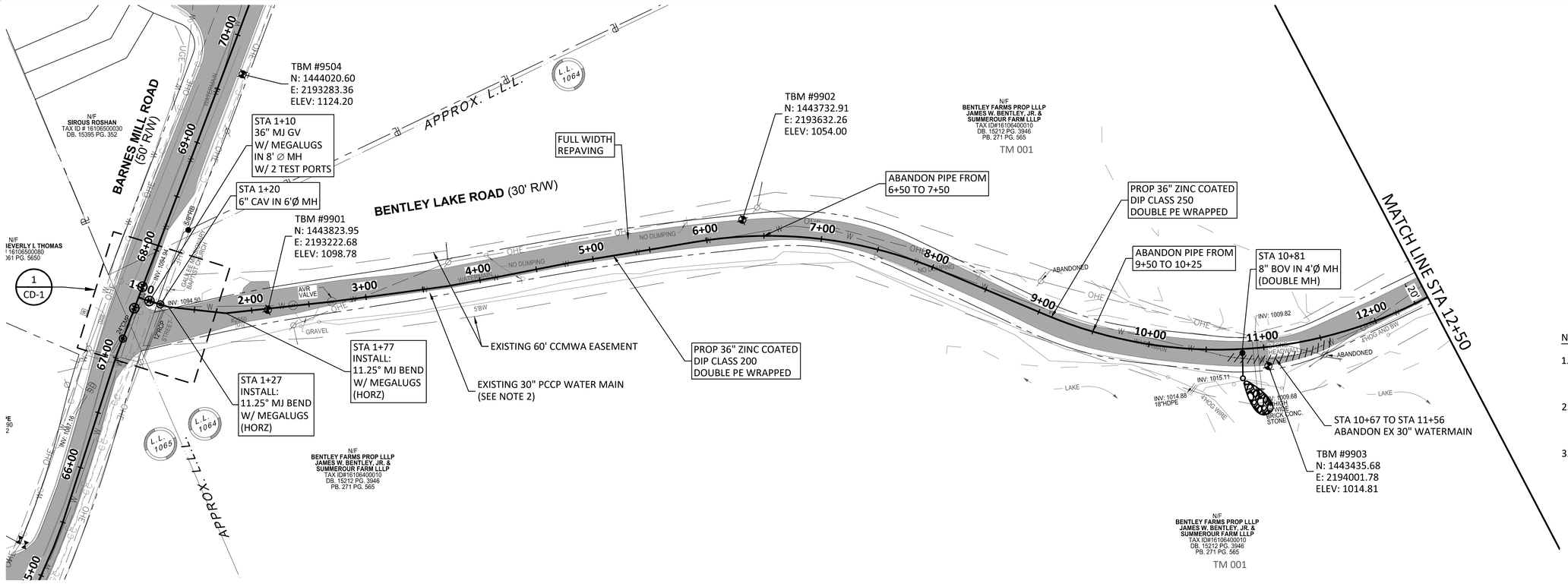
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-ALL-PROP-DATA.dwg

SHEET G-9
SEQ. 9

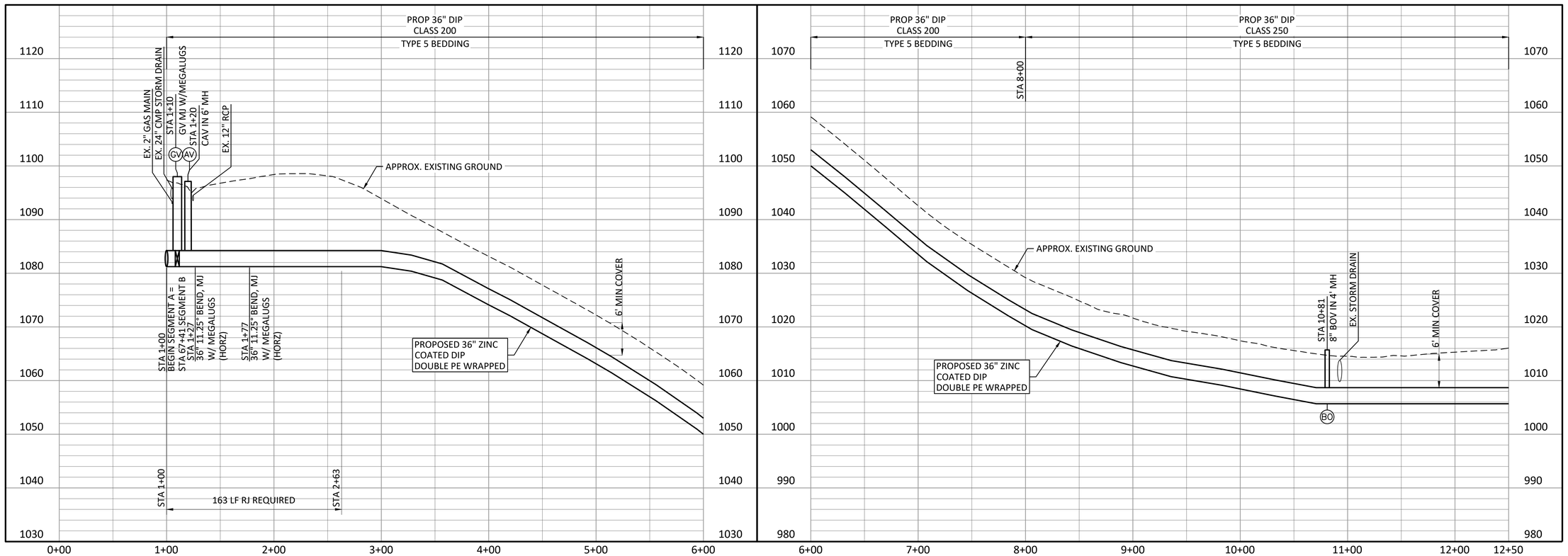
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-PROP-DATA.dwg
Last Saved: 3/12/2020 11:31 AM Saved By: 02618

Plot Date: 3/12/2020 2:38 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-PROP-DATA.dwg



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO PROPERTIES ALONG BENTLY LAKE ROAD AT ALL RIMES DURING CONSTRUCTION.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA START TO STA 12+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS01.dwg

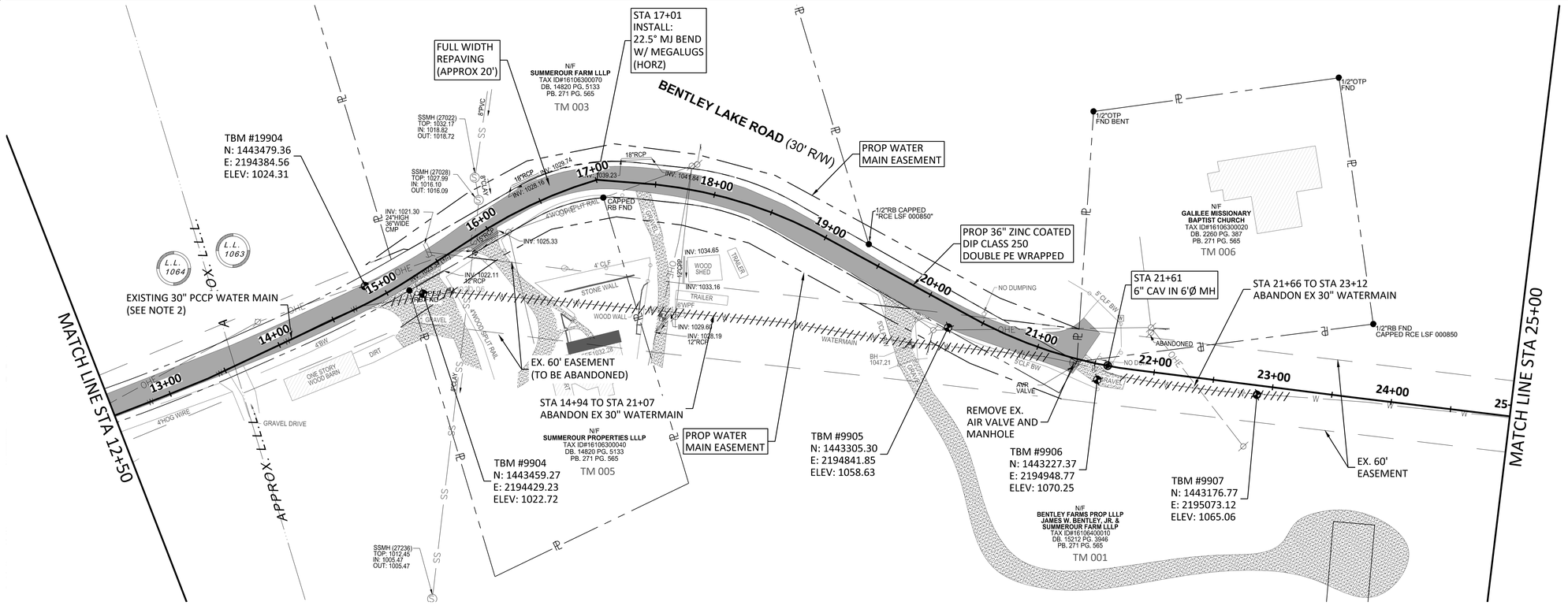
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

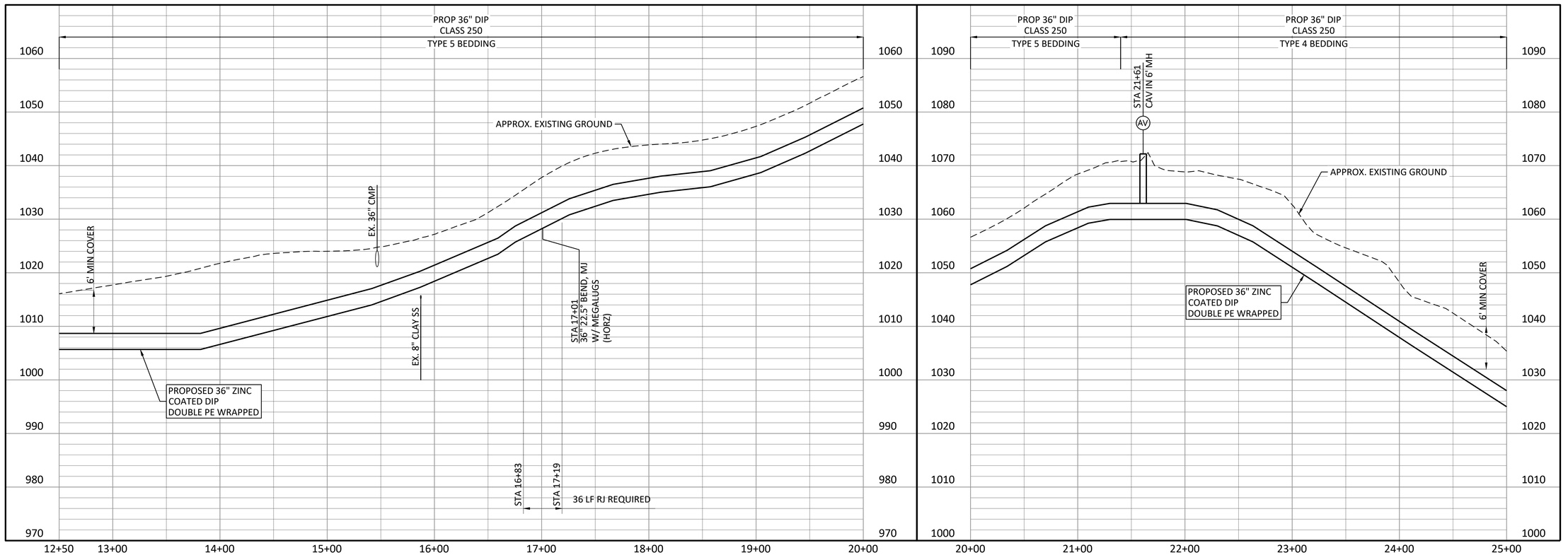
VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-1
SEQ. 10

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:40 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO PROPERTIES ALONG BENTLEY LAKE ROAD AT ALL TIME DURING CONSTRUCTION.

NORTH

SCALE IN FEET HORIZONTAL
0 50' 100'

SCALE IN FEET VERTICAL
0 10' 20'

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 12+50 TO STA 25+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

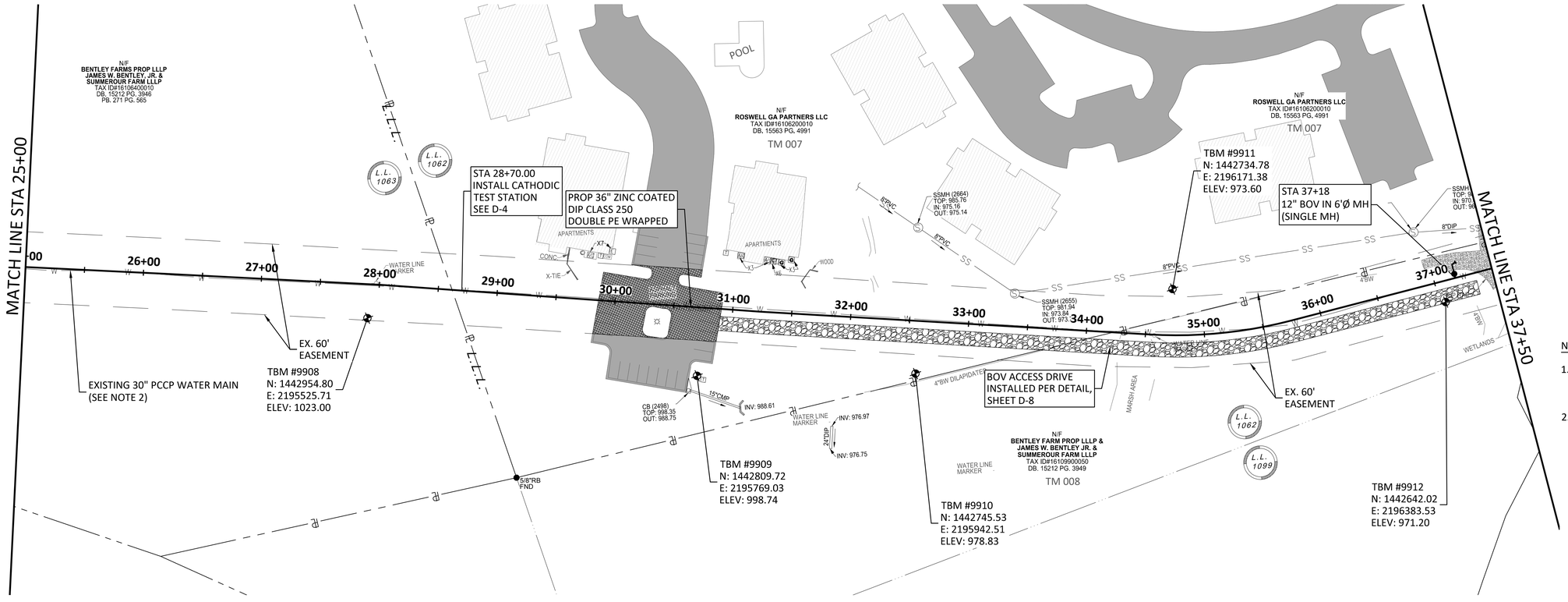
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

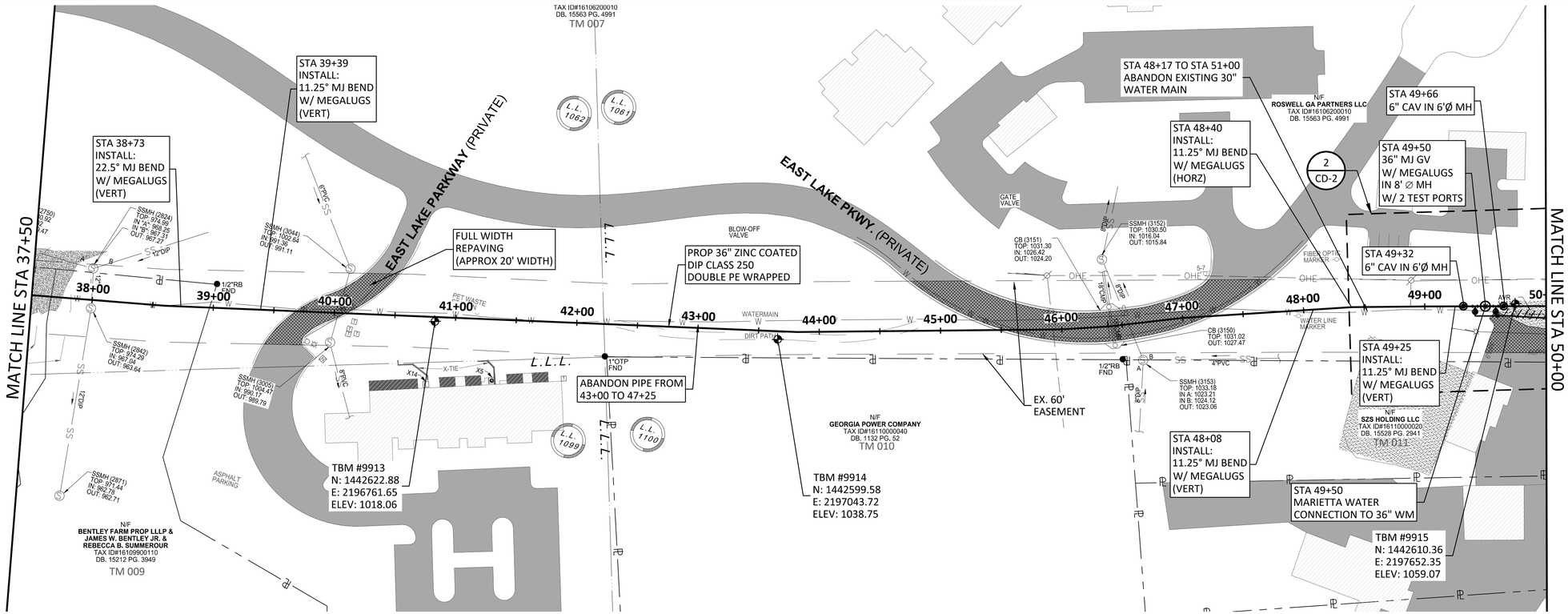
FILE NAME CV-LNA-PP-SHTS01.dwg

SHEET C-2
SEQ. 11

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:40 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg


MATCH LINE STA 25+00
MATCH LINE STA 37+50
N/F
BENTLEY FARMS PROP LLLP
JAMES W. BENTLEY, JR. &
SUMMEROUR FARM LLLP
TAX ID#16106400010
DB. 15212 PG. 3946
PB. 271 PG. 565
N/F
ROSWELL GA PARTNERS LLC
TAX ID#16106200010
DB. 15563 PG. 4991
TM 007
N/F
ROSWELL GA PARTNERS LLC
TAX ID#16106200010
DB. 15563 PG. 4991
TM 007
POOL
APARTMENTS
APARTMENTS
CONC
X-TIE
WOOD
WETLANDS
MARSH AREA
WETLANDS
WATER LINE MARKER
WATER LINE MARKER
L.L. 1062
L.L. 1063
L.L. 1062
L.L. 1099
STA 28+70.00
INSTALL CATHODIC
TEST STATION
SEE D-4
PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED
STA 37+18
12" BOV IN 6'Ø MH
(SINGLE MH)
TBM #9911
N: 1442734.78
E: 2196171.38
ELEV: 973.60
SSMH (2664)
TOP: 985.76
IN: 975.16
OUT: 975.14
SSMH (2655)
TOP: 981.94
IN: 973.94
OUT: 973.
SSMH
TOP: 9
IN: 970
OUT: 96
8"PVC
8"PVC
8"DIP
SS
RW
RW
RW



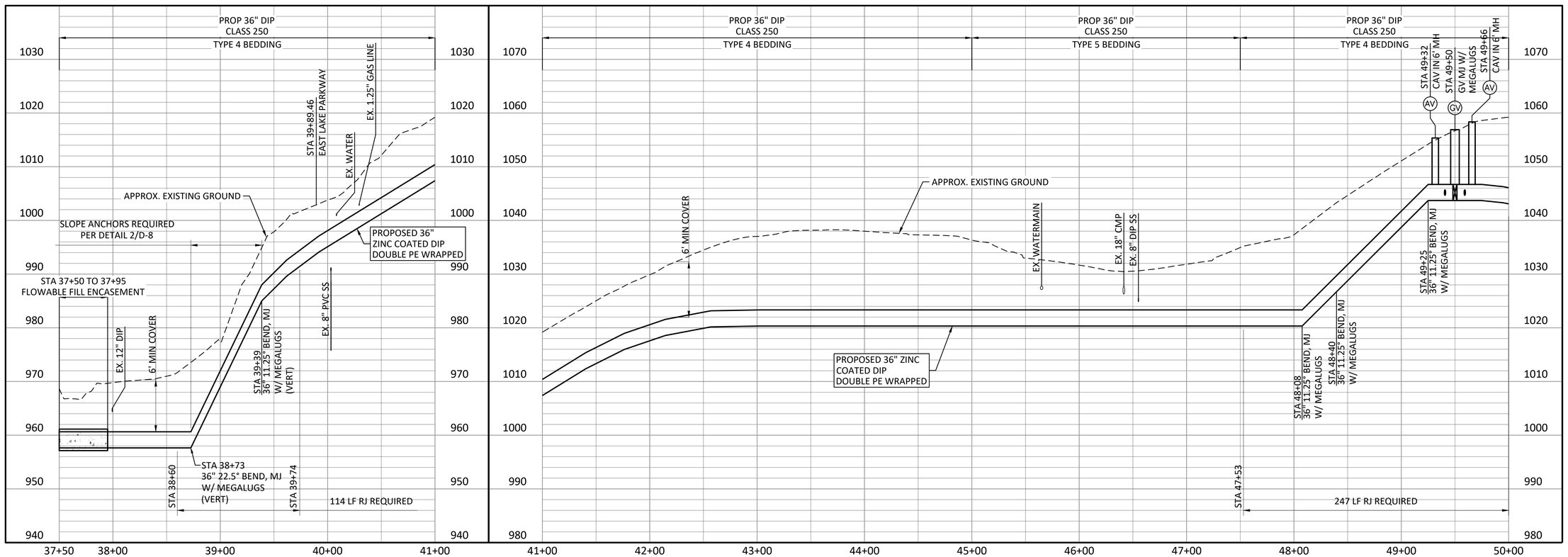
NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WESTER
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 37+50 TO STA 50+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

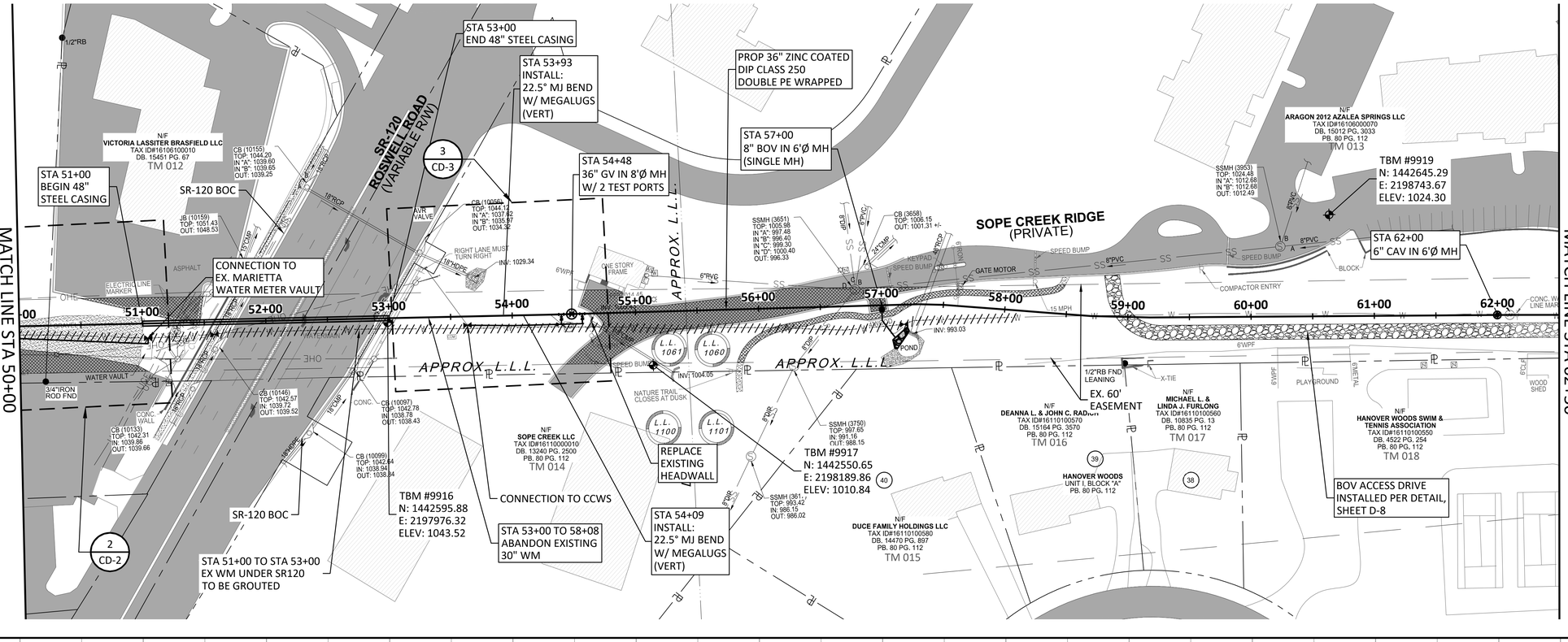
FILE NAME CV-LNA-PP-SHTS01.dwg

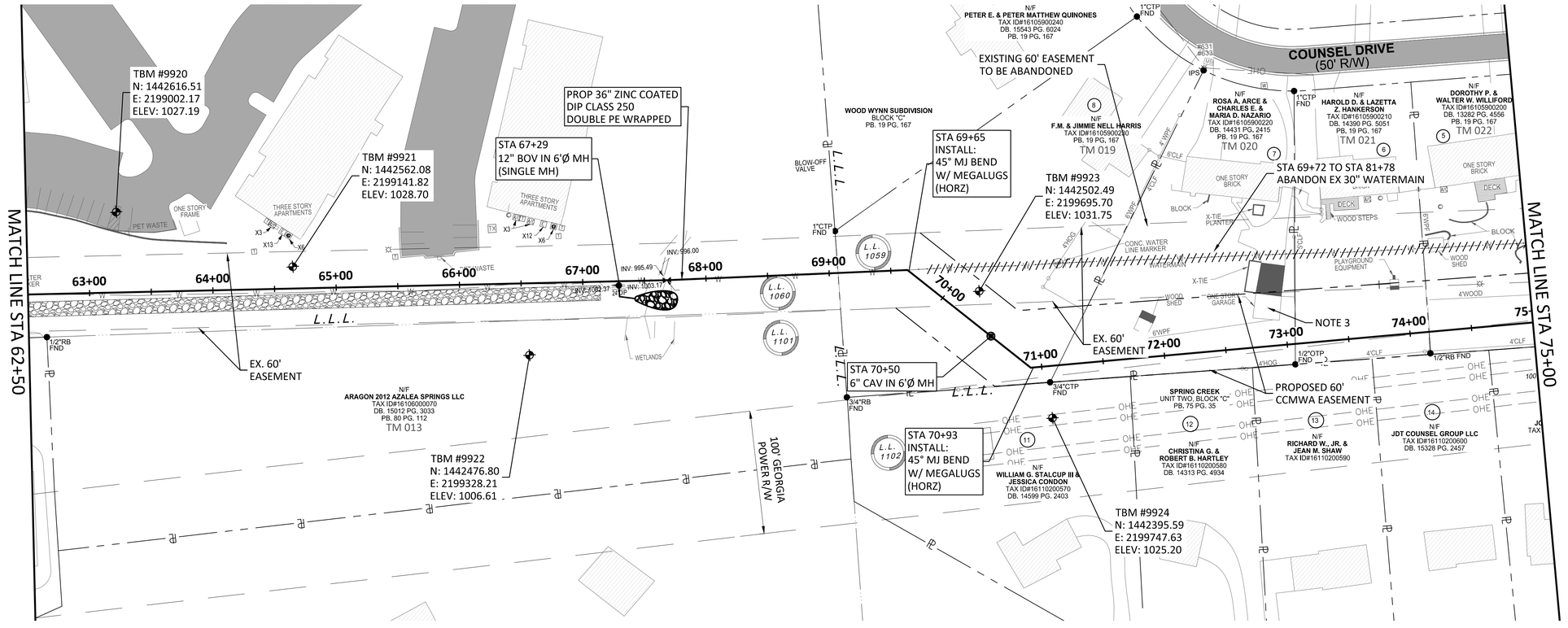
SHEET C-4

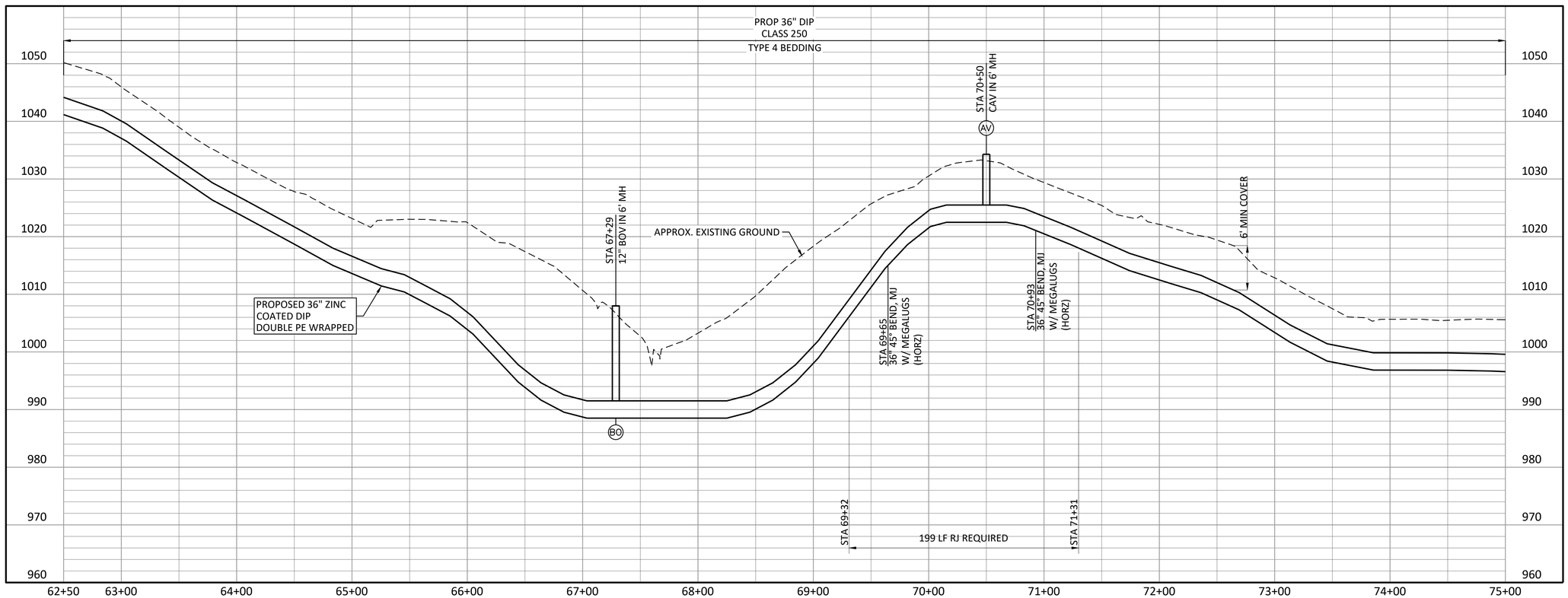
SEQ. 13

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:40 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg


MATCH LINE STA 50+00
MATCH LINE STA 62+50
STA 53+00
END 48" STEEL CASING
STA 53+93
INSTALL:
22.5° MJ BEND
W/ MEGALUGS
(VERT)
PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED
STA 57+00
8" BOV IN 6'Ø MH
(SINGLE MH)
STA 54+48
36" GV IN 8'Ø MH
W/ 2 TEST PORTS
STA 51+00
BEGIN 48"
STEEL CASING
SR-120 BOC
CONNECTION TO
EX. MARIETTA
WATER METER VAULT
SR-120
ROSWELL ROAD
(VARIABLE R/W)
SOPE CREEK RIDGE
(PRIVATE)
APPROX. L.L.L.
APPROX. L.L.L.
APPROX. L.L.L.
TBM #9916
N: 1442595.88
E: 2197976.32
ELEV: 1043.52
TBM #9917
N: 1442550.65
E: 2198189.86
ELEV: 1010.84
TBM #9919
N: 1442645.29
E: 2198743.67
ELEV: 1024.30
STA 62+00
6" CAV IN 6'Ø MH
CONNECTION TO CCWS
STA 53+00 TO 58+08
ABANDON EXISTING
30" WM
STA 51+00 TO STA 53+00
EX WM UNDER SR120
TO BE GROUTED
REPLACE
EXISTING
HEADWALL
STA 54+09
INSTALL:
22.5° MJ BEND
W/ MEGALUGS
(VERT)
BOV ACCESS DRIVE
INSTALLED PER DETAIL,
SHEET D-8
EX. 60'
EASEMENT
N/F
VICTORIA LASSITER BRASFIELD LLC
TAX ID#16106100010
DB. 15451 PG. 67
TM 012
N/F
SOPE CREEK LLC
TAX ID#16110000010
DB. 13240 PG. 2500
PB. 80 PG. 112
TM 014
N/F
DEANNA L. & JOHN C. RADICH
TAX ID#16110100570
DB. 15164 PG. 3570
PB. 80 PG. 112
TM 016
N/F
MICHAEL L. &
LINDA J. FURLONG
TAX ID#16110100560
DB. 10835 PG. 13
PB. 80 PG. 112
TM 017
N/F
HANOVER WOODS SWIM &
TENNIS ASSOCIATION
TAX ID#16110100550
DB. 4522 PG. 254
PB. 80 PG. 112
TM 018
N/F
ARAGON 2012 AZALEA SPRINGS LLC
TAX ID#16106000070
DB. 15012 PG. 3033
PB. 80 PG. 112
TM 013
N/F
DUCE FAMILY HOLDINGS LLC
TAX ID#16110100580
DB. 14470 PG. 897
PB. 80 PG. 112
TM 015
HANOVER WOODS
UNIT I, BLOCK "A"
PB. 80 PG. 112
CB (10155)
TOP: 1044.20
IN "A": 1039.60
IN "B": 1039.65
OUT: 1039.25
CB (10156)
TOP: 1044.11
IN "A": 1037.62
IN "B": 1035.97
OUT: 1034.32
JB (10159)
TOP: 1051.43
OUT: 1048.53
CB (10146)
TOP: 1042.57
IN: 1039.72
OUT: 1039.52
CB (10133)
TOP: 1042.31
IN: 1039.86
OUT: 1039.66
CB (10097)
TOP: 1042.78
IN: 1038.78
OUT: 1038.43
CB (10099)
TOP: 1042.84
IN: 1038.94
OUT: 1038.84
SSMH (3651)
TOP: 1005.98
IN "A": 997.48
IN "B": 996.40
IN "C": 999.30
IN "D": 1000.40
OUT: 996.33
CB (3658)
TOP: 1006.15
OUT: 1001.31 +/-
SSMH (3953)
TOP: 1024.48
IN "A": 1012.68
IN "B": 1012.68
OUT: 1012.49
SSMH (3750)
TOP: 997.65
IN: 991.16
OUT: 988.15
SSMH (361)
TOP: 993.42
IN: 986.15
OUT: 986.02
INV: 1029.34
INV: 1004.05
INV: 993.03
L.L. 1061
L.L. 1060
L.L. 1100
L.L. 1101
POND
N/A
VALVE
GATE MOTOR
KEYPAD
SPEED BUMP
SPEED BUMP
SPEED BUMP
SPEED BUMP
COMPACTOR ENTRY
BLOCK
15 MPH
RIGHT LANE MUST
TURN RIGHT
NATURE TRAIL
CLOSES AT DUSK
ONE STORY
FRAME
ASPHALT
ELECTRIC LINE
MARKER
WATER VAULT
3/4"IRON
ROD FND
1/2"RB
1/2"RB FND
LEANING
X-TIE
CONC. WALL
CONC. W/
LINE MAR
PLAYGROUND
WOOD
SHED
6"WPF
8"PVC
6"PVC
8"DIP
18"RCP
18"HDPE
16"CMP
24"CMP
8"DIP
6"PVC
8"PVC
8"DIP
8"PVC
8"DIP
8"PVC
8"DIP





NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROTECT EXISTING GARAGE DURING CONSTRUCTION OF WATER MAIN.
4. PROPERTIES FROM STA 69+00 TO 112+00 SHOWN IN THE TABLE ON SHEET D-3 ARE SERVICED BY SEPTIC DRAIN FIELDS. CONTRACTOR TO REPAIR TO LIKE OR BETTER CONDITION IF DAMAGED
5. CONTRACTOR SHALL NOTIFY GEORGIA POWER PRIOR TO ANY ACTIVITY WITHIN POWER LINE EASEMENT. REFER TO GPC EASEMENT ENCROACHMENT AGREEMENT FOR CONTACT INFORMATION.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTE 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 62+50 TO STA 75+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

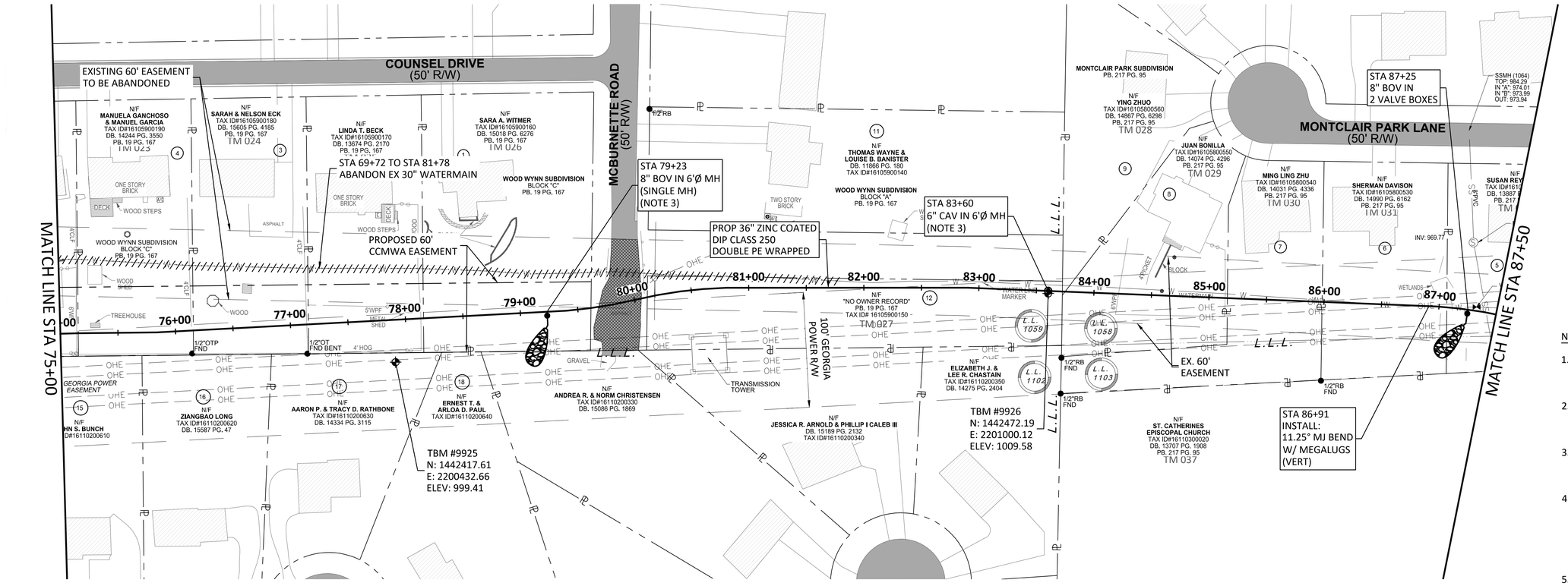
FILE NAME CV-LNA-PP-SHTS01.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-6
SEQ. 15

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:41 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg



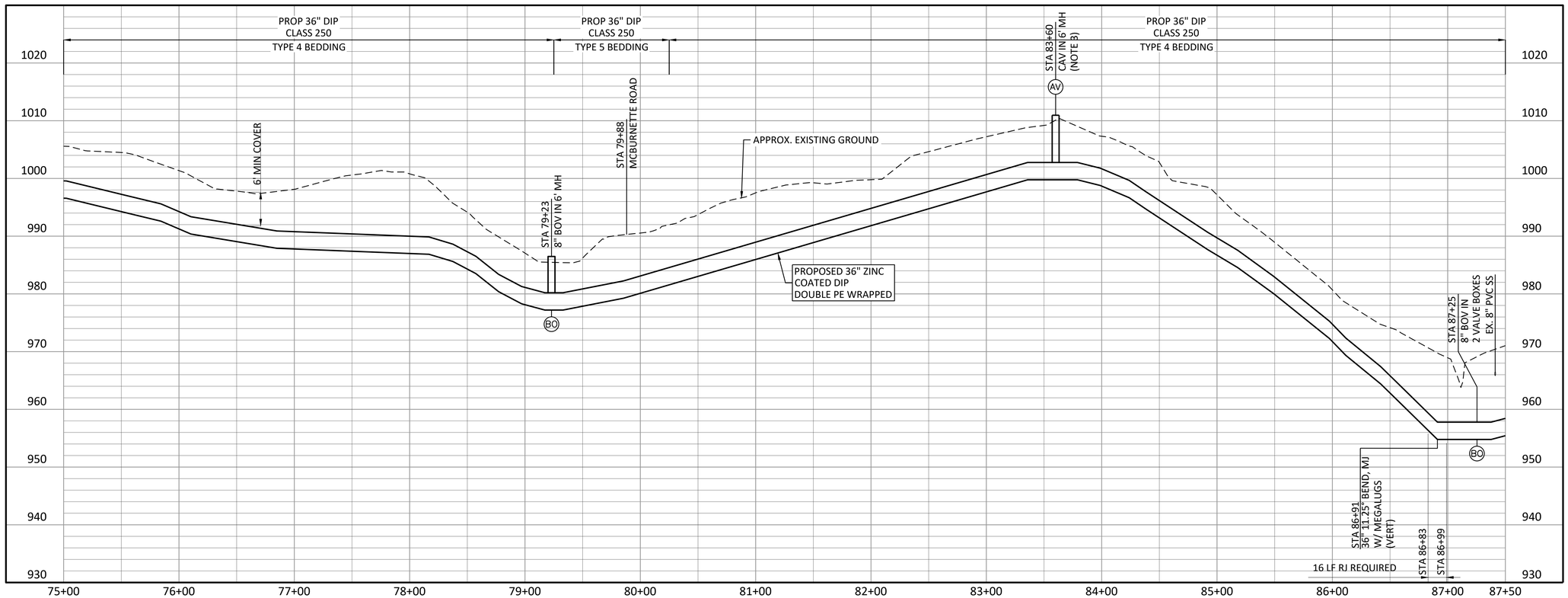
NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. MANHOLE LID SHALL BE BOLTED DOWN PER GEORGIA POWER COMPANY REQUIREMENTS AS SHOWN ON SHEET D-3.
4. PROPERTIES FROM STA 69+00 TO 112+00 SHOWN IN THE TABLE ON SHEET D-3 ARE SERVICED BY SEPTIC DRAIN FIELDS. CONTRACTOR TO REPAIR TO LIKE OR BETTER CONDITION IF DAMAGED.
5. CONTRACTOR SHALL NOTIFY GEORGIA POWER PRIOR TO ANY ACTIVITY WITHIN POWER LINE EASEMENT. REFER TO GPC EASEMENT ENCROACHMENT AGREEMENT FOR CONTACT INFORMATION.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTEN 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 75+00 TO STA 87+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS01.dwg

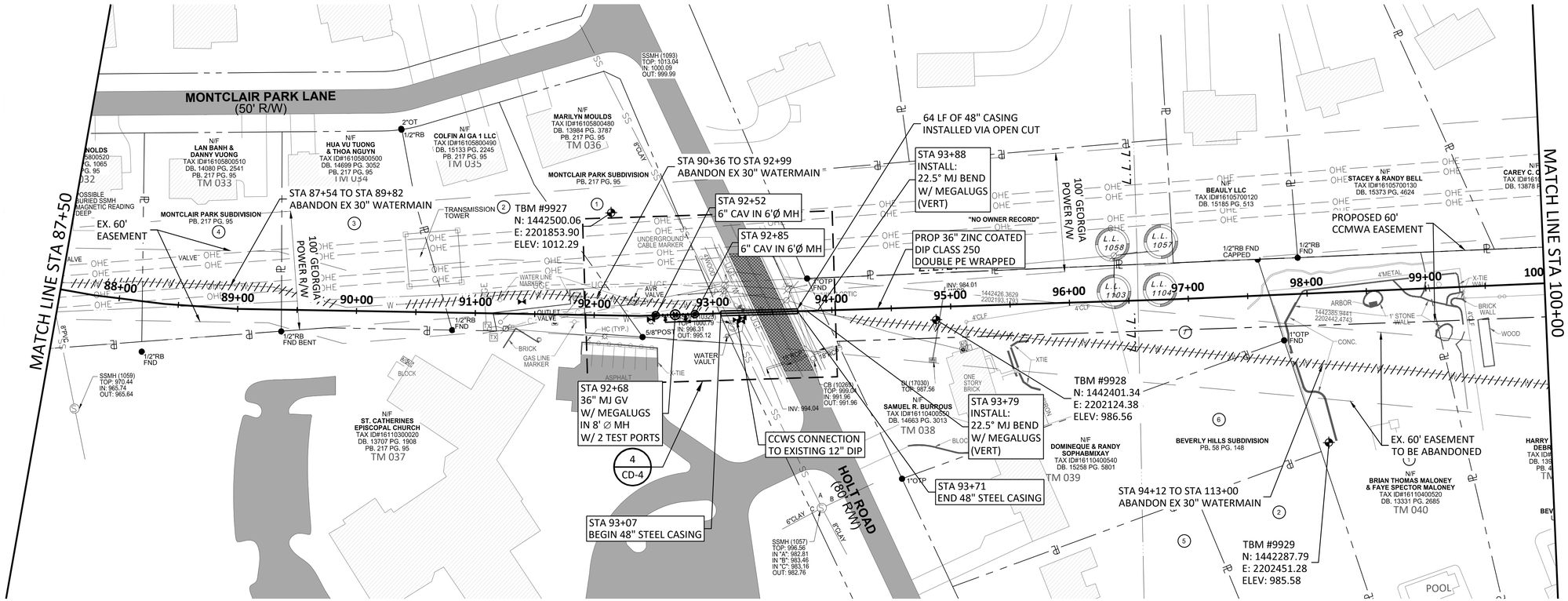
NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

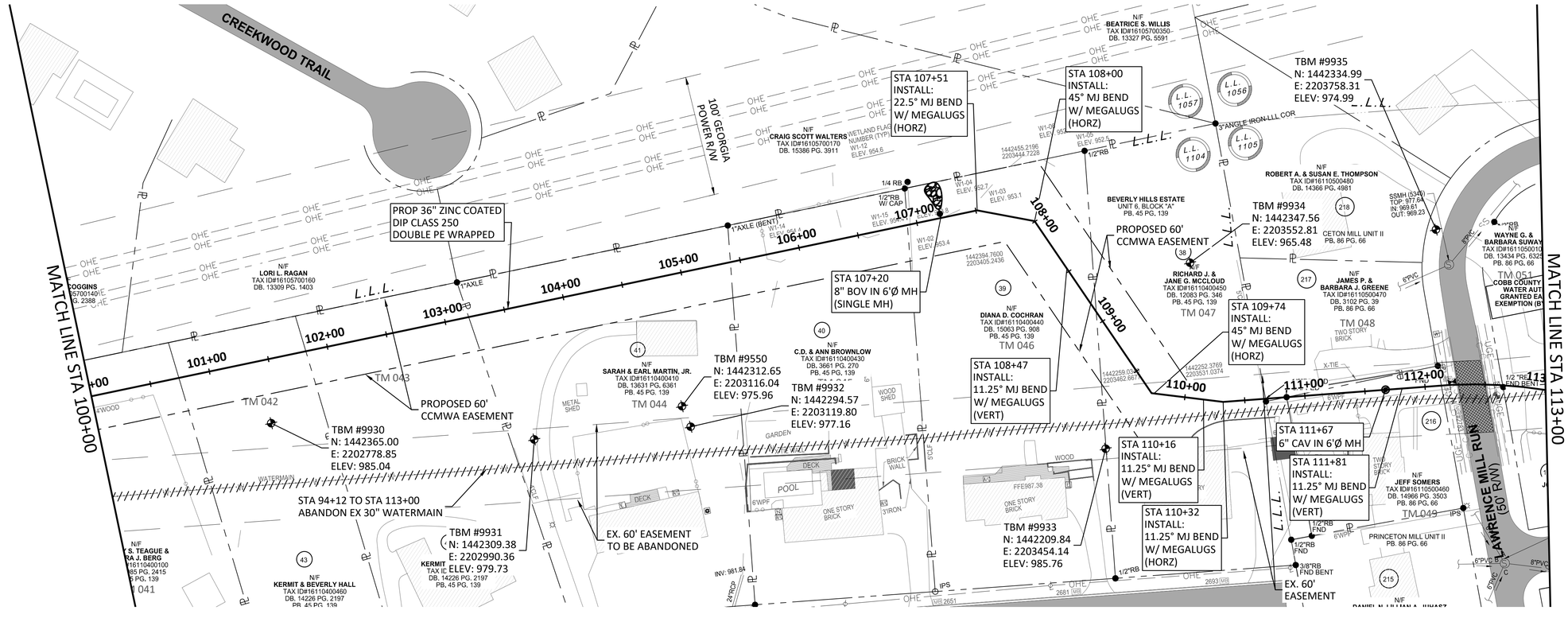
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

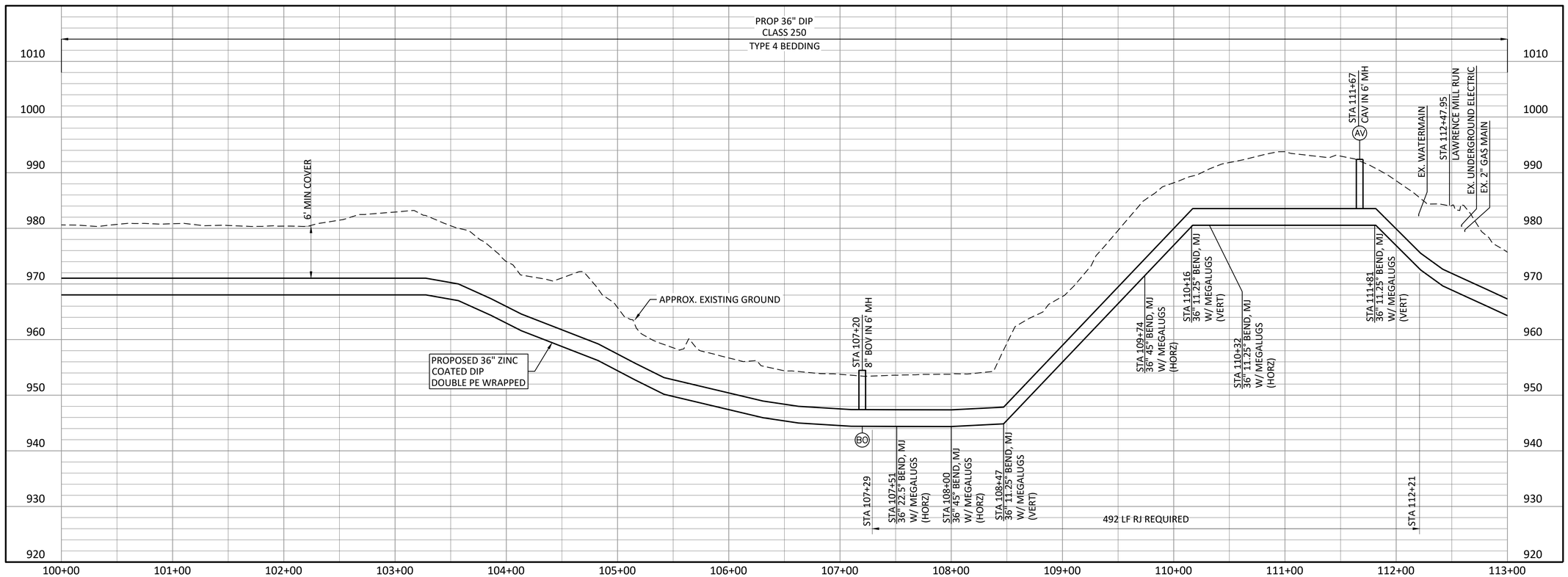
SHEET C-7
SEQ. 16

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:41 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg


MONTCLAIR PARK LANE
(50' R/W)
MATCH LINE STA 87+50
MATCH LINE STA 100+00
HOLT ROAD
(80' R/W)
100' GEORGIA POWER R/W
EX. 60' EASEMENT
PROPOSED 60' CCMWA EASEMENT
EX. 60' EASEMENT TO BE ABANDONED
STA 87+54 TO STA 89+82
ABANDON EX 30" WATERMAIN
STA 90+36 TO STA 92+99
ABANDON EX 30" WATERMAIN
STA 94+12 TO STA 113+00
ABANDON EX 30" WATERMAIN
64 LF OF 48" CASING
INSTALLED VIA OPEN CUT
STA 92+52
6" CAV IN 6'Ø MH
STA 92+85
6" CAV IN 6'Ø MH
STA 93+88
INSTALL:
22.5° MJ BEND
W/ MEGALUGS
(VERT)
PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED
"NO OWNER RECORD"
TBM #9927
N: 1442500.06
E: 2201853.90
ELEV: 1012.29
TBM #9928
N: 1442401.34
E: 2202124.38
ELEV: 986.56
TBM #9929
N: 1442287.79
E: 2202451.28
ELEV: 985.58
STA 92+68
36" MJ GV
W/ MEGALUGS
IN 8' ∅ MH
W/ 2 TEST PORTS
CCWS CONNECTION
TO EXISTING 12" DIP
STA 93+07
BEGIN 48" STEEL CASING
STA 93+71
END 48" STEEL CASING
STA 93+79
INSTALL:
22.5° MJ BEND
W/ MEGALUGS
(VERT)
N/F
ST. CATHERINES
EPISCOPAL CHURCH
TAX ID#16110300020
DB. 13707 PG. 1908
PB. 217 PG. 95
TM 037
N/F
SAMUEL P. BURROUS
TAX ID#16110400550
DB. 14663 PG. 3013
TM 038
N/F
DOMINEQUE & RANDY
SOPHABMIXAY
TAX ID#16110400540
DB. 15258 PG. 5801
TM 039
N/F
BRIAN THOMAS MALONEY
& FAYE SPECTOR MALONEY
TAX ID#16110400520
DB. 13331 PG. 2685
TM 040
N/F
MARILYN MOULDS
TAX ID#16105800480
DB. 13984 PG. 3787
PB. 217 PG. 95
TM 036
N/F
COLFIN AI GA 1 LLC
TAX ID#16105800490
DB. 15133 PG. 2245
PB. 217 PG. 95
TM 035
N/F
HUA VU TUONG
& THOA NGUYN
TAX ID#16105800500
DB. 14699 PG. 3052
PB. 217 PG. 95
TM 034
N/F
LAN BANH &
DANNY VUONG
TAX ID#16105800510
DB. 14080 PG. 2541
PB. 217 PG. 95
TM 033
N/F
BEAULY LLC
TAX ID#16105700120
DB. 15185 PG. 513
N/F
STACEY & RANDY BELL
TAX ID#16105700130
DB. 15373 PG. 4624
MONTCLAIR PARK SUBDIVISION
PB. 217 PG. 95
BEVERLY HILLS SUBDIVISION
PB. 98 PG. 148
SSMH (1093)
TOP: 1013.04
IN: 1000.09
OUT: 999.99
SSMH (1059)
TOP: 970.44
IN: 965.74
OUT: 965.64
SSMH (1057)
TOP: 996.56
IN "A": 982.81
IN "B": 983.46
IN "C": 983.16
OUT: 982.76
CB (1026)
TOP: 999.04
IN: 991.96
OUT: 991.96
5/8"POST
IN: 996.31
OUT: 995.12
1/2"RB FND
1/2"RB FND BENT
1/2"RB FND CAPPED
1"OTP FND
2"OT 1/2"RB
TRANSMISSION TOWER
POSSIBLE BURIED SSMH MAGNETIC READING DEEP
UNDERGROUND CABLE MARKER
WATER LINE MARKER
GAS LINE MARKER
WATER VAULT
OUTLET VALVE
AIR VALVE
HC (TYP.)
ASPHALT
BRICK
CONC.
WOOD
BRICK WALL
1' STONE WALL
4'METAL
X-TIE
4'CLF
ONE STORY BRICK
POOL
ARBOR
1442385.9441
2202442.4743
1442426.3629
2202193.1703
INV: 984.01
INV: 994.04
L.L. 1058
L.L. 1057
L.L. 1103
L.L. 1104
L.L. 1077
L.L. 1078
L.L. 1079
L.L. 1080
L.L. 1081
L.L. 1082
L.L. 1083
L.L. 1084
L.L. 1085
L.L. 1086
L.L. 1087
L.L. 1088
L.L. 1089
L.L. 1090
L.L. 1091
L.L. 1092
L.L. 1093
L.L. 1094
L.L. 1095
L.L. 1096
L.L.





NORTH

0 50' 100'
SCALE IN FEET HORIZONTAL

0 10' 20'
SCALE IN FEET VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. PROPERTIES FROM STA 69+00 TO 112+00 SHOWN IN THE TABLE ON SHEET D-3 ARE SERVICED BY SEPTIC DRAIN FIELDS. CONTRACTOR TO REPAIR TO LIKE OR BETTER CONDITION IF DAMAGED.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELLS 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 100+00 TO STA 113+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS01.dwg

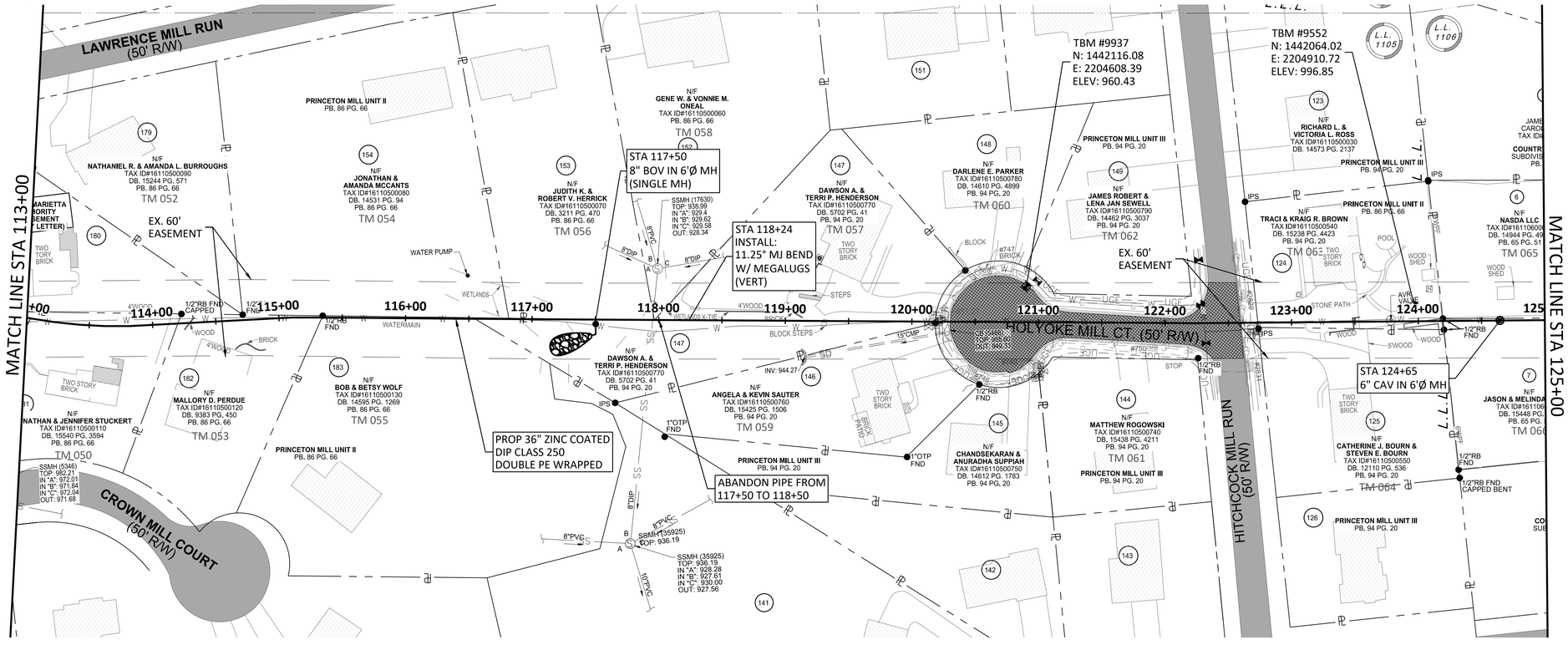
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

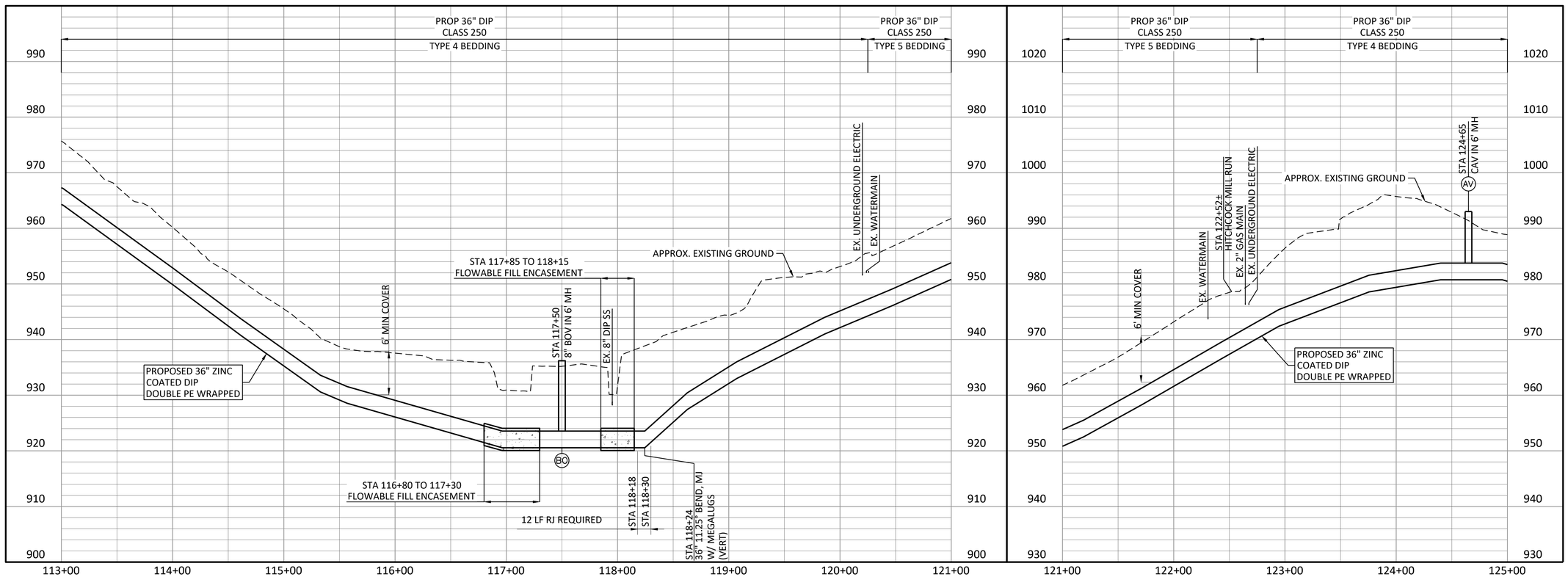
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-9
SEQ. 18

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:41 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CARLISTON PHELPS 3/12/20

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 113+00 TO STA 125+00

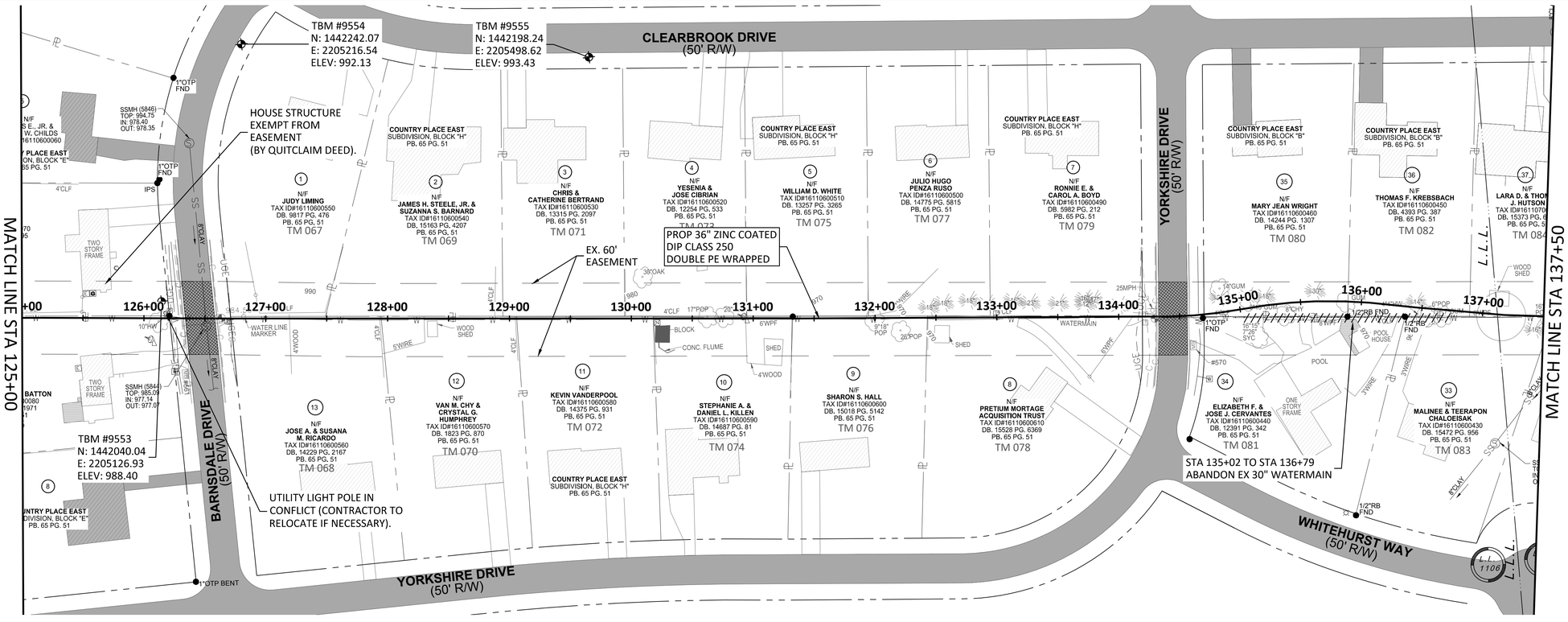
P&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS01.dwg

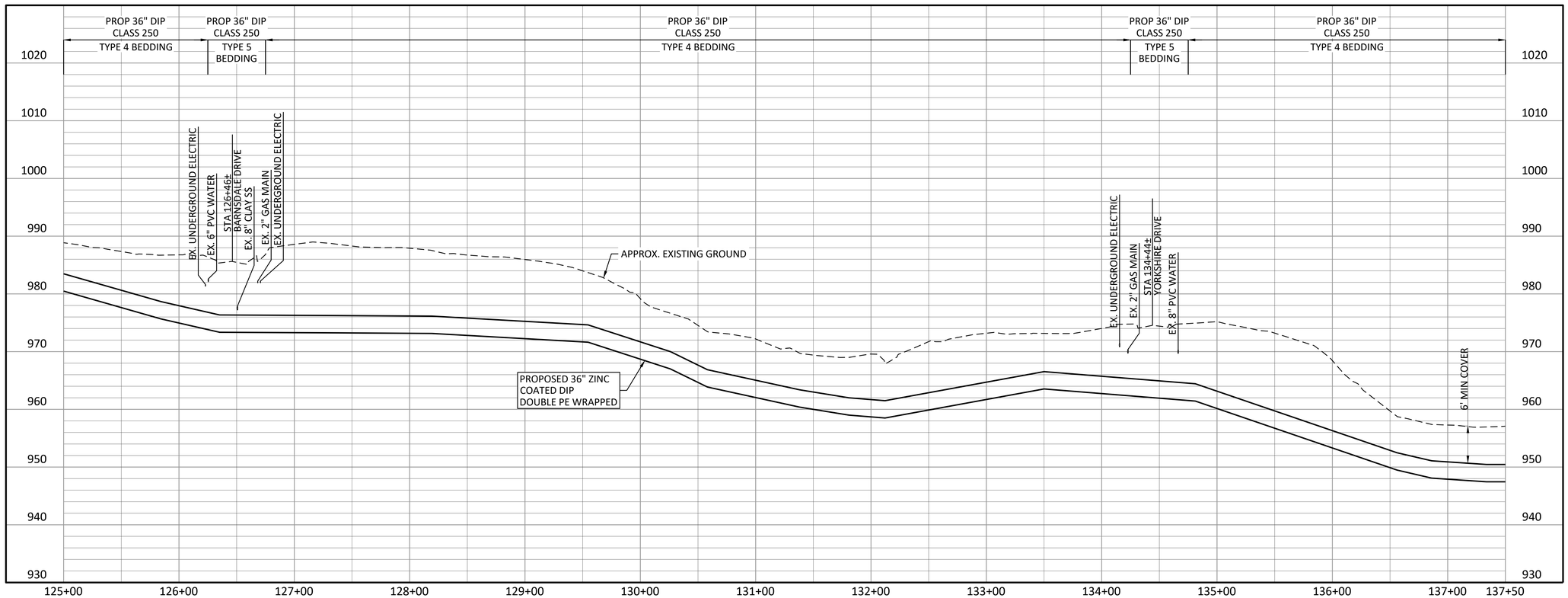
NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE
	VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		

SHEET C-10
SEQ. 19

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 1:05 PM Saved By: 90196

Plot Date: 3/12/2020 2:41 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS01.dwg





NORTH

0 50' 100'
SCALE IN FEET HORIZONTAL

0 10' 20'
SCALE IN FEET VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLIS
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 125+00 TO STA 137+50

P&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS02.dwg

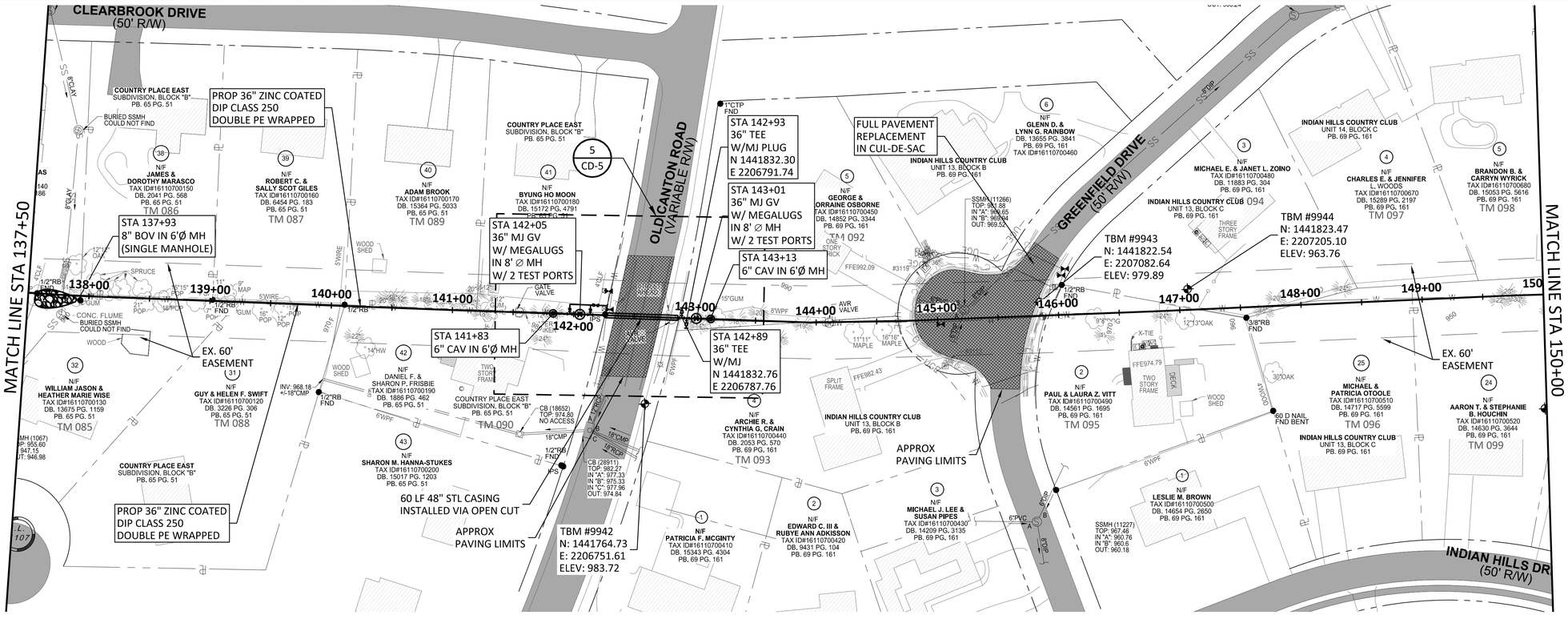
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20
	REVISED		

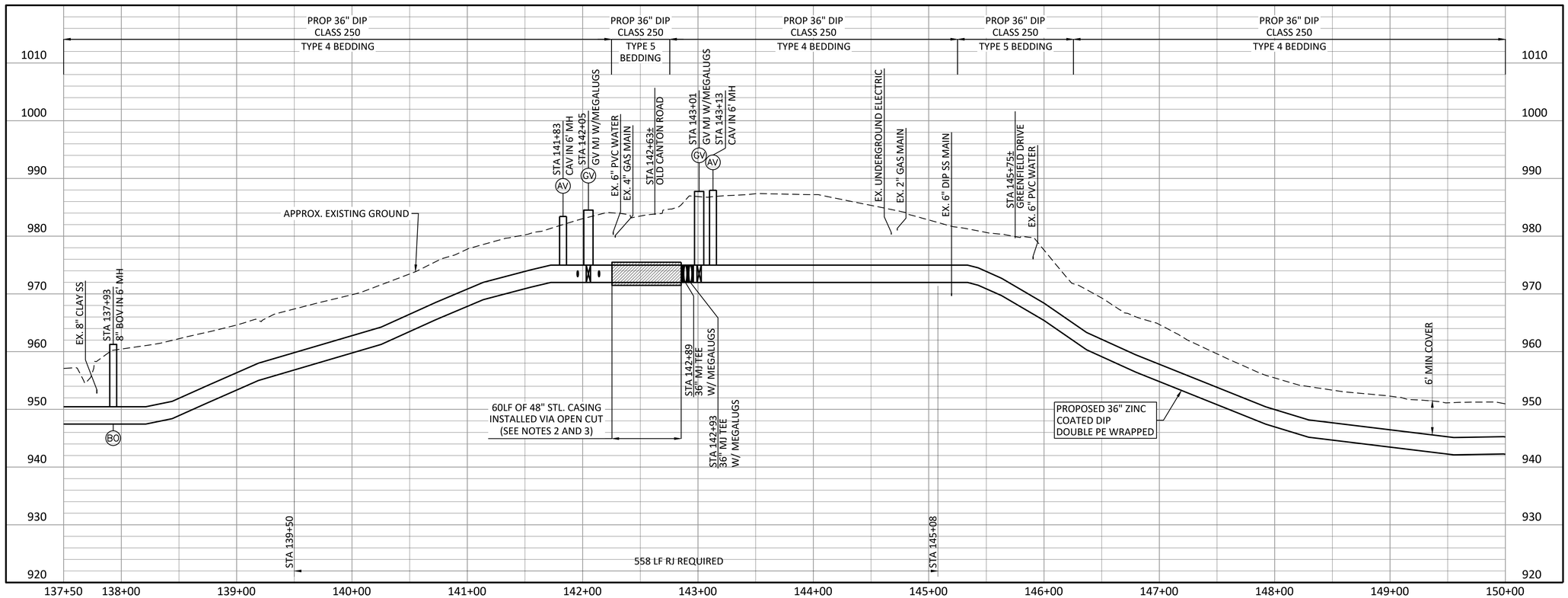
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-11
SEQ. 20

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:43 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. SEQUENCE WORK TO ALLOW REMOVAL OF EXISTING CCMWA 30" WATER MAIN AND REPLACEMENT WITH 48" CASING IN THE EXISTING TRENCH, WITH ADJUSTMENTS AS NEEDED FOR PROPER LINE AND GRADE FOLLOWING CASING INSTALLATION, REINSTATE TRAFFIC PRIOR TO INSTALLING NEW 36" WATER MAIN.

NORTH

SCALE IN FEET HORIZONTAL
0 50' 100'

SCALE IN FEET VERTICAL
0 10' 20'

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 137+50 TO STA 150+00

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

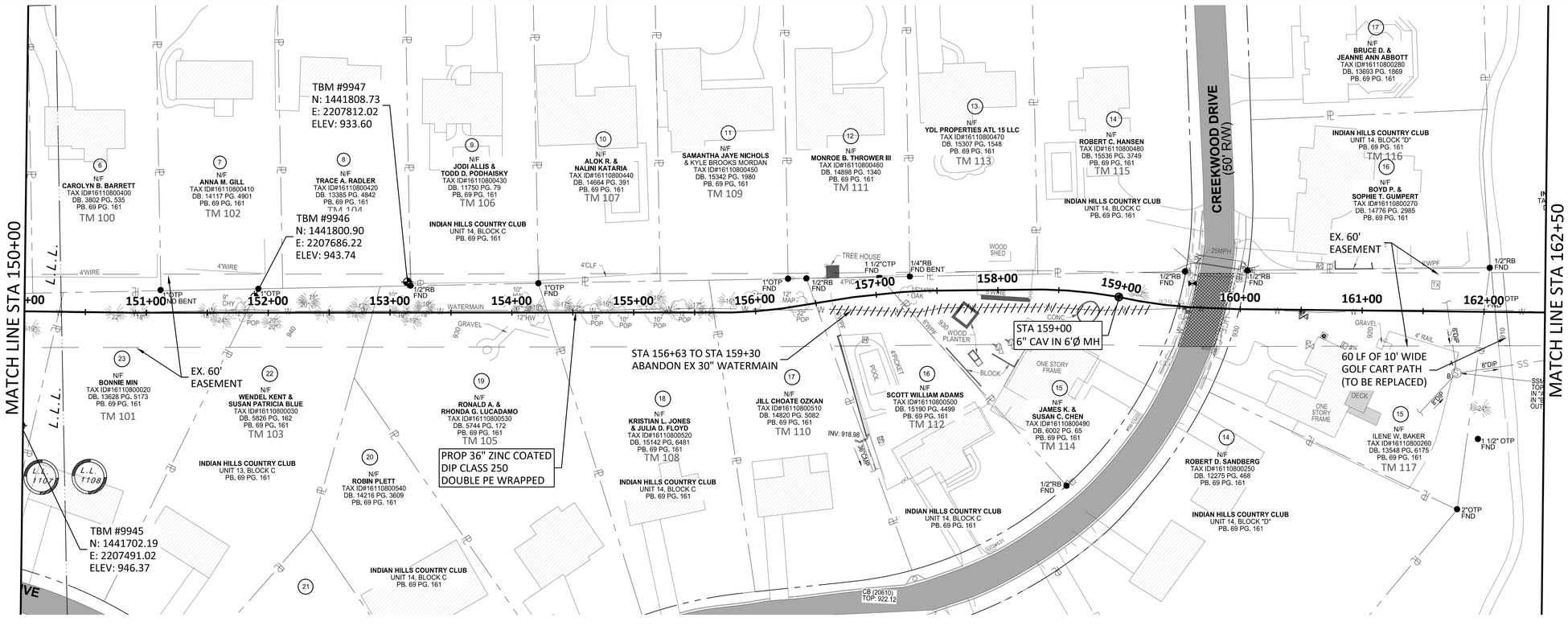
FILE NAME CV-LNA-PP-SHTS02.dwg

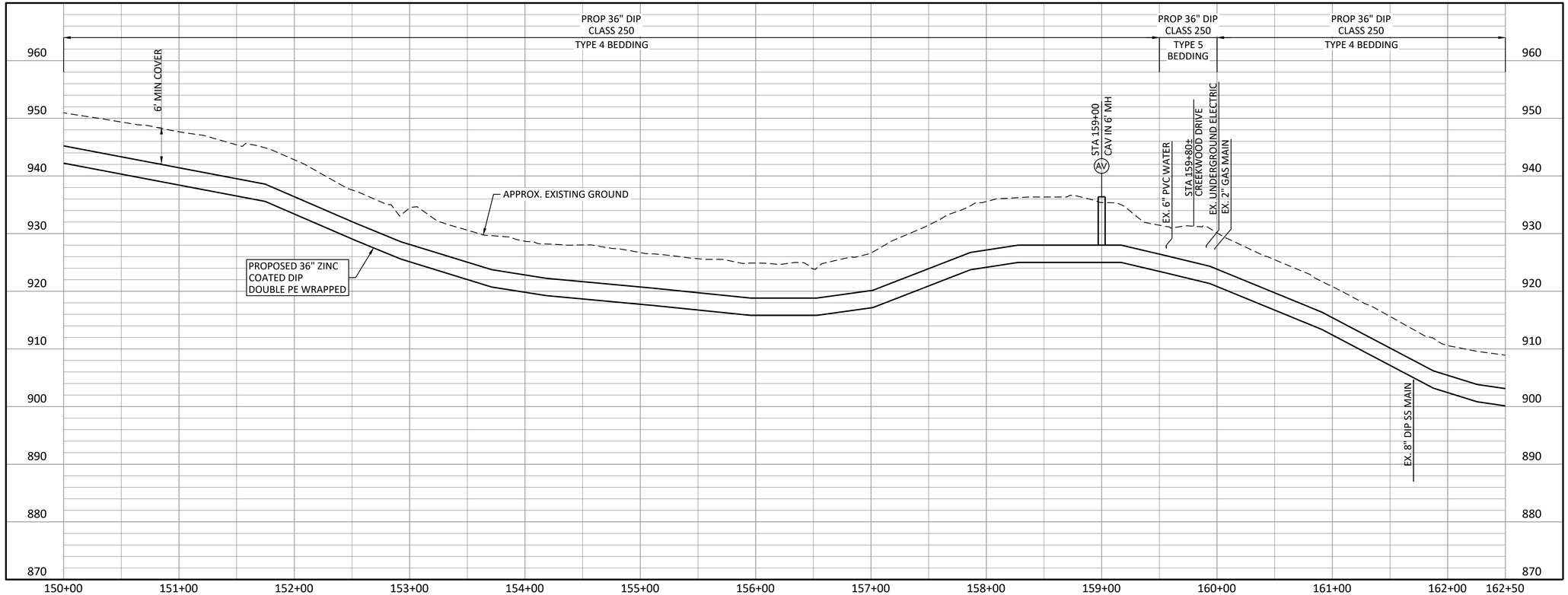
SHEET C-12

SEQ. 21

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:43 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NORTH

0 50' 100'
SCALE IN FEET HORIZONTAL

0 10' 20'
SCALE IN FEET VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING IRRIGATION PIPES AND REPLACE ANY DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 162+00 AND 186+00 TO BE PERFORMED NOV 2020-FEB 2021 - REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020
GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20
FREESE NICHOLS
360 Interstate North Parkway, Suite 250 Atlanta, GA 30339
Phone – (404) 334-4310
Web – www.freese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 150+00 TO STA 162+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

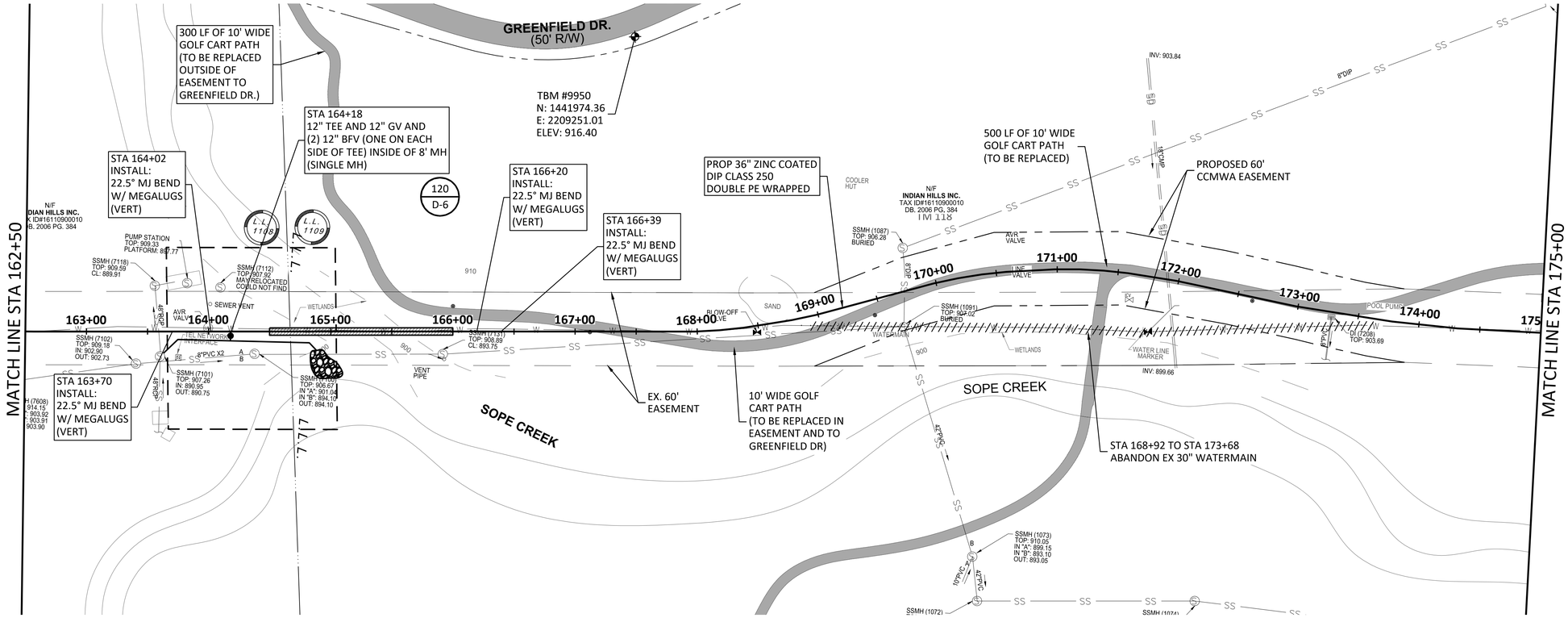
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

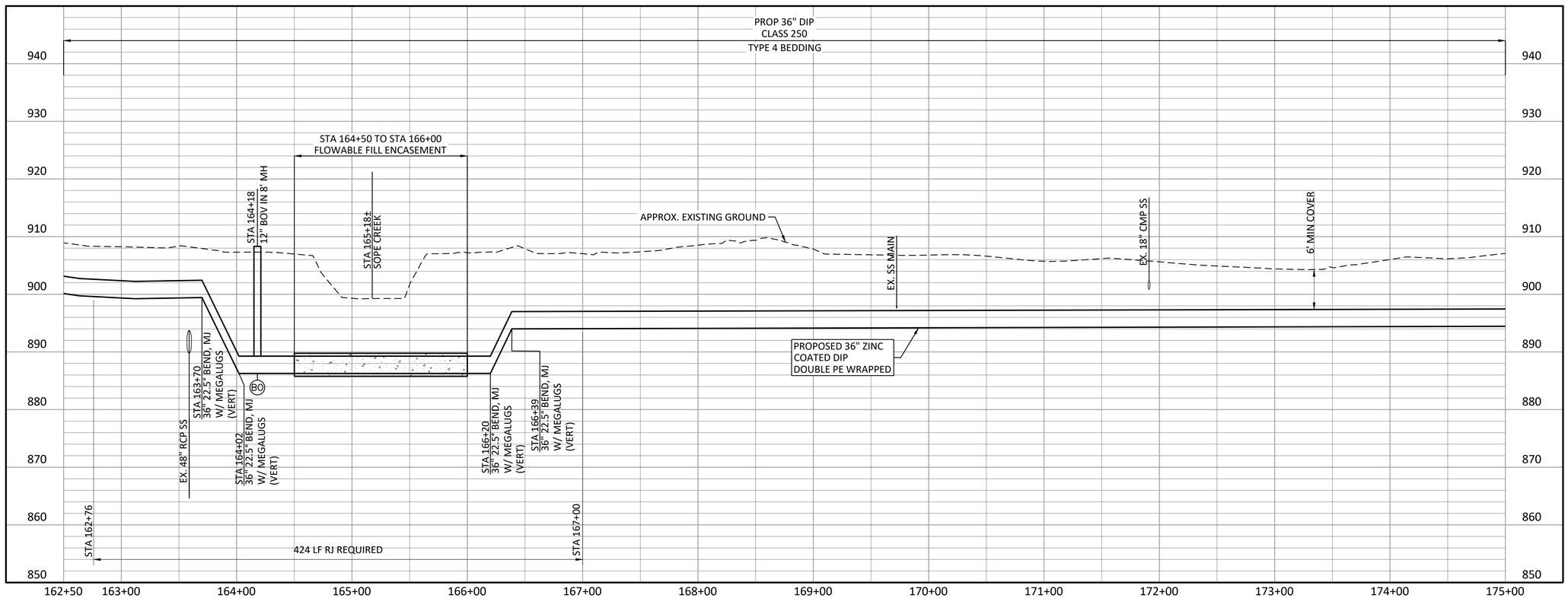
FILE NAME CV-LNA-PP-SHTS02.dwg

SHEET C-13

SEQ. 22

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618
Plot Date: 3/12/2020 2:43 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING IRRIGATION PIPES AND REPLACE ANY DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 162+00 AND 186+00 TO BE PERFORMED NOV 2020-FEB 2021- REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELSH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 162+50 TO STA 175+00

P&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS02.dwg

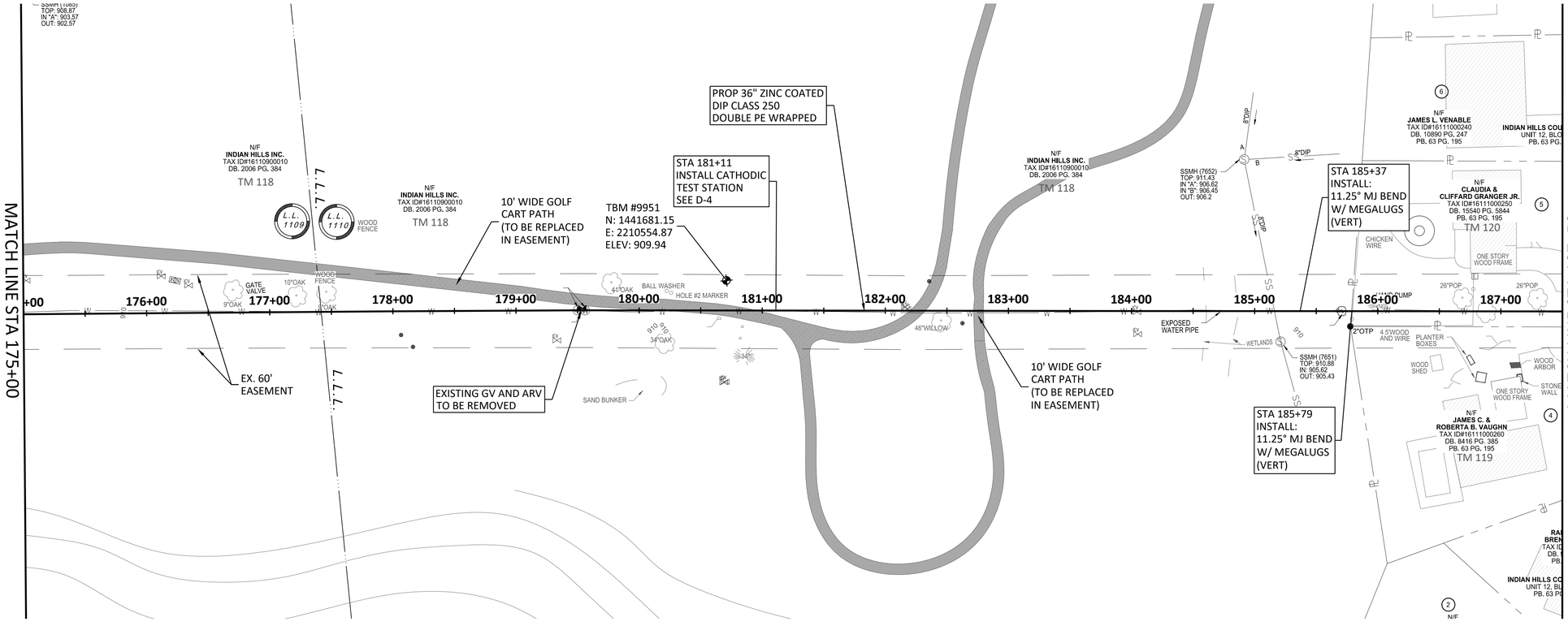
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

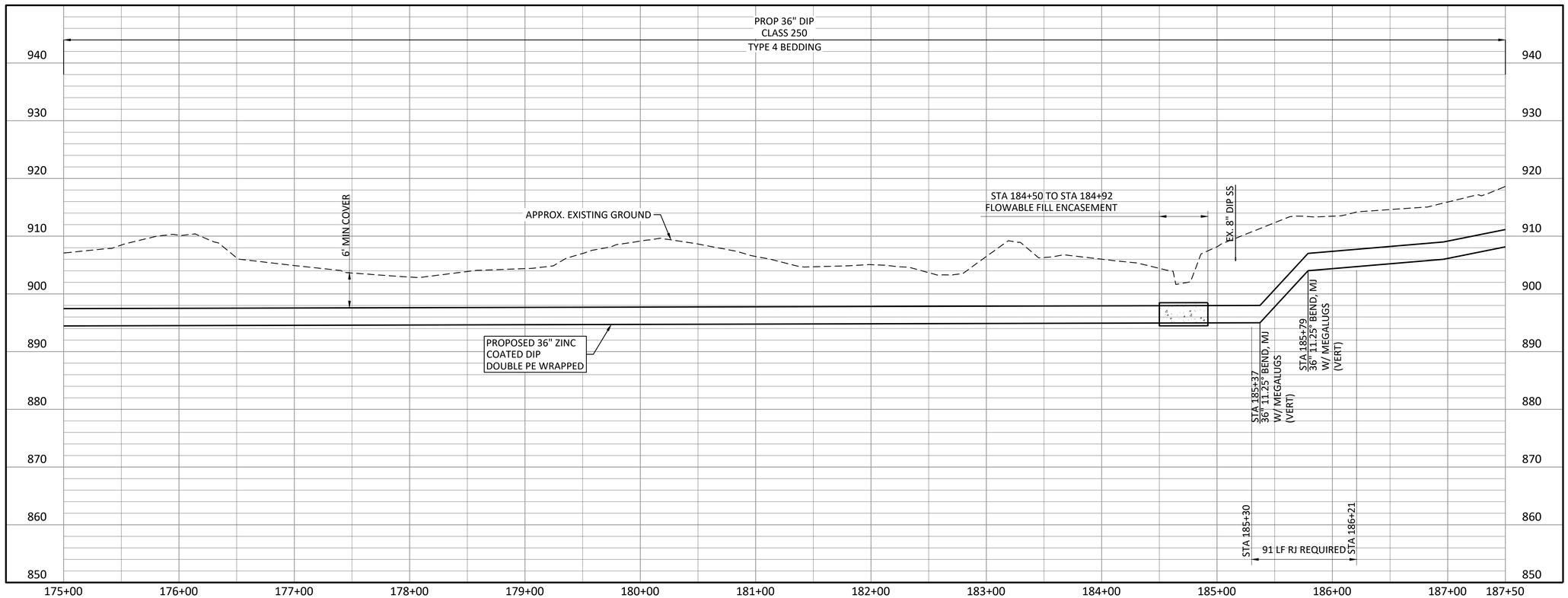
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
C-14
SEQ.
23

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:44 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING IRRIGATION PIPES AND REPLACE ANY DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 162+00 AND 186+00 TO BE PERFORMED NOV 2020-FEB 2021- REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 175+00 TO STA 187+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS02.dwg

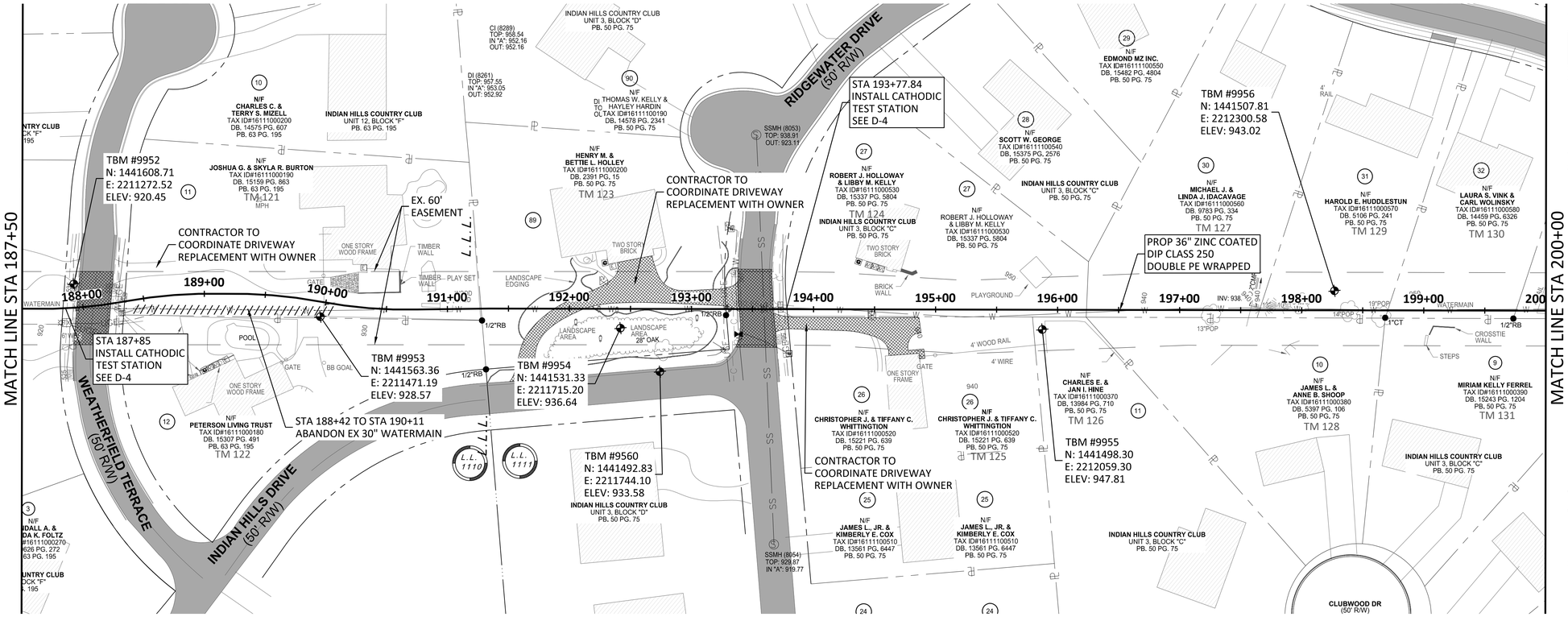
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

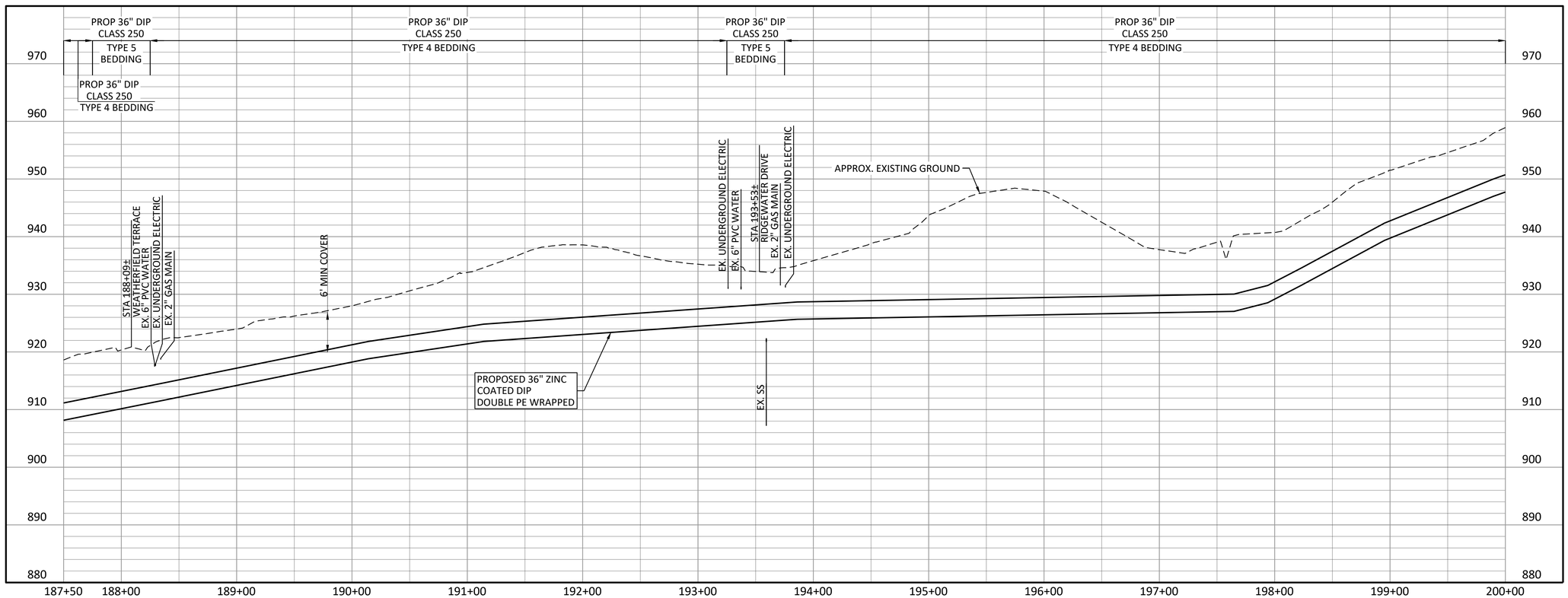
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
C-15
SEQ.
24

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:44 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTE 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 187+50 TO STA 200+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

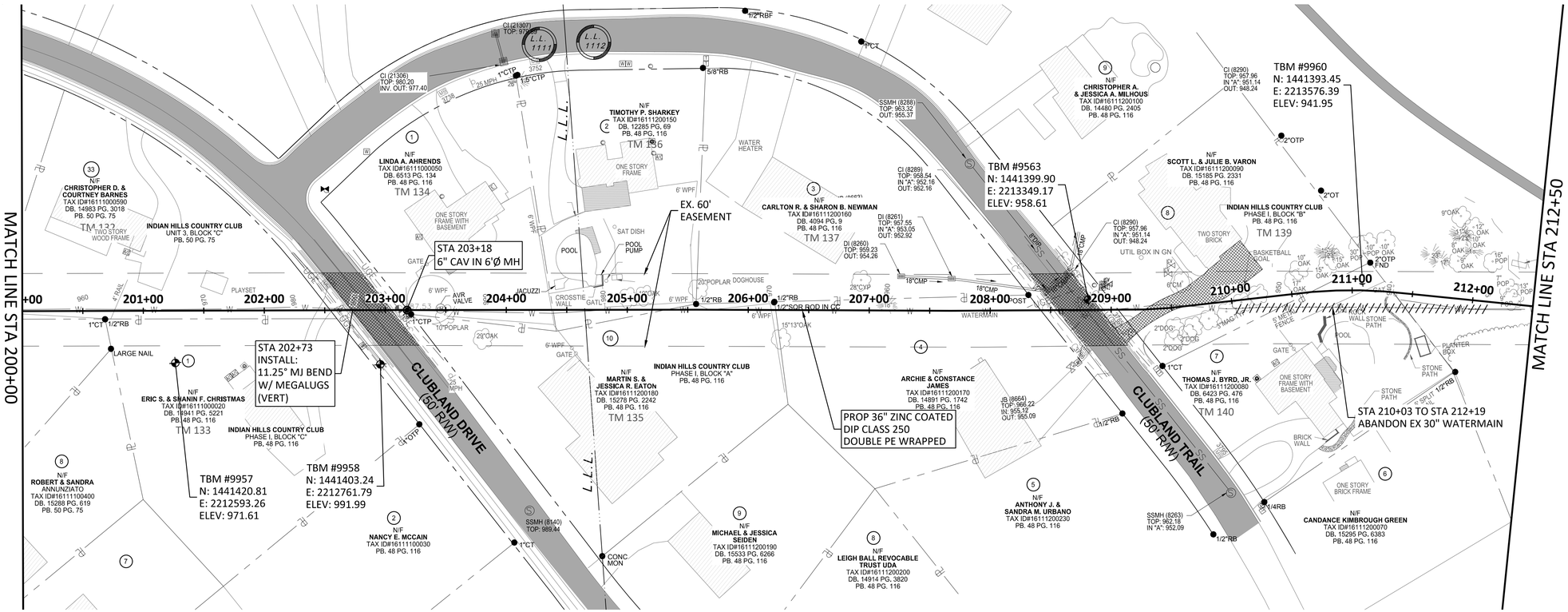
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-LNA-PP-SHTS02.dwg

SHEET C-16
SEQ. 25

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:44 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg



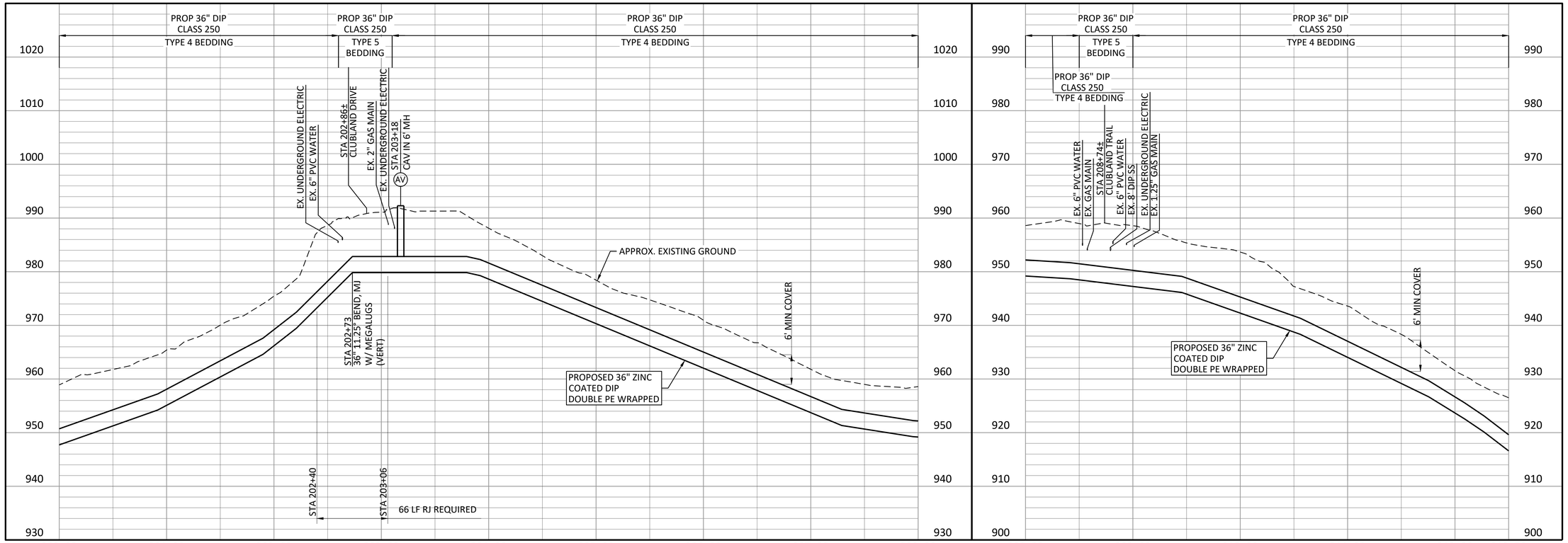
NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 211+00 AND 238+00 TO BE PERFORMED NOV 2020-FEB 2021 AND NOV 2021-FEB 2022 - REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELTEN
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 200+00 TO STA 212+50

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS
REVISED
DATE
BY
FILE NAME CV-LNA-PP-SHTS02.dwg

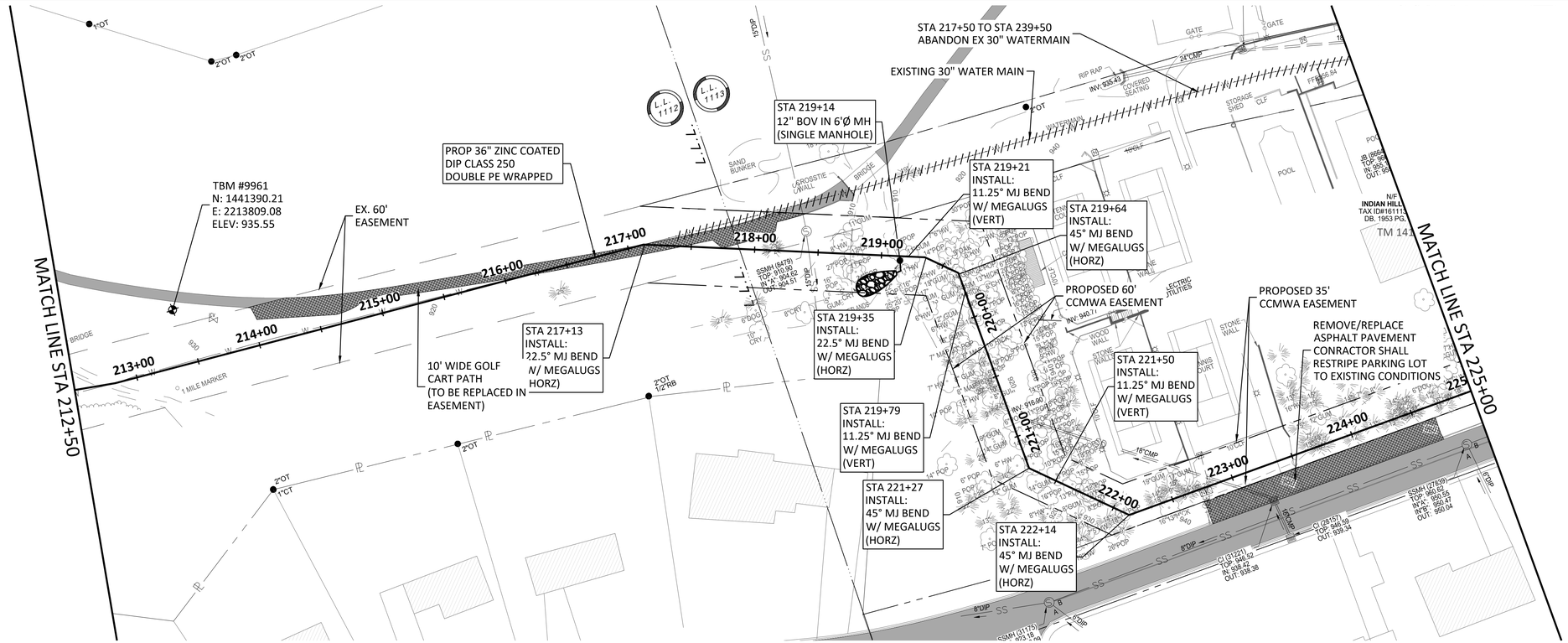
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

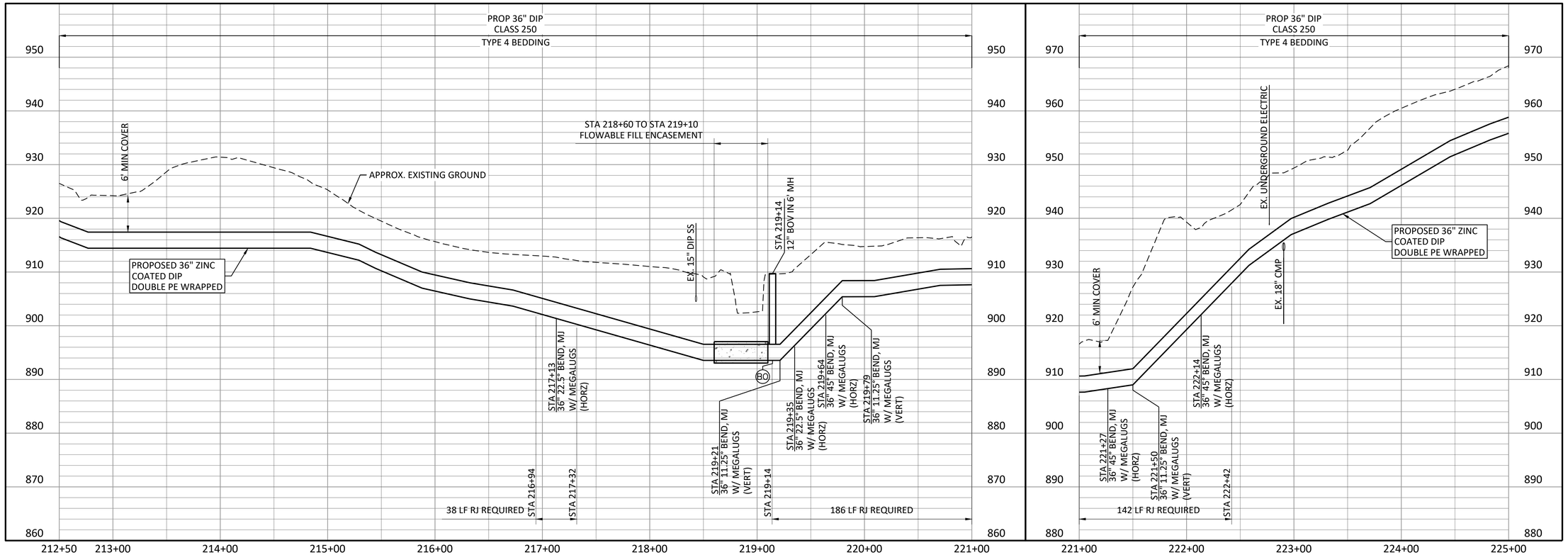
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-17
SEQ. 26

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:45 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 211+00 AND 238+00 TO BE PERFORMED NOV 2020-FEB 2021 AND NOV 2021-FEB 2022 - REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.

NORTH

SCALE IN FEET HORIZONTAL: 0 50' 100'

SCALE IN FEET VERTICAL: 0 10' 20'

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 212+50 TO STA 225+00

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

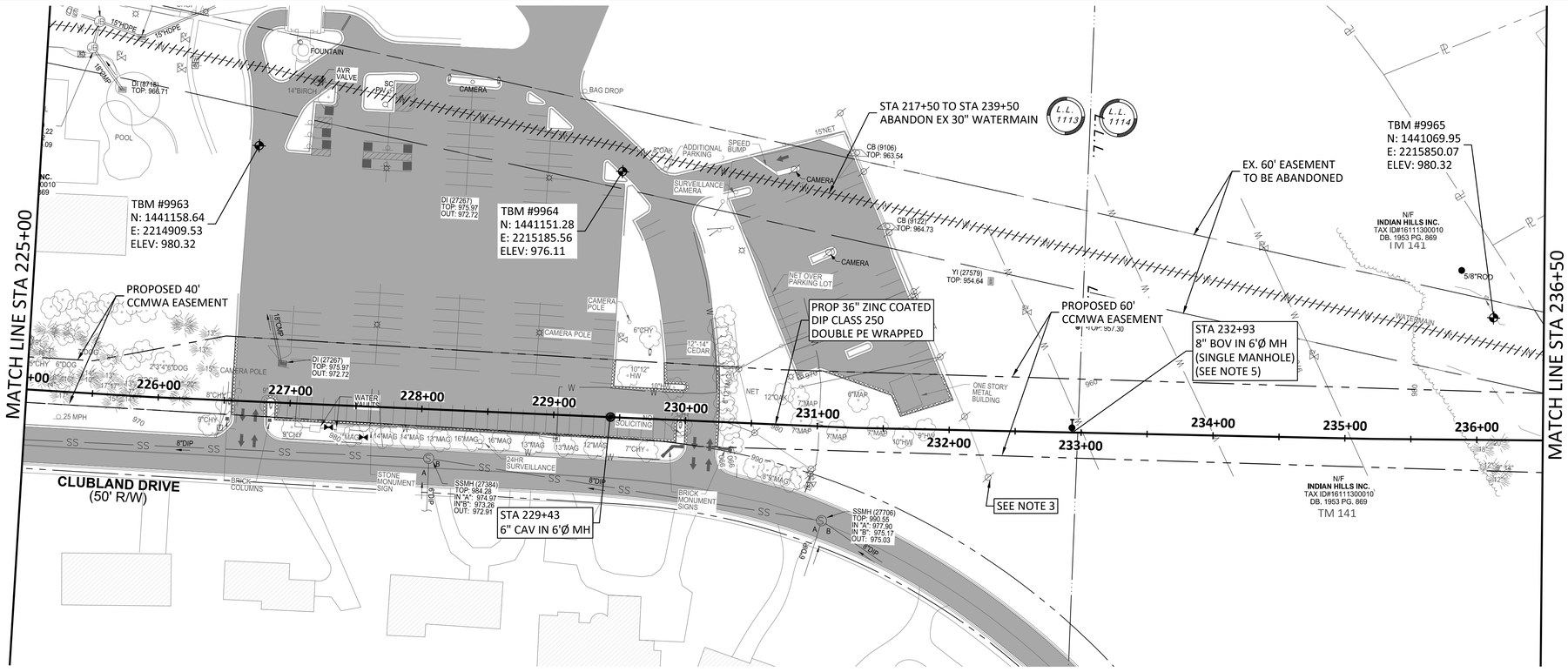
FILE NAME CV-LNA-PP-SHTS02.dwg

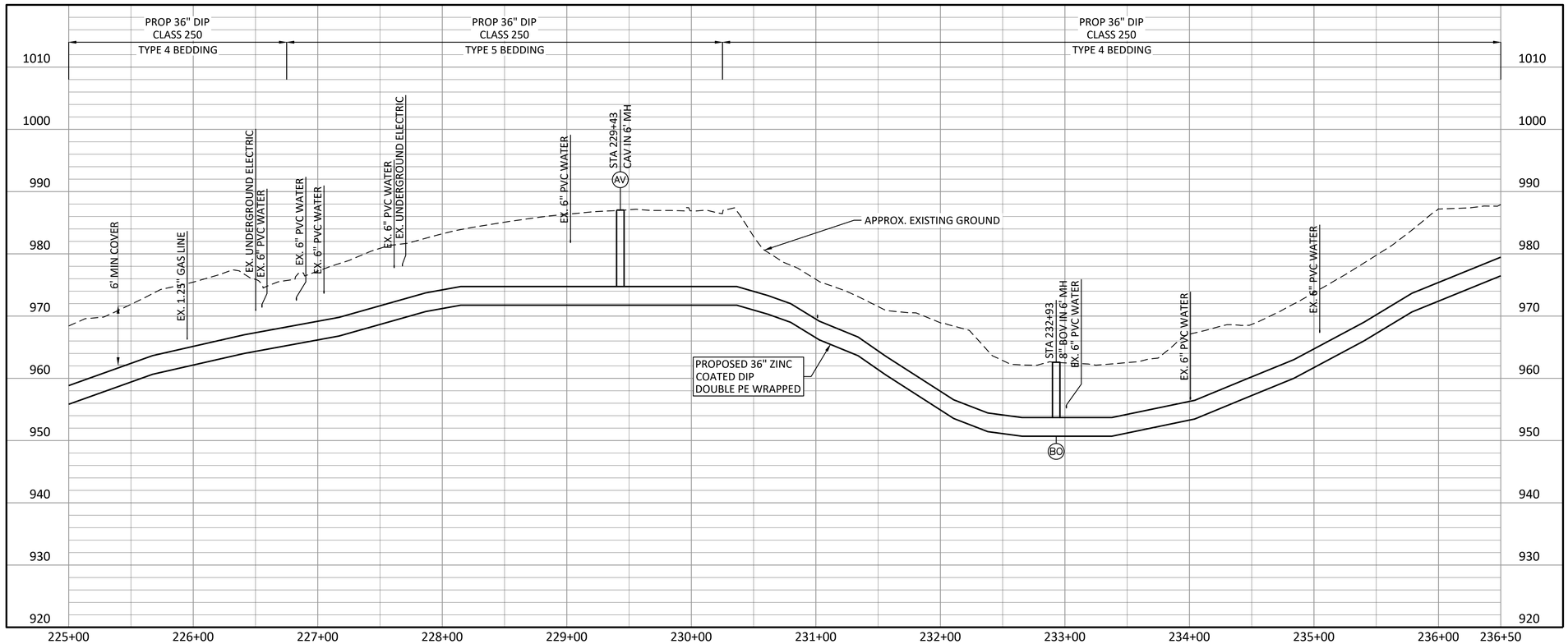
SHEET C-18

SEQ. 27

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:45 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg





NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO COORDINATE WITH INDIAN HILLS COUNTRY CLUB TO HOLD OR RELOCATE EXISTING NET POLES IN EASEMENT AREA
4. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 211+00 AND 238+00 TO BE PERFORMED NOV 2020-FEB 2021 AND NOV 2021-FEB 2022 - REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.
5. MANHOLE TOP TO MATCH EXISTING GRADE IN DRIVING RANGE.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WEST
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 225+00 TO STA 236+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

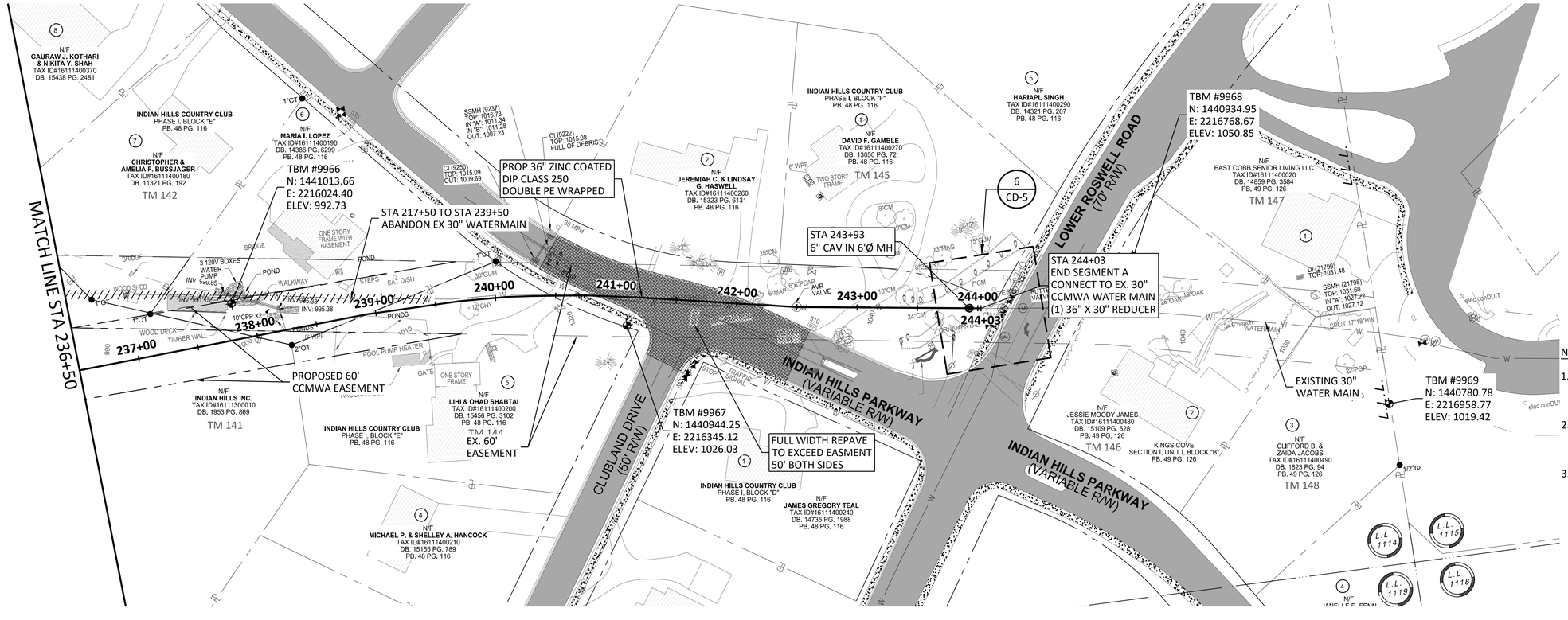
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-LNA-PP-SHTS02.dwg

SHEET C-19
SEQ. 28

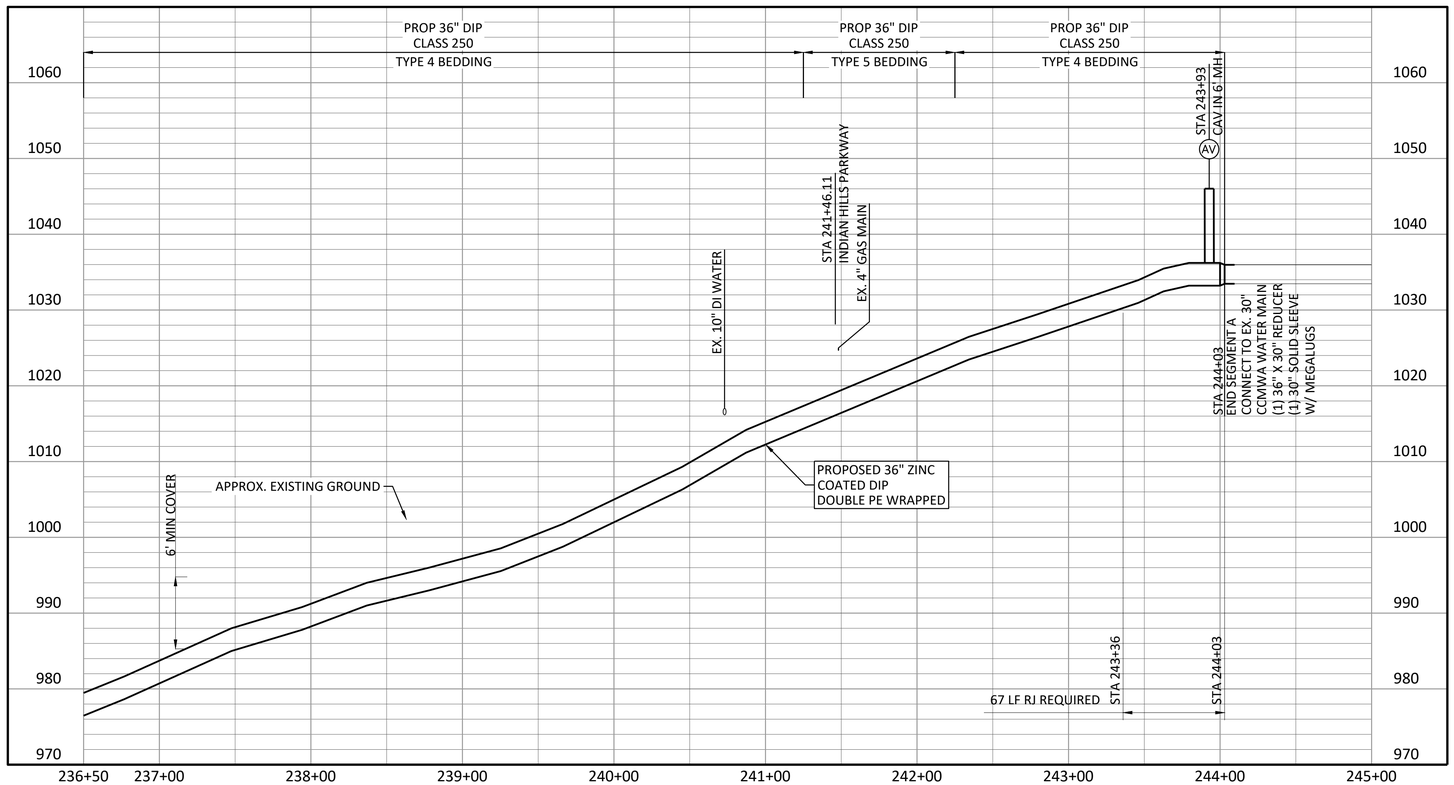
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:45 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 211+00 AND 238+00 TO BE PERFORMED NOV 2020-FEB 2021 AND NOV 2021-FEB 2022 - REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 236+50 TO END

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS02.dwg

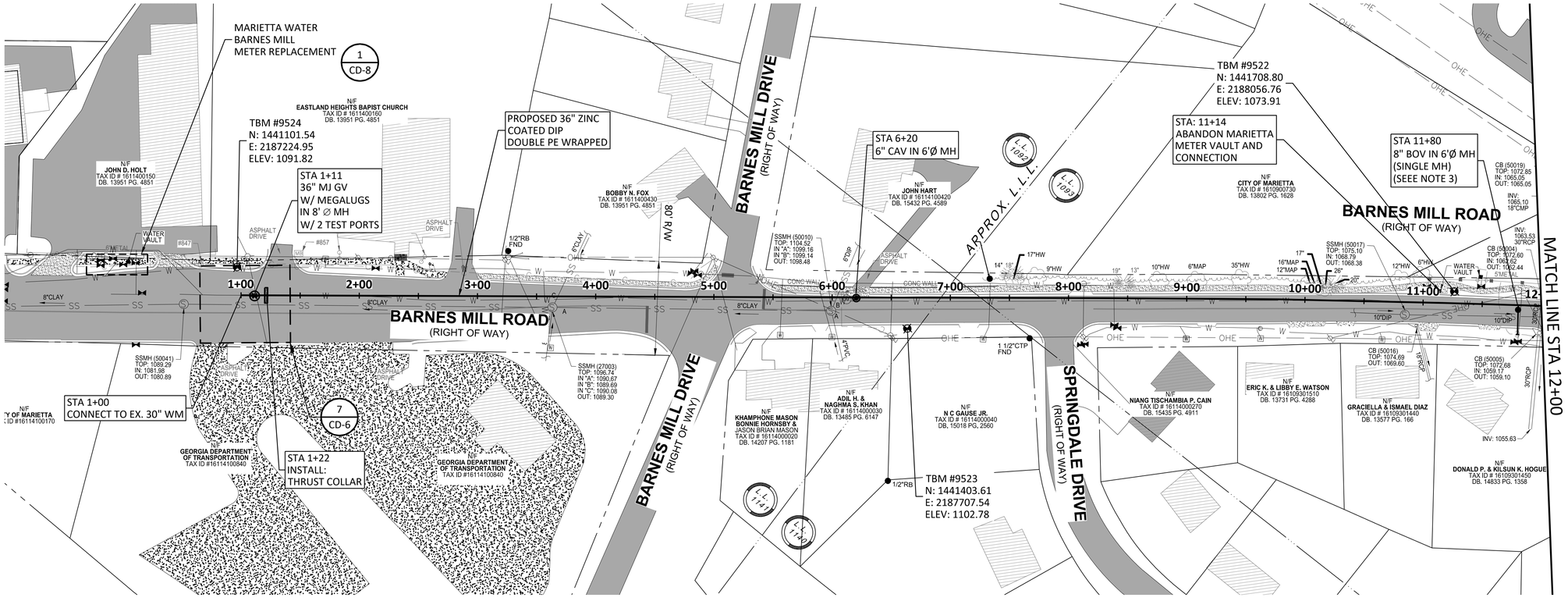
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20
	REVISED		

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-20
SEQ. 29

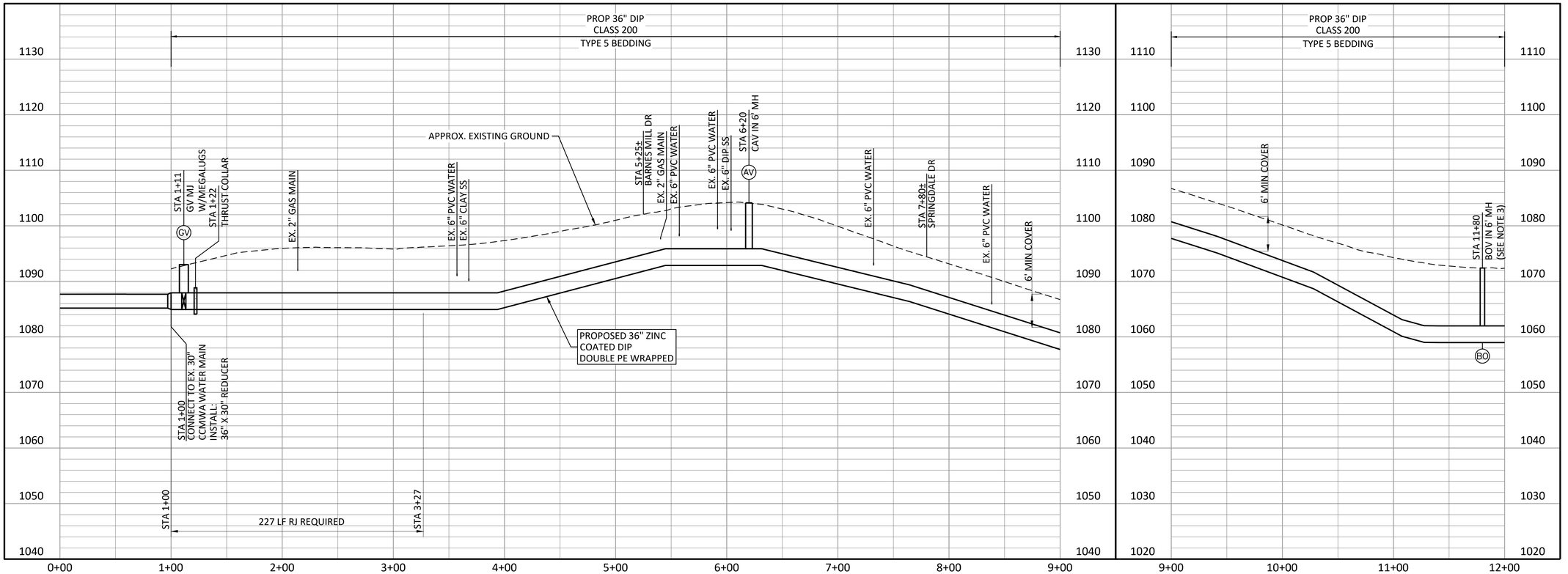
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 2:11 PM Saved By: 02618

Plot Date: 3/12/2020 2:45 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNA-PP-SHTS02.dwg



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. ROUTE BOV PIPE TO EXISTING STORM CATCH BASIN.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELTE
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 1+00 TO STA 12+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

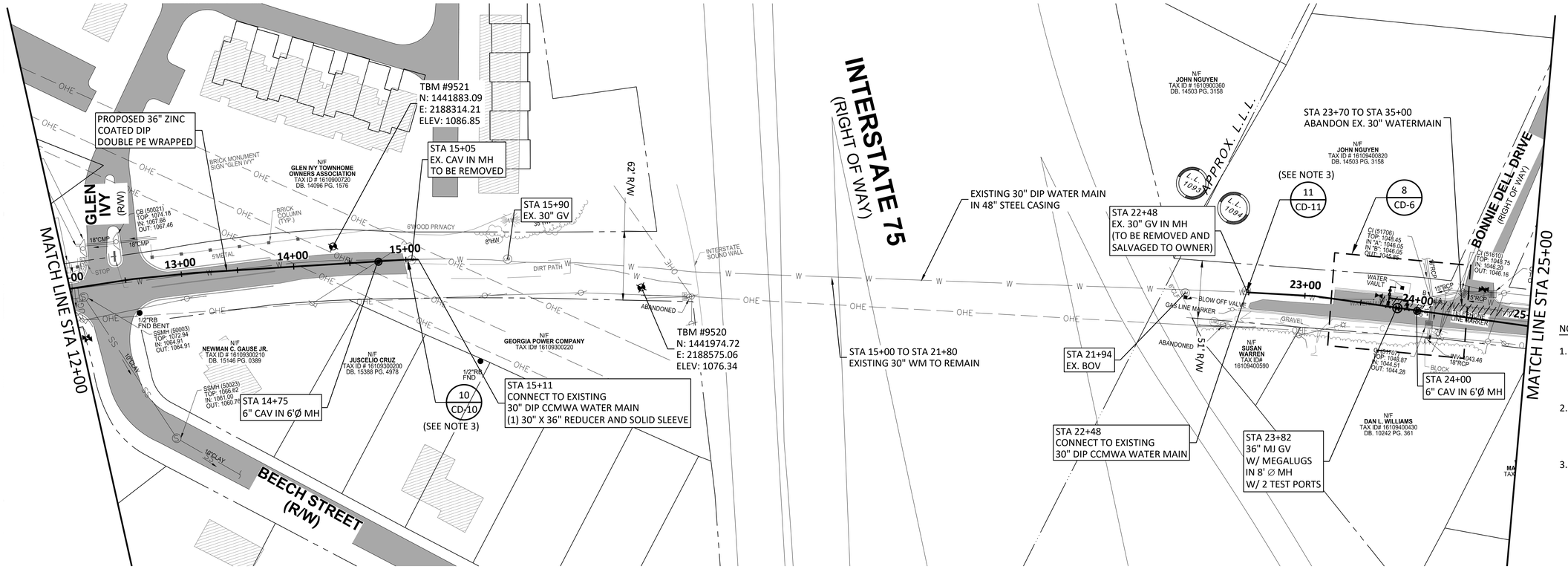
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-LNB-PP-SHTS01.dwg

SHEET C-21
SEQ. 30

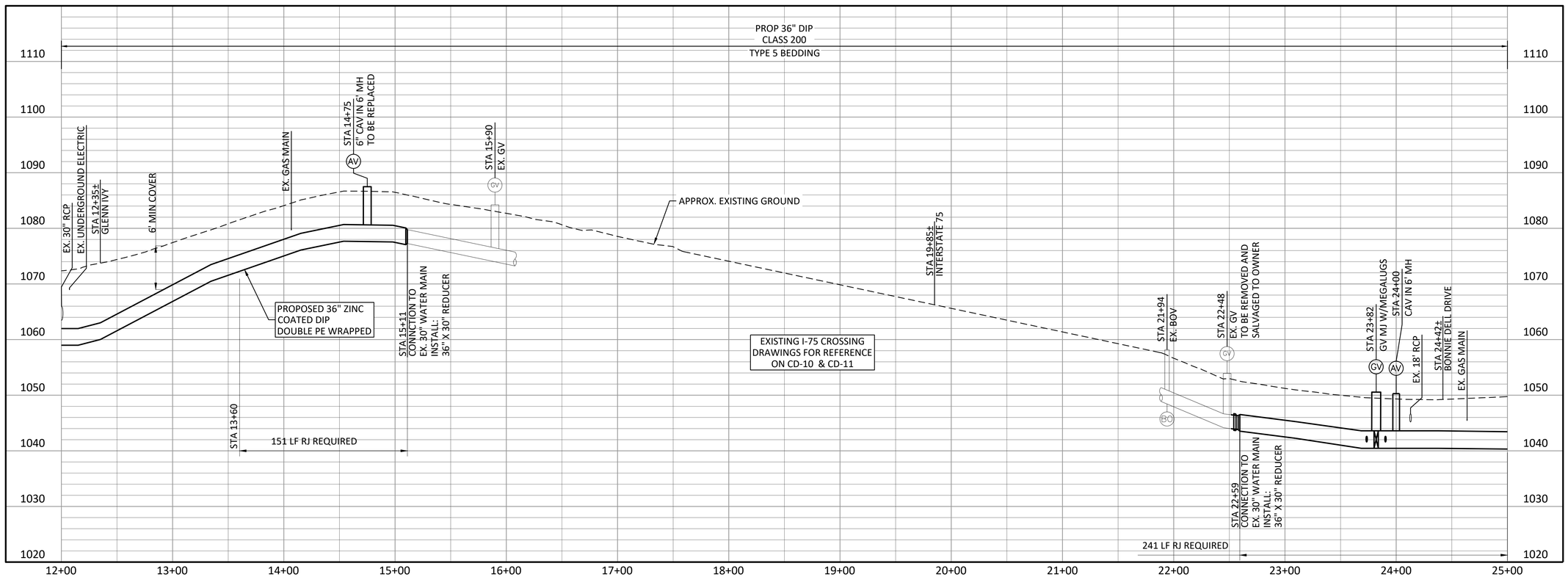
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 2:48 PM Saved By: 90196

Plot Date: 3/12/2020 3:11 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING 30" DIP WATER MAIN CROSSING I-75 PRIOR TO CONNECTION.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELTEN
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 12+00 TO STA 25+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

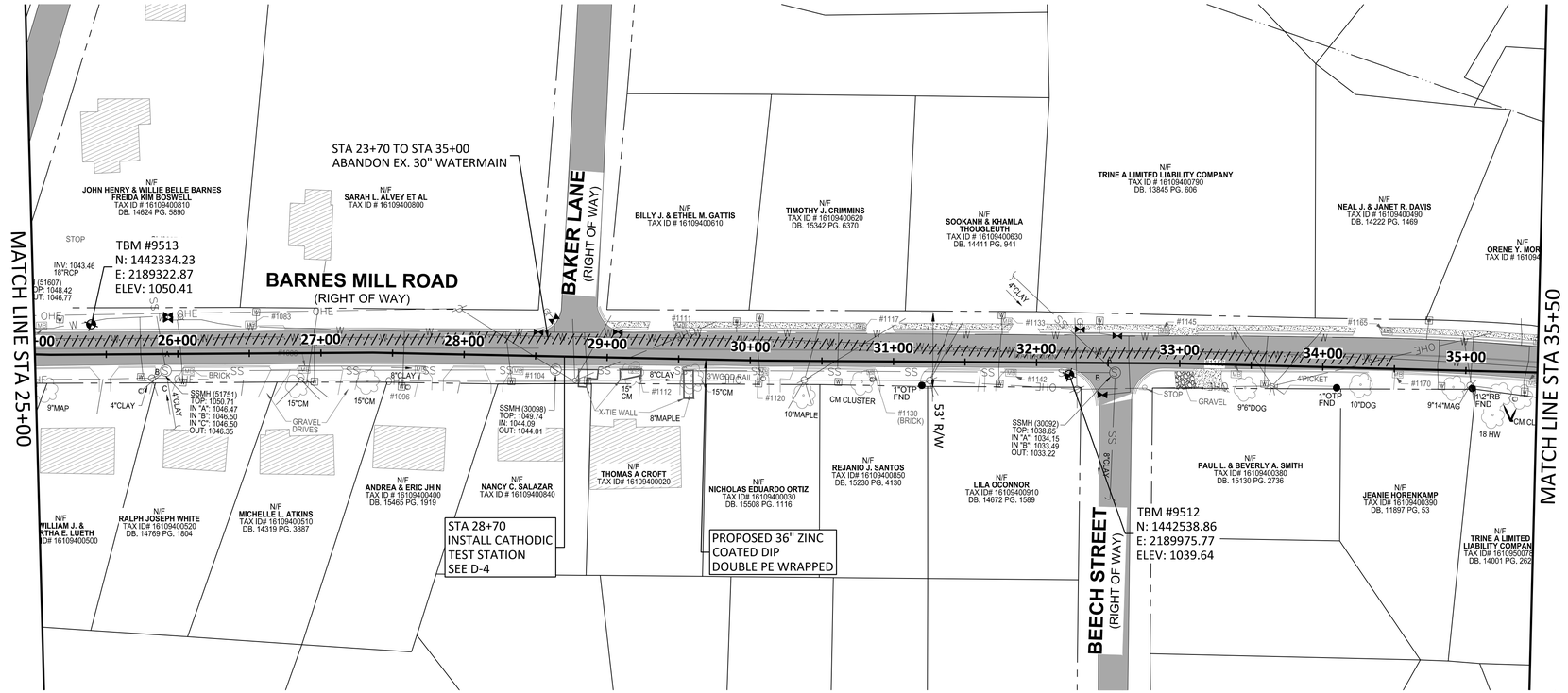
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

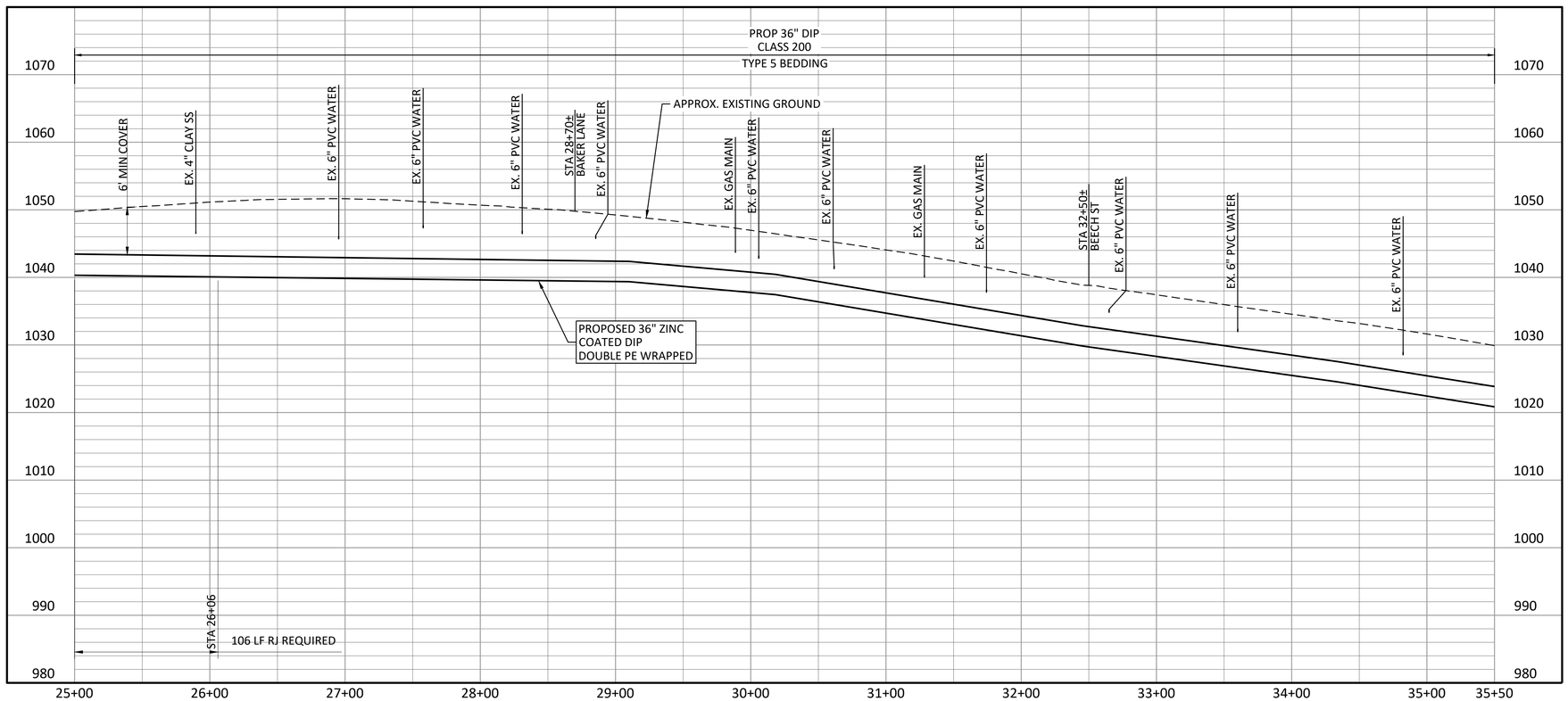
FILE NAME CV-LNB-PP-SHTS01.dwg

SHEET C-22
SEQ. 31

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 2:48 PM Saved By: 90196

Plot Date: 3/12/2020 3:12 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTEN 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 25+00 TO STA 35+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	
CHECKED	JCS

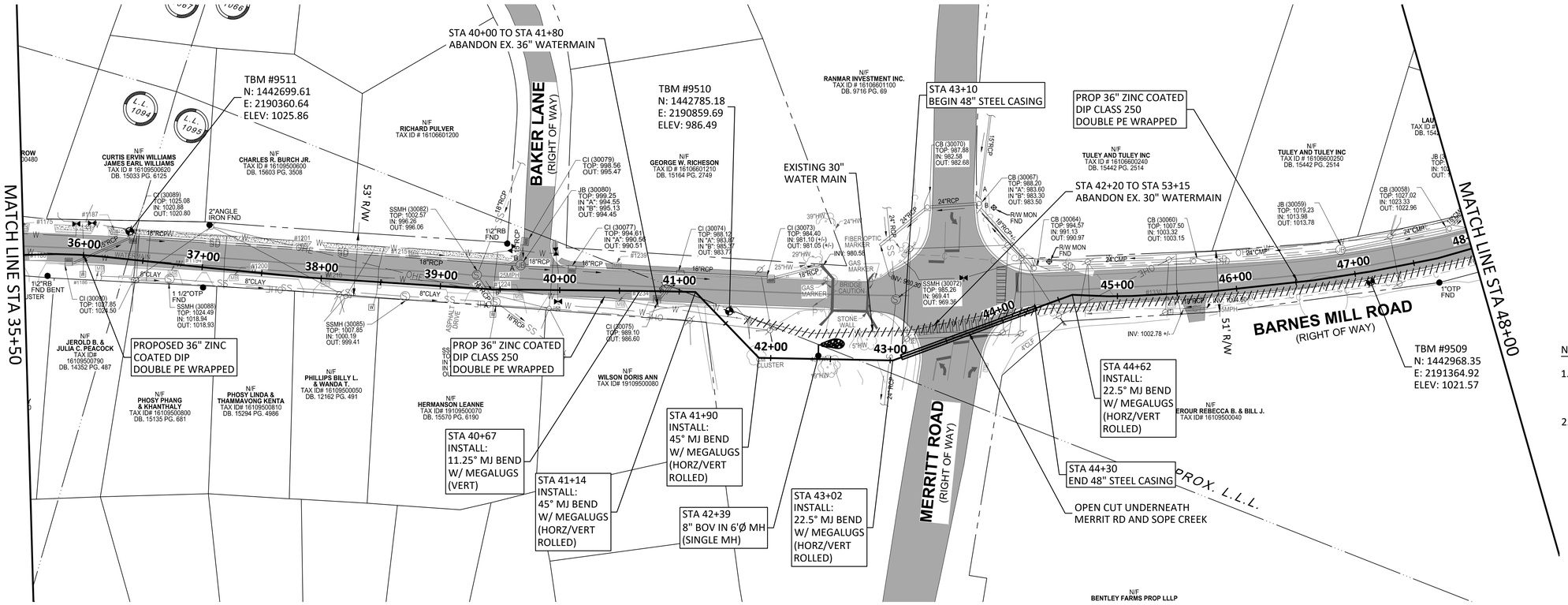
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

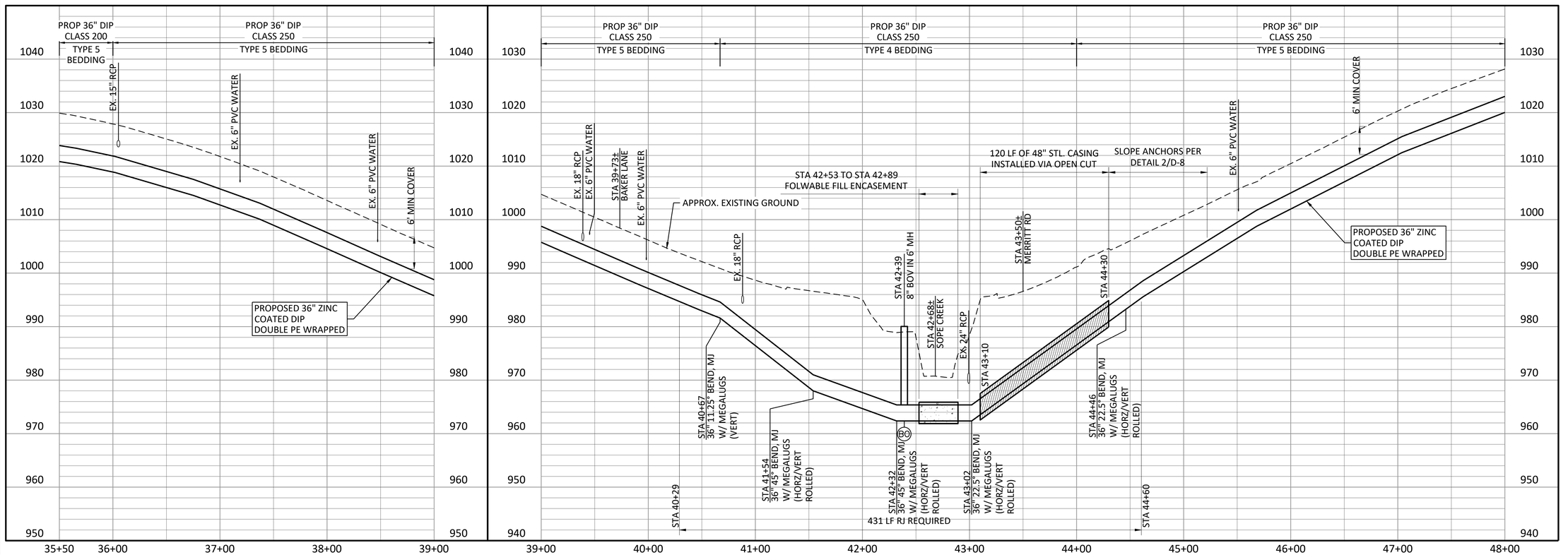
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-LNB-PP-SHTS01.dwg

SHEET C-23
SEQ. 32

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 2:48 PM Saved By: 90196
Plot Date: 3/12/2020 3:12 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
STA 35+50 TO STA 48+00
SEGMENT B - STA 35+50 TO STA 48+00

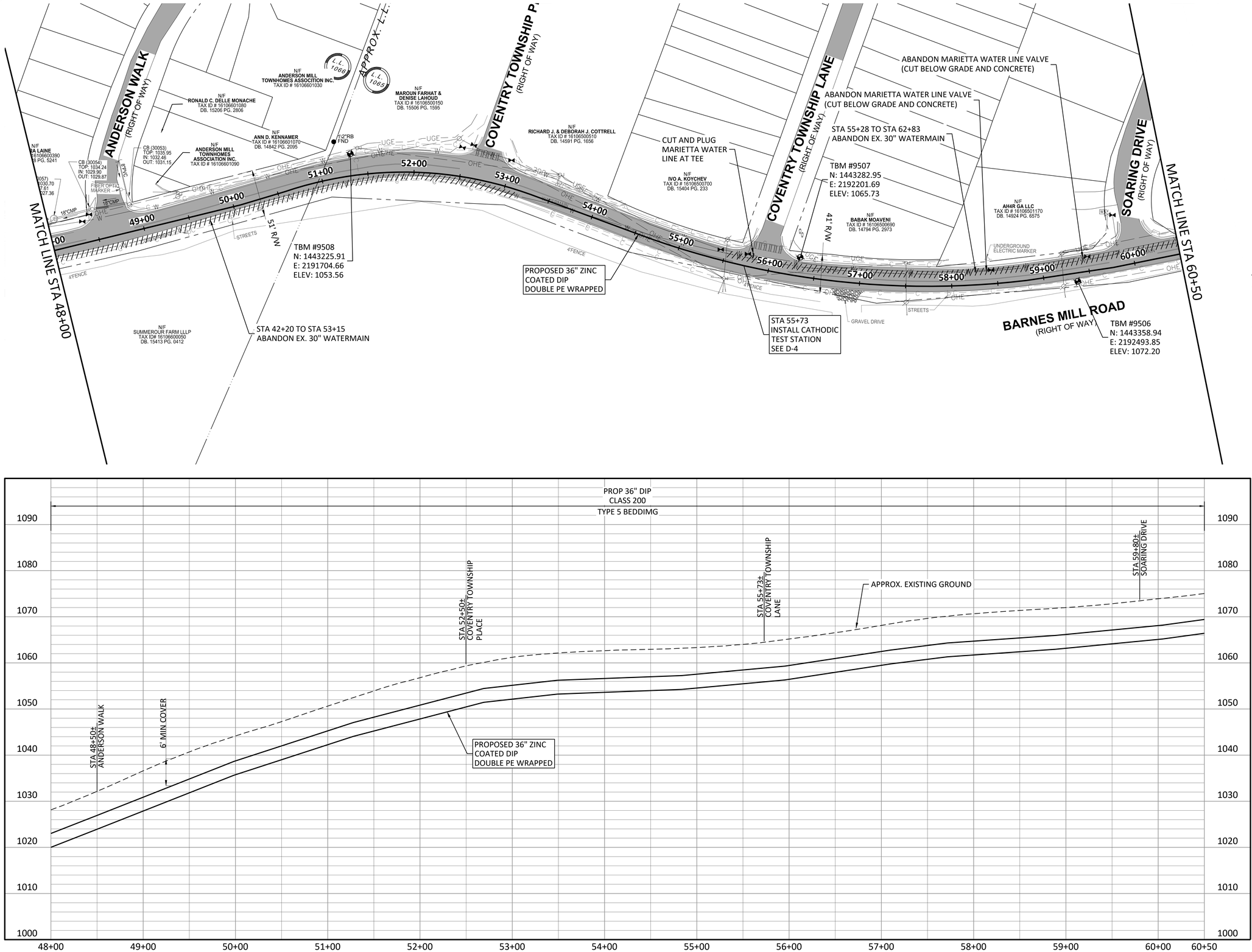
F&N JOB NO.	CBR18759			
DATE	03/12/20			
DESIGNED	RCE			
DRAWN	CKM			
REVISED				
CHECKED	JCS			
NO.	DATE	BY	ISSUE	FILE NAME
1	03/12/20	RCE	ISSUED FOR BID	CV-LNB-PP-SHTS01.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-24
SEQ. 33

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 2:48 PM Saved By: 90196

Plot Date: 3/12/2020 3:12 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg



NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 48+00 TO STA 60+50

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
REVISED			
CHECKED	JCS		
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

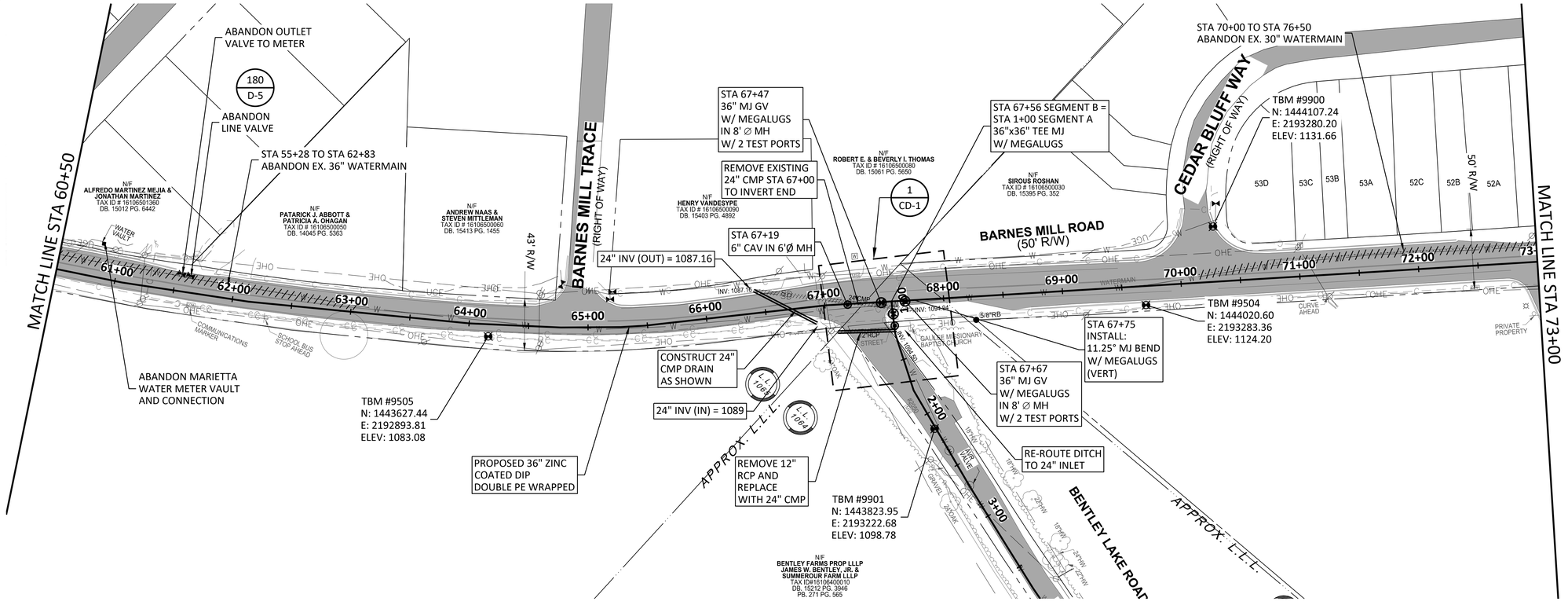
FILE NAME CV-LNB-PP-SHTS01.dwg

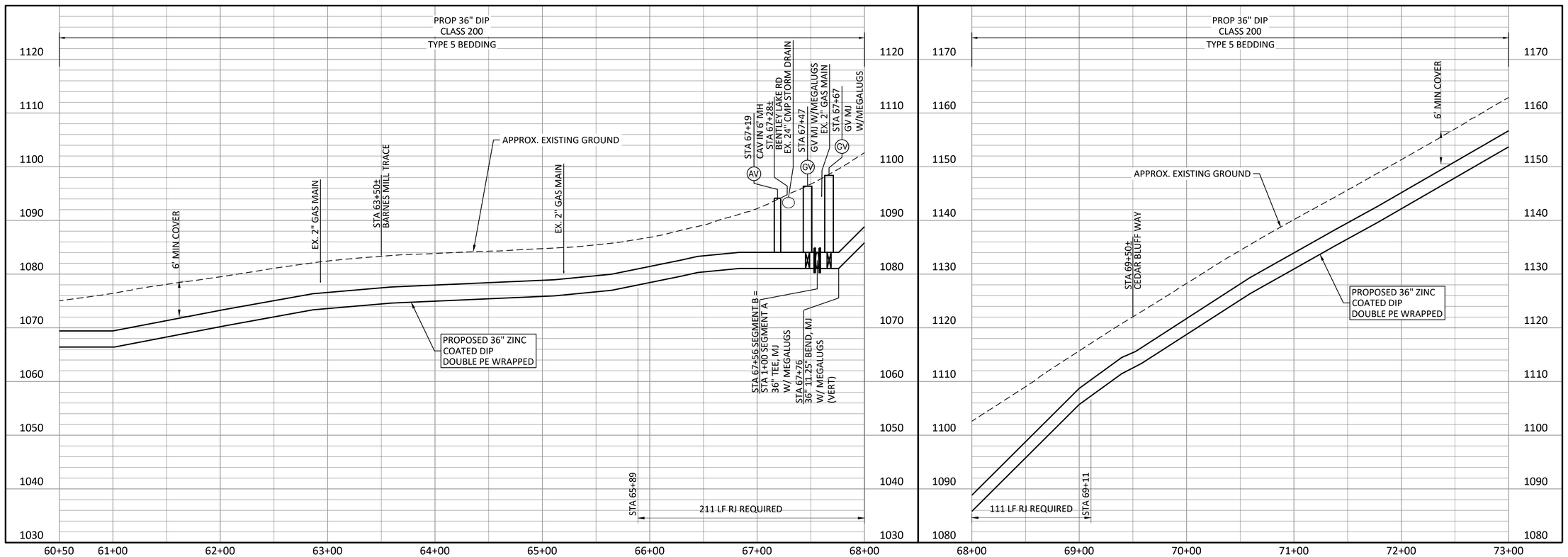
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-25
SEQ. 34

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 2:48 PM Saved By: 90196

Plot Date: 3/12/2020 3:12 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 60+50 TO STA 73+00

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

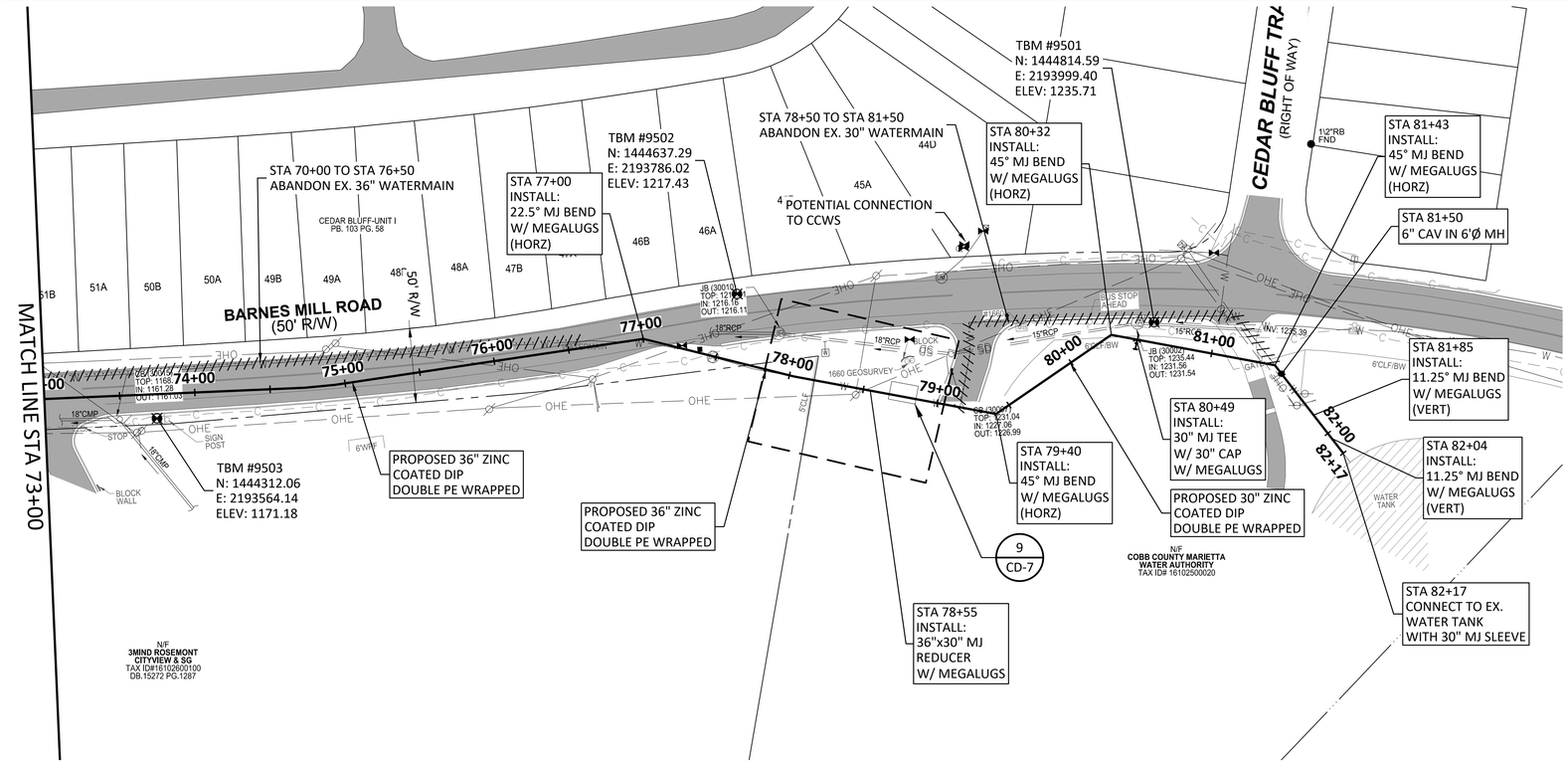
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

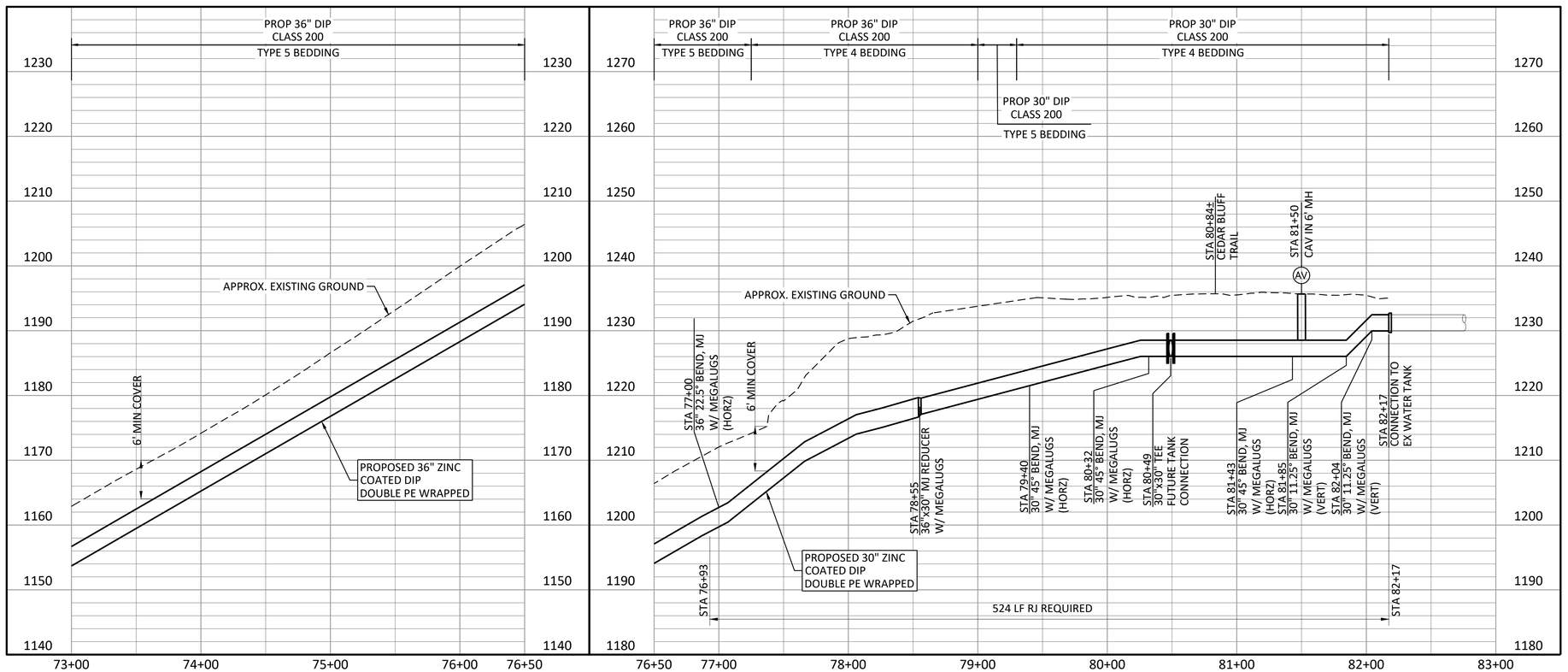
FILE NAME CV-LNB-PP-SHTS01.dwg

SHEET C-26
SEQ. 35

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 3:24 PM Saved By: 02618

Plot Date: 3/12/2020 3:47 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 73+00 TO END

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	
CHECKED	JCS

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

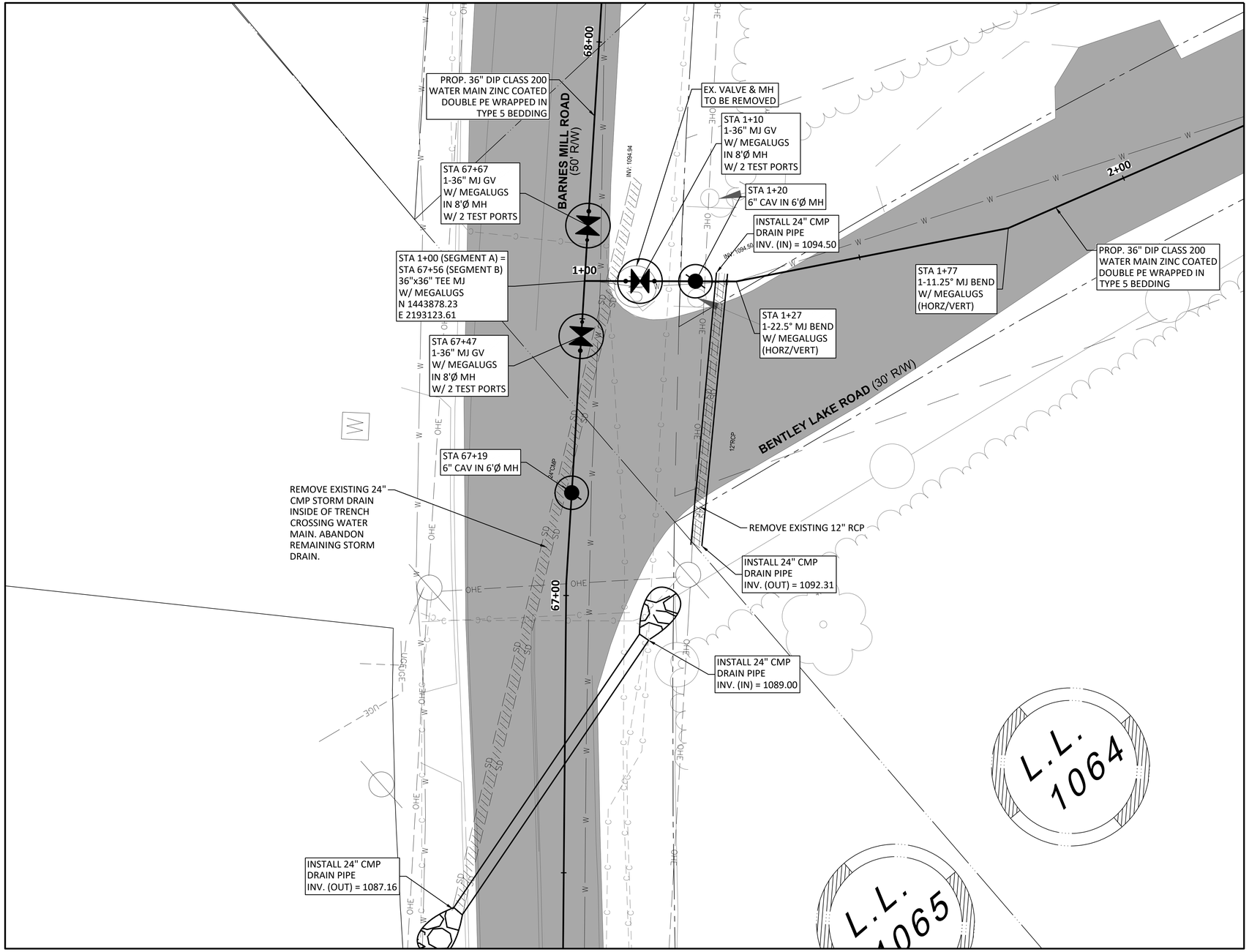
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-LNB-PP-SHTS01.dwg

SHEET C-27
SEQ. 36

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 2:48 PM Saved By: 90196

Plot Date: 3/12/2020 3:23 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-LNB-PP-SHTS01.dwg



SEGMENT A
CONNECTION 1+00
36" CCMWA

1 / C-1

NORTH

0 10' 20'
SCALE IN FEET
HORIZONTAL

CONNECTION NOTES:

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLEN
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
CONNECTION DETAILS I

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.DWG

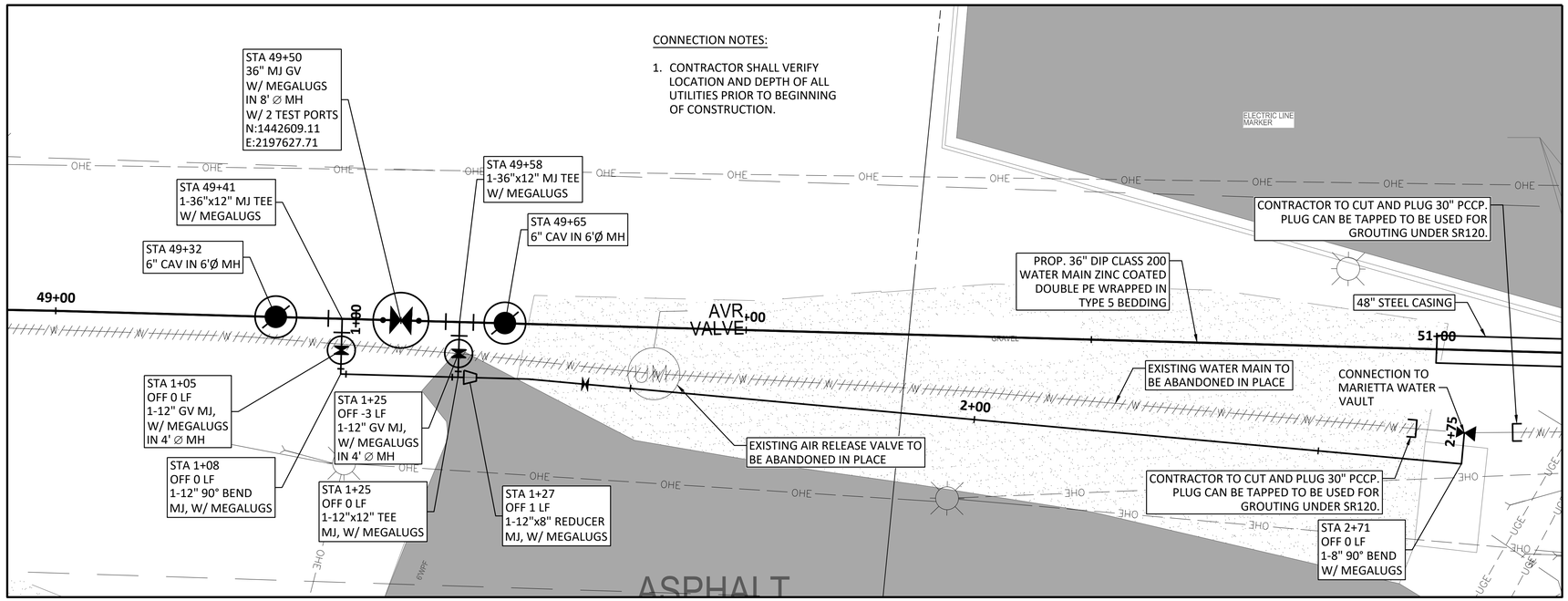
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	RCE	03/12/20

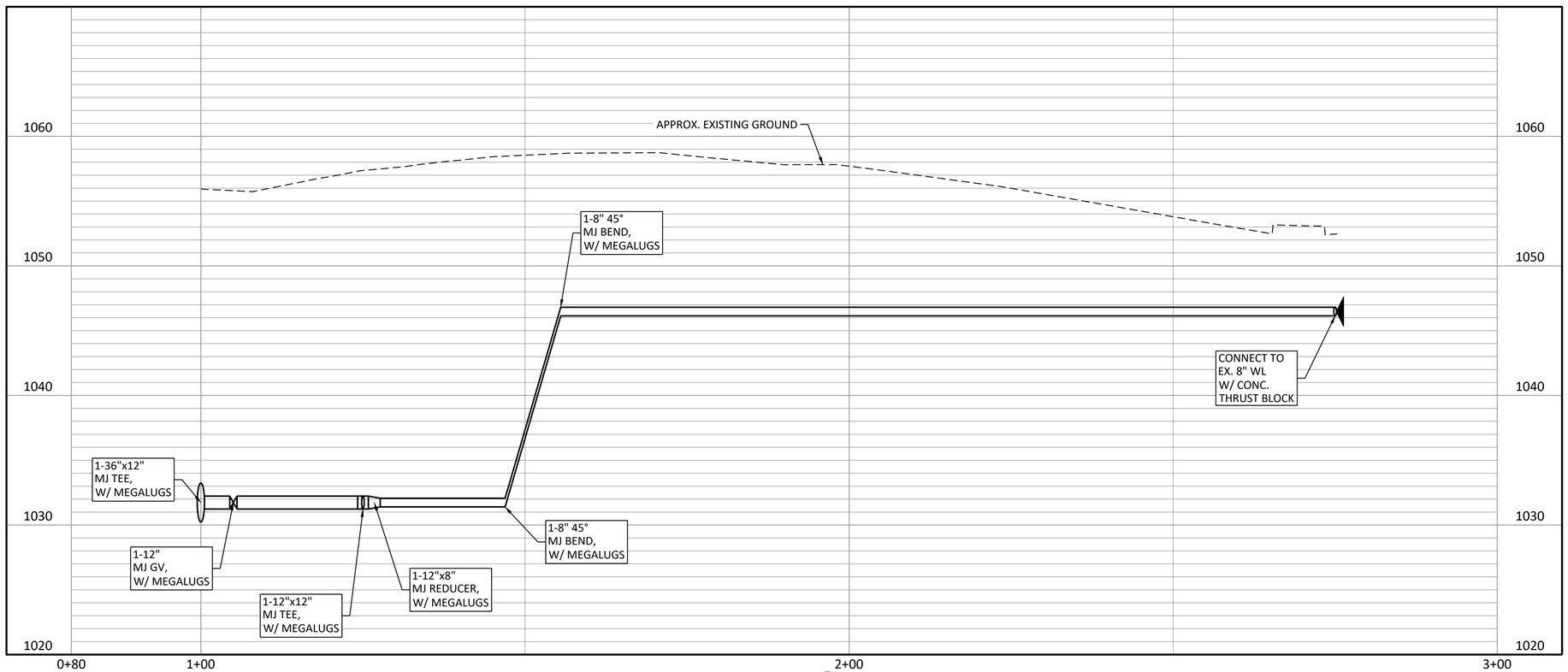
VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET CD-1
SEQ. 37

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

Plot Date: 3/12/2020 2:49 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG





2
C-5

SEGMENT A
CONNECTION STA 49+50
8" MARIETTA WATER AT ROSWELL ROAD

NORTH

0 10' 20'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLEN
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
CONNECTION DETAILS II

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.DWG

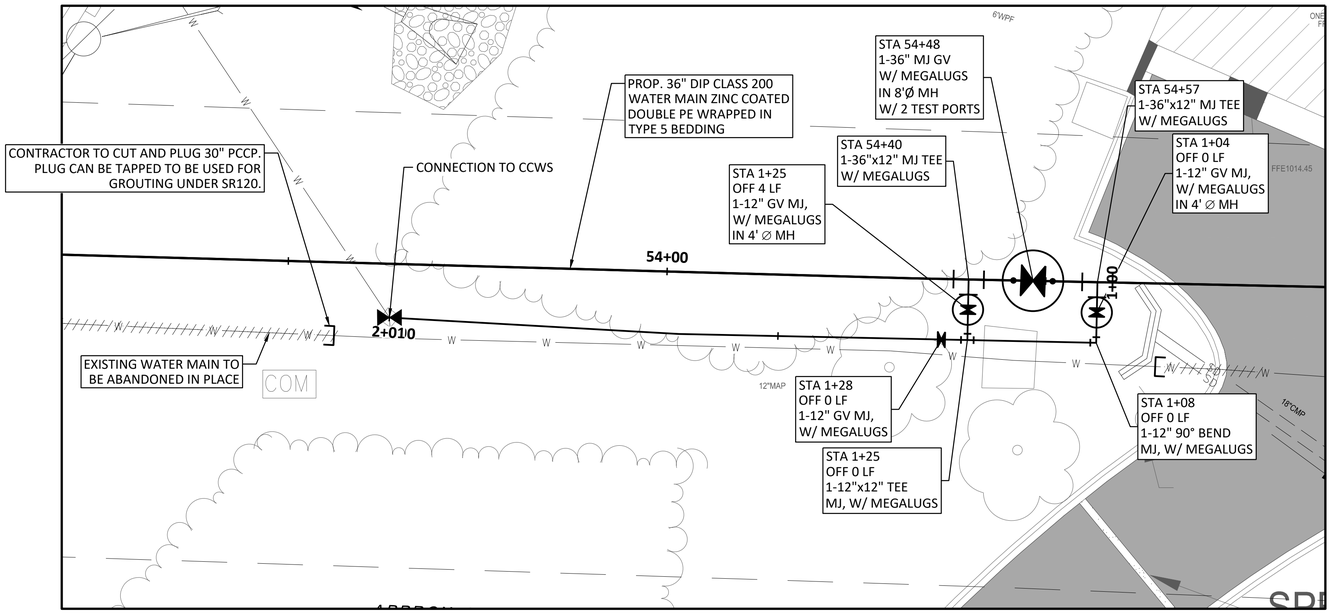
NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	RCE	03/12/20

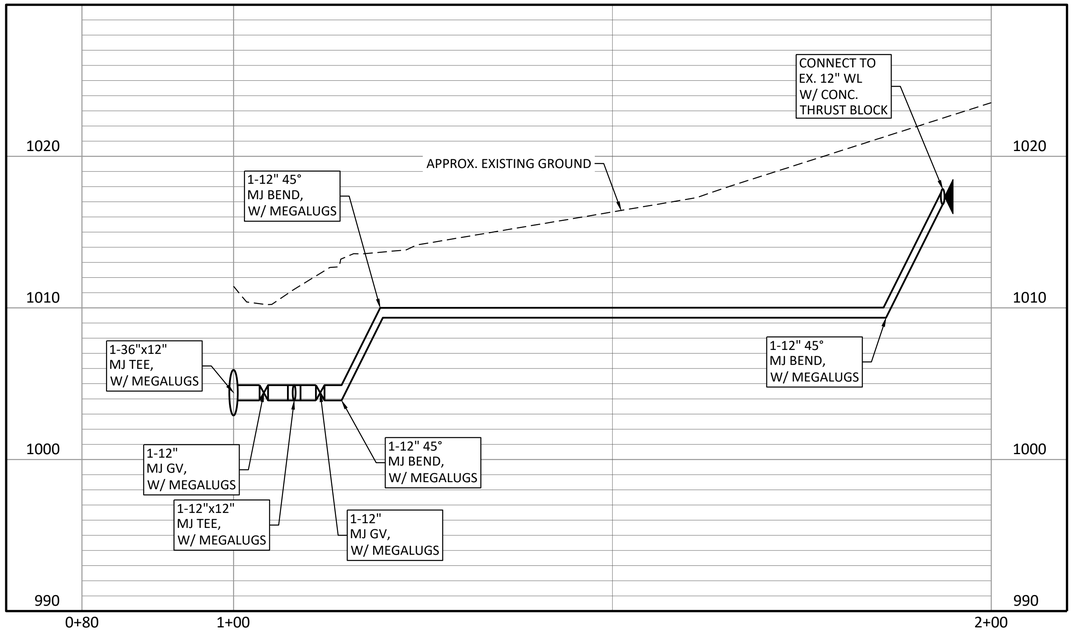
VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET
CD-2
SEQ.
38

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

Plot Date: 3/12/2020 2:50 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG





3 / C-5

SEGMENT A
CONNECTION STA 54+48
12" CCWS CONNECTION AT ROSWELL RD

NORTH

SCALE IN FEET HORIZONTAL: 0, 10', 20'

SCALE IN FEET VERTICAL: 0, 5', 10'

CONNECTION NOTES:

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
CONNECTION DETAILS III

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.DWG

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

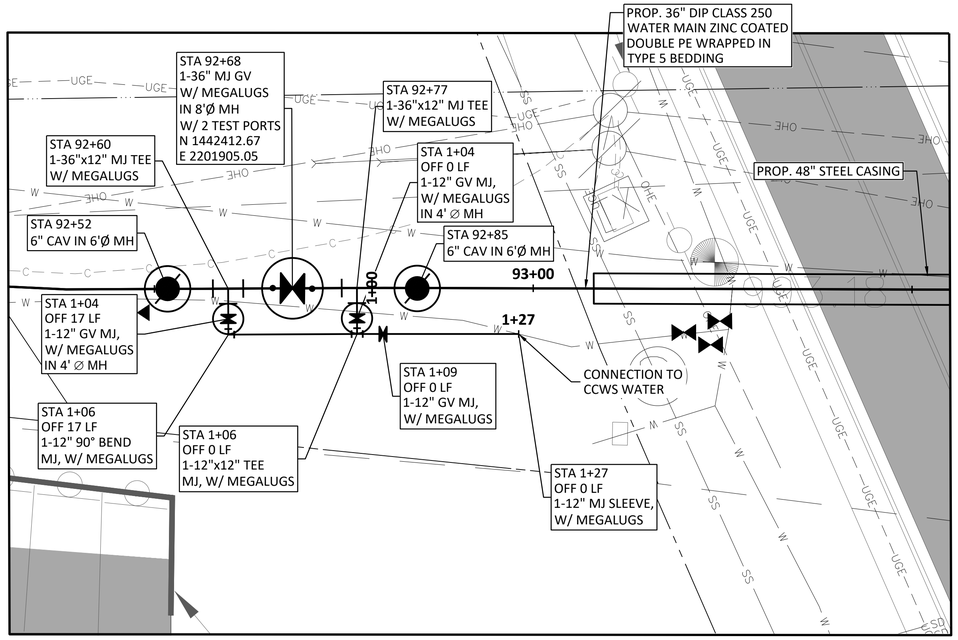
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

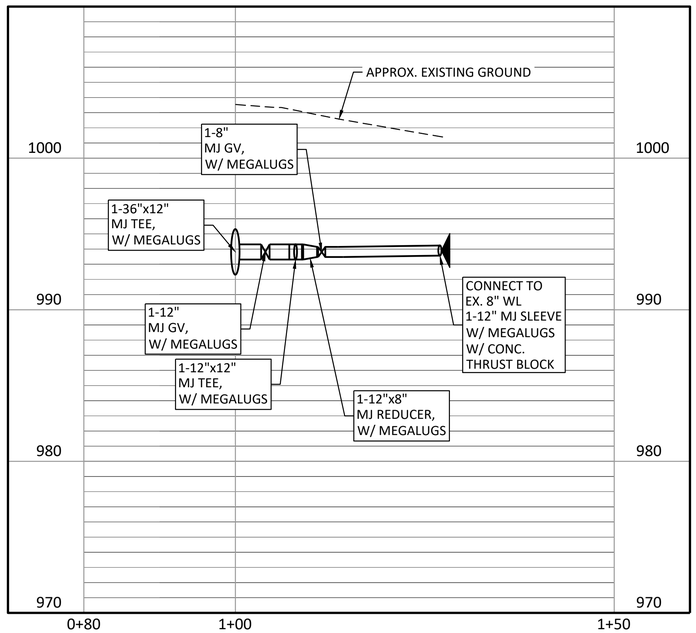
SHEET CD-3

SEQ. 39

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

Plot Date: 3/12/2020 2:50 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG





4
C-8

SEGMENT A
CONNECTION STA 92+68
8" CCWS CONNECTION AT HOLT RD

NORTH

0 10' 20'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

CONNECTION NOTES:

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
CONNECTION DETAILS IV

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.DWG

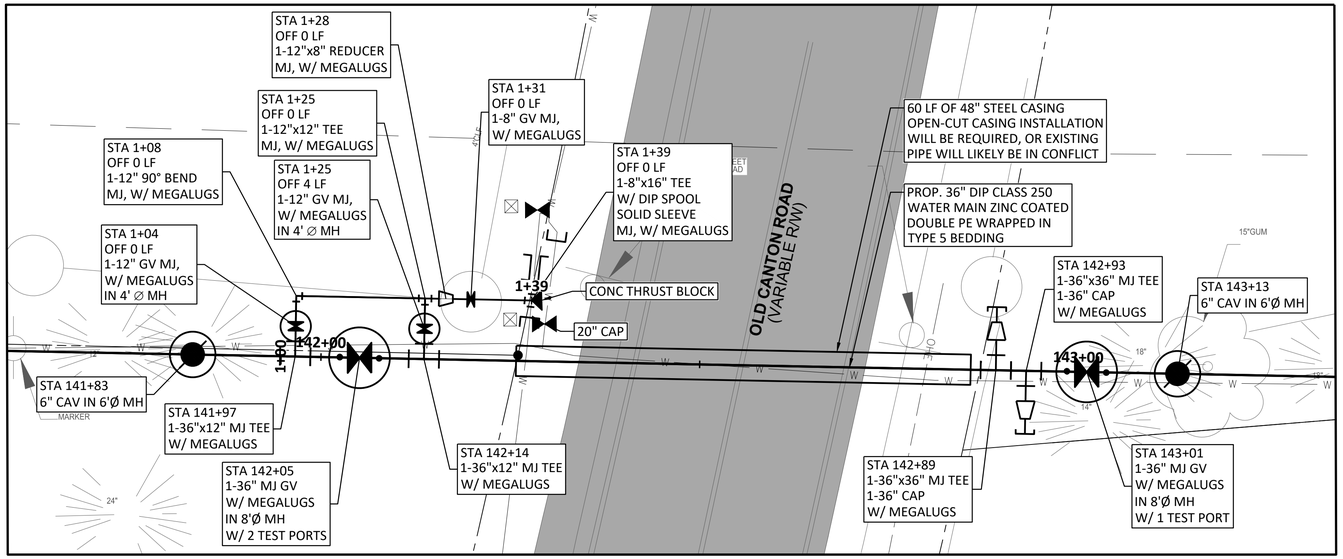
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

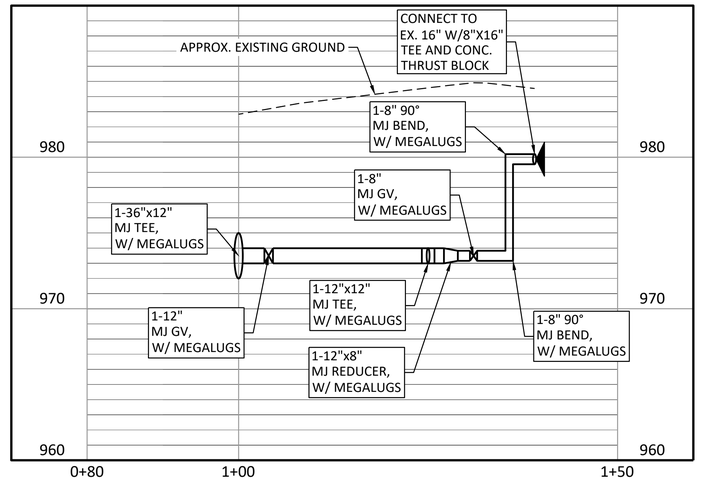
VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET
CD-4
SEQ.
40

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

Plot Date: 3/12/2020 2:50 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG





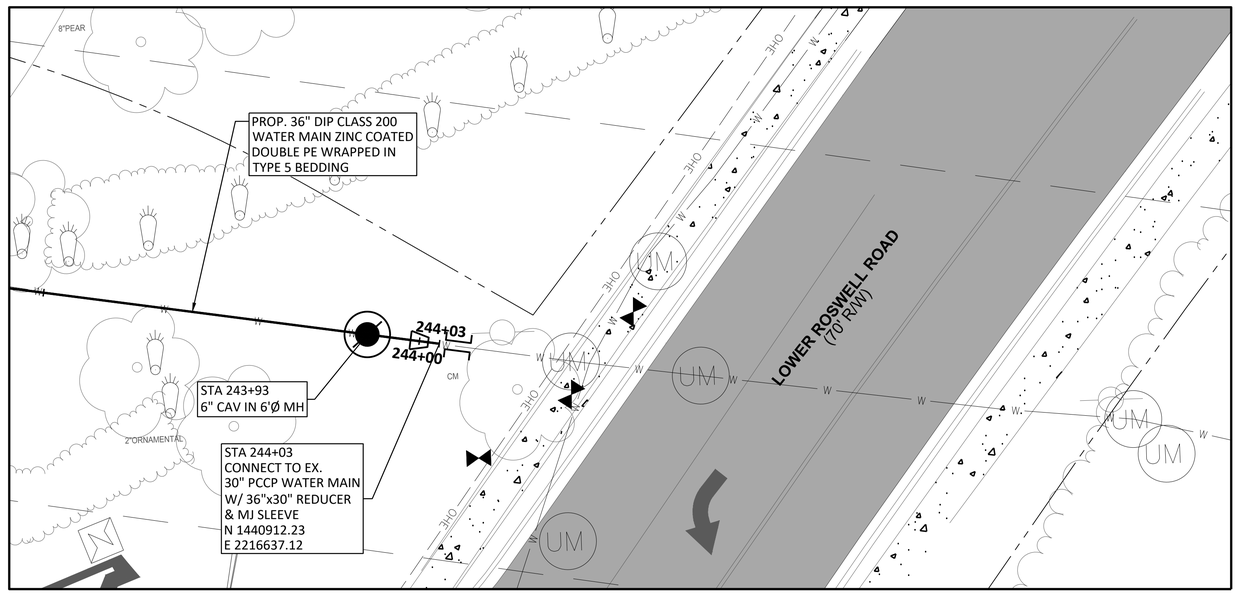
5
C-12

SEGMENT A
CONNECTION STA 142+05
8" CCWS CONNECTION AT OLD CANTON RD

NORTH

0 10' 20'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL



6
C-20

SEGMENT A
CONNECTION STA 244+03
30" CONNECTION TO CCMWA AT LOWER ROSWELL RD

NORTH

0 10' 20'
SCALE IN FEET
HORIZONTAL

CONNECTION NOTES:

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELSH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
CONNECTION DETAILS V

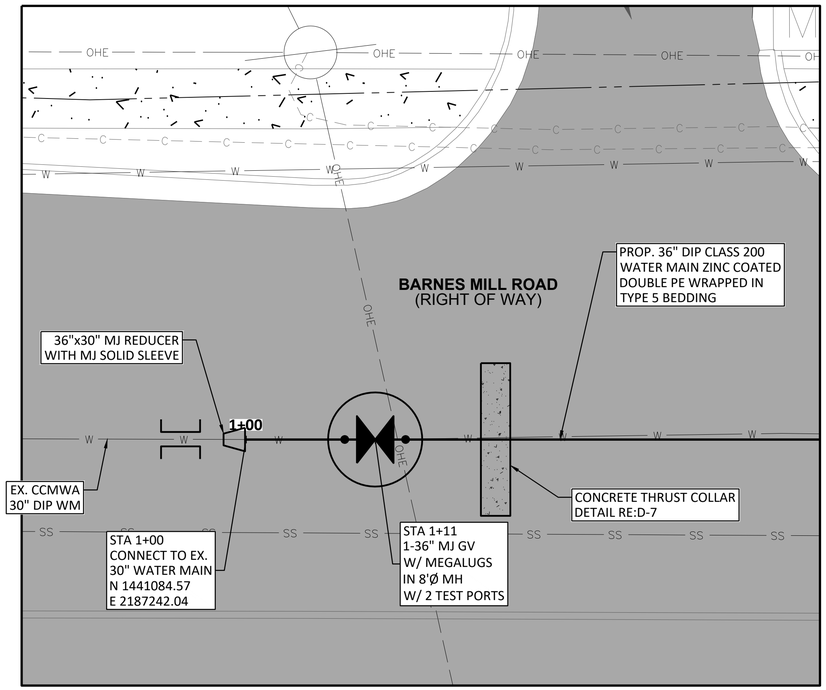
P&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	RCE				
DRAWN	CKM				
REVISED	----				
CHECKED	JCS				
NO.	ISSUE	DATE	BY	FILE NAME	
1	ISSUED FOR BID	03/12/20	RCE	CV-ALL-SHT_DTL.DWG	

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
CD-5
SEQ.
41

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

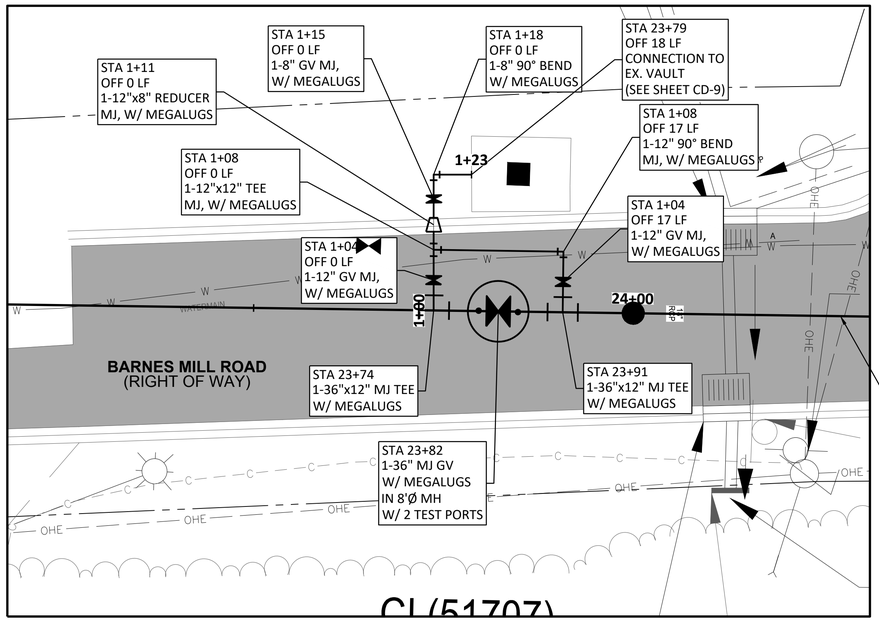
Plot Date: 3/12/2020 2:51 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG



7
C-21

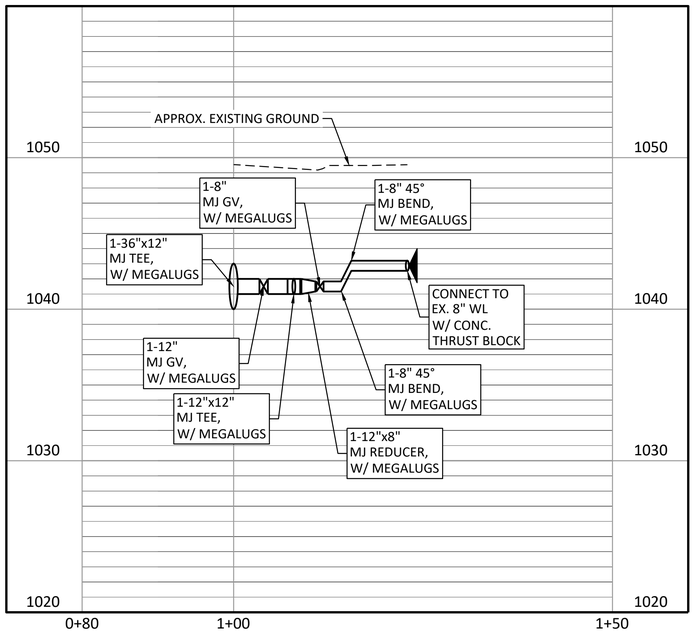
SEGMENT B
CONNECTION STA 1+00

30" CONNECTION TO CCMWA AT BARNES MILL RD. NEAR HWY 41



CONNECTION NOTES:

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



8
C-22,C-23

SEGMENT B
CONNECTION STA 23+82

8" CONNECTION TO MARIETTA WATER AT BONNIE DELL DR.

NORTH
0 10' 20'
SCALE IN FEET
HORIZONTAL

0 5' 10'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
CONNECTION DETAILS VI

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.DWG

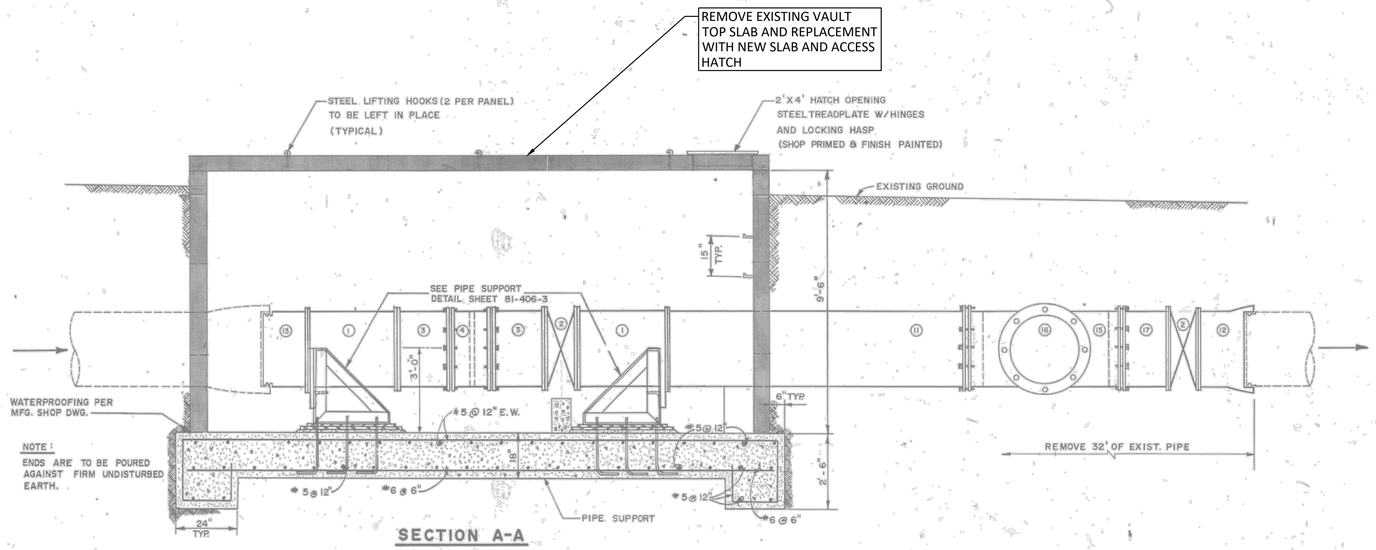
NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET CD-6
SEQ. 42

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

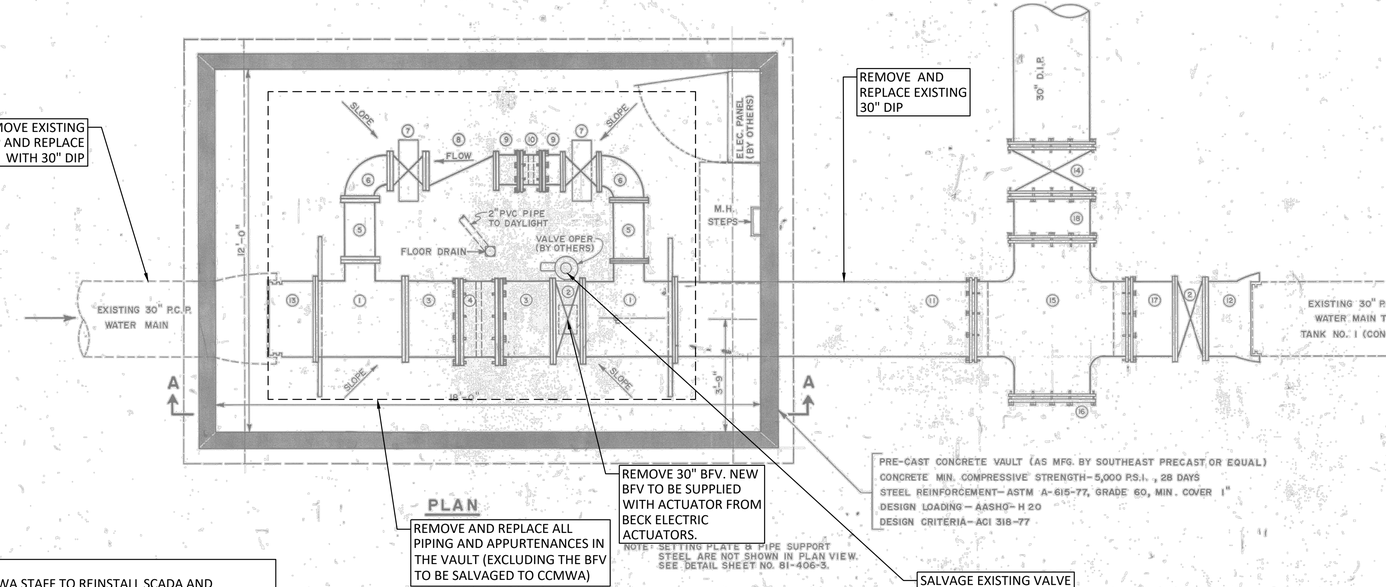
Plot Date: 3/12/2020 2:51 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG



MATERIALS LIST		
NO.	DESCRIPTION	QUANTITY
1	30"X12" TEE (FL.X FL.)	2
2	30" BUTTERFLY VALVE (FL.XFL.)	2
3	30"ϕ X 28" LONG D.I.P. (FL. X P.E.)	2
4	30" M.J. SLEEVE (SHORT)	1
5	12"ϕ SPOOL 24" LONG (FL.X FL.)	2
6	12" 90° BEND (FL. X FL.)	2
7	12" G.V. (FL. X FL.) NOTE 1	2
8	12" CHECK VALVE	1
9	12"ϕ X 12" LONG D.I.P. (FL.X P.E.)	2
10	12"ϕ M.J. SLEEVE (SHORT)	1
11	30"ϕ X 10'-4" LONG D.I.P. (FL. X P.E.)	1
12	30" FL. X L.J. BELL ADAPTER	1
13	30" FL. X L.J. SPIGOT ADAPTER	1
14	30" BUTTERFLY VALVE (M.J.)	1
15	30"X30" CROSS (M.J.)	1
16	30" RESTRAINED PLUG	1
17	30"ϕ X 2'-0" LONG D.I.P. (FL. X P.E.)	1
18	30"ϕ X 2'-0" LONG D.I.P. (P.E. X P.E.)	1

NOTES:

(1.) EACH VALVE SHALL HAVE CONCRETE SUPPORT



NOTES:
1. CCMWA STAFF TO REINSTALL SCADA AND ELECTRICAL CONNECTIONS.
2. CONTRACTOR SHALL PROTECT EXISTING VALVE VAULT FLOOR, WALLS, AND ELECTRICAL PANEL DURING CONSTRUCTION.
3. INSTALL NEW PIPING, VALVES AND APPURTENANCES IN VAULT IN SAME ARRANGEMENT AS EXISTING SHOWN (INCLUDING TAPS AND NEW BFV WITH ACTUATOR).

RECORD DRAWINGS

COBB COUNTY-MARIETTA WATER AUTHORITY
CONTROLS FOR WATER STORAGE TANKS
BLACKJACK MOUNTAIN

WELKER & ASSOCIATES ENGINEERS
MARIETTA, GEORGIA

DRAWN: D.M.
TRACED: G.D.W.
CHECKED: R.L.H.
DATE: OCT., 1981
SCALE: 1/2" = 1'-0"
SHEET: 81-406-5

GEORGIA No. 11252 PROFESSIONAL RONALD L. HARRIS

SEGMENT B
CONNECTION STA 78+77

9
C-27

NORTH

0 10' 20'
SCALE IN FEET
HORIZONTAL

CONNECTION NOTES:

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTE 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
TANK VALVE CONTROL VAULT REPLACEMENT DETAIL

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20
		REVISED	----

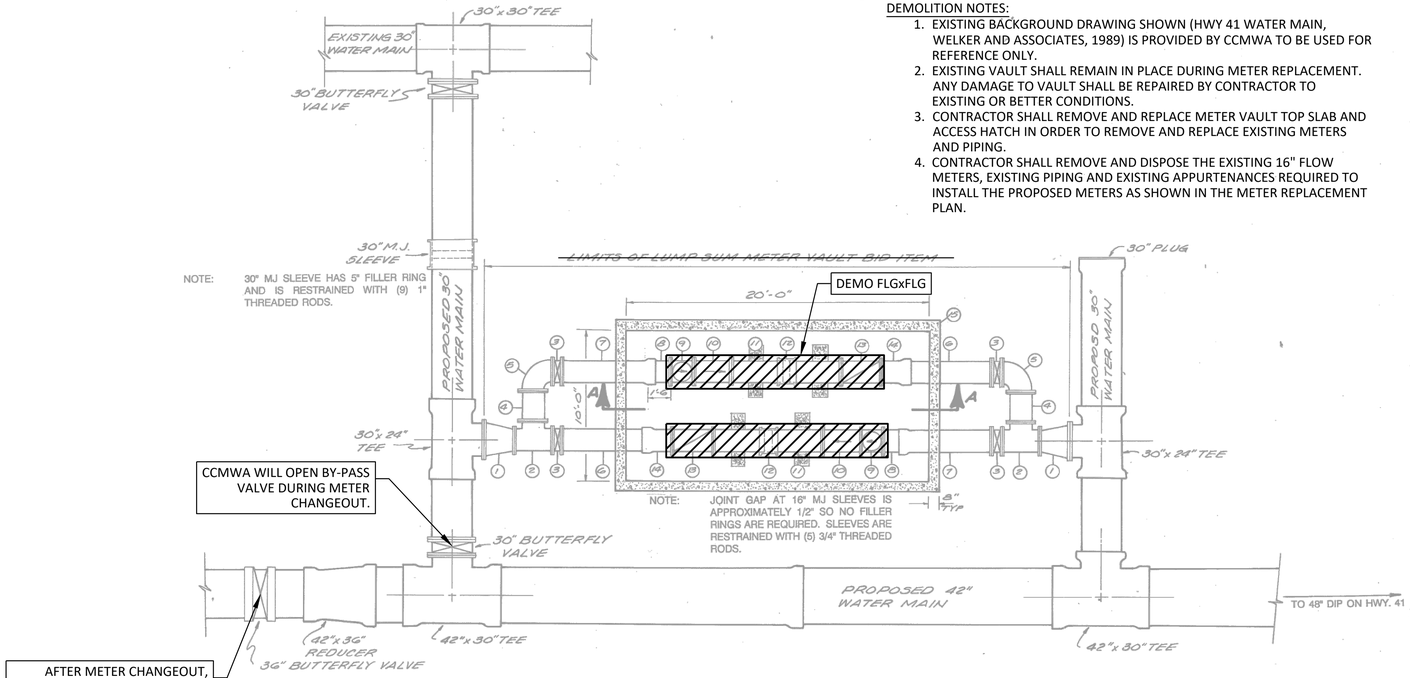
FILE NAME CV-ALL-SHT_DTL.DWG

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET CD-7
SEQ. 43

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 3/12/2020 2:17 PM Saved By: 02618

Plot Date: 3/12/2020 2:51 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG



DEMOLITION PLAN

DEMOLITION NOTES:

1. EXISTING BACKGROUND DRAWING SHOWN (HWY 41 WATER MAIN, WELKER AND ASSOCIATES, 1989) IS PROVIDED BY CCMWA TO BE USED FOR REFERENCE ONLY.
2. EXISTING VAULT SHALL REMAIN IN PLACE DURING METER REPLACEMENT. ANY DAMAGE TO VAULT SHALL BE REPAIRED BY CONTRACTOR TO EXISTING OR BETTER CONDITIONS.
3. CONTRACTOR SHALL REMOVE AND REPLACE METER VAULT TOP SLAB AND ACCESS HATCH IN ORDER TO REMOVE AND REPLACE EXISTING METERS AND PIPING.
4. CONTRACTOR SHALL REMOVE AND DISPOSE THE EXISTING 16" FLOW METERS, EXISTING PIPING AND EXISTING APPURTENANCES REQUIRED TO INSTALL THE PROPOSED METERS AS SHOWN IN THE METER REPLACEMENT PLAN.

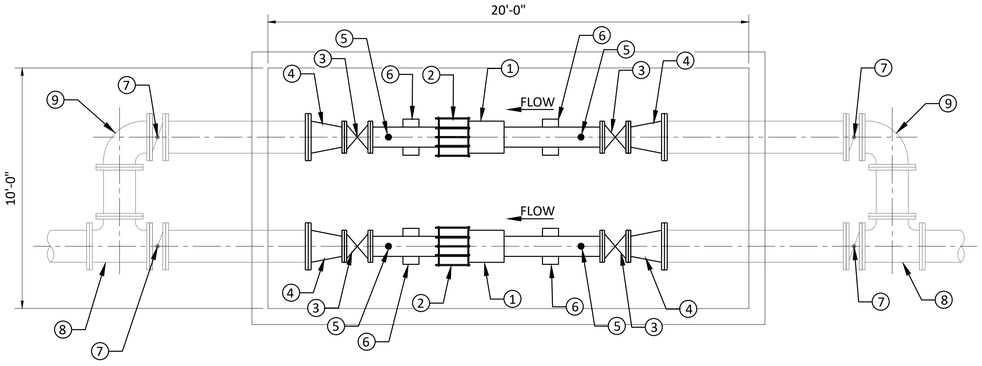
LIST OF MATERIALS

ITEM No.	DESCRIPTION
1.	2-24"x16" REDUCER FL x FL.
2.	2-16"x16" TEE FL x FL x FL.
3.	4-16" BUTTERFLY VALVES, FL x FL. CLASS 150
4.	2-16" NIPPLE, FL x FL. 24" LONG
5.	2-16", 90° BEND FL x FL.
6.	2-16" D.I.P. FL x LKRE, 5'-10" LAYING LENGTH
7.	2-16" D.I.P. FL x LKR, 5'-10" LAYING LENGTH
8.	2-16" NIPPLE, LKRE x FL., 1'-6" LAYING LENGTH
9.	2-16" STRAINER FL x FL.
10.	2-16" METER, ROCKWELL MODEL W-10,000 DR FLANGED
11.	2-16" D.I.P. FL x FL, 7'-2" LONG (CUT IN FIELD)
12.	2-16" SOLID SLEEVE, MJ
13.	2-16" CHECK VALVE, FL x FL
14.	2-16" NIPPLE, FL x LKR 1'-6" LAYING LENGTH
15.	1-UTILITY VAULT, TINDALL SERIES 3C 1020 RATED FOR H-20 HIGHWAY LOADING
16.	HATCH TO BE U.S. FOUNDRY MODEL THS 24"x36" ALUMINUM OR EQUAL





PHOTOS OF INSIDE VAULT



NOTES BY SYMBOL (X):

1. 10" MASTER METER OCTAVE ULTRASONIC METER.
2. 10" ROMAC DJ405 DISMANTLING JOINT
3. 10" GATE VALVE
4. 16"x10" REDUCER
5. TEST PORT
6. CONCRETE PIPE SUPPORT
7. EXISTING 16" BUTTERFLY VALVE
8. EXISTING 16" TEE
9. EXISTING 16" 90° ELBOW

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE AND REPLACE VAULT TOP SLAB, ACCESS HATCH, REPLACE CURB AND GUTTER AND REPLACE SIDEWALK DAMAGED/REMOVED DURING BARNES MILL METER REPLACEMENT.
2. CONTRACTOR SHALL PROTECT VAULT WALL AND FLOOR DURING METER REPLACEMENT CONSTRUCTION.

METER REPLACEMENT PLAN

1
C-21,CD-6

MARIETTA WATER
BARNES MILL METER REPLACEMENT
N.T.S.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
BARNES MILL METER REPLACEMENT DETAIL

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	-
DRAWN	-
CHECKED	-

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

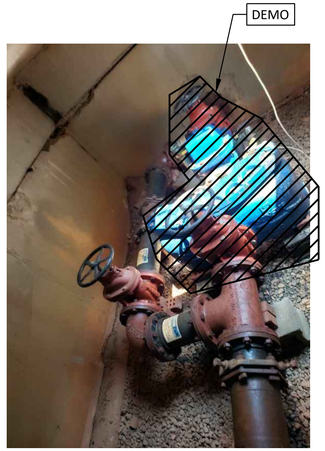
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME CV-ALL-SHT_METER DTLS.dwg

SHEET CD-8
SEQ.

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_METER DTLS.dwg
Last Saved: 3/12/2020 2:19 PM Saved By: 02618

Plot Date: 3/12/2020 2:52 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_METER DTLS.dwg





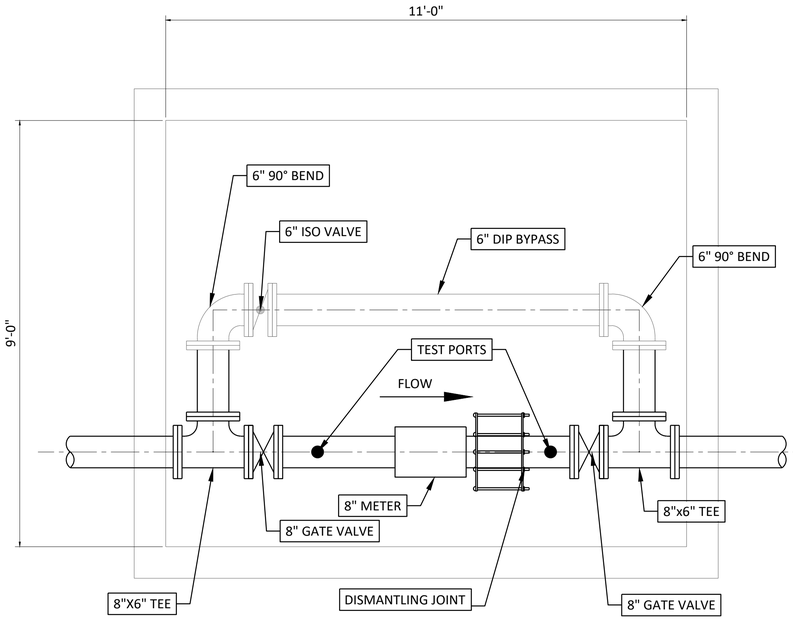


DEMOLITION PLAN

N.T.S.

DEMOLITION NOTES:

1. EXISTING VAULT SHALL REMAIN IN PLACE DURING METER REPLACEMENT. ANY DAMAGE TO VAULT SHALL BE REPAIRED BY CONTRACTOR TO EXISTING OR BETTER CONDITIONS.
2. CONTRACTOR SHALL REMOVE AND REPLACE METER VAULT TOP SLAB IN ORDER TO REMOVE AND REPLACE EXISTING METERS AND PIPING.
3. CONTRACTOR SHALL REMOVE AND DISPOSE THE EXISTING 6" FLOW METER, EXISTING PIPING AND EXISTING APPURTENANCES REQUIRED TO INSTALL THE PROPOSED METERS AS SHOWN IN THE METER REPLACEMENT PLAN. BYPASS LANE TO REMAIN BEYOND 8"X6" TEE CONNECTIONS SHOWN IN PLAN.



METER REPLACEMENT PLAN

N.T.S.

NORTH

GENERAL NOTES:

1. METER SHALL BE MASTER METER OCTAVE ULTRASONIC METER.
2. DISMANTLING JOINTS SHALL BE ROMAC DJ405
3. CONTRACTOR SHALL RE-INSTALL VAULT TOP SLAB, ACCESS HATCH, REPLACE CURB AND GUTTER AND REPLACE ASPHALT DAMAGED/REMOVED DURING BONNIE DELL METER REPLACEMENT.

1
C-23,CD-6

MARIETTA WATER
BONNIE DELL METER REPLACEMENT

N.T.S.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLEN
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT

CIVIL
SEGMENT B
BONNIE DELL METER REPLACEMENT DETAIL

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED
DRAWN
REVISED
CHECKED

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

FILE NAME CV-ALL-SHT_METER DTLS.dwg

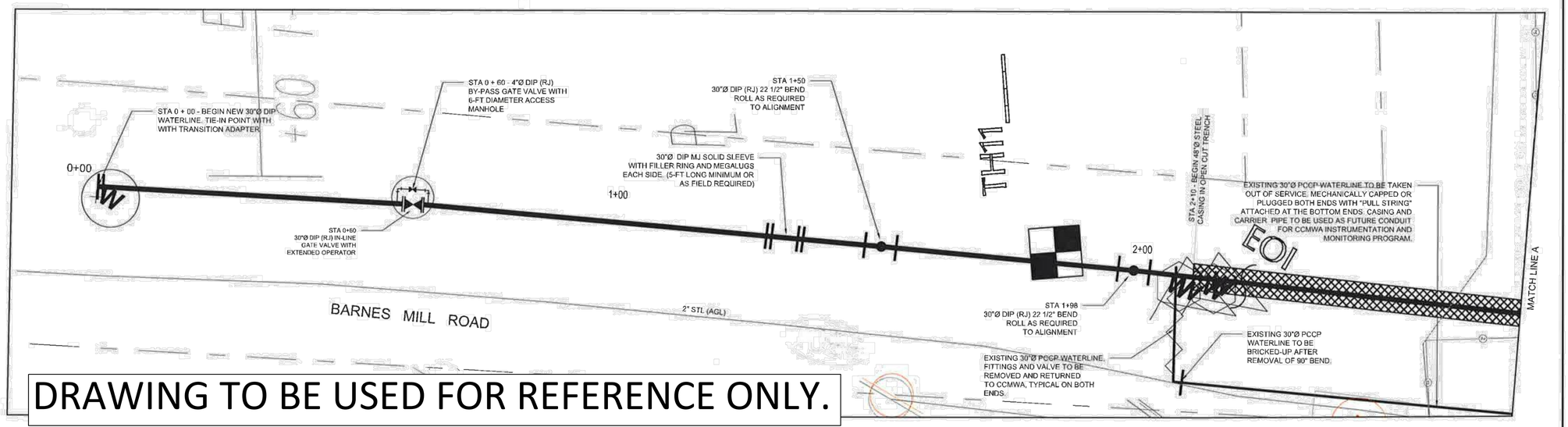
SHEET CD-9

SEQ.

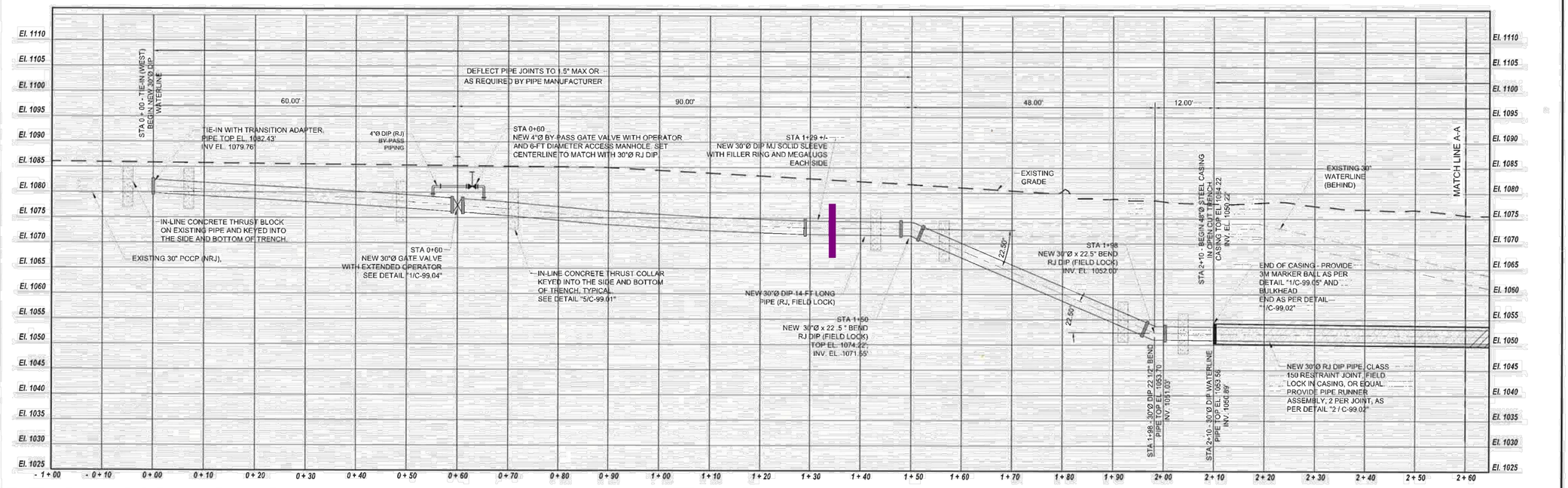
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_METER DTLS.dwg
Last Saved: 3/12/2020 2:19 PM Saved By: 02618

Plot Date: 3/12/2020 2:52 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_METER DTLS.dwg

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	STPAMSL-0008-00(356)		



DRAWING TO BE USED FOR REFERENCE ONLY.



PROPERTY AND EXISTING R/W LINE	BEGIN LIMIT OF ACCESS...BLA
REQUIRED R/W LINE	END LIMIT OF ACCESS.....ELA
CONSTRUCTION LIMITS	LIMIT OF ACCESS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	REQ'D R/W & LIMIT OF ACCESS
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	

NO.	ISSUE RECORD	DATES
1	FINAL PLANS	01/30/15

PARSONS
NORTHWEST EXPRESS ROADBUILDERS

FINAL PLANS
DO NOT USE FOR CONSTRUCTION

VERTICAL & HORIZONTAL SCALE:1:10

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: INNOVATIVE DELIVERY
30" WATER MAIN REPLACEMENT AT BARNES MILL ROAD
PLAN & PROFILE
STATION 0+00 TO 2+60
DRAWING No. C-00.02

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
I-75 CROSSING EXISTING PLAN (1 OF 2)

F&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	RCE				
DRAWN	CKM	REVISED	– – –	CHECKED	JCS
CHECKED	JCS	DATE		FILE NAME	CV-ALL-SHT_75 CROSSING.dwg

NO.	BY	ISSUE	DATE
1	RCE	ISSUED FOR BID	03/12/20

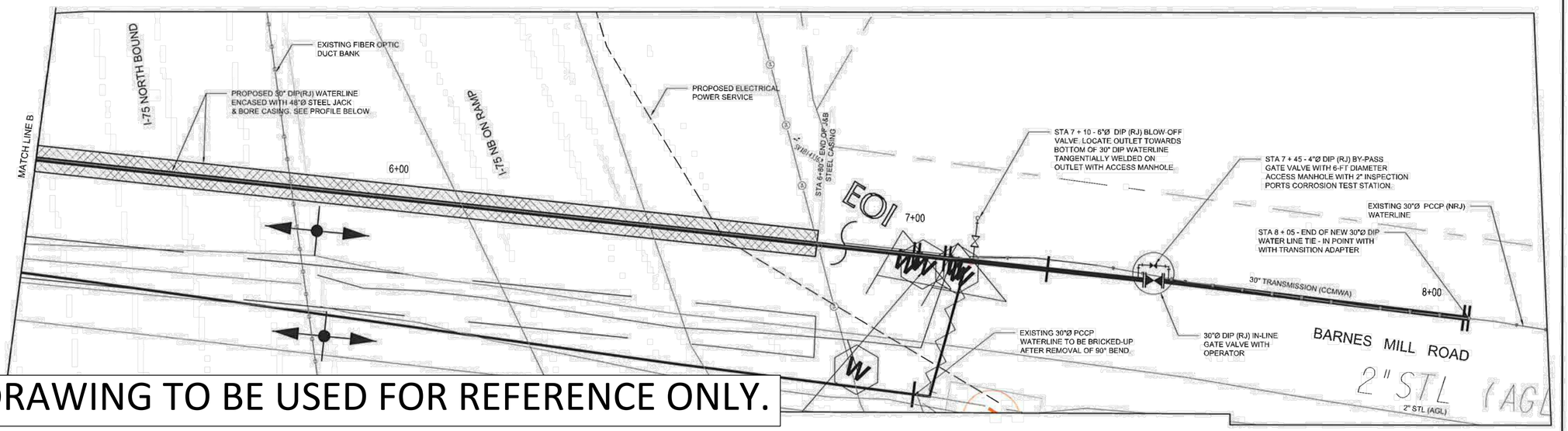
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

SHEET CD-10
SEQ. 46

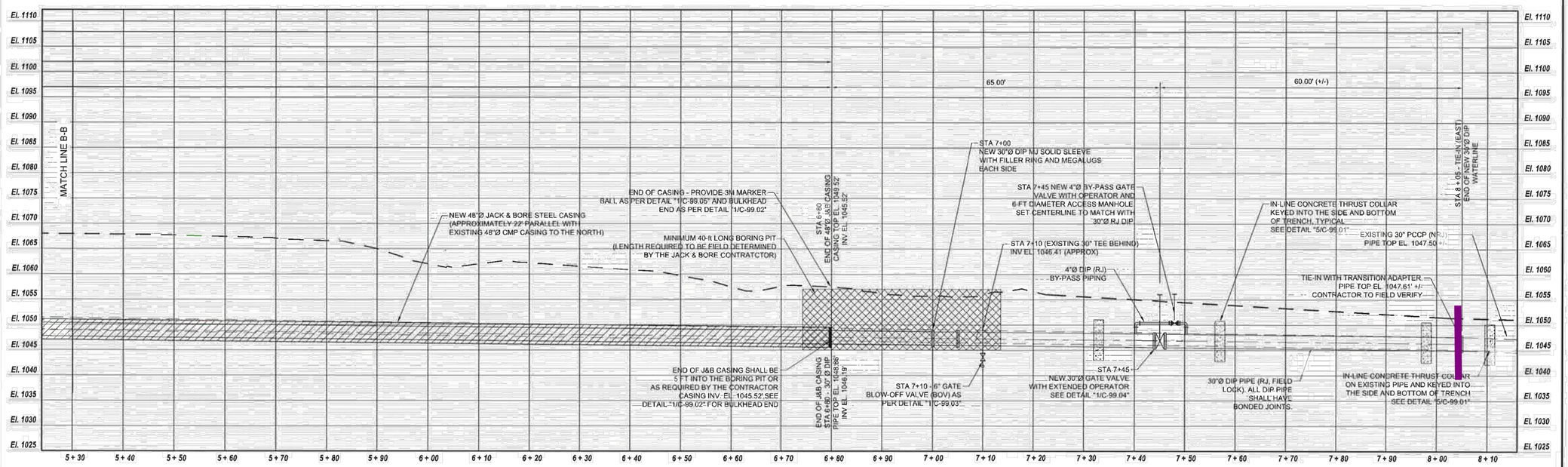
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_75 CROSSING.dwg
Last Saved: 3/11/2020 3:47 PM Saved By: 02618

Plot Date: 3/12/2020 2:52 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_75 CROSSING.dwg

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHP-0008-00(256)		



DRAWING TO BE USED FOR REFERENCE ONLY.



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS...BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

NO.	ISSUE RECORD	DATES
1	FINAL PLANS	01/30/15

PARSONS
8811 Colesville Rd, Suite 405
Silver Spring, MD 20910

NORTHWEST EXPRESS ROADBUILDERS

FINAL PLANS
DO NOT USE FOR CONSTRUCTION

VERTICAL & HORIZONTAL SCALE:1:10

SCALE: 1"=10'

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: INNOVATIVE DELIVERY
30" WATER MAIN REPLACEMENT AT BARNES MILL ROAD
PLAN & PROFILE
STATION 5+30 TO END
DRAWING No. C-00.04

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
WESLEY RYAN CHRISTOPHER
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
I-75 CROSSING EXISTING PLAN (2 OF 2)

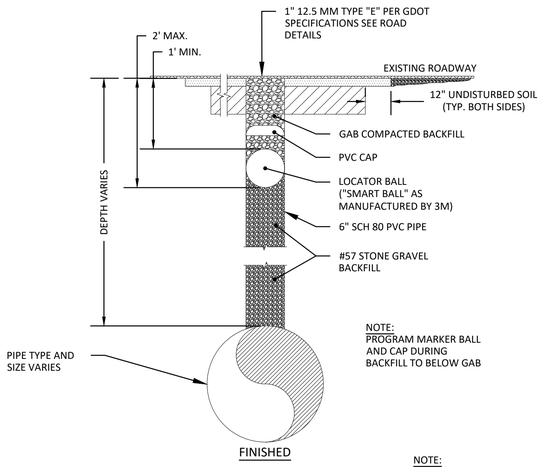
P&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		
FILE NAME	CV-ALL-SHT_75 CROSSING.dwg		
NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET CD-11
SEQ. 47

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_75 CROSSING.dwg
Last Saved: 3/11/2020 3:47 PM Saved By: 02618

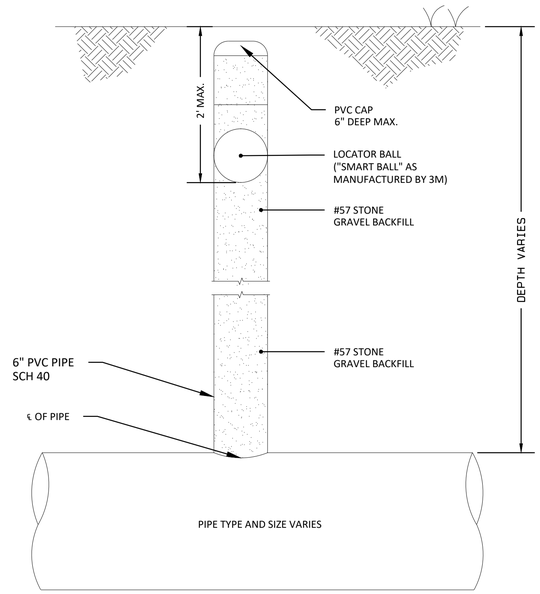
Plot Date: 3/12/2020 2:52 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_75 CROSSING.dwg



NOTE:
LOCATOR BALL TO BE PLACED AT ALL FITTINGS, CONNECTIONS TO EXISTING LINES, AND AT 3RD JOINT OF PIPE ON STRAIGHT RUNS.

PVC AS-BUILT LOCATOR INSTALLATION DETAIL
(IN PAVEMENT)

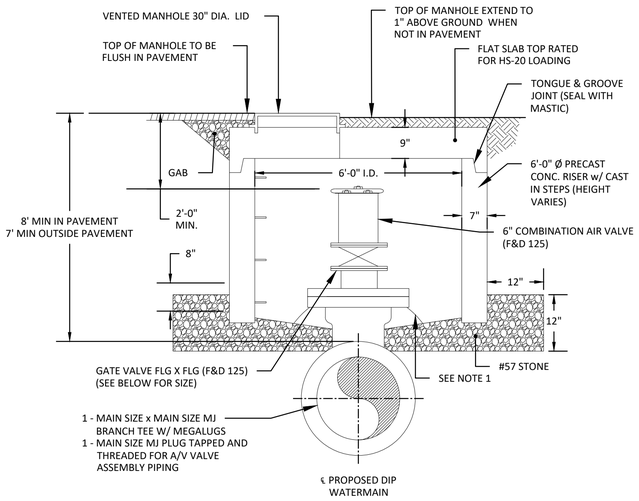
N.T.S.



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

N.T.S.

DETAIL 110



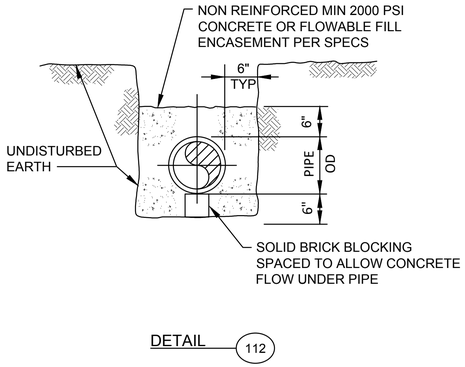
NOTES:

1. DOGHOUSE MANHOLE SECTION AS REQ'D TO MAINTAIN 1'-0" CLEAR ABOVE PIPE.
2. MANHOLES LIDS TO BE VENTED
3. ALL GASKETS SHALL BE TORUSEAL, NO SUBSTITUTION.

DETAIL 130

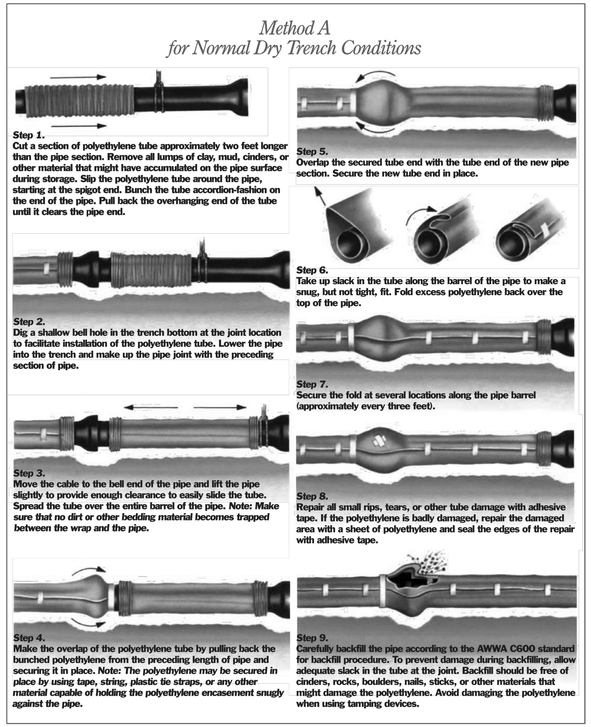
COMBINATION AIR & VACUUM ASSEMBLY WITH MANWAY DETAIL

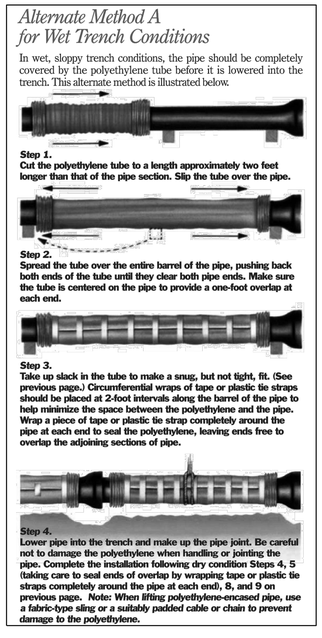
SCALE: N.T.S.



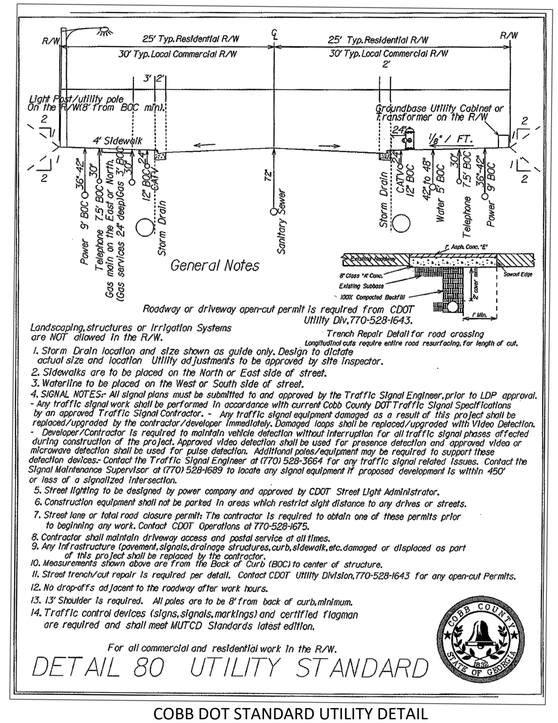
DETAIL 112

CONCRETE OR FLOWABLE FILL ENCASEMENT





POLYETHYLENE ENCASEMENT INSTALLATION



COBB DOT STANDARD UTILITY DETAIL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER FELTEN 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS I

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

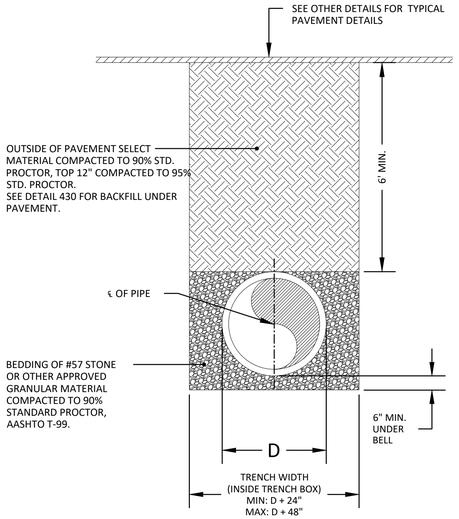
P&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
REVISED ----
CHECKED JCS
FILE NAME GN-ALL-DTLS.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-1
SEQ. 48

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

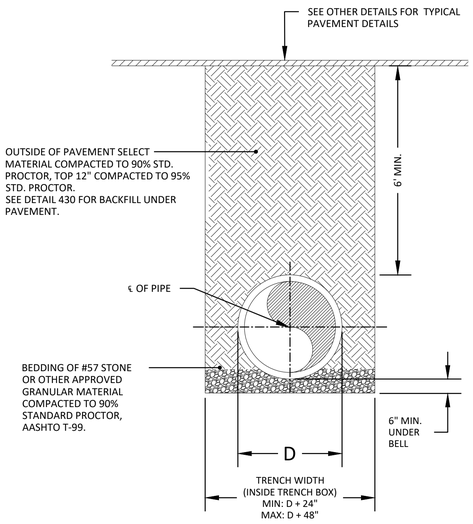
Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg



NOTES:

1. TYPE 5 BEDDING SHALL BE USED INSIDE ROADWAYS.
2. PLACE EARTHEN DAM EVERY 200' OF PIPE.

TYPE 5 BEDDING



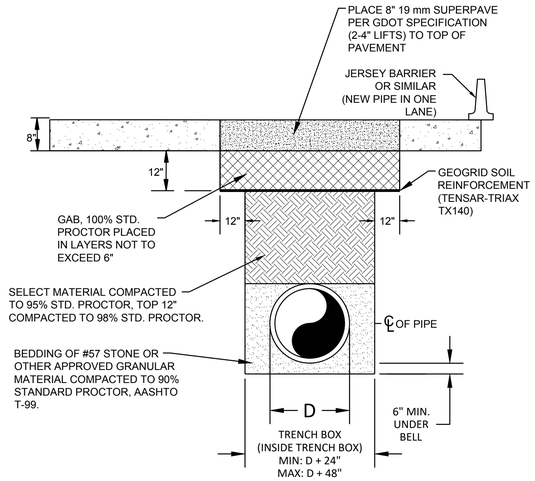
NOTES:

1. TYPE 4 BEDDING SHALL BE USED OUTSIDE ROADWAYS.
2. PLACE EARTHEN DAM EVERY 200' OF PIPE.

TYPE 4 BEDDING

DETAIL 330

TRENCH EMBEDMENT DETAIL

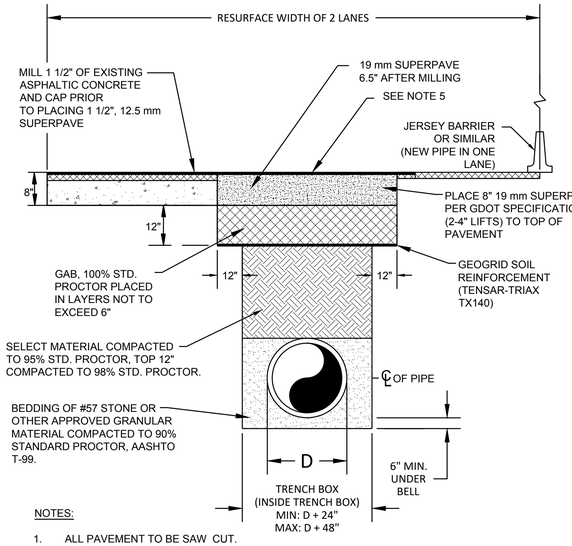


NOTES:

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 105

ASPHALT PAVEMENT REPLACEMENT WITHOUT OVERLAY

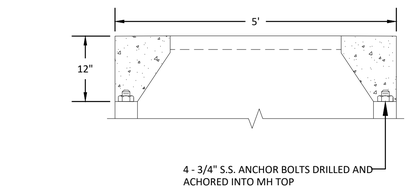


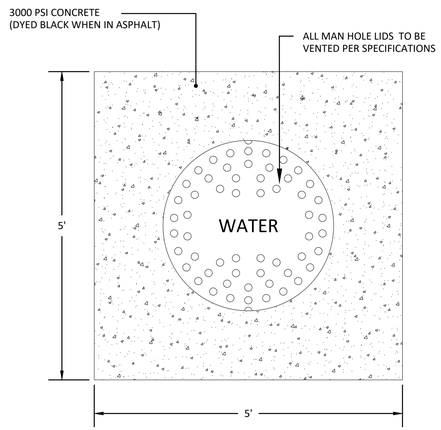
NOTES:

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.
4. ASPHALT PAVEMENT REPLACEMENT W/ OVERLAY TO BE PLACED AFTER PIPELINE TESTING AND ACCEPTANCE.
5. REPLACE TOP COURSE AS FOLLOWS:
   -1-1/2", 9.5mm SUPERPAVE IN SECTION B, STA 1+00 TO APPROX.\ STA 44+00 (CITY OF MARIETTA CITY LIMITS)
   -1-1/2", 12.5 SUPERPAVE ALONG ALL OF SEGMENT A AND STA 44+00 TO END OF SEGMENT B (COBB COUNTY LIMITS)

DETAIL 114

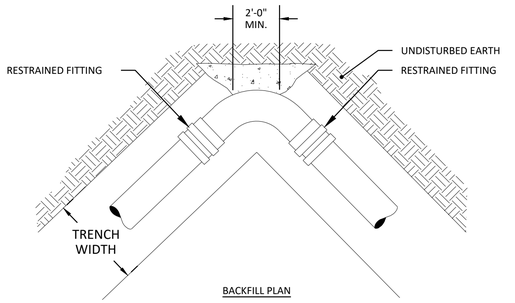
ASPHALT PAVEMENT REPLACEMENT WITH OVERLAY



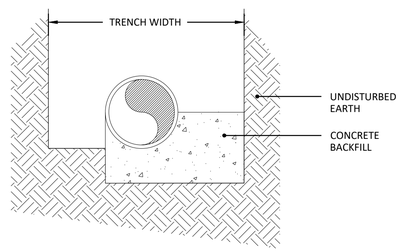


DETAIL 450

MANHOLE LID & CONCRETE PAD DETAIL #1



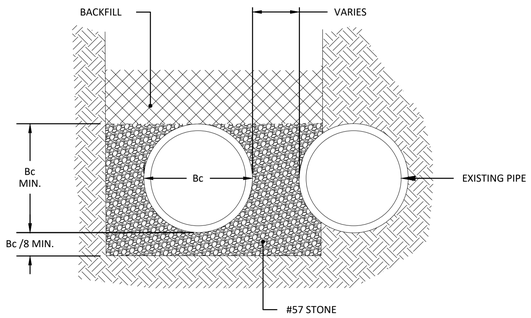
BACKFILL PLAN



TYPICAL SECTION

DETAIL 320

CONCRETE BACKFILL DETAIL

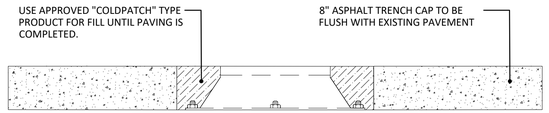


NOTES:

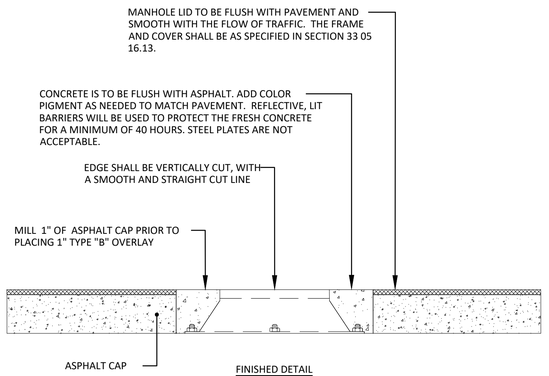
1. AC PIPE ENCOUNTERED IN TRENCH SHALL BE HANDLED PER LAWS/REGULATIONS AND PROPERLY DISPOSED. REFER TO GENERAL NOTES.

DETAIL 440

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



DETAIL FOR TEMPORARY - DURNING CONSTRUCTION



FINISHED DETAIL

NOTE: ALL MAN HOLE LIDS TO BE VENTED PER SPECIFICATIONS.

DETAIL 460

MANHOLE LID & CONCRETE PAD DETAIL #2

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS II

F&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	RCE				
DRAWN	CKM				
REVISED	----				
CHECKED	JCS				
NO.	DATE	BY	ISSUE		
1	03/12/20	RCE	ISSUED FOR BID		

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

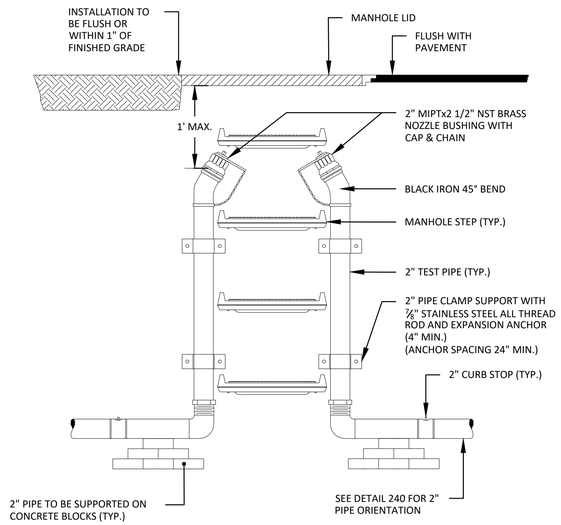
FILE NAME GN-ALL-DTLS.dwg

SHEET D-2

SEQ. 49

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg

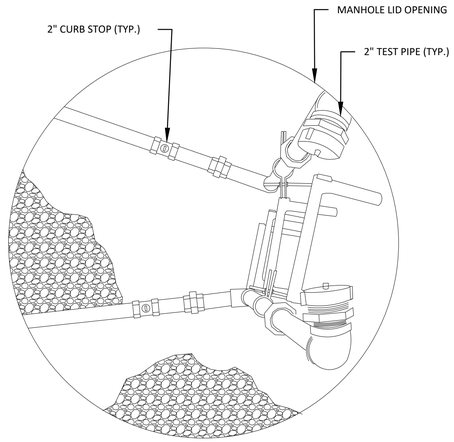


NOTE:

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

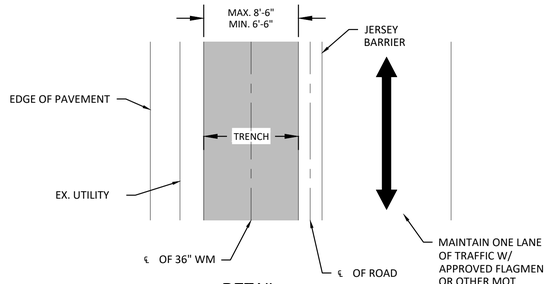
DETAIL 240A

IN-LINE VALVE MANHOLE AND TEST CONNECTIONS



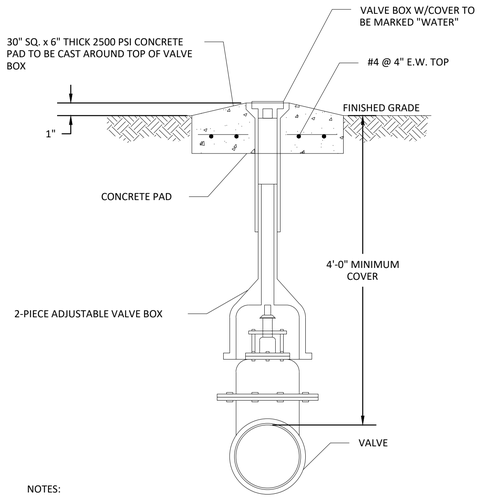
DETAIL 240B

VALVE TEST CONNECTIONS
SCALE: N.T.S.



DETAIL

TYPICAL TRENCH LAYOUT DETAIL (IN PAVEMENT)

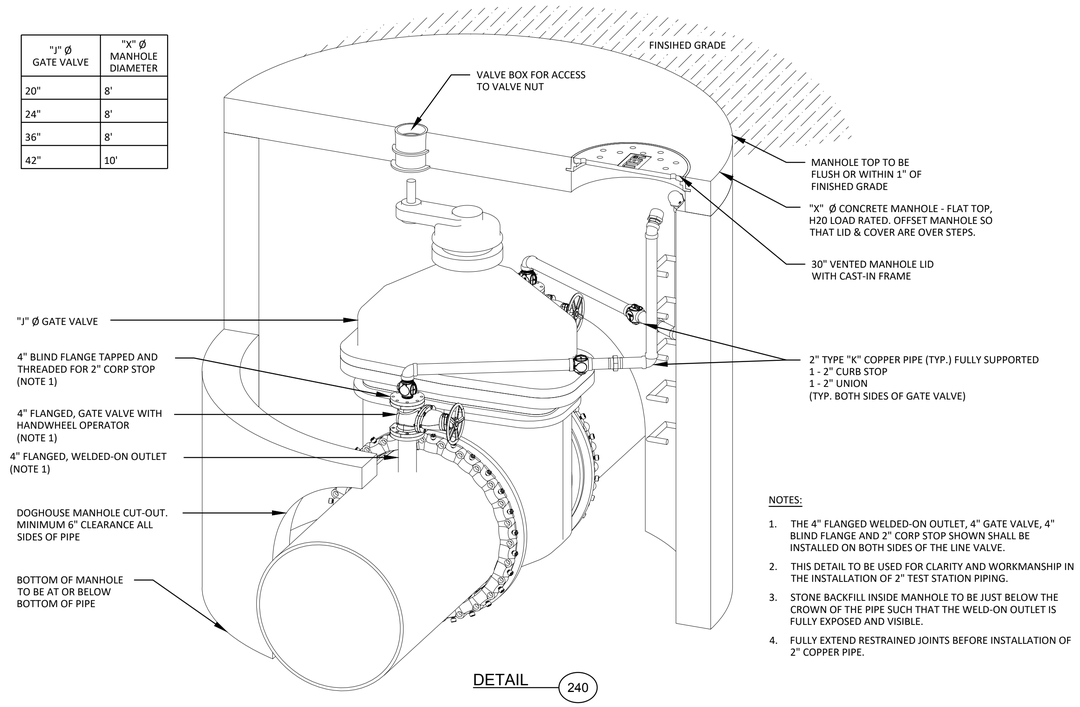


NOTES:

1. 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.
2. IF PRECAST PADS ARE USED, THE VOID BETWEEN THE PRECAST PAD AND THE VALVE BOX SHALL BE FILLED W/NON-SHRINK EPOXY GROUT.
3. VALVE DEEPER THAN 8' REQUIRES 4'Ø 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:

1. 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.
2. THIS DETAIL TO BE USED FOR CLARITY AND WORKMANSHIP IN THE INSTALLATION OF 2" TEST STATION PIPING.
3. STONE BACKFILL INSIDE MANHOLE TO BE JUST BELOW THE CROWN OF THE PIPE SUCH THAT THE WELD-ON OUTLET IS FULLY EXPOSED AND VISIBLE.
4. FULLY EXTEND RESTRAINED JOINTS BEFORE INSTALLATION OF 2" COPPER PIPE.

DETAIL 240

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

TRACT	TRACT	TRACT	TRACT	TRACT
19	F.M. & JIMMIE NELL HARRIS	633 COUNSEL DRIVE	MARIETTA	30068
20	ROSA A. ARCE & CHARLESE. & MARIA D. NAZARIO	631 COUNSEL DRIVE	MARIETTA	30068
21	HAROLD D. & LAZETTA Z. HARKERSON	629 COUNSEL DRIVE	MARIETTA	30068
22	DOROTHY P. & WALTER W. WILLIFORD	627 COUNSEL DRIVE	MARIETTA	30068
23	MANUELA GANCHOSO & MANUEL GARCIA	625 COUNSEL DRIVE	MARIETTA	30068
24	CATHERINE SCOGGINS LAMBERT	623 COUNSEL DRIVE	MARIETTA	30068
25	LINDA T. BECK	621 COUNSEL DRIVE	MARIETTA	30068
26	PATRICIA L. PONZANI & EVELYN K. SLAYBAUGH	619 COUNSEL DRIVE	MARIETTA	30068
40	BRIAN THOMAS MALONEY & FAYE SPECTOR MALONEY	2595 ARROW WOOD DRIVE	MARIETTA	30068
41	HARRY S. TEAGUE & DEBRA J. BERG	2601 ARROW WOOD DRIVE	MARIETTA	30068
42	KERMIT & BEVERLY HALL	2621 ARROW WOOD DRIVE	MARIETTA	30068
43	KERMIT REID HALL, SR.	2621 ARROW WOOD DRIVE	MARIETTA	30068
44	SARAH & EARL MARTIN	2635 ARROW WOOD DRIVE	MARIETTA	30068
45	C.D. & ANN BROWNLOW	2651 ARROW WOOD DRIVE	MARIETTA	30068
46	KARIN R. REIDELBERGER	2681 ARROW WOOD DRIVE	MARIETTA	30068
47	RICHARD J. & JANE G. MCCLOUD	2693 ARROW WOOD DRIVE	MARIETTA	30068

PROPERTIES WITH SEPTIC DRAIN FIELDS

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 5/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WATERS 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS III

P&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

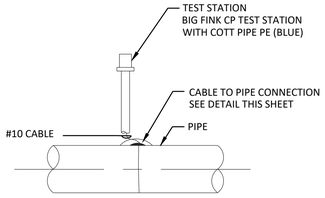
FILE NAME GN-ALL-DTLS.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-3
SEQ. 50

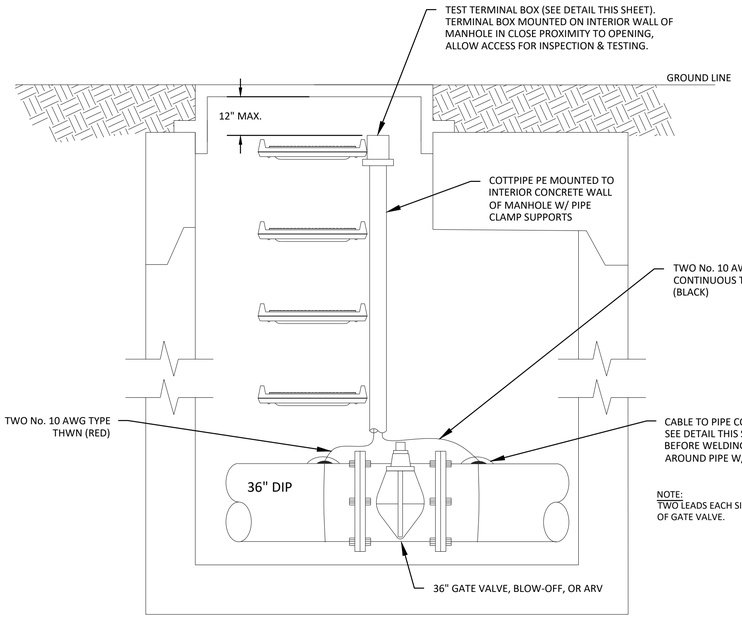
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg



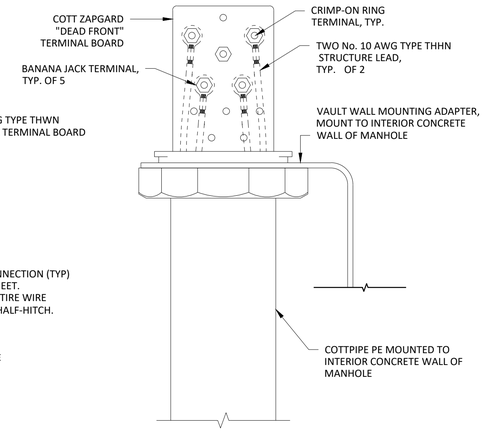
NOTE:
ONE TEST STATION SHALL BE INSTALLED INSIDE EACH MANHOLE SPECIFIED IN CATHODIC TEST STATION TABLE. MOUNT THE TOP OF PIPE WITHIN 12" OF THE TOP OF THE MANHOLE SO IT CAN BE ACCESSED WHEN THE MANHOLE LID IS OPENED. SUPPORT #10 CABLES ON MANHOLE WALL AS NEEDED.

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

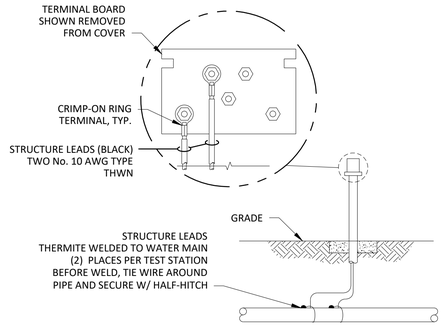


NOTE:
TWO LEADS EACH SIDE OF GATE VALVE.

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

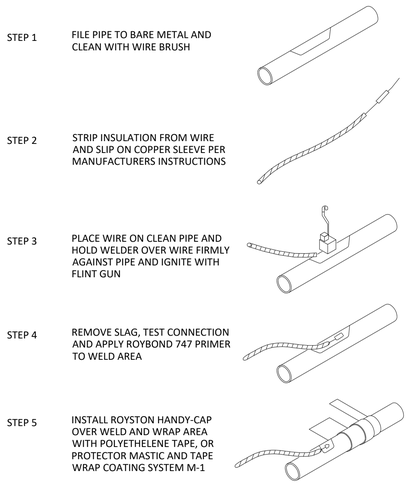


TEST TERMINAL BOX INSIDE MANHOLE
SCALE: N.T.S.

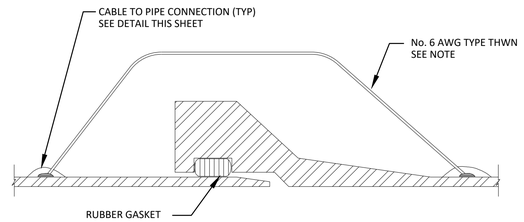


NOTES:
1. COTTPIPE PE CONCRETE TEST STATION MARKER TO BE USED AT TEST STATION LOCATIONS ONLY.
2. FOR STATIONS OUTSIDE PAVEMENT, ROUTE CABLES INSIDE ONE 6" SCH. 80 PVC PIPE TO 5-FEET MIN. BEHIND CURB, EDGE OF PAVEMENT OR SIDEWALK BURIED 4-FEET MINIMUM. PLACE 4" WIDE DETECTABLE MARKING TAPE, WITH A MINIMUM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

CATHODIC TEST STATION
SCALE: N.T.S.

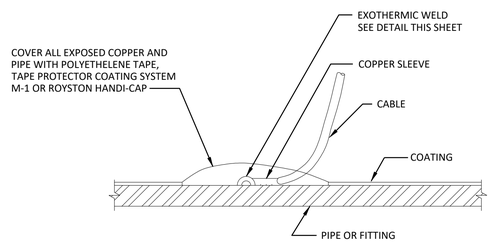


EXOTHERMIC WELD DETAIL
SCALE: N.T.S.

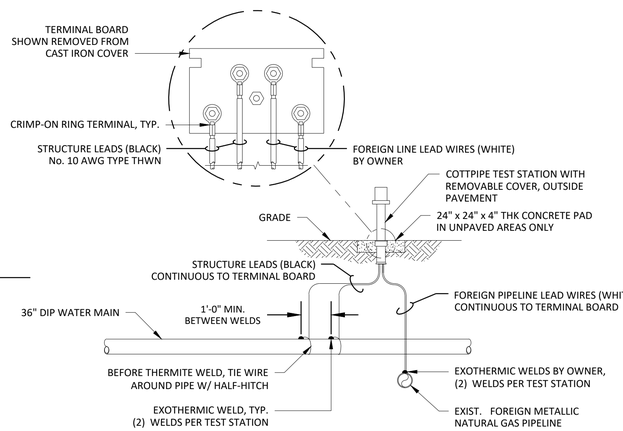


NOTE: ALL BURIED PIPE WITH JOINT GASKETS SHALL BE BONDED. INSTALL TWO NO. 6 BONDS, ONE EACH SIDE AT 6"-12" FROM THE PIPE CROWN. DOUBLE BOND ALL FITTINGS

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



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



NOTES:
1. SEE TEST STATION SCHEDULE, THIS SHEET, FOR LOCATIONS.
2. CONNECTIONS TO FOREIGN PIPELINES SHALL BE MADE BY FOREIGN PIPELINE OWNER.

FOREIGN PIPELINE CROSSING TEST STATION

CATHODIC TEST STATION LOCATION TABLE			
CTS #	SEGMENT	STATION	CTS TYPE
1	B	1+11	GV
2	B	6+20	AV
3	B	11+80	BO
4	B	14+75	AV
5	B	23+79	GV
6	B	24+00	AV
7	B	33+08	GROUND
8	B	42+17	BO
9	B	50+51	GROUND
10	B	58+85	GROUND
11	B	67+19	AV
12	B	67+47	GV
13	B	67+67	GV
14	B	81+49	AV
15	A	1+10	GV
16	A	1+20	AV
17	A	10+81	BO
18	A	21+61	AV
19	A	37+18	BO
20	A	49+33	AV
21	A	49+50	GV
22	A	49+66	AV
23	A	54+50	GV
24	A	57+00	BO
25	A	62+00	AV
26	A	67+29	BO
27	A	70+50	AV
28	A	79+23	BO
29	A	83+60	AV
30	A	92+53	AV
31	A	92+70	GV
32	A	92+86	AV
33	A	107+20	BO
34	A	111+67	AV
35	A	117+50	BO
36	A	124+65	AV
37	A	137+93	BO
38	A	141+83	AV
39	A	142+05	GV
40	A	143+01	GV
41	A	143+13	AV
42	A	159+00	AV
43	A	164+18	BO
44	A	174+00	GROUND
45	A	184+00	GROUND
46	A	194+00	GROUND
47	A	203+18	AV
48	A	219+14	BO
49	A	229+43	AV
50	A	232+93	BO
51	A	243+93	AV

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER KELLY 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
DETAILS IV

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM	REVISED	----
CHECKED	JCS	DATE	03/12/20
FILE NAME	GN-ALL-DTLS.dwg	BY	RCE

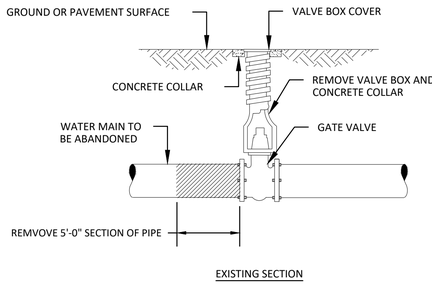
NO.	ISSUE
1	ISSUED FOR BID

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

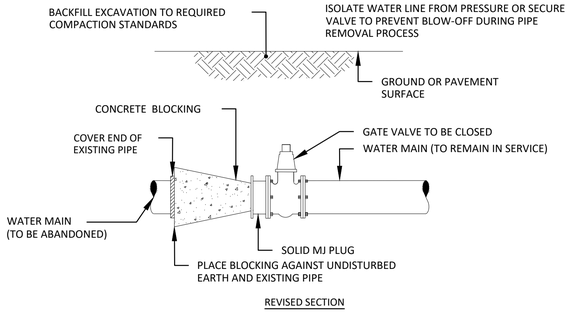
SHEET D-4
SEQ. 51

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg



EXISTING SECTION

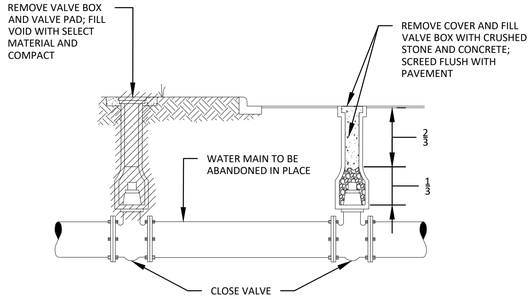


REVISED SECTION

OUTLET VALVE ABANDONMENT DETAIL #1

N.T.S.

150



OUT-OF-PAVEMENT IN-PAVEMENT

NOTE :

REMOVE ANY VALVE MARKERS ASSOCIATED WITH ABANDONED VALVES

MAINLINE VALVE ABANDONMENT DETAIL #2

N.T.S.

160

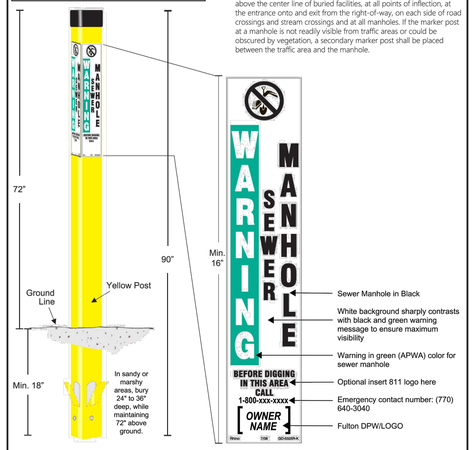
Rhino Marking Systems, Inc.

ALL MATERIALS SHALL BE USED AS LISTED, OR EQUIVALENT APPROVED BY GEORGIA POWER

Parts:
- Rhino # TVP90YB - 90° Yellow TriView PLUS™ with Black Cap (using Flex PLUS rod insert) and TriGrip™ anchor system
- GD-5325R-K Decal (printed on reflective stock and factory applied to post)

NOTES:

1. Marker posts shall be installed in accordance with this Exhibit MP-1 and per the manufacturer's specifications.
2. Posts shall be color coded and labeled to match the type of facility they are marking (Blue = Water, Green = Sewer, Purple = Reclaimed Water, etc.), except that posts marking manholes shall be yellow, with the decal lettering color coded to match the service of the facility to which the manhole is related. Posts shall include the name and contact information for the owner / operator of the utility facility.
3. Markers shall be placed at the following locations: every 500 feet above the center line of buried facilities, at all points of inflection, at the entrance onto and exit from the right-of-way, on each side of road crossings and stream crossings and at all manholes. If the marker post at a manhole is not readily visible from traffic areas or could be obscured by vegetation, a secondary marker post shall be placed between the traffic area and the manhole.

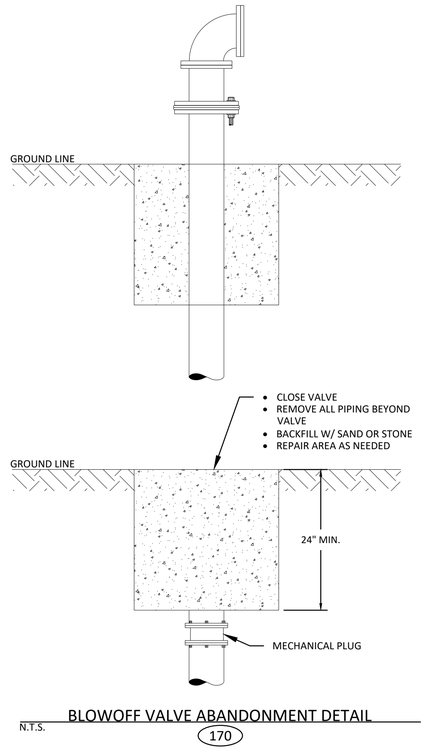


Georgia Power

HIGH VISIBILITY MARKER POST
DETAILS AND SPECIFICATIONS

Drawn by: B. Kitchel
Date: 10.26.2016
Exhibit MP-1

GEORGIA POWER EASEMENT: PIPELINE MARKERS

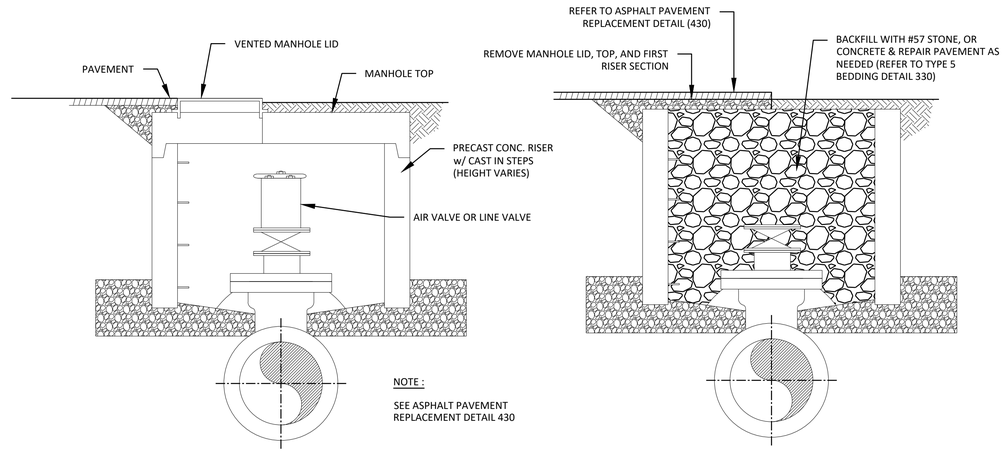


BLOWOFF VALVE ABANDONMENT DETAIL

N.T.S.

170

ABANDONMENT TABLE			
ITEM #	ITEM	REFERENCE LOCATION STATION	NOTES
SEGMENT A			
1	ABANDON AIR RELEASE VALVE	49+90	
2	ABANDON LINE VALVE & MH	54+50	
3	ABANDON GATE VALVE	57+20	
4	ABANDON AIR RELEASE VALVE	71+00	
5	ABANDON GATE VALVE	91+40	
6	ABANDON OUTLET VALVE	91+90	
7	ABANDON AIR RELEASE VALVE	92+40	
8	ABANDON GATE VALVE	171+75	
9	ABANDON AIR RELEASE VALVE	227+50	COORDINATE WITH IHCC STAFF DURING ABANDONMENT
SEGMENT B			
10	ABANDON MARIETTA METER VAULT AND CONNECTION	11+14	
11	ABANDON GATE VALVE	28+50	
12	ABANDON GATE VALVE	29+10	
13	ABANDON GATE VALVE	40+00	
14	ABANDON LINE VALVE	58+45	MARIETTA WATER LINE VALE (CUT BELOW GRADE AND CONCRETE)
15	ABANDON LINE VALVE	59+45	MARIETTA WATER LINE VALE (CUT BELOW GRADE AND CONCRETE)
16	METER VAULT NEAR SOARING DRIVE	60+75	REMOVE VAULT TOP, METER, BLOWOFF VALVE, & CAP EACH SIDE FILL WITH NO. 57 STONE. OUTLET VALVE TO COVENTRY TOWNSHIP METER, LINE VALVE; 61+50; ABANDON IN PLACE.
17	ABANDON OUTLET VALVE TO METER	61+55	
18	ABANDON LINE VALVE	61+60	



NOTE :

SEE ASPHALT PAVEMENT REPLACEMENT DETAIL 430

VALVE MANHOLE ABANDONMENT DETAIL

N.T.S.

180

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER KITCHEL 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS V

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
REVISED	----
DATE	03/12/20
BY	RCE
FILE NAME	GN-ALL-DTLS.dwg

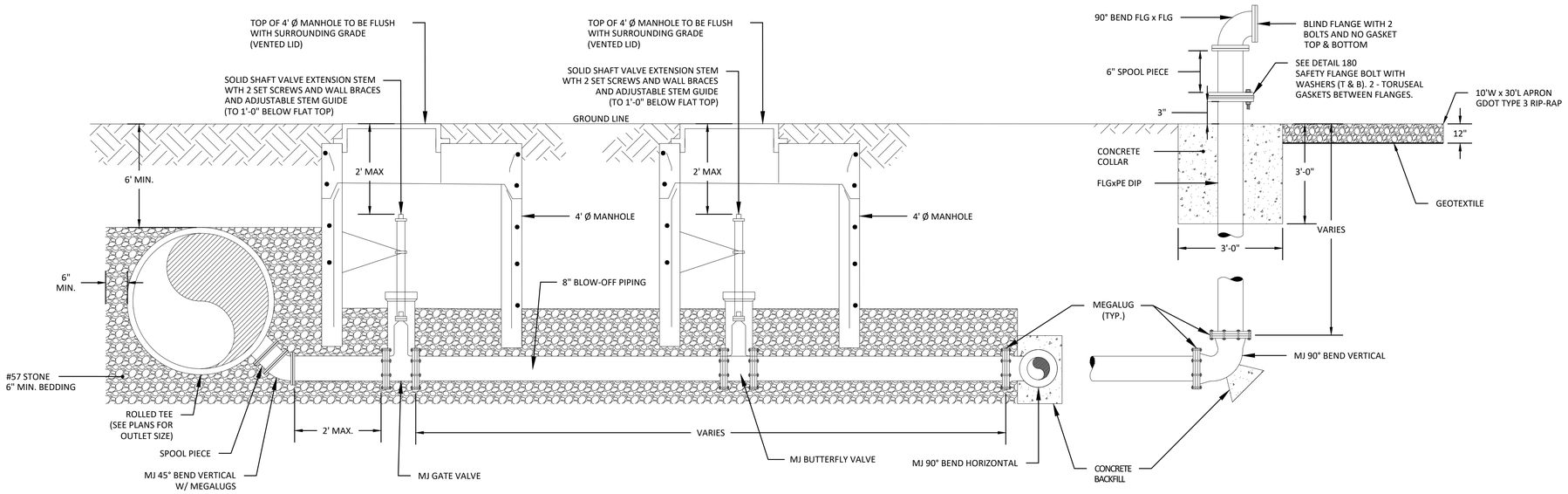
NO.	ISSUE
1	ISSUED FOR BID

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET D-5
SEQ. 52

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 3:05 PM Saved By: 02618

Plot Date: 3/12/2020 3:16 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg



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:

1. MEGALUGS TO BE USED WITH ALL MECHANICAL JOINT FITTINGS. PUSH-ON JOINTS FOR BLOWOFF PIPING (8"-16") TO BE RESTRAINED WITH FAST GRIP GASKETS.
2. TEES & BENDS SHALL BE MECHANICAL JOINT WITH MEGALUGS.
3. ALL BLOW-OFF PIPING SHALL BE DOUBLE POLY WRAPPED.
4. SAFETY FLANGE BOLTS SHALL BE ⅝" 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.
5. USE AMERICAN RED RUBBER FLAT GASKET (TORUSEAL) OR APPROVED EQUAL.

BLOWOFF VALVE INSTALLATION DETAIL

N.T.S.

120

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER KELLY 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
DETAILS VI

F&N JOB NO.	CBR18759				
DATE	03/12/20	DESIGNED	RCE		
		DRAWN	CKM		
		REVISED	----		
		CHECKED	JCS		
03/12/20		FILE NAME	GN-ALL-DTLS.dwg		
RCE					
BY					
DATE					
ISSUED FOR BID					
ISSUE					
NO.					

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

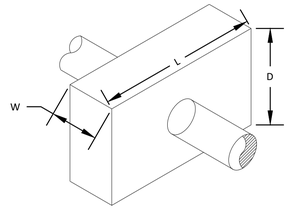
VERIFY SCALE 0 1

SHEET D-6

SEQ. 53

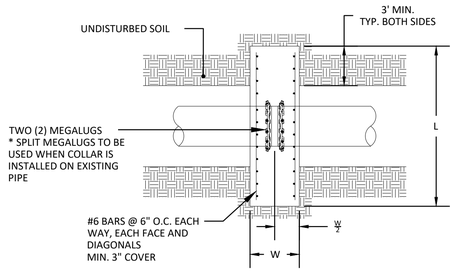
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg



ISOMETRIC

	SEGMENT B STA 1+22
W	2'-6"
L	13'-0"
D	4'-9"



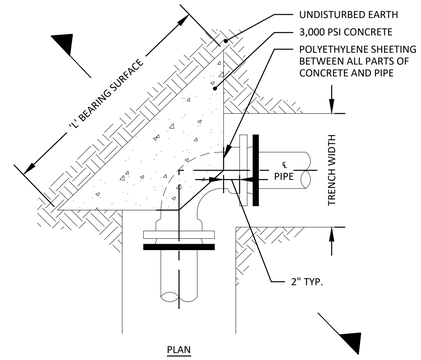
PLAN

NOTES:

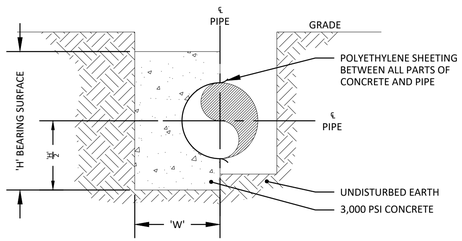
1. WHEN INSTALLED ON AN EXISTING DUCTILE IRON PIPE, COLLAR SHALL BE PLACED ON THE FIRST UNRESTRAINED JOINT OF PIPE.
2. CONCRETE SHALL BE POURED AGAINST UNDISTURBED EARTH EXCEPT WHERE FORMWORK IS A MUST. AFTER CONCRETE IS CURED THE FORMWORK SHALL BE REMOVED.
3. DIMENSIONS SHALL BE AS SHOWN ON THE DRAWINGS.
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.



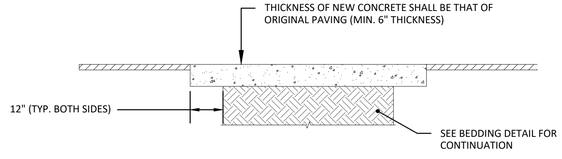
PLAN



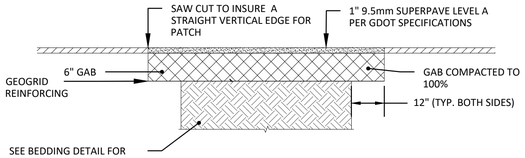
SECTION

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

N.T.S.



CONCRETE



ASPHALT

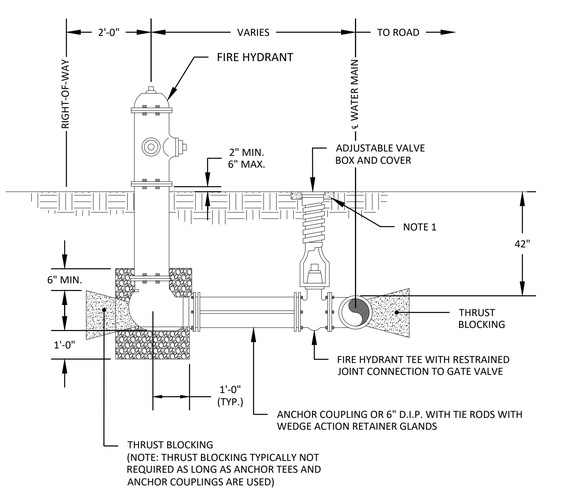
NOTES:

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 MARCH EXISTING SURFACE.

DRIVEWAY REPAIR DETAIL

N.T.S.

470



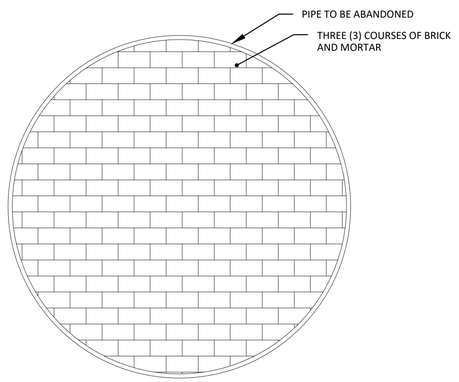
TYPICAL SECTION

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 BITUMONOUS PAINT AFTER INSTALLATION.
3. WEDGE ACTION RETAINER GLANDS SHALL BE EBAA IRON MEGALUB, FOR UNI-FLANGE SERIES 1400, OR EQUAL.

FIRE HYDRANT INSTALATION (ROADWAY STANDARD) CCWS DETAIL 2713-3

N.T.S.



DETAIL 302

ABANDONED PIPE AND BULKHEAD BRICK

CONCRETE THRUST BLOCK TABLE				
SEGMENT	**STA**	**W (FT)**	**H (FT)**	**L (FT)**
A	49+50	3	1.5	3
A	54+50	3	2	4
A	92+70	3	1.5	3
A	142+05	3	1.5	3
B	23+00	3	1.5	3

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS VII

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS

NO.	BY	DATE	REVISED
1	RCE	03/12/20	ISSUED FOR BID

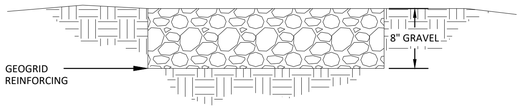
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME GN-ALL-DTLS.dwg

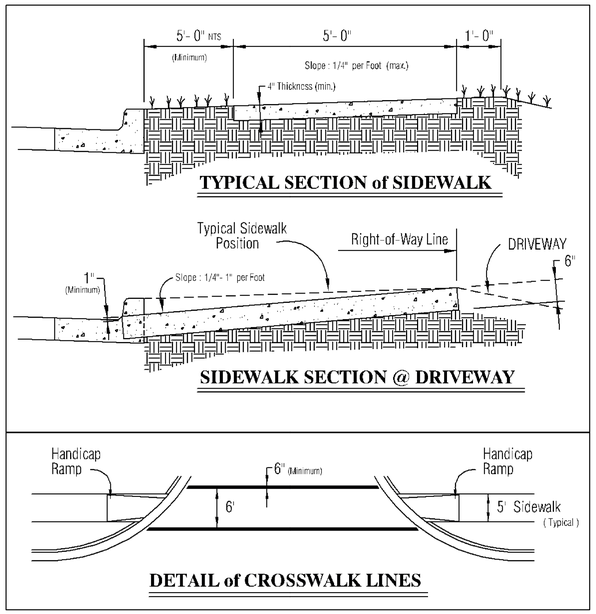
SHEET D-7
SEQ. 54

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

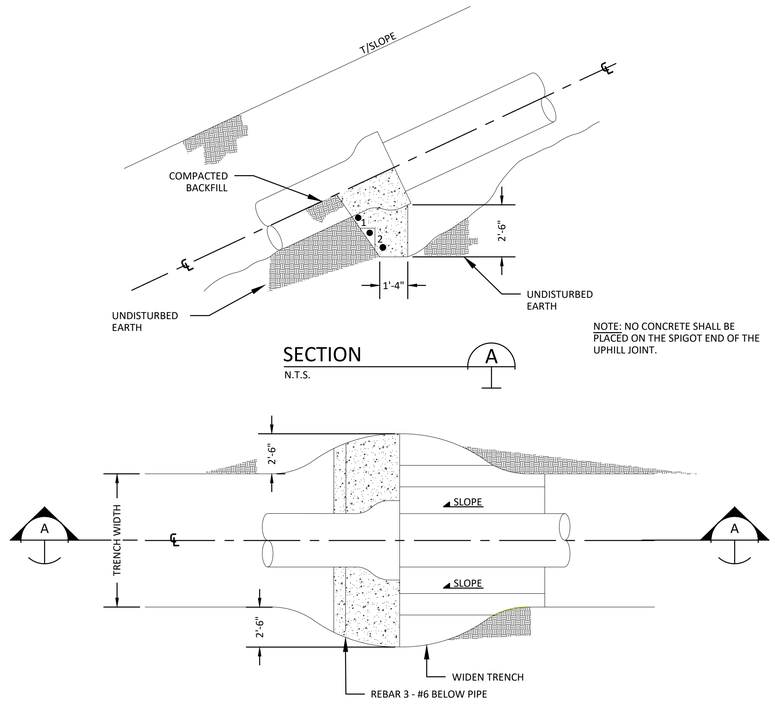
Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg



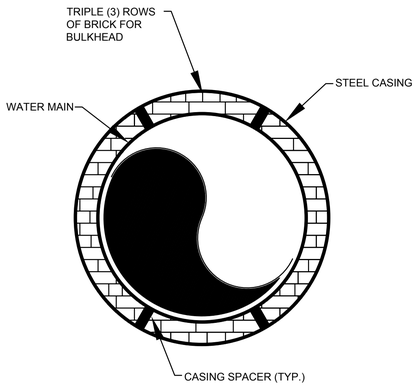
GRAVEL DRIVEWAY REPAIR DETAIL
N.T.S.
470



STANDARD CONCRETE SIDEWALK DETAIL
N.T.S.
1



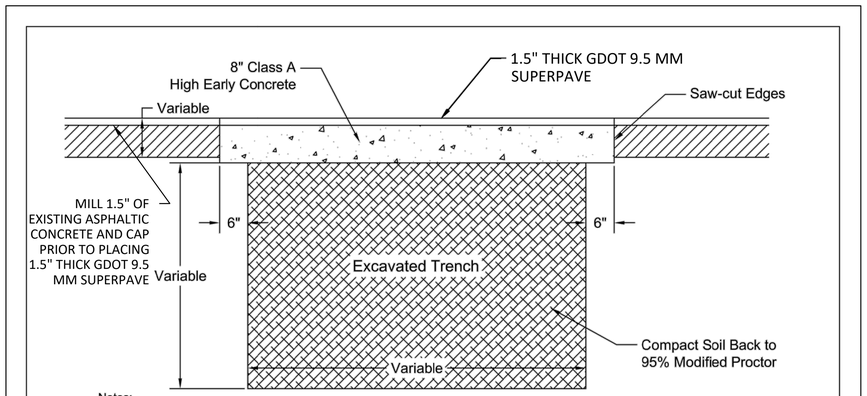
CONCRETE SLOPE ANCHOR DETAIL
N.T.S.
2



WATER MAIN INCHES	CASING INCHES	WALL THICKNESS* INCHES
36	48	0.500
30	42	0.500
24	36	0.500
20	30	0.375
16	24	0.375

*** NOTE THAT ENGINEER IS RESPONSIBLE FOR CASING WALL THICKNESS DESIGN. CCMWA CONSIDERS THE VALUES SHOWN ABOVE AS TYPICAL.**

CASING PIPE DETAIL
N.T.S.
303

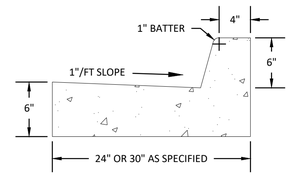


CITY OF Marietta GEORGIA

12/2/2019	N.T.S.

City of Marietta
Utility Trench Repair Detail

Transportation Department



*** NOTE: 24" CURB WILL BE ALLOWED IF 30" IS NOT REQUIRED BY DESIGN, CDOT OR IF TIEING INTO 24"**

CURB AND GUTTER DETAIL DETAIL
N.T.S.
3

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WESTON 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS VIII

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	---
CHECKED	JCS

NO.	BY	DATE	ISSUE
1	RCE	03/12/20	ISSUED FOR BID

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME GN-ALL-DTLS.dwg

SHEET D-8
SEQ. 55

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg
Last Saved: 3/12/2020 2:21 PM Saved By: 02618

Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg

INTRODUCTION

THIS EROSION SEDIMENTATION AND POLLUTION CONTROL PLAN (ESPCP) IS FOR THE PROJECT KNOWN AS THE COBB COUNTY MARIETTA WATER AUTHORITY (CCMWA) BLACKJACK MOUNTAIN 36-INCH PIPELINE REPLACEMENT LOCATED IN COBB COUNTY, GEORGIA. THE CCMWA IS IN CHARGE OF ADMINISTRATING THE PROJECT. THE PROJECT INVOLVES THE INSTALLATION OF APPROXIMATELY 32,000 LINEAR FEET OF 36-INCH DUCTILE IRON TRANSMISSION WATER MAIN. THE TOTAL AREA OF THE SITE IS 36.1 ACRES. THE TOTAL DISTURBED AREA IS 36.1 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 SOPE CREEK
UPSTREAM SAMPLE LOCATION (NORTH OF BONNIE DELL DRIVE): LATITUDE = N33.9708, LONGITUDE = W84.5206
DOWNSTREAM SAMPLE LOCATION (WEST OF OLD CANTON ROAD): LATITUDE = N33.9567 LONGITUDE = W84.4622
· SAMPLE LOCATION 1 - AT THE CENTERLINE OF SOPE CREEK
UPSTREAM SAMPLE LOCATION (NORTH OF ROBINSON ROAD): LATITUDE = N33.9719, LONGITUDE = W84.4567
DOWNSTREAM SAMPLE LOCATION (SOUTH OF LOWER ROSWELL ROAD): LATITUDE = N33.9508 LONGITUDE = W84.4408

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 QUAILIFIED 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 NOT 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.

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOP

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 traveleay 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	GABION			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 otherwise 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/drains 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	STORMDRAIN 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-nourished.
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 seedings 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 erodable 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.

GaSWCC (Amended - 2013)

STORM WATER AND EROSION CONTROL NOTES

1. 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 13067C0128H DATED NOVEMBER 2, 2012.
2. A 25-FOOT UNDISTURBED STATE STREAM BUFFER SHALL BE MAINTAINED ADJACENT TO ALL STREAMS.
3. TOTAL WETLAND AREA = 0.00 ACRES.
4. SOURCE OF TOPOGRAPHY IS PROVIDED BY TERRAMARK SURVEYING, INC. RECEIVED BY FREESE AND NICHOLS IN OCTOBER, 2019.
5. 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.
6. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED 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.
7. EROSION AND SEDIMENT CONTROL DEVICES SHOWN ARE THE MINIMUM REQUIRED. ADDITIONAL DEVICES MAY BE REQUIRED AS NECESSARY.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. CONTRACTOR SHALL BUILD, MAINTAIN, AND USE A CONSTRUCTION EXIT AT ALL SITE ENTRY/EXIT LOCATIONS ADJACENT TO PAVED ROADS.
14. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE USED ARE DETAILED ON THE EROSION CONTROL PLAN OR EROSION CONTROL DETAILS.
15. 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.
16. 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.
17. 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.
18. 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.
19. MAXIMUM SLOPE FOR CUT OR FILL IS 2H:1V EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 2.5H:1V.
20. 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 PERMITTEE'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.

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

GSWCC

RYAN C. ELLENA
Level II Certified Design Professional
CERTIFICATION NUMBER 0000081592
ISSUED: 09/15/2017 EXPIRES: 09/15/2020

EROSION CONTROL NOTES

1. 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 COBB COUNTY OR IN EASEMENT OWNED BY COBB COUNTY MARIETTA WATER AUTHORITY.
2. OWNER/DEVELOPER/PRIMARY PERMITTEE: CONTRACTOR
2. 24-HOUR CONTACT: CCMWA PROJECT MANAGER JACOB WILSON (678) 372-8158
3. THIS PROJECT LIES WITHIN DISTRICT 18, LAND LOTS 201, 258, 259, 304-309, 382-388, AND 411-414 IN COBB COUNTY, GEORGIA. SEGMENT A EXTENDS FROM BARNES MILL ROAD (LAT: 33.968739 LONG: W84.507942) TO LOWER ROSWELL ROAD (LAT: 33.960828 LONG:W84.430344). SEGMENT B BEGINS NEAR THE BARNES MILL ROAD AND HWY 41 INTERSECTION (LAT: 33.960739 LONG: W84.527781) AND ENDS NEAR THE INTERSECTION OF BARNES MILL ROAD AND CEDAR BLUFF CT NE (LAT: 33.971472 LONG: W84.504533).
4. TOTAL PROJECT AREA: 36.1± ACRES.
5. TOTAL DISTURBED AREA: 36.1± ACRES
6. EROSION CONTROL PRACTICES SHALL COMPLY WITH THE STANDARDS/SPECIFICATIONS IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
7. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO ANY GRADING ON SITE.
8. 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.
9. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREAS WITHIN 24 HOURS OF SEEDING.
10. 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.
11. 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.
12. 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.
13. 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.
14. MULCH TEMPORARY VEGETATION ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.
15. CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AND POSTAL SERVICE THROUGHOUT THE DURATION OF THE PROJECT.
16. WHEN PLANTING VEGETATION, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING.
17. 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.
18. 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.
19. 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.
20. 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 BMPs WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGIN.
21. RECEIVING WATER FOR THIS PROJECT IS SOPE CREEK.
22. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
23. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

EROSION CONTROL PROJECT NARRATIVE

THE PROPOSED PROJECT CONSISTS OF APPROXIMATELY 32,000 LINEAR FEET OF 36-INCH DUCTILE IRON TRANSMISION WATER MAIN FROM BARNES MILL ROAD ALONG AN EXISTING CCMWA EASEMENT AND CONNECTING TO AN EXISTING 30" WATER MAIN AT LOWER ROSWELL ROAD. THE TOTAL AREA OF THE SITE IS 43.7 ACRES. THE TOTAL DISTURBED AREA IS 43.7 ACRES.

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

1. SILT FENCE - TYPE SENSITIVE (SD1-S) SHALL BE INSTALLED AT APPROPRIATE LOCATIONS TO PREVENT SEDIMENT FROM BEING WASHED OFF OF THE SITE.
2. MULCHING, TEMPORARY AND PERMANENT GRASSING (DS1, DS2 & DS3) SHALL BE USED TO RE-ESTABLISH VEGETATION ON THE DISTURBED AREAS AS CONSTRUCTION PROCEEDS.
3. CONSTRUCTION EXITS (CO) WILL BE USED TO PREVENT SEDIMENT FROM LEAVING THE SITE VIA THE TIRES OF TRUCKS AND CONSTRUCTION EQUIPMENT.
4. INLET SEDIMENT TRAPS WILL BE INSTALLED TO PREVENT SEDIMENT FROM ESCAPING THROUGH EXISTING STORM DRAIN PIPES LEADING AWAY FROM THE PROJECT SITE.
5. 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.

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN C. ELLENA 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
EROSION & SEDIMENT CONTROL
LEGEND & NOTES

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	JLJ
DRAWN	CKM
REVISED	-
CHECKED	JCS
FILE NAME	ES-ALL-CHECKLIST.dwg

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

SHEET ES-2
SEQ. 57

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg
Last Saved: 3/12/2020 2:26 PM Saved By: 02618
Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg

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

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N		
ES-3	Y	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	Y	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-2	Y	3	The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
ES-2	Y	4	Provide the name, address, **email address**, and phone number of primary permittee.
ES-2	Y	5	Note total and disturbed acreage of the project or phase under construction.
ES-2	Y	6	Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.
ALL ES	Y	7	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
ES-2	Y	8	Description of the nature of construction activity.
COVER	Y	9	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
ES-2	Y	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-2	Y	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-2	Y	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-2	Y	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-2	Y	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-2	Y	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 wrested 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."
	N/A	16	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
ES-1	Y	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-2	Y	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."*
ES-2	Y	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-2	Y	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-2	Y	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."
	N/A	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 Biota 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.*
	N/A	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-2	Y	24	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.*
ES-1	Y	25	Provide BMPs for the remediation of all petroleum spills and leaks.
ES-1	Y	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-1	Y	27	Description of practices to provide cover for building materials and building products on site.*
ES-1	Y	28	Description of the practices that will be used to reduce the pollutants in storm water discharges.*
ES-4	Y	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-1	Y	30	Provide complete requirements of inspections and record keeping by the primary permittee.*
ES-1	Y	31	Provide complete requirements of sampling frequency and reporting of sampling results.*
ES-1	Y	32	Provide complete details for retention of records as per Part IV.F. of the permit.*
ES-1	Y	33	Description of analytical methods to be used to collect and analyze the samples from each location.*
ES-1	Y	34	Appendix B rationale for NTU values at all outfall sampling points where applicable.*
ES-4	Y	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-2	Y	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	Y	37	Graphic scale and North arrow.
ALL ES	Y	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

	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.
	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	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	Y	42	Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
ES-17	Y	43	Delineation and acreage of contributing drainage basins on the project site.
ES-20	Y	44	Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.
	N/A	45	An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
	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	Y	47	Soil series for the project site and their delineation.
	N/A	48	The limits of disturbance for each phase of construction.
ES-17	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, permitees 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	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	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	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 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2019

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLENA 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
EROSION & SEDIMENT CONTROL
CHECKLIST

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	JLJ
DRAWN	CKM
REVISED	-
CHECKED	JCS
FILE NAME	ES-ALL-CHECKLIST.dwg

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET ES-3
SEQ. 58

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg
Last Saved: 3/12/2020 2:26 PM Saved By: 02618

Plot Date: 3/12/2020 2:53 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATION TECHNIQUES SHALL BE EMPLOYED.

SITE PREPARATION

1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSION BERMS, TERRACES, AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

APPLYING MULCH

WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.

1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
3. CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY. CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF TRACKING IN, OR DAMAGE TO SHOES, CLOTHING, ETC.
4. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH

1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL PACKER DISK. DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.
2. STRAW OR HAY SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASHPALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFIERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLASTIC MESH OR NETTING WITH A MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANIFACTURER'S SPECIFICATIONS.
3. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
4. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

Ds1 MULCHING

VEGETATIVE COVERS

	MONTH	TEMPORARY SEED	RATE/ACRE	RATES/1,000 SQ. FT. FERTILIZER	RATES/1,000 SQ. FT. LIME STONE	PERMANENT SEED	RATE/ACRE	RATES/1,000 SQ. FT. FERTILIZER	RATES/1,000 SQ. FT. LIME STONE	MAINTENANCE
1)	JANUARY	RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2)	8 - 10 LB. 30 - 40 LB. (1)	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
2)	FEBRUARY	RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2) FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
3)	MARCH	RYE ANNUAL LESPEDEZA WEEPING LOVEGRASS	2 - 3 BU. 20 - 25 LB. 4 - 6 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2) FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
4)	APRIL	RYE BROWN TOP MILLET ANNUAL LESPEDEZA SUDAN ANNUAL	2 - 3 BU. 30 - 40 LB. 20 - 25 LB. 35 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
5)	MAY	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
6)	JUNE	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
7)	JULY	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
8)	AUGUST	RYEGRASS WEEPING LOVEGRASS	40 - 50 LB. 4 - 6 LB.	12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB.	HULLED BERMUDA BAHIA	5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
9)	SEPTEMBER	RYEGRASS TALL FESCUE	40 - 50 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	TALL FESCUE	30 - 50 LB.	35 LB (6-12-12)	45 LB.	10 LB (10-10-10)
10)	OCTOBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2) FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
11)	NOVEMBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA FESCUE SERICEA LESPEDEZA	8 - 10 LB. 30 - 50 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
12)	DECEMBER	RYE RYEGRASS WHEAT	2 - 3 BU. 40 - 50 LB. 2 - 3 BU.	12 LB (10-10-10) 12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)

(1) - USE A MINIMUM OF 40 LBS. SCARIFIED SEED. REMAINDER MAY BE UNSCARIFIED, CLEAN HULLED SEED.
(2) - USE EITHER COMMON SERALA, OR INTERSTATE SERICEA LESPEDEZA.

THE ABOVE SEEDING CHART LISTS ALL POTENTIAL OPTIONS. CONTRACTOR IS TO SUBMIT THE SCHEDULE AND PROPOSED SEED MIXTURE FOR THIS PROJECT FOR ENGINEER'S APPROVAL PRIOR TO SEEDING.

Ds2 Ds3 TEMPORARY & PERMANENT GRASSING

CONSTRUCTION SCHEDULE

ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
NOTICE TO PROCEED																														
INSTALLATION OF EROSION CONTROL																														
MAINTENANCE OF EROSION CONTROL																														
INSTALLATION OF TREE PROTECTION DEVICES																														
MAINTENANCE OF TREE PROTECTION DEVICES																														
INSTALLATION OF WATER MAIN																														
TEMPORARY AND PERMANENT GRASSING																														
CLEAN-UP																														

CONSTRUCTION ACTIVITIES ARE EXPECTED TO BEGIN IN JUNE 2019.

PERMITTEE CONTACT INFORMATION

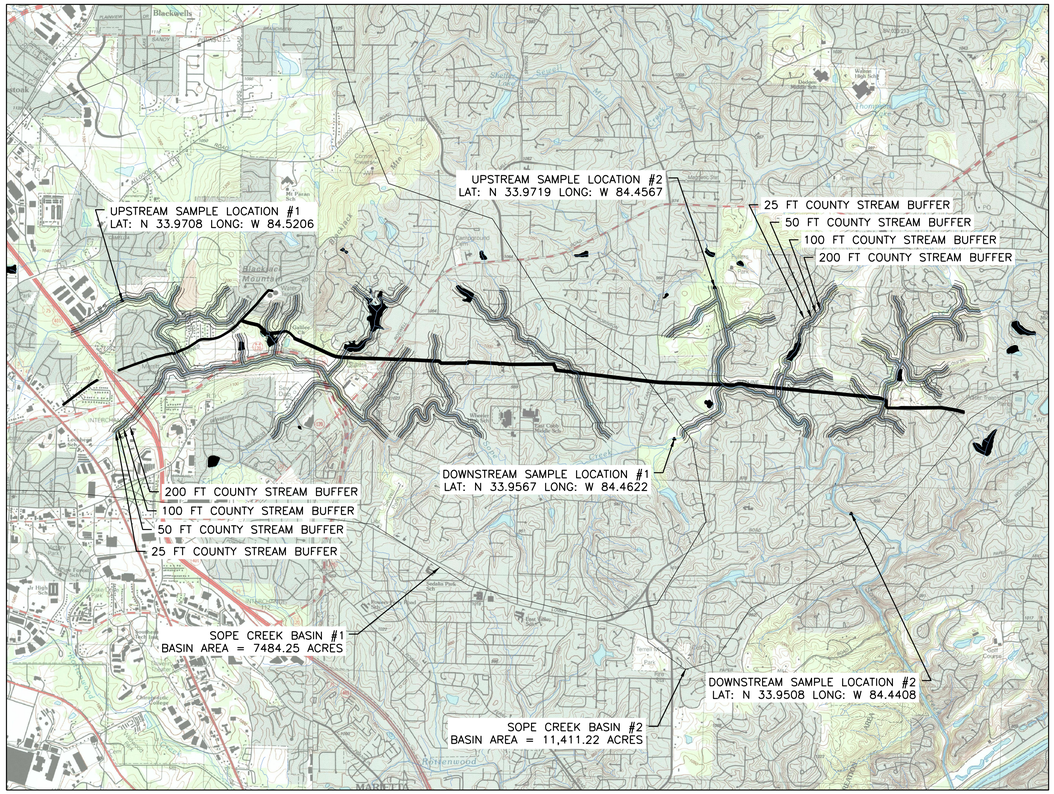
CONTRACTOR

PERMITTEE CERTIFICATION STATEMENT

___ I CERTIFY THAT THE RECEIVING WATER(S) OR THE OUTFALL(S) OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S) WILL BE MONITORED IN ACCORDANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN.

OPERATOR'S PRINTED NAME: _____

SIGNATURE: _____ DATE: _____



NPDES BOUNDARY

SCALE: NOT TO SCALE

SOIL TYPES ON SITE

AlB	Altavista sandy loam, 0 to 4 percent slopes	MDC3	Madison clay loam, 6 to 10 percent slopes, severely eroded
AmB	Appling sandy loam, 2 to 6 percent slopes	MDE3	Madison clay loam, 15 to 25 percent slopes, severely eroded
AmC	Appling sandy loam, 6 to 10 percent slopes	MgB2	Madison sandy loam, 2 to 6 percent slopes, moderately eroded
AmD	Appling sandy loam, 10 to 15 percent slopes	MgC2	Madison sandy loam, 6 to 10 percent slopes, eroded
Cah	Cartecay fine sandy loam, 0 to 2 percent slopes, frequently flooded	MJF	Musella and Pacolet stony soils, 10 to 45 percent slopes
Cw	Cartecay silt loam, silty variant	MlD2	Musella gravelly soils, 6 to 15 percent slopes, eroded
CYB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	MsD3	Madison and Pacolet soils, 10 to 15 percent slopes, severely eroded
CYC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	MsE2	Madison and Pacolet soils, 15 to 25 percent slopes, eroded
GeB3	Gwinnett clay loam, 2 to 6 percent slopes, severely eroded	PfD	Pacolet sandy loam, 10 to 15 percent slopes
GeC3	Gwinnett clay loam, 6 to 10 percent slopes, severely eroded	PgC3	Pacolet sandy clay loam, 6 to 10 percent slopes, severely eroded
GeD3	Gwinnett clay loam, 10 to 15 percent slopes, severely eroded	Toc	Toccoa sandy loam, 0 to 2 percent slopes, occasionally flooded
GeE2	Gwinnett clay loam, 15 to 25 percent slopes, eroded	Tod	Toccoa sandy loam, local alluvium
HSB	Hiwassee loam, 2 to 6 percent slopes	Ubp	Urban land and borrow pits
LDF	Wateree-Rock outcrop-Louisburg complex, 15 to 45 percent slopes, bouldery	UfC	Urban land-Cecil complex, 2 to 10 percent slopes
LkE	Louisa gravelly sandy loam, 10 to 25 percent slopes	W	Water
LnE	Wateree-Rion complex, 10 to 25 percent slopes	WjF	Wilkes stony sandy loam, 10 to 40 percent slopes

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLENA 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
EROSION & SEDIMENT CONTROL
DRAINAGE MAP & SOILS MAP

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	JLJ
DRAWN	CKM
REVISED	-
CHECKED	JCS

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME ES-ALL-CHECKLIST.dwg

SHEET ES-4

SEQ. 59

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg
Last Saved: 3/12/2020 2:26 PM Saved By: 02618

Plot Date: 3/12/2020 2:54 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg

BARNES MILL ROAD (50' R/W)

BENTLEY LAKE ROAD (30' R/W)

APPROX. L.L.L.

N/F
SIROUS ROSHAN
TAX ID # 16106500030
DB. 15395 PG. 352

N/F
BEVERLY L THOMAS
061 PG. 5650

N/F
BENTLEY FARMS PROP LLLP
JAMES W. BENTLEY, JR. &
SUMMEROUR FARM LLLP
TAX ID#16106400010
DB. 15212 PG. 3946
PB. 271 PG. 565
TM 001

N/F
SUMMEROUR FARM LLLP
TAX ID#16106300070
DB. 14820 PG. 5133
PB. 271 PG. 565
TM 003

N/F
SUMMEROUR PROPERTIES LLLP
TAX ID#16106300040
DB. 14820 PG. 5133
PB. 271 PG. 565
TM 005

N/F
GALILEE MISSIONARY
BAPTIST CHURCH
TAX ID#16106300020
DB. 2260 PG. 387
PB. 271 PG. 565
TM 006

PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED

PROP 36" ZINC COATED
DIP CLASS 200
DOUBLE PE WRAPPED

LIMIT OF DISTURBANCE

EXISTING 60' CCMWA EASEMENT

60' EXISTING CCMWA EASEMENT

MATCH LINE STA 12+50

MATCH LINE STA 25+00

TYP ALL DISTURBED AREAS

Ds1 Ds2 Ds3

SCALE IN FEET
HORIZONTAL
0 50' 100'

NORTH

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELSH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
START TO STA 25+00

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
REVISED	----		
CHECKED	JCS		
DATE	03/12/20		
BY	RCE		
NO.	ISSUE		
1	ISSUED FOR BID		
FILE NAME	ES-LNA-PP-SHTS01.dwg		

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
ES-5

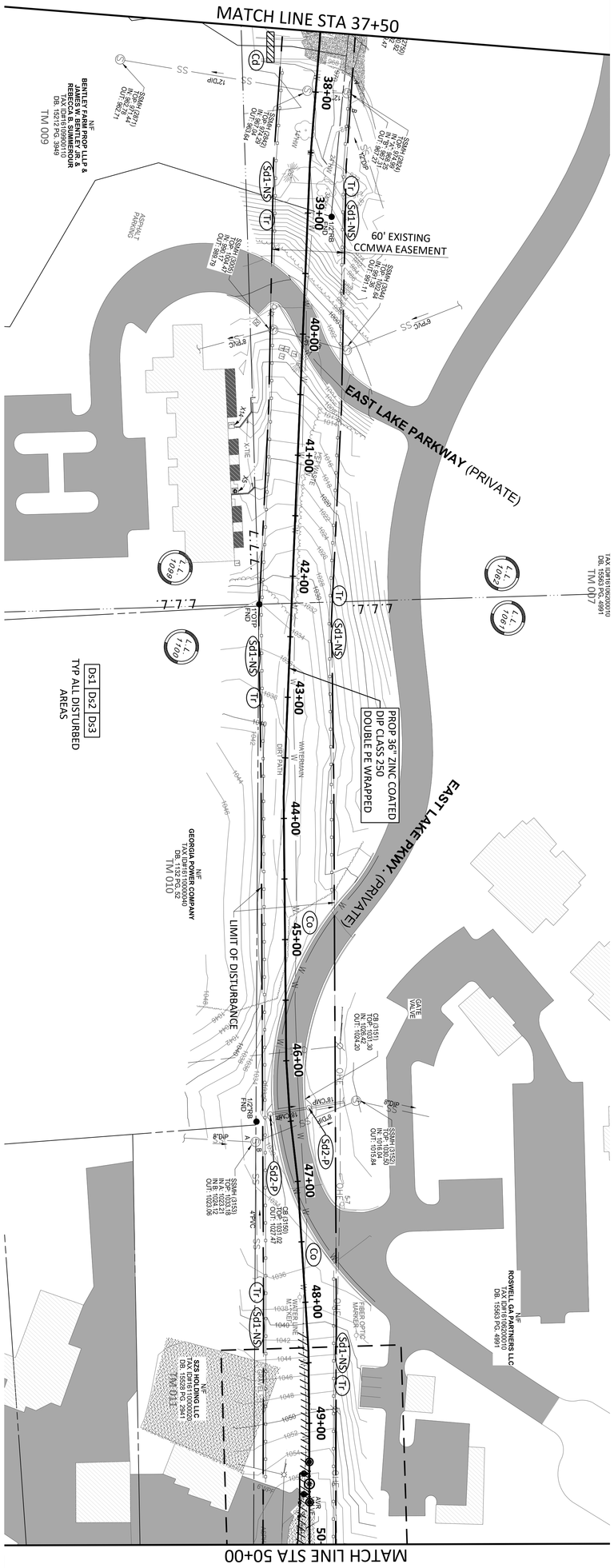
SEQ.
60

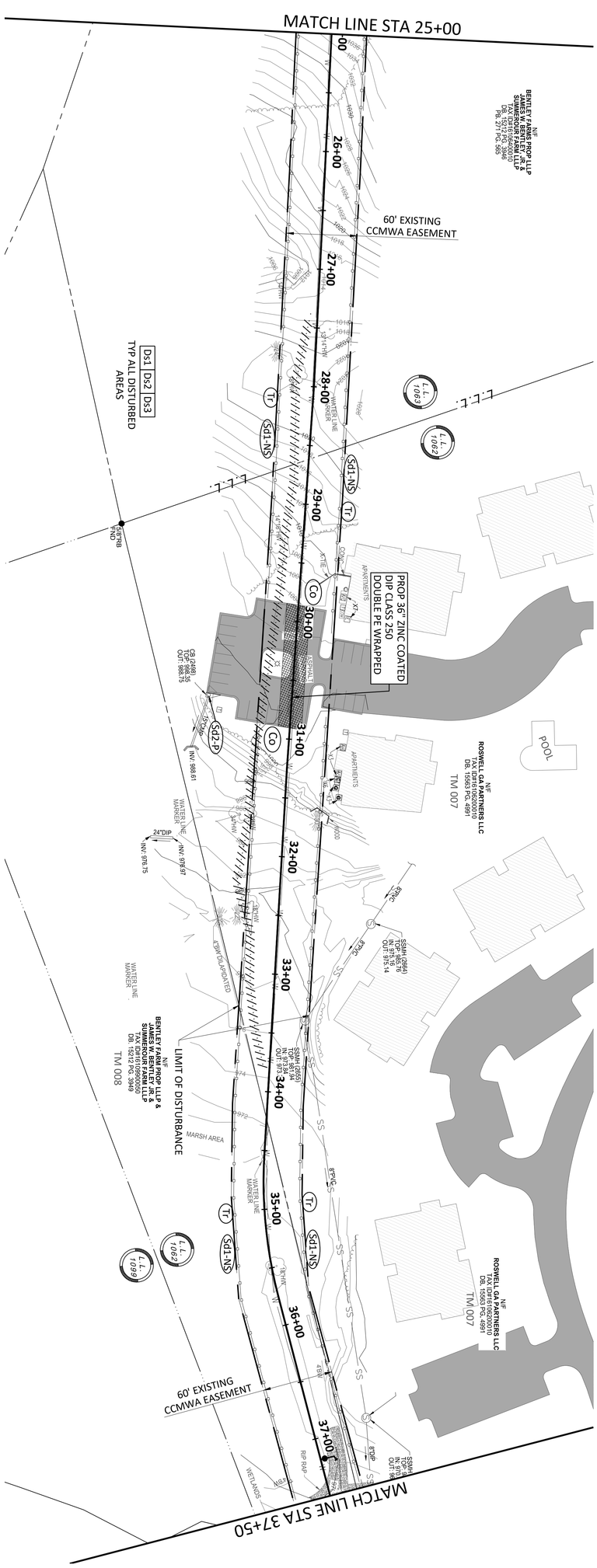
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 12:14 PM Saved By: 90196

Plot Date: 3/12/2020 2:55 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 12:14 PM Saved By: 90196

Plot Date: 3/12/2020 2:55 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg





SCALE IN FEET HORIZONTAL 0 50' 100'

NORTH

SCALE IN FEET HORIZONTAL 0 50' 100'

NORTH

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE 0 1 Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

FILE NAME ES-LNA-PP-SHTS01.dwg

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 25+00 TO STA 50+00

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED No. PE041997 PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLENA
3/12/20

SHEET ES-6
SEQ. 61

MATCH LINE STA 50+00

MATCH LINE STA 62+50

MATCH LINE STA 75+00

PROP 36" ZINC COATED DIP CLASS 250 DOUBLE PE WRAPPED

ROSWELL ROAD (VARIABLE R/W)

APPROX. L.L.L.

SOPE CREEK RIDGE (PRIVATE)

COUNSEL DRIVE (50' R/W)

N/F
VICTORIA LASSITER BRASFIELD LLC
TAX ID#16106100010
DB. 15451 PG. 67
TM 012

N/F
SOPE CREEK LLC
TAX ID#16110000010
DB. 13240 PG. 2500
PB. 80 PG. 112
TM 014

N/F
DUCE FAMILY HOLDINGS LLC
TAX ID#16110100580
DB. 14470 PG. 897
PB. 80 PG. 112
TM 015

N/F
DEANNA L. & JOHN C. RADICH
TAX ID#16110100570
DB. 15164 PG. 3570
PB. 80 PG. 112
TM 016

N/F
MICHAEL L. & LINDA J. FURLONG
TAX ID#16110100560
DB. 10835 PG. 13
PB. 80 PG. 112
TM 017

N/F
HANOVER WOODS SWIM & TENNIS ASSOCIATION
TAX ID#16110100550
DB. 4522 PG. 254
PB. 80 PG. 112
TM 018

N/F
ARAGON 2012 AZALEA SPRINGS LLC
TAX ID#16105900070
DB. 15012 PG. 3033
PB. 80 PG. 112
TM 013

N/F
PETER E. & PETER MATTHEW QUINONES
TAX ID#16105900240
DB. 15543 PG. 6024
PB. 19 PG. 167

WOOD WYNN SUBDIVISION
BLOCK "C"
PB. 19 PG. 167

N/F
F.M. & JIMMIE NELL HARRIS
TAX ID#16105900230
PB. 19 PG. 167
TM 019

N/F
ROSA A. ARCE & CHARLES E. & MARIA D. NAZARIO
TAX ID#16105900220
DB. 14431 PG. 2415
PB. 19 PG. 167
TM 020

N/F
HAROLD D. & LAZETTA Z. HANKERSON
TAX ID#16105900210
DB. 14390 PG. 5051
PB. 19 PG. 167
TM 021

N/F
DOROTHY P. & WALTER W. WILLIFORD
TAX ID#16105900200
DB. 13282 PG. 4556
PB. 19 PG. 167
TM 022

N/F
WILLIAM G. STALCUP III & JESSICA CONDON
TAX ID#16110200570
DB. 14599 PG. 2403

N/F
CHRISTINA G. & ROBERT B. HARTLEY
TAX ID#16110200580
DB. 14313 PG. 4934

N/F
RICHARD W. JR. & JEAN M. SHAW
TAX ID#16110200590

N/F
JDT COUNSEL GROUP LLC
TAX ID#16110200600
DB. 15328 PG. 2457

SPRING CREEK
UNIT TWO, BLOCK "C"
PB. 75 PG. 35

HANOVER WOODS
UNIT I, BLOCK "A"
PB. 80 PG. 112

LIMIT OF DISTURBANCE

60' EXISTING CCMWA EASEMENT

60' PROPOSED CCMWA EASEMENT

100' GEORGIA POWER R/W

DOUBLE ROW 230 LF

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED AREAS

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 50+00 TO STA 75+00

P&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		
REVISED	----		
DATE	03/12/20		
BY	RCE		
FILE NAME	ES-LNA-PP-SHTS01.dwg		

NO.	ISSUE
1	ISSUED FOR BID

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

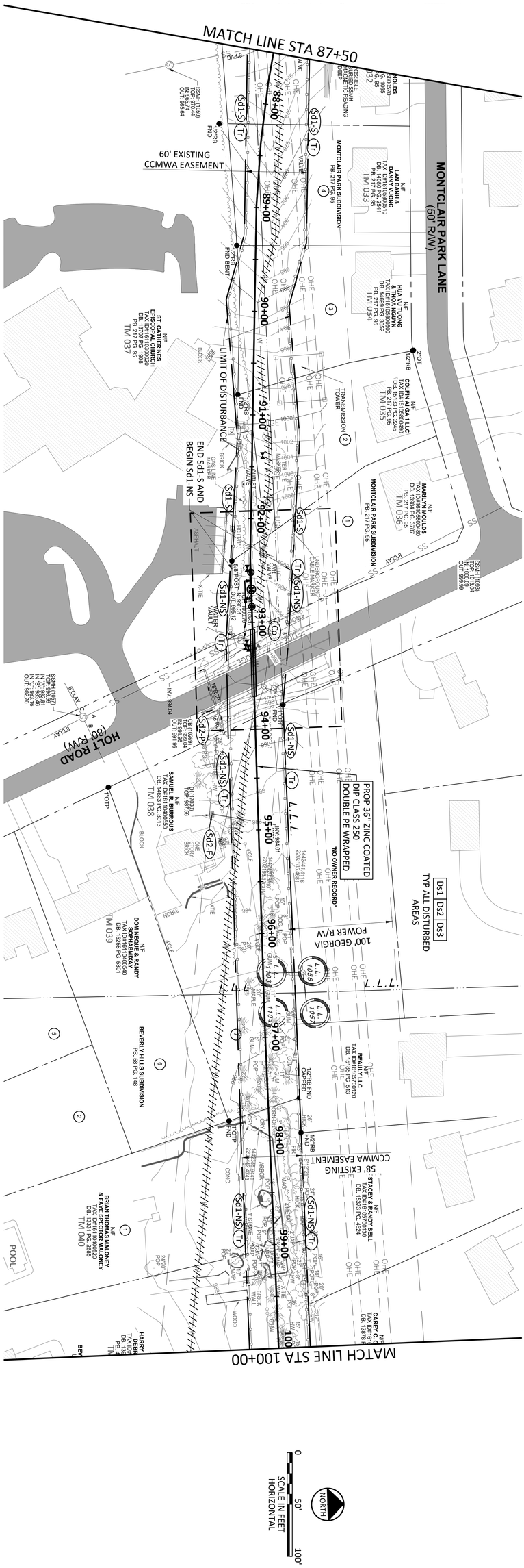
SHEET ES-7
SEQ. 62

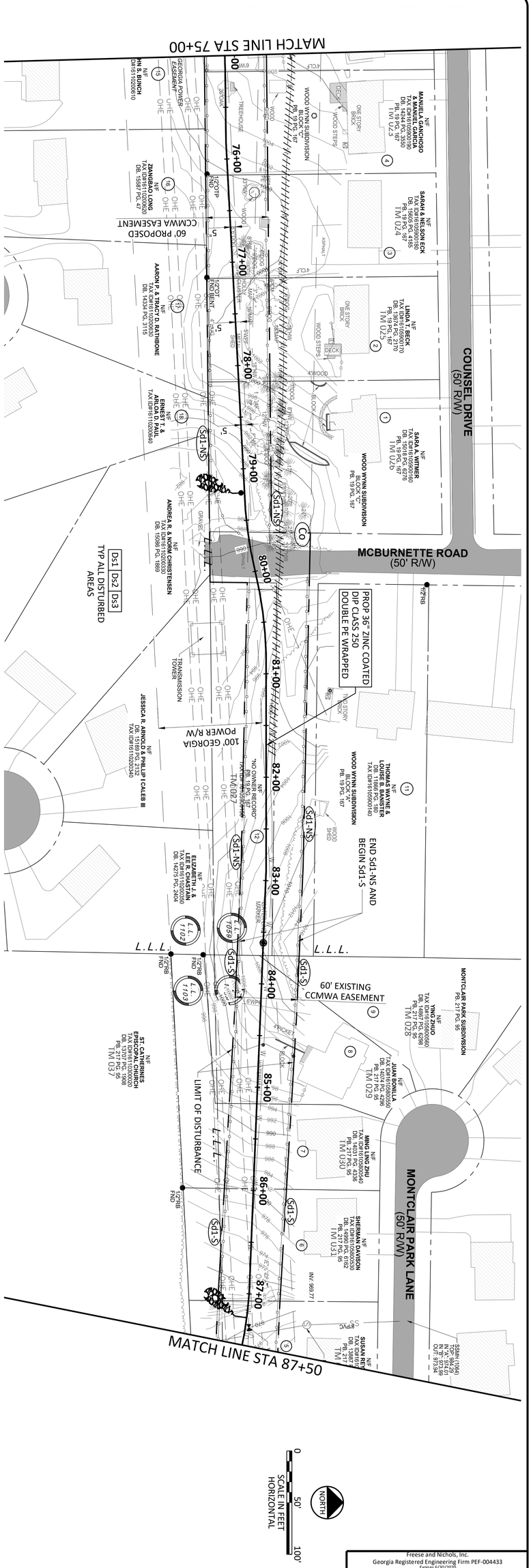
ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 12:14 PM Saved By: 90196

Plot Date: 3/12/2020 2:56 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 12:14 PM Saved By: 90196

Plot Date: 3/12/2020 2:56 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg





SCALE IN FEET HORIZONTAL 0 50' 100'

NORTH

SCALE IN FEET HORIZONTAL 0 50' 100'

NORTH

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

NO.	ISSUE	BY	DATE
0	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE 0 1 Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

FILE NAME ES-LNA-PP-SHTS01.dwg

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 75+00 TO STA 100+00

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

GEORGIA REGISTERED No. PE041697 PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLENA
3/12/20

SHEET ES-8
SEQ. 63

CREEKWOOD TRAIL

MATCH LINE STA 100+00

MATCH LINE STA 113+00

100' GEORGIA POWER R/W

PROP 36" ZINC COATED DIP CLASS 250 DOUBLE PE WRAPPED

LIMIT OF DISTURBANCE

60' PROPOSED CCMWA EASEMENT

60' EXISTING CCMWA EASEMENT

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED AREAS

LAWRENCE MILL RUN (50' R/W)

HOLYOKE MILL CT (50' R/W)

HITCHCOCK MILL RUN (50' R/W)

CROWN MILL COURT (50' R/W)

N/F BEATRICE S. WILLIS TAX ID#16105700350- DB. 13327 PG. 5591

N/F CRAIG SCOTT WALTERS TAX ID#16105700170 DB. 15386 PG. 3911

N/F LORI L. RAGAN TAX ID#16105700160 DB. 13309 PG. 1403

N/F COGGINS 05700140 G. 2388

N/F C.D. & ANN BROWNLOW TAX ID#16110400430 DB. 3661 PG. 270 PB. 45 PG. 139 TM 045

N/F DIANA D. COCHRAN TAX ID#16110400440 DB. 15063 PG. 908 PB. 45 PG. 139 TM 046

N/F SARAH & EARL MARTIN, JR. TAX ID#16110400410 DB. 13631 PG. 6361 PB. 45 PG. 139 TM 044

N/F BEVERLY HILLS ESTATE UNIT 6, BLOCK "A" PB. 45 PG. 139

N/F RICHARD J. & JANE G. MCCLOUD TAX ID#16110400450 DB. 12083 PG. 346 PB. 45 PG. 139 TM 047

N/F ROBERT A. & SUSAN E. THOMPSON TAX ID#16110500480 DB. 14366 PG. 4981

PRINCETON MILL UNIT II PB. 86 PG. 66

N/F JAMES P. & BARBARA J. GREENE TAX ID#16110500470 DB. 3102 PG. 39 PB. 86 PG. 66 TM 048

N/F WAYNE G. & BARBARA SUWAY TAX ID#16110500100 DB. 13434 PG. 6329 PB. 86 PG. 66 TM 051

COBB COUNTY WATER AUTH GRANTED EA EXEMPTION (B

N/F JEFF SOMERS TAX ID#16110500460 DB. 14966 PG. 3503 PB. 86 PG. 66 TM 049

PRINCETON MILL UNIT II PB. 86 PG. 66

N/F KERMIT REID HALL, SR. TAX ID#16110400400 DB. 14226 PG. 2197 PB. 45 PG. 139

N/F KERMIT & BEVERLY HALL TAX ID#16110400460 DB. 14226 PG. 2197 PB. 45 PG. 139

N/F NATHANIEL R. & AMANDA L. BURROUGHS TAX ID#16105500090 DB. 15244 PG. 571 PB. 86 PG. 66 TM 052

N/F JONATHAN & AMANDA MCCANTS TAX ID#16110500080 DB. 14531 PG. 94 PB. 86 PG. 66 TM 054

N/F JUDITH K. & ROBERT V. HERRICK TAX ID#16110500070 DB. 3211 PG. 470 PB. 86 PG. 66 TM 056

N/F GENE W. & VONNIE M. ONEAL TAX ID#16110500060 PB. 86 PG. 66 TM 058

N/F DAWSON A. & TERRI P. HENDERSON TAX ID#16110500770 DB. 5702 PG. 41 PB. 94 PG. 20 TM 057

N/F DARLENE E. PARKER TAX ID#16110500780 DB. 14610 PG. 4899 PB. 94 PG. 20 TM 060

N/F JAMES ROBERT & LENA JAN SEWELL TAX ID#16110500790 DB. 14462 PG. 3037 PB. 94 PG. 20 TM 062

N/F TRACI & KRAIG R. BROWN TAX ID#16110500540 DB. 15238 PG. 4423 PB. 94 PG. 20 TM 063

N/F NASDA LLC TAX ID#16110600 DB. 14944 PG. 49 PB. 65 PG. 51 TM 065

N/F BOB & BETSY WOLF TAX ID#16110500130 DB. 14595 PG. 1269 PB. 86 PG. 66 TM 055

N/F MALLORY D. PERDUE TAX ID#16110500120 DB. 9383 PG. 450 PB. 86 PG. 66 TM 053

N/F NATHAN & JENNIFER STUCKERT TAX ID#16110500110 DB. 15540 PG. 3594 PB. 86 PG. 66 TM 050

N/F & KEVIN SAUTER TAX ID#16110500760 DB. 15425 PG. 1506 PB. 94 PG. 20 TM 059

N/F MATTHEW ROGOWSKI TAX ID#16110500740 DB. 15438 PG. 4211 PB. 94 PG. 20 TM 061

N/F CHANDSEKARAN & ANURADHA SUPPIAH TAX ID#16110500750 DB. 14612 PG. 1783 PB. 94 PG. 20

N/F CATHERINE J. BOURN & STEVEN E. BOURN TAX ID#16110500550 DB. 12110 PG. 536 PB. 94 PG. 20 TM 064

N/F JASON & MELINDA TAX ID#161106 DB. 15448 PG. PB. 65 PG. TM 066

PRINCETON MILL UNIT III PB. 94 PG. 20

PRINCETON MILL UNIT II PB. 86 PG. 66

PRINCETON MILL UNIT III PB. 94 PG. 20

SSMH (5346) TOP: 982.21 IN "A": 972.01 IN "B": 971.84 IN "C": 972.04 OUT: 971.68

SSMH (35925) TOP: 936.19 IN "A": 928.28 IN "B": 927.61 IN "C": 930.00 OUT: 927.56

SSMH (17630) TOP: 938.99 IN "A": 929.4 IN "B": 929.62 IN "C": 929.58 OUT: 928.34

DOUBLE ROW 65 LF

DOUBLE ROW 125 LF

DOUBLE ROW 150 LF

DOUBLE ROW 215 LF

DOUBLE ROW 100 LF

DOUBLE ROW 40 LF

STONE PATH

WATER PUMP

SCALE IN FEET HORIZONTAL
0 50' 100'

NORTH

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTE NO. PE034564
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

SEGMENT A
STA 100+00 TO STA 125+00

P&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		
REVISED	----		
DATE	03/12/20		
BY	RCE		
FILE NAME	ES-LNA-PP-SHTS01.dwg		

NO.	ISSUE
1	ISSUED FOR BID

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET ES-9
SEQ. 64

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg
Last Saved: 3/12/2020 12:14 PM Saved By: 90196

Plot Date: 3/12/2020 2:56 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS01.dwg

CLEARBROOK DRIVE
(50' R/W)

YORKSHIRE DRIVE
(50' R/W)

BARNSDALE DRIVE
(50' R/W)

WHITEHURST WAY
(50' R/W)

MATCH LINE STA 125+00

MATCH LINE STA 137+50

PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED

60' EXISTING
CCMWA EASEMENT

LIMIT OF DISTURBANCE

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED
AREAS

1"OTP FND

1"OTP BENT

1/2"RB FND

1"OTP
FND

1/2"RB
FND

1"OTP
FND

1/2"RB FND

1106

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

CLEARBROOK DRIVE
(50' R/W)

OLD CANTON ROAD
(VARIABLE R/W)

GREENFIELD DRIVE
(50 R/W)

INDIAN HILLS DR
(50' R/W)

MATCH LINE STA 150+00

PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED

LIMIT OF DISTURBANCE

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED
AREAS

1"CTP
FND

1/2"RB
FND

1/2"RB
FND

3/8"RB
FND

60 D NAIL
FND BENT

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELLS
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 125+00 TO STA 150+00

P&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	RCE				
DRAWN	CKM				
REVISED	----				
CHECKED	JCS				
NO.	ISSUE	DATE	BY	FILE NAME	
1	ISSUED FOR BID	03/12/20	RCE	ES-LNA-PP-SHTS02.dwg	

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
ES-10

SEQ.
65

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 11:33 AM Saved By: 90196

Plot Date: 3/12/2020 2:57 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg

MATCH LINE STA 150+00

MATCH LINE STA 162+50

CREEKWOOD DRIVE
(50' R/W)

GREENFIELD DR.
(50' R/W)

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED AREAS

LIMIT OF DISTURBANCE

STA 156+63 TO STA 159+30
ABANDON EX 30" WATERMAIN

PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED

60' EXISTING CCMWA EASEMENT

60' PROPOSED CCMWA EASEMENT

INDIAN HILLS COUNTRY CLUB
UNIT 14, BLOCK C
PB. 69 PG. 161

INDIAN HILLS COUNTRY CLUB
UNIT 13, BLOCK C
PB. 69 PG. 161

INDIAN HILLS COUNTRY CLUB
UNIT 14, BLOCK "D"
PB. 69 PG. 161

N/F
CAROLYN B. BARRETT
TAX ID#16110800400
DB. 3802 PG. 535
PB. 69 PG. 161

N/F
ANNA M. GILL
TAX ID#16110800410
DB. 14117 PG. 4901
PB. 69 PG. 161

N/F
TRACE A. RADLER
TAX ID#16110800420
DB. 13385 PG. 4842
PB. 69 PG. 161

N/F
JODI ALLIS &
TODD D. PODHAISKY
TAX ID#16110800430
DB. 11750 PG. 79
PB. 69 PG. 161

N/F
ALOK R. &
NALINI KATARIA
TAX ID#16110800440
DB. 14664 PG. 391
PB. 69 PG. 161

N/F
SAMANTHA JAYE NICHOLS
& KYLE BROOKS MORDAN
TAX ID#16110800450
DB. 15342 PG. 1980
PB. 69 PG. 161

N/F
MONROE B. THROWER III
TAX ID#16110800460
DB. 14898 PG. 1340
PB. 69 PG. 161

N/F
YDL PROPERTIES ATL 15 LLC
TAX ID#16110800470
DB. 15307 PG. 1548
PB. 69 PG. 161

N/F
ROBERT C. HANSEN
TAX ID#16110800480
DB. 15536 PG. 3749
PB. 69 PG. 161

N/F
BRUCE D. &
JEANNE ANN ABBOTT
TAX ID#16110800280
DB. 13693 PG. 1869
PB. 69 PG. 161

N/F
BOYD P. &
SOPHIE T. GUMPERT
TAX ID#16110800270
DB. 14776 PG. 2985
PB. 69 PG. 161

N/F
BONNIE MIN
TAX ID#16110800020
DB. 13628 PG. 5173
PB. 69 PG. 161

N/F
WENDEL KENT &
SUSAN PATRICIA BLUE
TAX ID#16110800030
DB. 5826 PG. 162
PB. 69 PG. 161

N/F
ROBIN PLETT
TAX ID#16110800540
DB. 14216 PG. 3609
PB. 69 PG. 161

N/F
RONALD A. &
RHONDA G. LUCADAMO
TAX ID#16110800530
DB. 5744 PG. 172
PB. 69 PG. 161

N/F
KRISTIAN L. JONES
& JULIA D. FLOYD
TAX ID#16110800520
DB. 15142 PG. 6481
PB. 69 PG. 161

N/F
JILL CHOATE OZKAN
TAX ID#16110800510
DB. 14820 PG. 5082
PB. 69 PG. 161

N/F
SCOTT WILLIAM ADAMS
TAX ID#16110800500
DB. 15190 PG. 4499
PB. 69 PG. 161

N/F
JAMES K. &
SUSAN C. CHEN
TAX ID#16110800490
DB. 6002 PG. 65
PB. 69 PG. 161

N/F
ROBERT D. SANDBERG
TAX ID#16110800250
DB. 12275 PG. 468
PB. 69 PG. 161

N/F
ILENE W. BAKER
TAX ID#16110800260
DB. 13548 PG. 6175
PB. 69 PG. 161

N/F
INDIAN HILLS COUNTRY CLUB
TAX ID#16110900010
DB. 2006 PG. 384

DOUBLE ROW
175 LF

DOUBLE ROW
615 LF

DOUBLE ROW
345 LF

SOPE CREEK

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELTEN
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 150+00 TO STA 175+00

P&N JOB NO.	CBR18759			
DATE	03/12/20			
DESIGNED	RCE			
DRAWN	CKM			
CHECKED	JCS			
REVISED	----			
DATE	03/12/20			
BY	RCE			
NO.	ISSUE			
1	ISSUED FOR BID			

FILE NAME ES-LNA-PP-SHTS02.dwg

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
ES-11

SEQ.
66

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 11:33 AM Saved By: 90196

Plot Date: 3/12/2020 2:58 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg

MATCH LINE STA 175+00

MATCH LINE STA 187+50

MATCH LINE STA 200+00

PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED

PROP 36" ZINC COATED
DIP CLASS 250
DOUBLE PE WRAPPED

LIMIT OF DISTURBANCE

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED AREAS

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED AREAS

60' EXISTING CCMWA EASEMENT

60' EXISTING CCMWA EASEMENT

RIDGEWATER DRIVE (50' R/W)

WEATHERFIELD TERRACE (50' R/W)

INDIAN HILLS DRIVE (50' R/W)

CLUBWOOD DR (50' R/W)

N/F
INDIAN HILLS INC.
TAX ID#16110900010
DB. 2006 PG. 384

N/F
JAMES L. VENABLE
TAX ID#16111000240
DB. 10890 PG. 247
PB. 63 PG. 195

N/F
CLAUDIA & CLIFFARD GRANGER JR.
TAX ID#16111000250
DB. 15540 PG. 5844
PB. 63 PG. 195

N/F
JAMES C. & ROBERTA B. VAUGHN
TAX ID#16111000260
DB. 8416 PG. 385
PB. 63 PG. 195

N/F
CHARLES C. & TERRY S. MIZELL
TAX ID#16111000200
DB. 14575 PG. 607
PB. 63 PG. 195

N/F
JOSHUA G. & SKYLA R. BURTON
TAX ID#16111000190
DB. 15159 PG. 863
PB. 63 PG. 195

N/F
HENRY M. & BETTIE L. HOLLEY
TAX ID#16111000200
DB. 2391 PG. 15
PB. 50 PG. 75

N/F
PETERSON LIVING TRUST
TAX ID#16111000180
DB. 15307 PG. 491
PB. 63 PG. 195

N/F
ROBERT J. HOLLOWAY & LIBBY M. KELLY
TAX ID#16111000530
DB. 15337 PG. 5804
PB. 50 PG. 75

N/F
ROBERT J. HOLLOWAY & LIBBY M. KELLY
TAX ID#16111000530
DB. 15337 PG. 5804
PB. 50 PG. 75

N/F
MICHAEL J. & LINDA J. IDACAVAGE
TAX ID#16111000560
DB. 9783 PG. 334

N/F
HAROLD E. HUDDLESTUN
TAX ID#16111000570
DB. 5106 PG. 241
PB. 50 PG. 75

N/F
LAURA S. VINK & CARL WOLINSKY
TAX ID#16111000580
DB. 14459 PG. 6326
PB. 50 PG. 75

N/F
EDMOND MZ INC.
TAX ID#16111100550
DB. 15482 PG. 4804
PB. 50 PG. 75

N/F
SCOTT W. GEORGE
TAX ID#16111100540
DB. 15375 PG. 2576
PB. 50 PG. 75

N/F
CHARLES E. & JAN I. HINE
TAX ID#16111000370
DB. 13984 PG. 710
PB. 50 PG. 75

N/F
JAMES L. & ANNE B. SHOOP
TAX ID#16111000380
DB. 5397 PG. 106
PB. 50 PG. 75

N/F
MIRIAM KELLY FERREL
TAX ID#16111000390
DB. 15243 PG. 1204
PB. 50 PG. 75

N/F
CHRISTOPHER J. & TIFFANY C. WHITTINGTON
TAX ID#16111000520
DB. 15221 PG. 639
PB. 50 PG. 75

N/F
CHRISTOPHER J. & TIFFANY C. WHITTINGTON
TAX ID#16111000520
DB. 15221 PG. 639
PB. 50 PG. 75

N/F
JAMES L., JR. & KIMBERLY E. COX
TAX ID#16111000510
DB. 13561 PG. 6447
PB. 50 PG. 75

N/F
JAMES L., JR. & KIMBERLY E. COX
TAX ID#16111100510
DB. 13561 PG. 6447
PB. 50 PG. 75

INDIAN HILLS COUNTRY CLUB
UNIT 3, BLOCK "D"
PB. 50 PG. 75

INDIAN HILLS COUNTRY CLUB
UNIT 12, BLOCK "F"
PB. 63 PG. 195

INDIAN HILLS COUNTRY CLUB
UNIT 3, BLOCK "C"
PB. 50 PG. 75

SSMH (7652)
TOP: 911.43
IN "A": 906.62
IN "B": 906.45
OUT: 906.2

SSMH (7651)
TOP: 910.88
IN: 905.62
OUT: 905.43

SSMH (8053)
TOP: 938.91
OUT: 923.31

SSMH (8054)
TOP: 929.67
IN "A": 919.77

CI (8289)
TOP: 958.54
IN "A": 952.16
OUT: 952.16

DI (8261)
TOP: 957.55
IN "A": 953.05
OUT: 952.92

DI THOMAS W. KELLY & TO HAYLEY HARDIN
OLTAX ID#16111100190
DB. 14578 PG. 2341
PB. 50 PG. 75

GATE VALVE
WOOD FENCE
BALL WASHER
HOLE #2 MARKER
SAND BUNKER
EXPOSED WATER PIPE
WETLANDS
CHICKEN WIRE
ONE STORY WOOD FRAME
WOOD SHED
WOOD ARBOR
STONE WALL
2"OTP
4.5"WOOD AND WIRE
UTILITY POLE
TIMBER WALL
STONE FIREPLACE
ONE STORY WOOD FRAME
POOL
GATE
BB GOAL
TIMBER WALL
PLAY SET
LANDSCAPE EDGING
TWO STORY BRICK
BRICK WALL
PLAYGROUND
4' WOOD RAIL
ONE STORY FRAME
CROSSTIE WALL
STEPS
4' RAIL
INV: 938.
1/2"RB
1"CT
L.L. 1109
L.L. 1110
L.L. 1111

SCALE IN FEET
HORIZONTAL
0 50' 100'

NORTH

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELSH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 175+00 TO STA 200+00

P&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
REVISED	----		
CHECKED	JCS		

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

FILE NAME ES-LNA-PP-SHTS02.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET ES-12

SEQ. 67

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 11:33 AM Saved By: 90196

Plot Date: 3/12/2020 2:58 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg

MATCH LINE STA 200+00

MATCH LINE STA 212+50

MATCH LINE STA 212+50

MATCH LINE STA 225+00

PROP 36" ZINC COATED DIP CLASS 250 DOUBLE PE WRAPPED

LIMIT OF DISTURBANCE

Ds1 | Ds2 | Ds3
TYP ALL DISTURBED AREAS

60' EXISTING CCMWA EASEMENT

CLUBLAND DRIVE (50' R/W)

CLUBLAND TRAIL (50' R/W)

L.L.L.

L.L. 1111

L.L. 1112

L.L. 1113

N/F
LINDA A. AHRENDS
TAX ID#16111000050
DB. 6513 PG. 134
PB. 48 PG. 116

N/F
TIMOTHY P. SHARKEY
TAX ID#16111200150
DB. 12285 PG. 69
PB. 48 PG. 116

N/F
CARLTON R. & SHARON B. NEWMAN
TAX ID#16111200160
DB. 4094 PG. 9
PB. 48 PG. 116

N/F
CHRISTOPHER A. & JESSICA A. MILHOUS
TAX ID#16111200100
DB. 14480 PG. 2405
PB. 48 PG. 116

N/F
SCOTT L. & JULIE B. VARON
TAX ID#16111200090
DB. 15185 PG. 2331
PB. 48 PG. 116

N/F
CHRISTOPHER D. & COURTNEY BARNES
TAX ID#16111000590
DB. 14983 PG. 3018
PB. 50 PG. 75

INDIAN HILLS COUNTRY CLUB
UNIT 3, BLOCK "C"
PB. 50 PG. 75

INDIAN HILLS COUNTRY CLUB
PHASE I, BLOCK "B"
PB. 48 PG. 116

INDIAN HILLS COUNTRY CLUB
PHASE I, BLOCK "A"
PB. 48 PG. 116

INDIAN HILLS COUNTRY CLUB
PHASE I, BLOCK "C"
PB. 48 PG. 116

N/F
ERIC S. & SHANIN F. CHRISTMAS
TAX ID#16111000020
DB. 14941 PG. 5221
PB. 48 PG. 116

N/F
MARTIN S. & JESSICA R. EATON
TAX ID#16111200180
DB. 15278 PG. 2242
PB. 48 PG. 116

N/F
ARCHIE & CONSTANCE JAMES
TAX ID#16111200170
DB. 14891 PG. 1742
PB. 48 PG. 116

N/F
THOMAS J. BYRD, JR.
TAX ID#16111200080
DB. 6423 PG. 476
PB. 48 PG. 116

N/F
ROBERT & SANDRA ANNUNZIATO
TAX ID#16111100400
DB. 15288 PG. 619
PB. 50 PG. 75

N/F
NANCY E. MCCAIN
TAX ID#16111100030
PB. 48 PG. 116

N/F
MICHAEL & JESSICA SEIDEN
TAX ID#16111200190
DB. 15533 PG. 6266
PB. 48 PG. 116

N/F
LEIGH BALL REVOCABLE TRUST UDA
TAX ID#16111200200
DB. 14914 PG. 3820
PB. 48 PG. 116

N/F
ANTHONY J. & SANDRA M. URBANO
TAX ID#16111200230
PB. 48 PG. 116

N/F
CANDANCE KIMBROUGH GREEN
TAX ID#16111200070
DB. 15295 PG. 6383
PB. 48 PG. 116

EXISTING 30" WATER MAIN

60' PROPOSED CCMWA EASEMENT

40' PROPOSED CCMWA EASEMENT

15' TEMPORARY CCMWA EASEMENT

DOUBLE ROW 540 LF

DOUBLE ROW 325 LF

SCALE IN FEET HORIZONTAL
0 50' 100'

NORTH

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WESTER 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

SEGMENT A
STA 200+00 TO STA 225+00

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

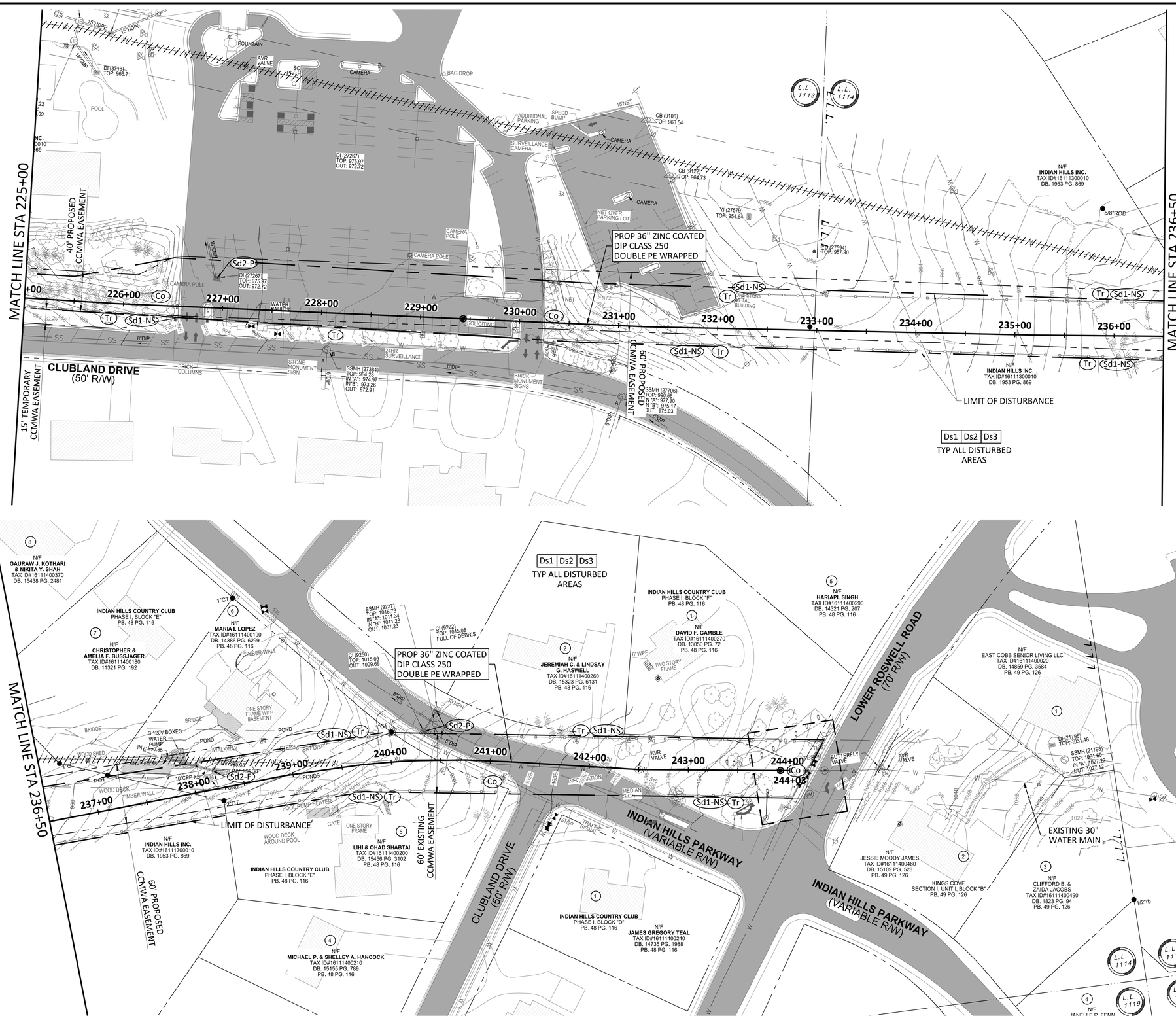
F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	----
CHECKED	JCS
FILE NAME	ES-LNA-PP-SHTS02.dwg

SHEET
ES-13

SEQ.
68

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 11:33 AM Saved By: 90196

Plot Date: 3/12/2020 2:59 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELSH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
STA 225+00 TO END

P&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		

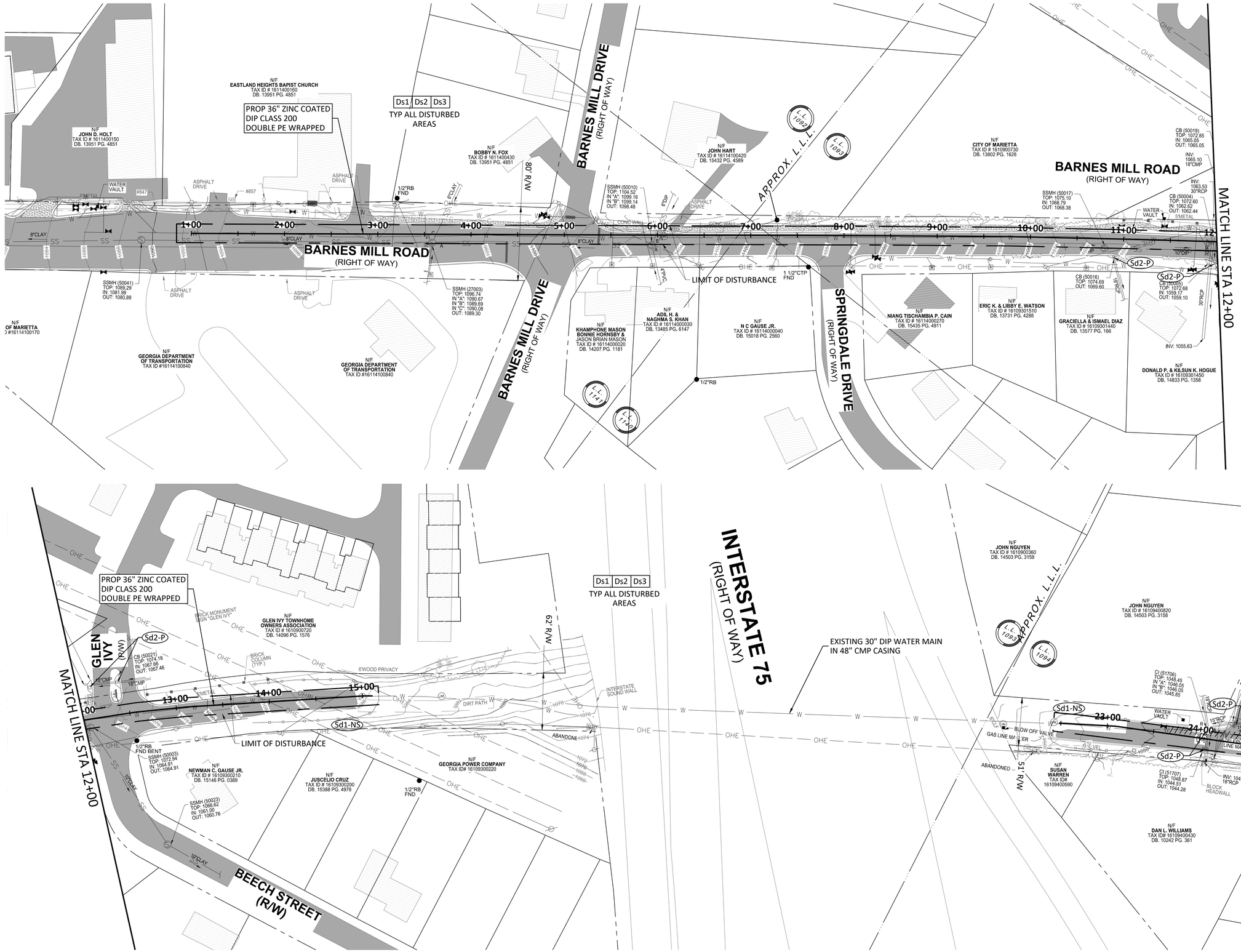
NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE
	VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		

FILE NAME ES-LNA-PP-SHTS02.dwg

SHEET ES-14
SEQ. 69

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg
Last Saved: 3/12/2020 11:33 AM Saved By: 90196

Plot Date: 3/12/2020 2:59 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNA-PP-SHTS02.dwg



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELTE
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
START TO STA 25+00

P&N JOB NO.	CBR18759			
DATE	03/12/20			
DESIGNED	RCE			
DRAWN	CKM			
CHECKED	JCS			
REVISED	----			
DATE	03/12/20			
BY	RCE			
FILE NAME	ES-LNB-PP-SHTS01.dwg			

NO.	ISSUE	DATE
1	ISSUED FOR BID	03/12/20

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 0 1"

SHEET ES-15
SEQ. 70

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 11:15 AM Saved By: 90196

Plot Date: 3/12/2020 3:00 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELLS
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

SEGMENT B
STA 25+00 TO STA 48+00

P&N JOB NO.	CBR18759			
DATE	03/12/20			
DESIGNED	RCE			
DRAWN	CKM			
CHECKED	JCS			
REVISED	----			
DATE	03/12/20			
BY	RCE			
FILE NAME	ES-LNB-PP-SHTS01.dwg			

NO.	ISSUE
1	ISSUED FOR BID

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
ES-16
SEQ.
71

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 11:15 AM Saved By: 90196

Plot Date: 3/12/2020 3:01 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
STA 48+00 TO STA 73+00

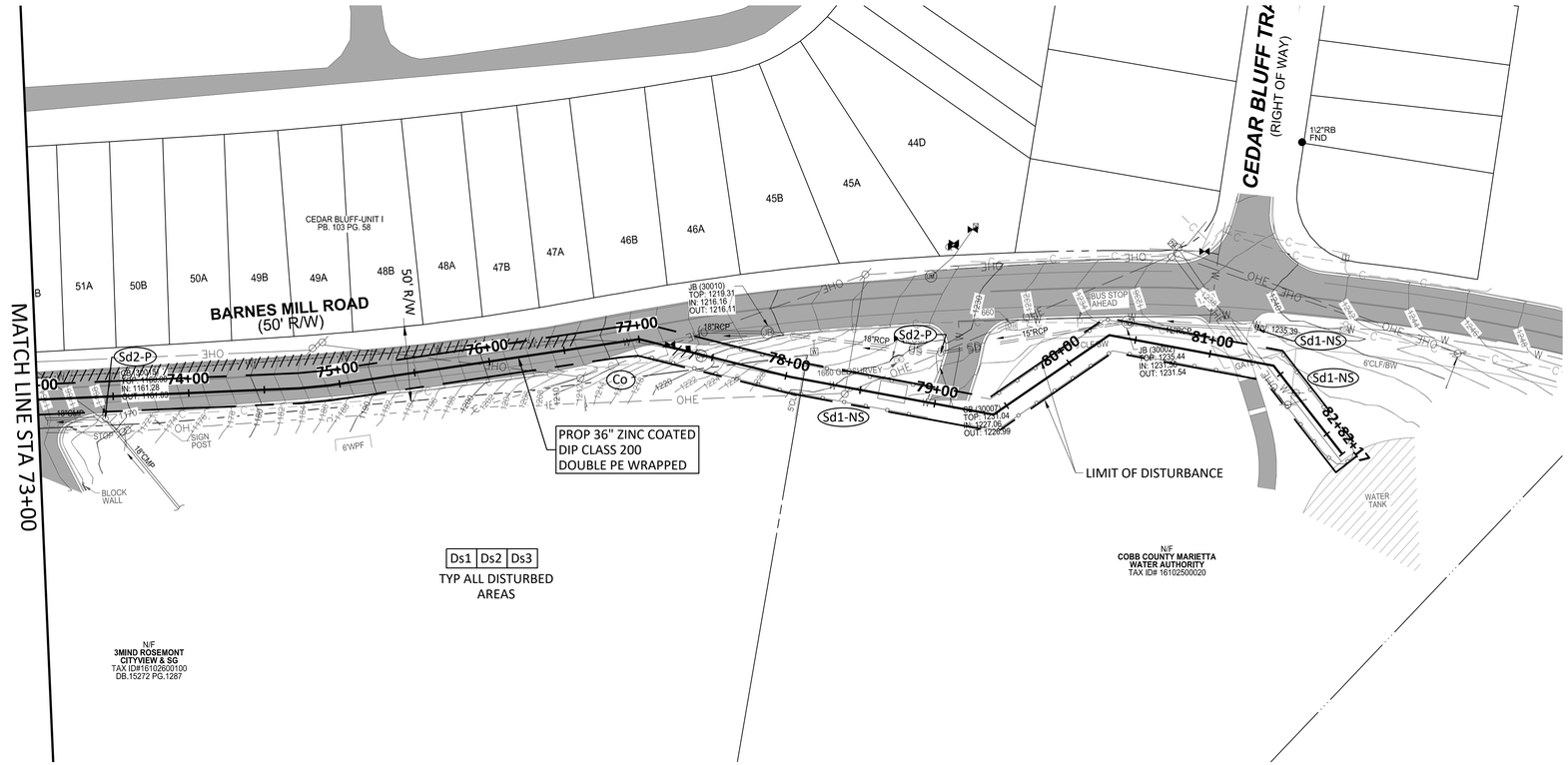
P&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	RCE				
DRAWN	CKM				
CHECKED	JCS				
NO.	ISSUE	DATE	BY	FILE NAME	
1	ISSUED FOR BID	03/12/20	RCE	ES-LNB-PP-SHTS01.dwg	

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
ES-17
SEQ.
72

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 11:15 AM Saved By: 90196

Plot Date: 3/12/2020 3:01 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg



NORTH

0 50' 100'

SCALE IN FEET
HORIZONTAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WELCH
3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
STA 73+00 TO END

F&N JOB NO. CBR18759
DATE 03/12/20
DESIGNED RCE
DRAWN CKM
CHECKED JCS

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20
		REVISED	----

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

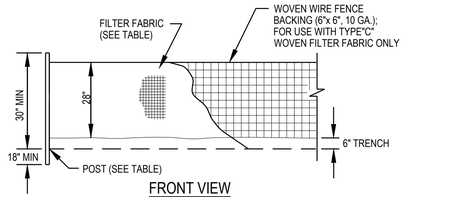
FILE NAME ES-LNB-PP-SHTS01.dwg

SHEET ES-18

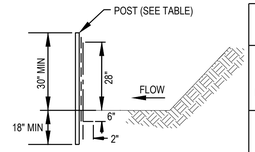
SEQ. 73

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg
Last Saved: 3/12/2020 11:15 AM Saved By: 90196

Plot Date: 3/12/2020 3:01 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-LNB-PP-SHTS01.dwg



FRONT VIEW



SIDE VIEW

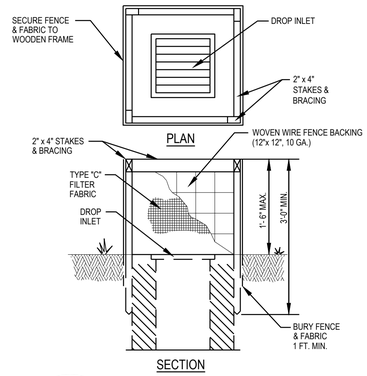
FILTER FABRIC TYPE	POST TYPE
(SD1) A NON-WOVEN	3" DIA. OR 2x4 (SOFT WOOD) OR; 1.5"x1.5"(OAK) OR; 1.3 LB/FT (STEEL) 6' O.C.
(SD1-S) C WOVEN	1.3 LB/FT (STEEL) 4' O.C. ONLY

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)

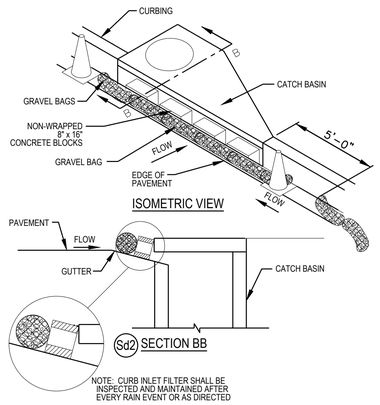
SCALE: N.T.S.



Sd2-F

INLET SEDIMENT TRAP

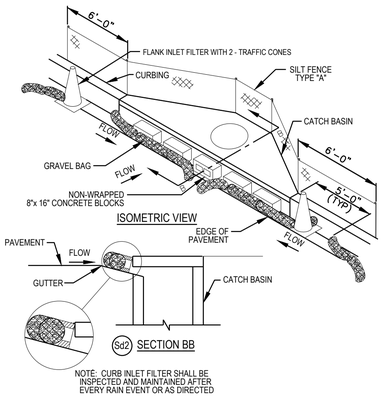
SCALE: N.T.S.



Sd2-P

CURB INLET FILTER TRAP (IN-LINE)

SCALE: N.T.S.



Sd2

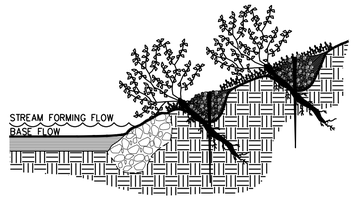
CURB INLET FILTER TRAP (IN-SAG)

SCALE: N.T.S.

FASCINE BUNDLE DETAIL



LIVE FASCINE CROSS-SECTION DETAIL

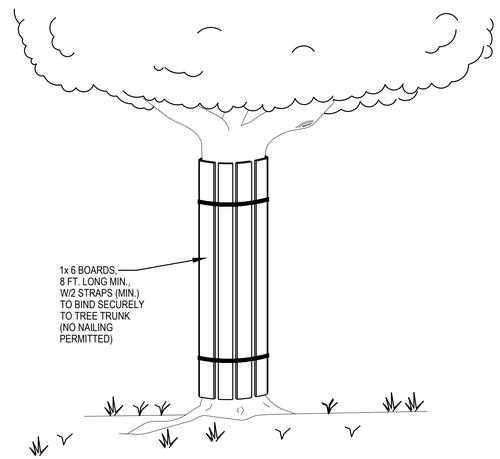


NOTES:
1. ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE OF THE TIME OF INSTALLATION.
2. LIVE FASCINES SHALL BE PREPARED FROM FRESHLY CUT DORMANT PLANTS AND INSTALLED WITHIN 8 HOURS OF THE TIME THE MATERIAL IS HARVESTED, UNLESS PROPERLY STORED.
3. LIVE FASCINE SHALL BE OBTAINED FROM SOURCES APPROVED BY ENGINEER.
4. LIVE FASCINES SHALL BE 4"–8" IN DIAMETER WITH MINIMUM 8' LENGTH.
5. BEGINNING AT THE BASE OF THE SLOPE, A TRENCH SHALL BE DUG LARGE ENOUGH TO CONTAIN THE LIVE FASCINES. THE LIVE FASCINES SHALL BE PLACED IN THE TRENCH. WHERE ENDS MEET IN THE TRENCH, THE FASCINES SHALL OVERLAP BY 18".
6. THE TRENCH SHALL BE BACKFILLED WITH MOIST SOIL AND HAND TAMPED. THE TOP OF THE FASCINE SHALL BE SLIGHTLY EXPOSED WHEN THE INSTALLATION IS COMPLETE AS SHOWN ON CROSS SECTION.
7. SEED OR OTHER EROSION CONTROL MATERIAL SHALL BE USED BETWEEN THE FASCINE ROWS, AS SPECIFIED IN THE CONTRACT DOCUMENTS.
8. LIVE FASCINE TRENCHES SHALL BE FROM 3' TO 8' APART, ACCORDING TO SLOPE AND/OR CONTRACT DOCUMENTS.

Sb

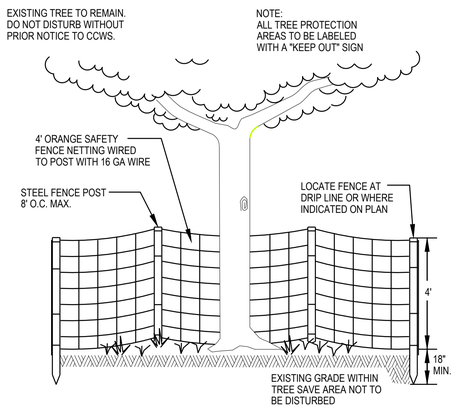
STREAMBANK STABILIZATION

SCALE: N.T.S.



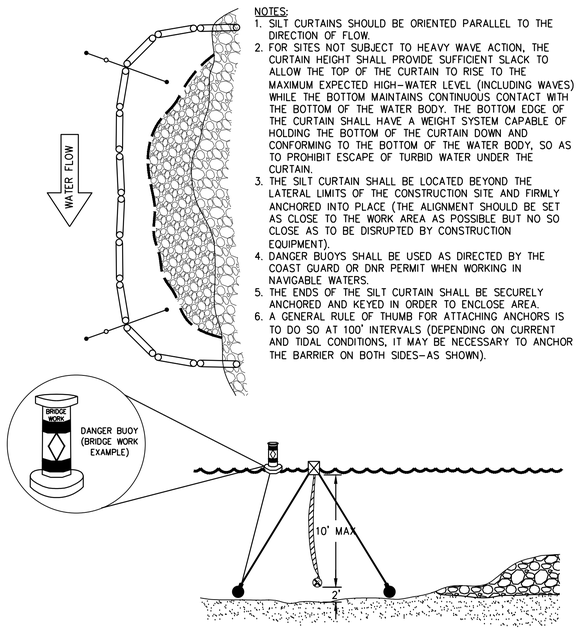
TREE TRUNK PROTECTION

SCALE: N.T.S.



TREE PROTECTION FENCING

SCALE: N.T.S.

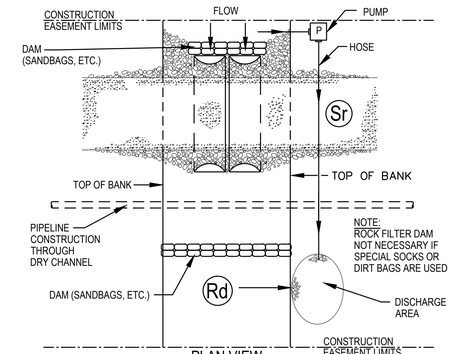


NOTES:
1. SILT CURTAINS SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF FLOW.
2. FOR SITES NOT SUBJECT TO HEAVY WAVE ACTION, THE CURTAIN HEIGHT SHALL PROVIDE SUFFICIENT SLACK TO ALLOW THE TOP OF THE CURTAIN TO RISE TO THE MAXIMUM EXPECTED HIGH–WATER LEVEL (INCLUDING WAVES) WHILE THE BOTTOM MAINTAINS 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 (DEPENDING 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.



PLAN VIEW

NOTES:
1. CLEARING AND EXCAVATION OF STREAM BED AND BANKS SHALL BE KEPT TO A MINIMUM.
2. REMOVE STRUCTURE AS SOON AS IT IS NO LONGER NEEDED FOR CONSTRUCTION OF PIPE AND ENCASEMENT
3. RESHAPE STREAM TO ORIGINAL CROSS SECTION AND STABILIZE AS SHOWN ON CHANNEL STABILIZATION DETAIL.

Dv2

DIVERSION (PUMPED)

SCALE: N.T.S.

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN OREN STOPHER 3/12/20

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
EROSION & SEDIMENT CONTROL
DETAILS

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	JLJ		
DRAWN	CKM	REVISED	-
CHECKED	JCS		

NO.	ISSUE	BY	DATE
1	ISSUED FOR BID	RCE	03/12/20

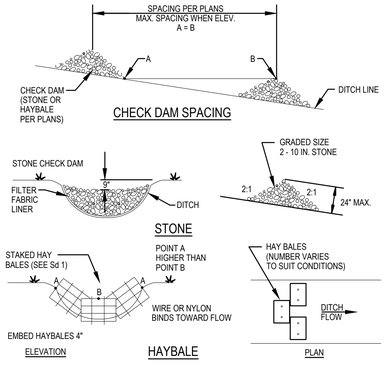
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

FILE NAME ES-ALL-CHECKLIST.dwg

SHEET ES-19
SEQ. 74

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg
Last Saved: 3/12/2020 2:26 PM Saved By: 02618

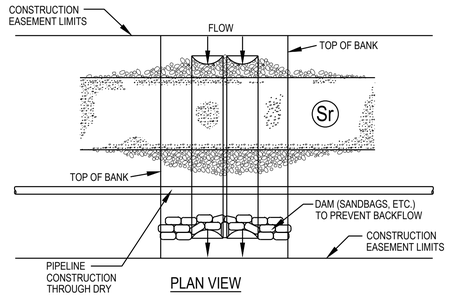
Plot Date: 3/12/2020 3:02 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg



Cd

CHECK DAM

SCALE: N.T.S.



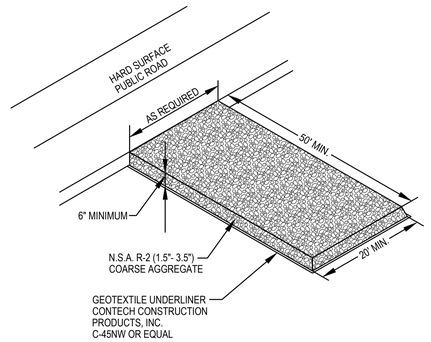
NOTES:

1. CLEARING AND EXCAVATION OF STREAM BED AND BANKS SHALL BE KEPT TO A MINIMUM.
2. REMOVE STRUCTURE AS SOON AS IT IS NO LONGER NEEDED FOR CONSTRUCTION OF PIPE AND ENCASEMENT
3. RESHAPE STREAM TO ORIGINAL CROSS SECTION AND STABILIZE AS SHOWN ON CHANNEL STABILIZATION DETAIL.

Dv1

DIVERSION (PIPED)

SCALE: N.T.S.



Co

CONSTRUCTION EXIT

SCALE: N.T.S.

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

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLENA 3/12/20

FREESE NICHOLS

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

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
EROSION & SEDIMENT CONTROL
DETAILS

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	JLJ
DRAWN	CKM
REVISED	-
CHECKED	JCS

NO.	ISSUE	DATE	BY
1	ISSUED FOR BID	03/12/20	RCE

FILE NAME ES-ALL-CHECKLIST.dwg

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET
ES-20

SEQ.
75

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg
Last Saved: 3/12/2020 2:26 PM Saved By: 02618

Plot Date: 3/12/2020 3:09 PM Plot By: 02618 Filename: N:\WTU\Drawings\ES-ALL-CHECKLIST.dwg