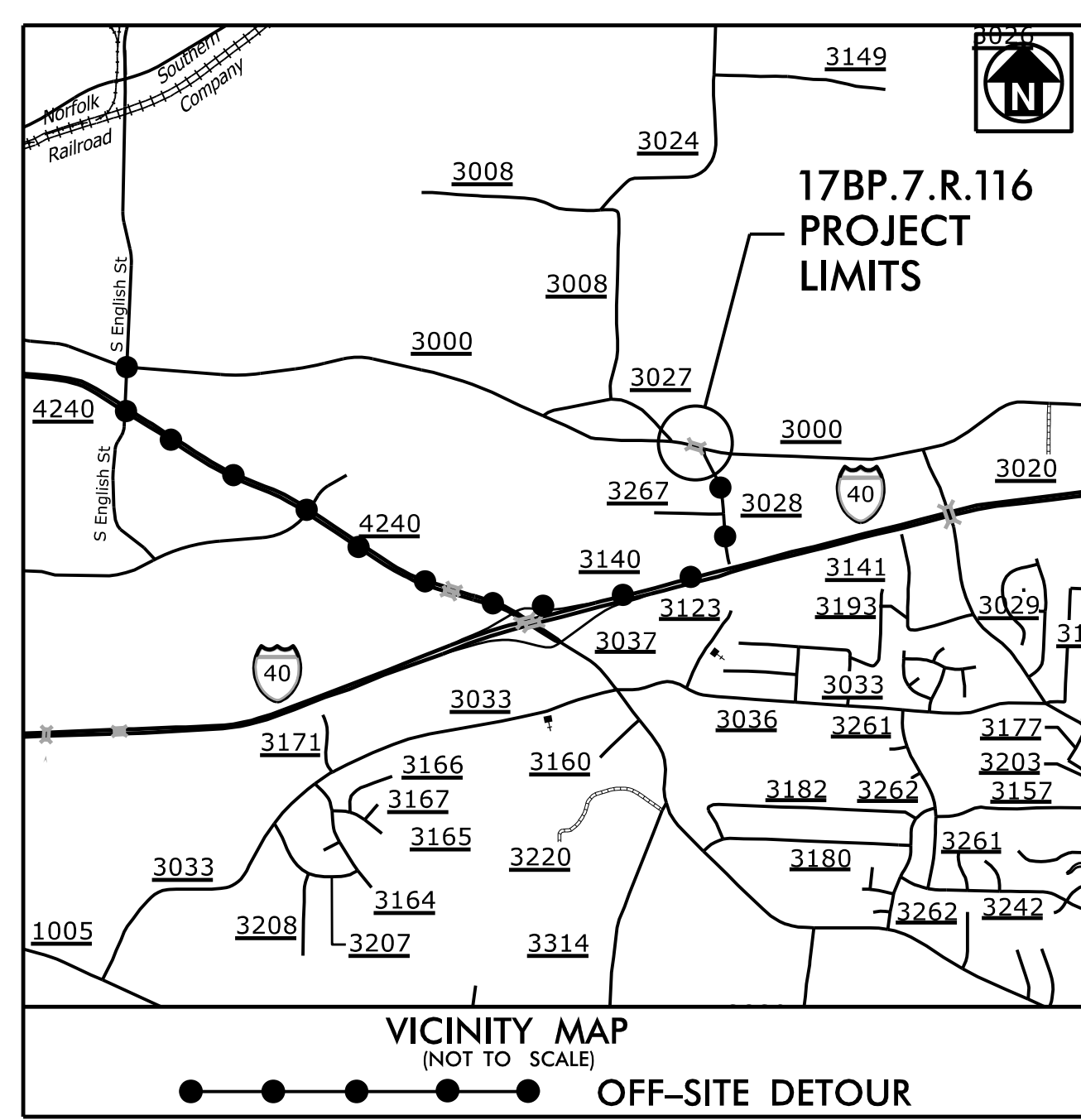


09.028/99

TIP PROJECT: 17BP.7.R.116



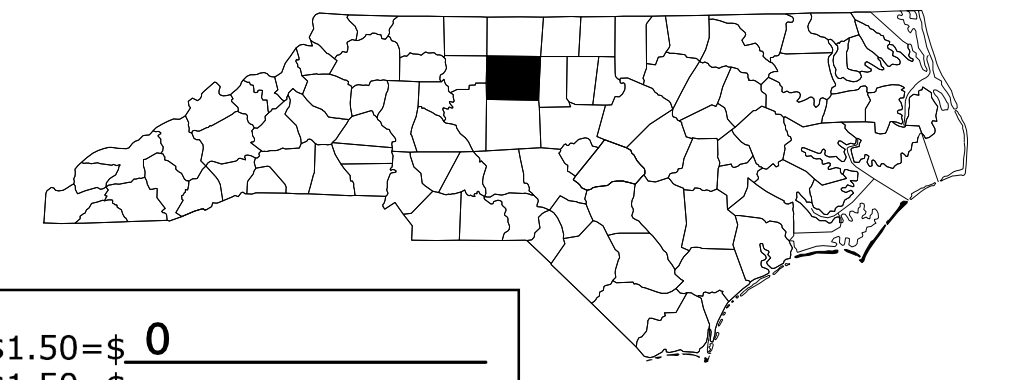
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
17BP.7.R.116	UC-1

UTILITY CONSTRUCTION PLANS GUILFORD COUNTY

LOCATION: BRIDGE NO. 224 OVER SOUTH BUFFALO CREEK ON SR 3000 (McCONNELL ROAD)

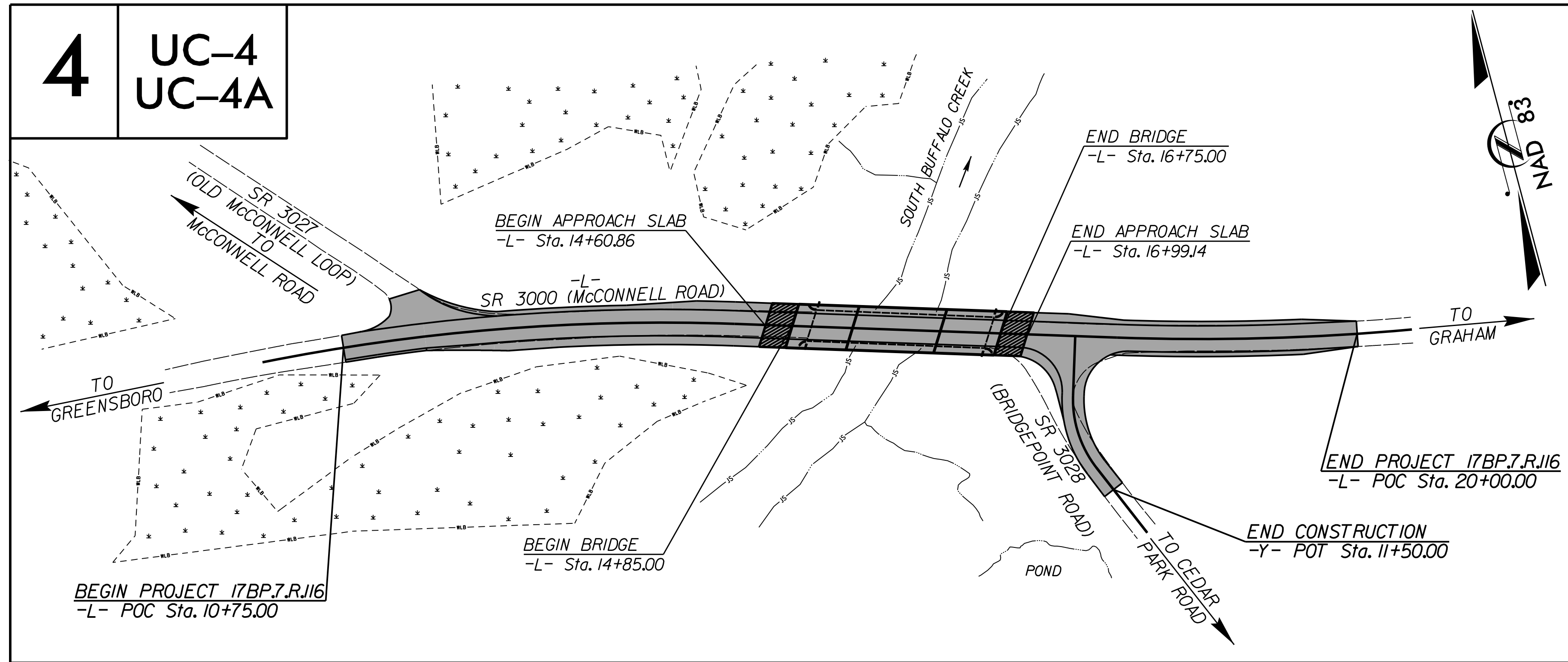
TYPE OF WORK: WATER AND SEWER RELOCATION



WATER	714	L.F.X \$1.50=\$	0
SEWER		L.F.X \$1.50=\$	
RDWY		L.F.X \$1.50=\$	
TOTAL			= \$ 0

ROADWAY TO BE PRIVATELY INSPECTED

DATE FEE(S) RECEIVED BY CITY OF GREENSBORO _____

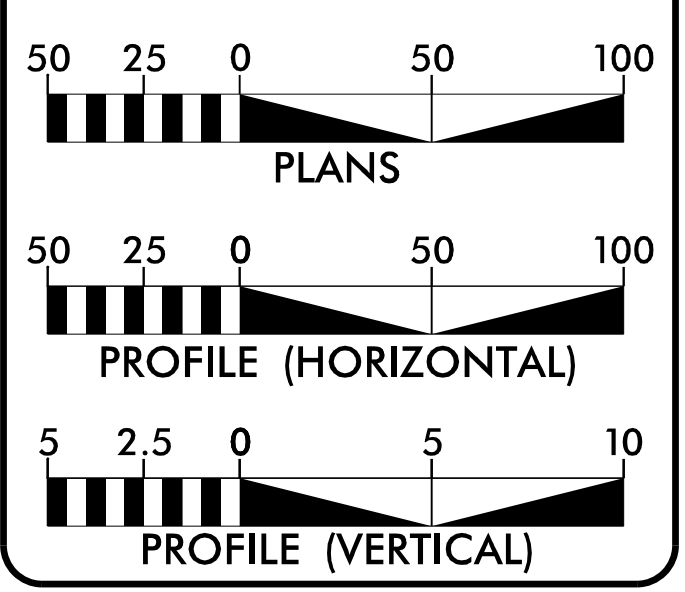


ENCROACHMENT PERMIT IS REQUIRED THROUGH NCDOT FOR WATERLINE INSTALLATION, CALL (336) 487-0100 FOR PERMIT.

CONSTRUCTION INSPECTION REQUIRED FOR 6", 8", 12" AND 30" WATERLINE INSTALLATION, CALL (336) 373-2377 TO SCHEDULE AN INSPECTOR.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



INDEX OF SHEETS


SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A, UC-3B, UC-3C	DETAILS
UC-4, UC-4A	UTILITY CONSTRUCTION SHEETS
UC-5	PROFILE SHEET

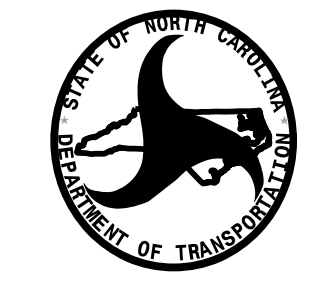
WATER AND SEWER OWNERS ON PROJECT

- A) WATER - CITY OF GREENSBORO
- B) SEWER - CITY OF GREENSBORO

PREPARED IN THE OFFICE OF:
DAVIS • MARTIN • POWELL
ENGINEERS & SURVEYORS 
6415 OLD PLANK RD., HIGH POINT, NC 27265
PHONE: (336)896-4821 FAX: (336)896-4458
WWW.DMP-INC.COM LICENSE: F-0245

<u>Randy McNeill, P.E.</u>	CONSULTANT CONTACT #1
<u>Steve McKee, P.E.</u>	CONSULTANT CONTACT #2
<u>Ralph Lowe</u>	CONSULTANT CONTACT #3

SEAL




DIVISION OF HIGHWAYS
DIVISION 7
1584 YANCEVILLE STREET
GREENSBORO, NC 27415-4996
PHONE (336) 487-0000
FAX (336) 334-3637

<u>Daniel Dagenhart</u>	DIV. BRIDGE PROGRAM MGR.
<u>Wright R. Archer, III, P.E.</u>	DIVISION ENGINEER
<u>Stephen J. Robinson, P.E.</u>	DIVISION PROJECT MANAGER
<u>Kelvin S. Martin</u>	DIVISION UTILITIES ENGINEER
<u>Cody Lungrin</u>	DIV. UTILITY COORDINATOR

\$\$\$ SYSTEM \$\$\$
\$\$\$ DN \$\$\$
\$\$\$ USERNAME \$\$\$

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
2. THE EXISTING WATER AND SEWER UTILITIES BELONG TO THE CITY OF GREENSBORO.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

PROJECT SPECIFIC NOTES:

1. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS FOR PROPOSED WATER MAINS 12" DIAMETER AND SMALLER SHALL BE DUCTILE IRON, PC 350.
2. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS FOR PROPOSED WATER MAINS 16" DIAMETER AND LARGER SHALL BE DUCTILE IRON, PC 250.
3. FURNISH AND INSTALL RESTRAINED-JOINT D.I. PIPE AND FITTINGS AS NOTED ON THE PLANS AND PROFILES.
4. WATER LINE VALVES SHALL BE RESILIENT-SEAT GATE VALVES CONFORMING TO ANSI/AWWA C509, OR ANSI/AWWA C515, AND SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 250 PSI.
5. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
6. THE CONTRACTOR SHALL CONTACT THE CITY OF GREENSBORO WATER RESOURCES DEPARTMENT AT LEAST TWO (2) WEEKS IN ADVANCE OF ANY WORK INVOLVING SHUT-DOWNS OF EXISTING WATER MAINS. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER SERVICE TO CUSTOMERS WHEN EXISTING WATER MAINS HAVE TO BE SHUT DOWN FOR MORE THAN 8 HOURS.
7. AS INDICATED ON THE DETAILS OF THESE PLANS AND AS DESCRIBED IN THE SPECIAL PROVISIONS, ALL EQUIPMENT WITHIN THE VAULTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, ALL WIRING WILL BE FURNISHED AND INSTALLED BY OTHERS.

LIST OF STANDARD DRAWINGS

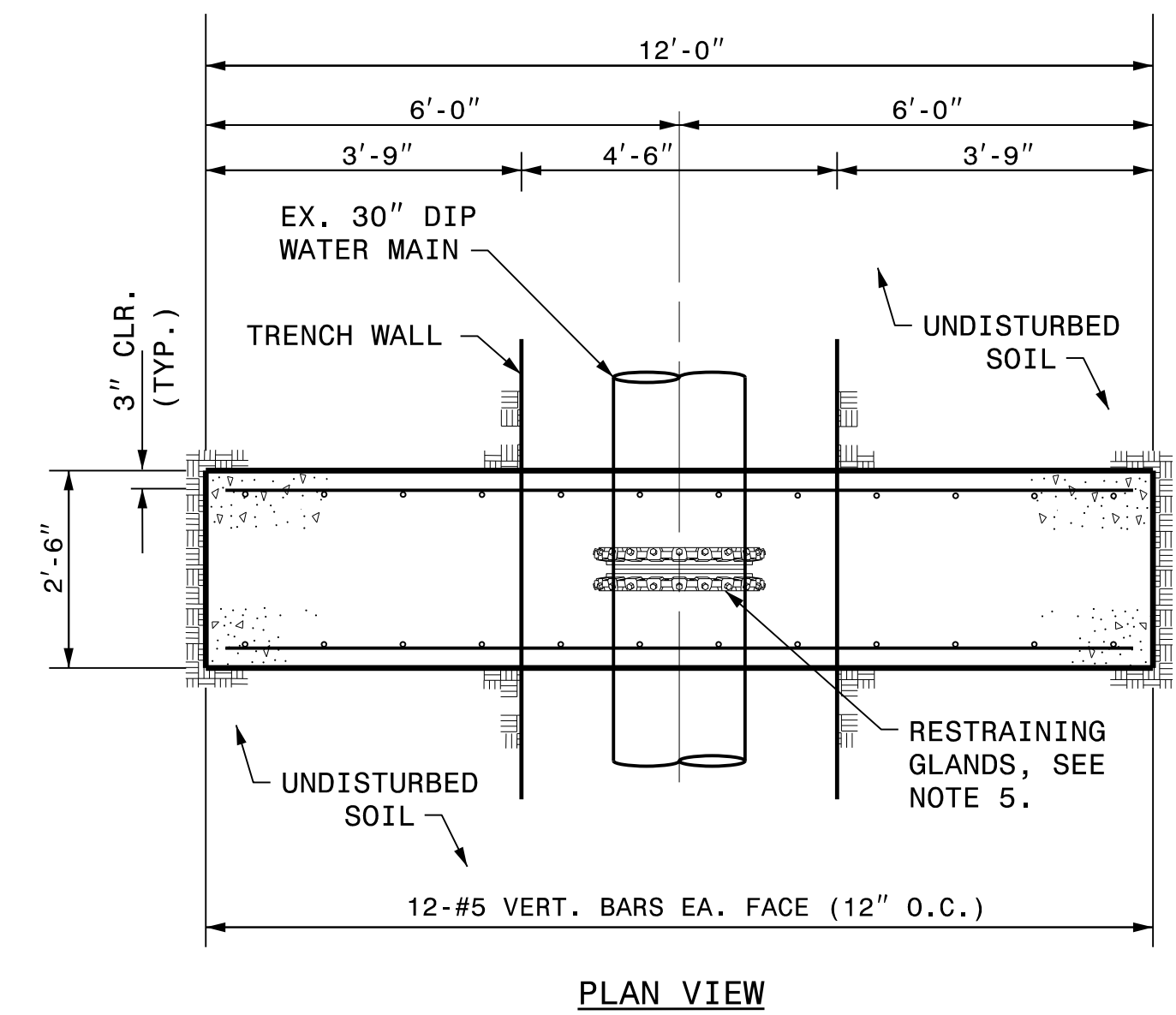
1515.02 FIRE HYDRANT

PROJECT REFERENCE NO. 178P.7.R.116 - GUILFORD 224	SHEET NO. UC-3
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

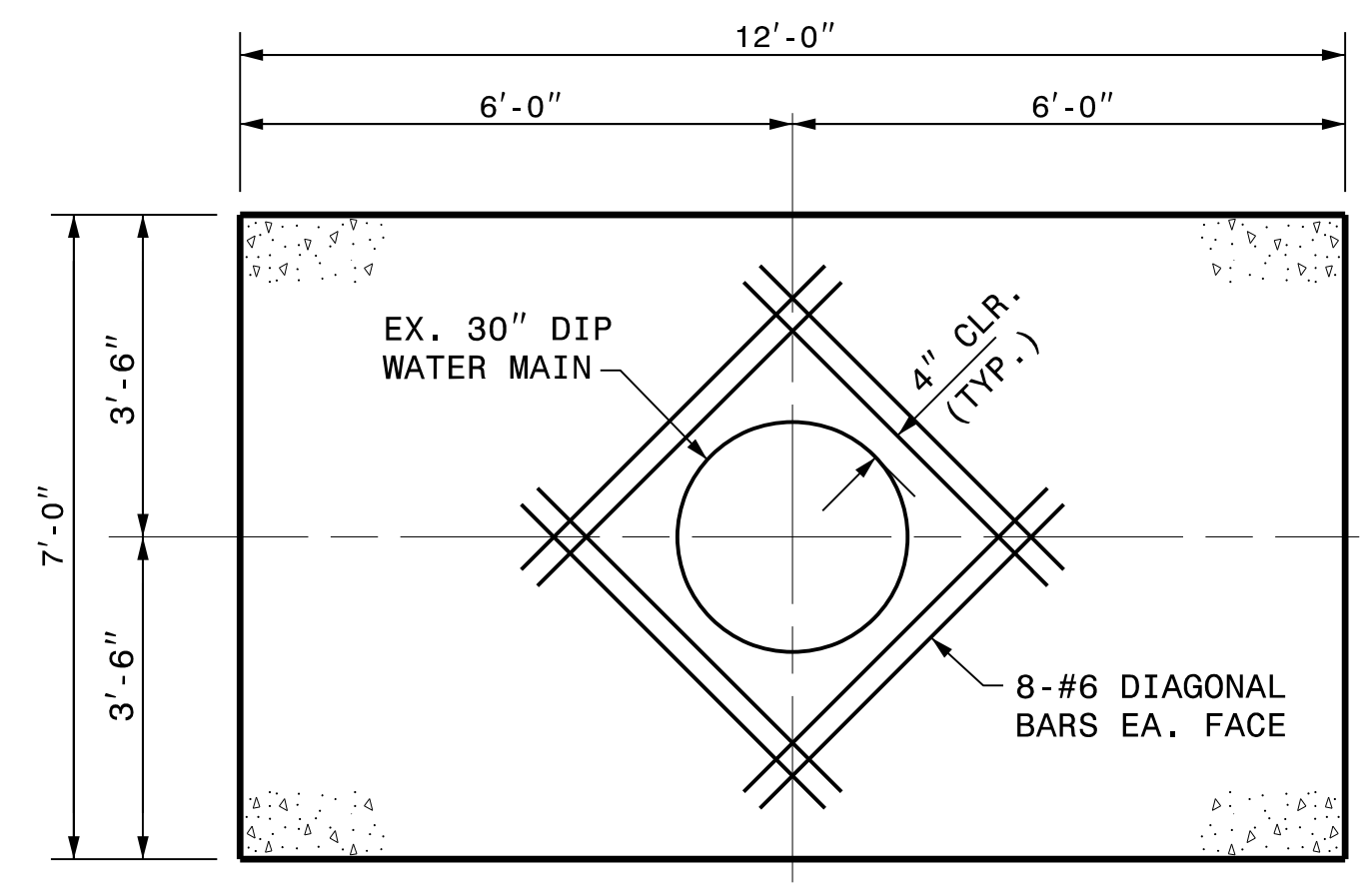
UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

8/17/99
SYTIME\$\$\$\$
\$\$\$\$SYTIME\$\$\$\$

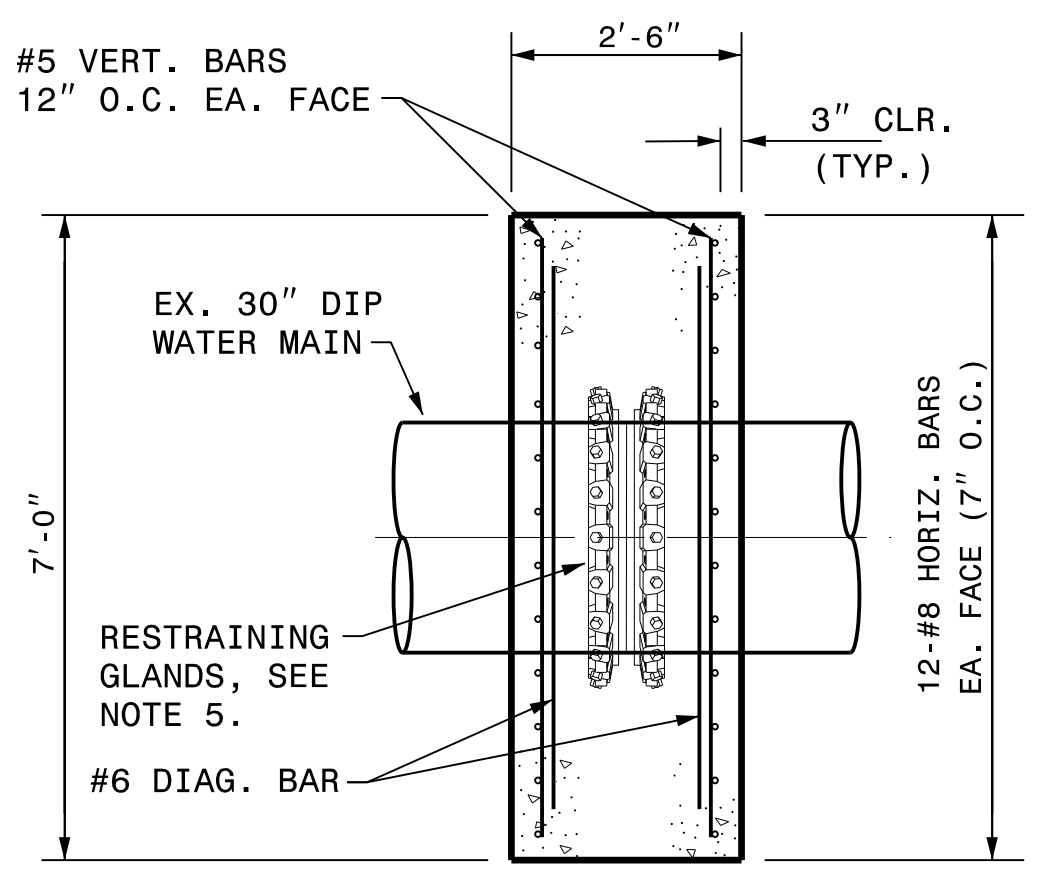


PLAN VIEW



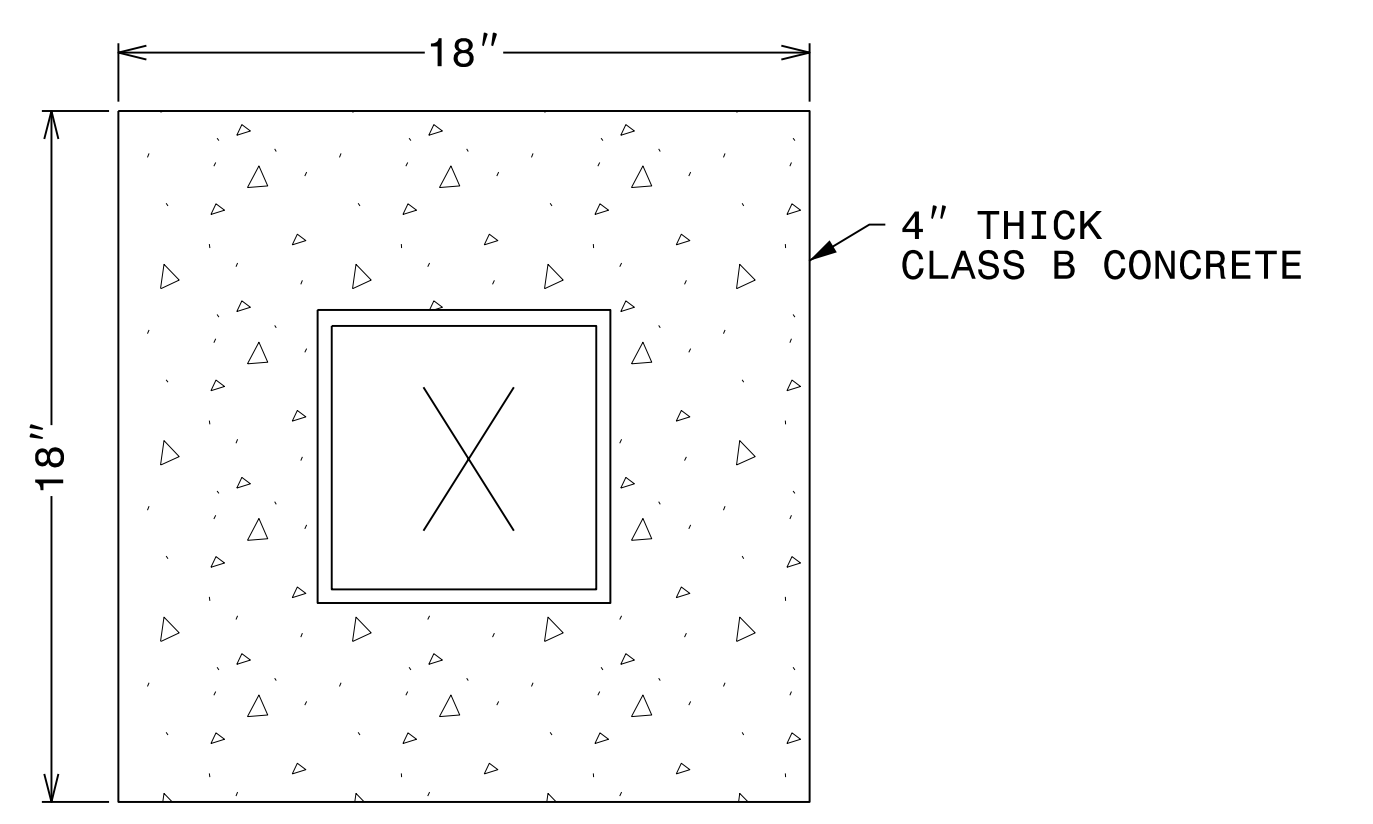
ELEVATION VIEW
(HORIZ. & VERT. BARS NOT SHOWN FOR CLARITY)

- NOTES:
1. CONCRETE FOR THRUST COLLAR SHALL BE MIN. 3,000 PSI CLASS A, NON-AIR ENTRAINED. REINFORCING STEEL FOR THRUST WALL SHALL BE GRADE 60.
 2. DESIGN IS BASED ON TEST PRESSURE OF 200 PSI WITH A SAFETY FACTOR = 1.25 AND ASSUMED SOIL BEARING CAPACITY OF 2,500 LBS/SF.
 3. DIAGONAL BARS SHALL BE PLACED INSIDE VERTICAL BARS AS SHOWN. DIAGONAL BARS SHALL BE 4'-8"± LONG.
 4. THRUST COLLAR SHALL BE ORIENTED APPROXIMATELY AT THE CENTER OF PIPE JOINT.
 5. TWO (2) OPPOSING SPLIT RESTRAINING GLANDS BOLTED TOGETHER WITH STAINLESS STEEL BOLTS. GRIPPING WEDGES SHALL BE TORQUED TO MANUFACTURERS SPECIFICATIONS. RESTRAINING GLANDS SHALL BE WRAPPED WITH POLYETHELENE AND SECURED PRIOR TO POURING CONCRETE.
 6. ANY PROPOSED MODIFICATIONS TO THIS DETAIL, BASED ON THE FIELD CONDITIONS, MUST BE APPROVED BY THE CITY OF GREENSBORO FIELD INSPECTOR AND/OR THE ENGINEER OF RECORD.



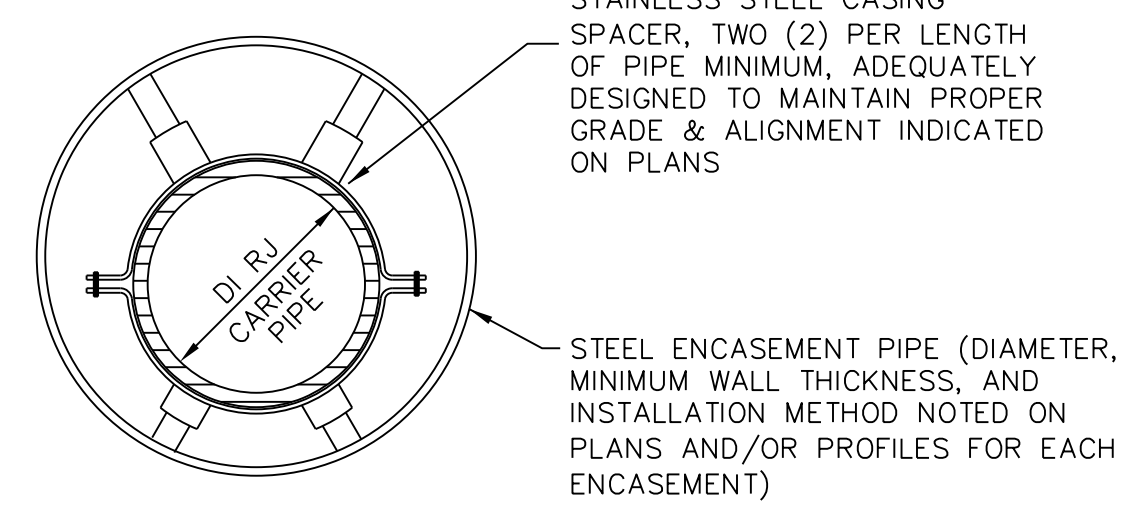
END SECTION VIEW

CONCRETE THRUST COLLAR FOR 30" DIAMETER D.I. WATER PIPE
(NOT TO SCALE)



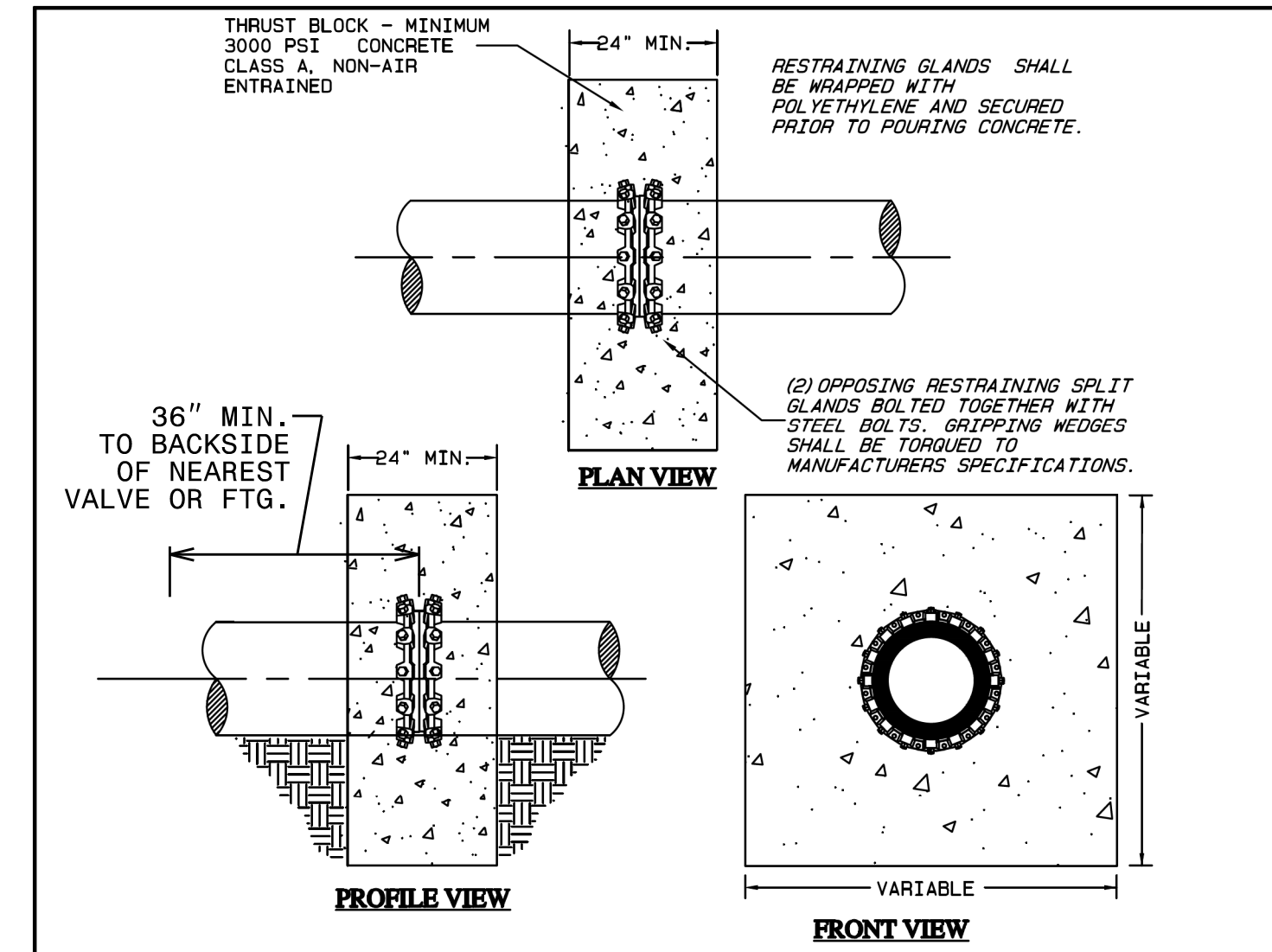
CONCRETE COLLAR FOR VALVE BOX

- NOTES:
1. PROVIDE CONCRETE COLLARS FOR ALL VALVE BOXES THAT ARE NOT IN PAVED AREAS.
 2. VALVE BOX LIDS SHALL HAVE THE LETTER "W" FOR WATER VALVES, OR "S" FOR SEWER VALVES.



TYPICAL ENCASEMENT PIPE SECTION
N.T.S.

- NOTES:
1. ENCLOSE ENDS WITH BRICK MASONRY.
 2. PROVIDE 2" WEEP HOLE AT LOW END OF ENCASEMENT.
 3. SEE 2018 NCDOT STANDARD SPECIFICATIONS, DIVISION 15, SECTIONS 1540 AND 1550, FOR OTHER REQUIREMENTS.

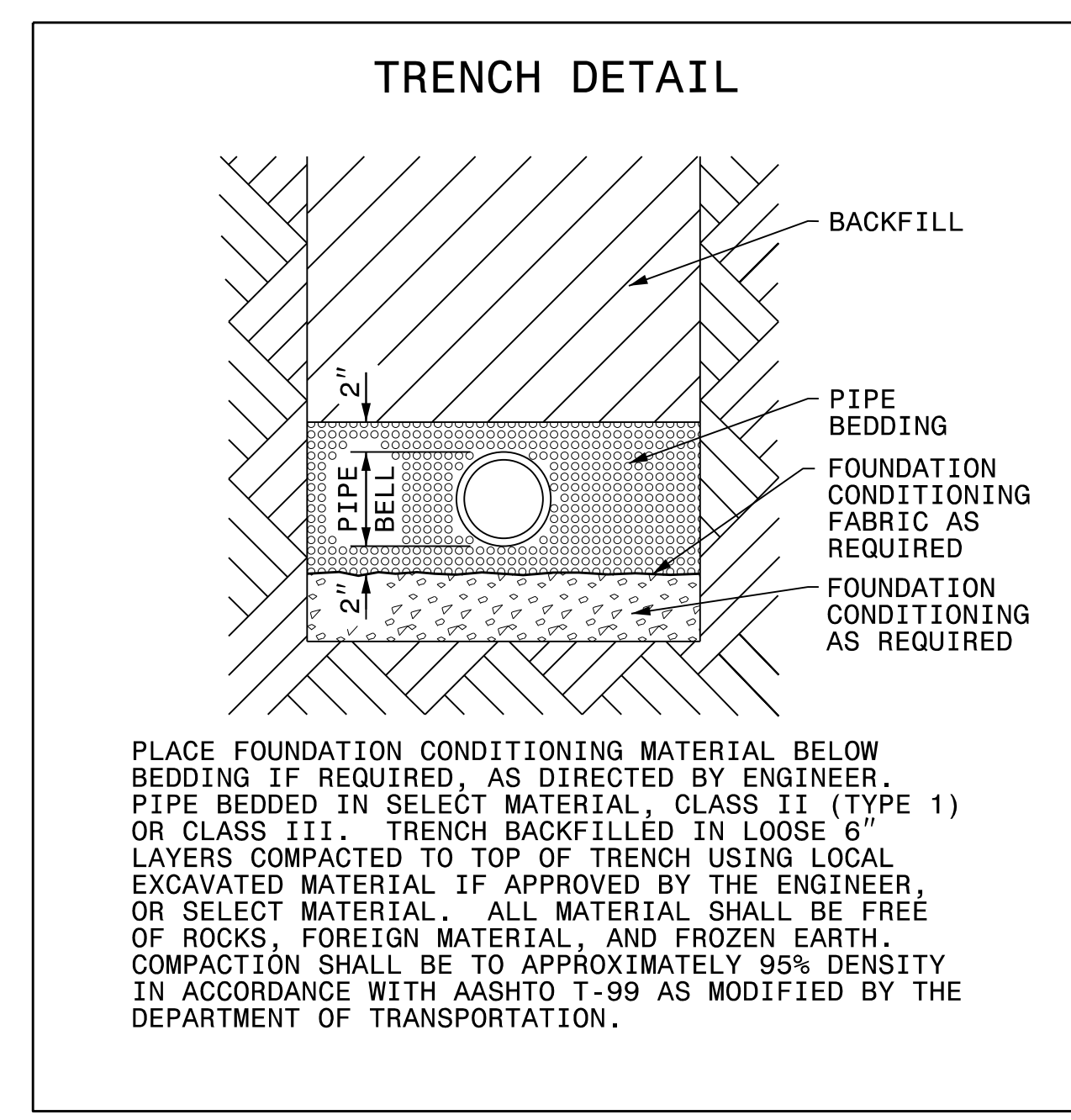


- NOTES:
1. SEE CITY OF GREENSBORO - WATER LINE AND SEWER LINE STANDARD CONSTRUCTION SPECIFICATIONS, SUB-ARTICLE 3.02 & 3.03 FOR (TRENCH AND BACKFILL) AND (TRENCH STABILIZATION) REQUIREMENTS.
 - THRUST BLOCK SHALL BE ORIENTED APPROXIMATELY CENTER OF PIPE JOINT.
 - *OPTIONAL* A WELDED COLLAR (INSTALLED BY PIPE MANUFACTURER) MAY BE USED IN LIEU OF RESTRAINING GLANDS. ALL OTHER DESIGN REQUIREMENTS SHALL APPLY AS SHOWN.
 - FOR PIPES LARGER THAN 16" DIAMETER, THE DEADMAN THRUST RESTRAINT WITH BLOCKING MUST BE DESIGNED AND SEALED BY A N.C. PROFESSIONAL ENGINEER.
 - ANY PROPOSED MODIFICATIONS TO THIS STANDARD BASED ON THE FIELD CONDITIONS MUST BE PRE-APPROVED BY THE CITY OF GREENSBORO FIELD INSPECTOR AND/OR THE ENGINEER OF RECORD.
 - QUANTITIES SHOWN BELOW ARE TO THE NEAREST QUARTER YARD AND ARE BASED ON MINIMUM MASS WEIGHT REQUIREMENTS OF THE TEST PRESSURES SHOWN.

PIPE DIAMETER	MINIMUM CUBIC YARDS OF CONCRETE REQUIRED		
	100 PSI TEST PRES.	200 PSI TEST PRES.	250 PSI TEST PRES.
6"	0.75	1.0	1.25
8"	1.5	2.0	2.25
10"	2.0	3.0	3.5
12"	3.0	4.0	5.0
16"	5.5	7.25	9.0

CITY OF GREENSBORO

DEADMAN THRUST RESTRAINT WITH MASS WEIGHT BLOCKING	STD. NO.	REV.
	118	06-13 06-15



PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

MAXIMUM TRENCH WIDTH AT TOP OF PIPE			
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	30	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42	60	84

PROJECT REFERENCE NO. 17BP.7.R.116 - GUILFORD 224	SHEET NO. UC-3A
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

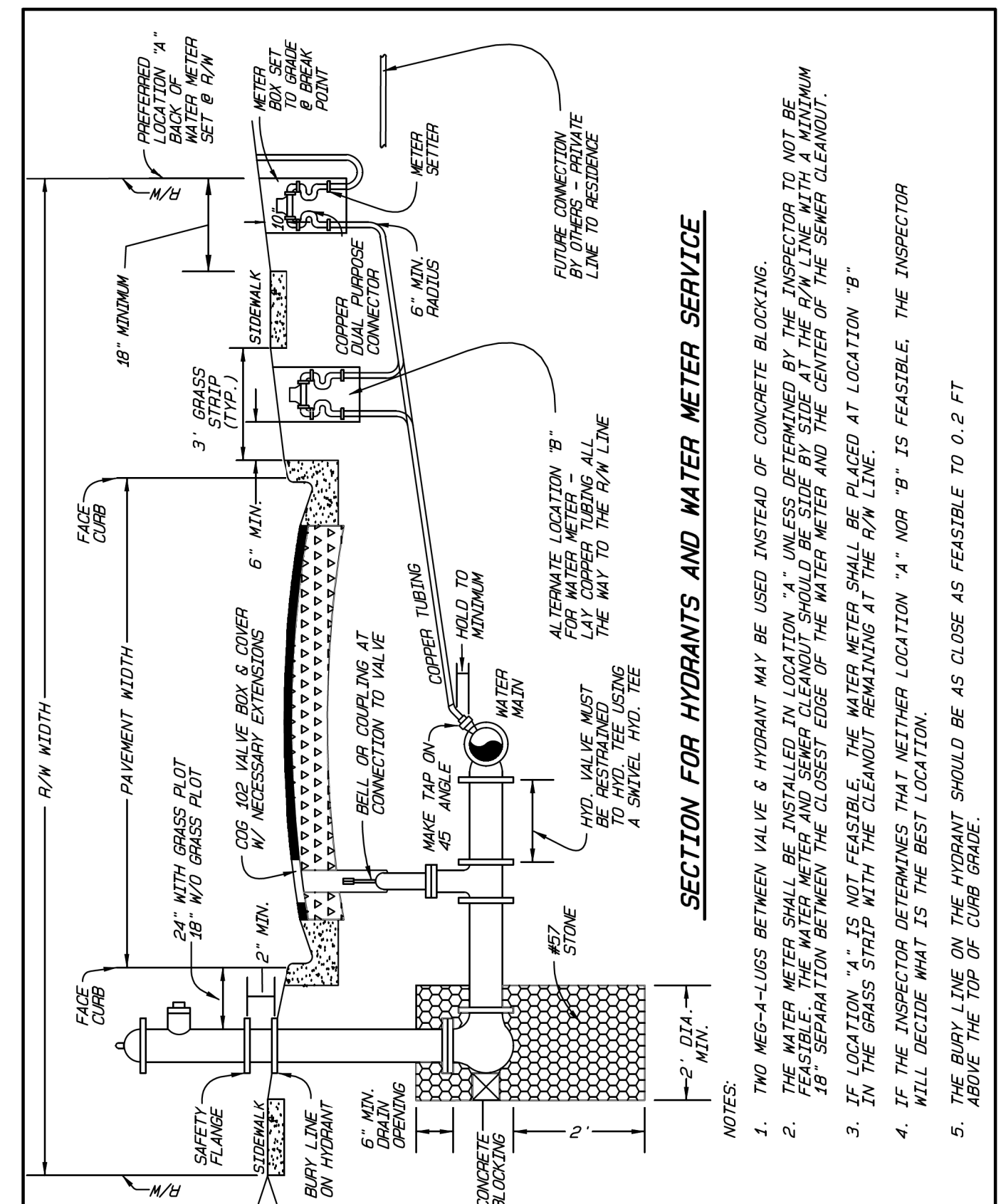
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

8.17/99

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.116 - GUILFORD 224	UC-3B
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SECTION FOR HYDRANTS AND WATER METER SERVICE

- NOTES:
1. TWO NEG-4-LUGS BETWEEN VALVE & HYDRANT MAY BE USED INSTEAD OF CONCRETE BLOCKING.
 2. THE WATER METER SHALL BE INSTALLED IN LOCATION "A" UNLESS DETERMINED BY THE INSPECTOR TO NOT BE FEASIBLE. THE METER SHALL BE INSTALLED WITH THE CENTER OF THE WATER METER AND THE CENTER OF THE SEWER CLEANOUT 18" SEPARATION BETWEEN THE CLOSEST EDGE OF THE WATER METER AND THE CENTER OF THE SEWER CLEANOUT.
 3. IF LOCATION "A" IS NOT FEASIBLE, THE WATER METER SHALL BE PLACED AT LOCATION "B". IN THE GRASS STRIP WITH THE CLEANOUT REMAINING AT THE R/W LINE.
 4. IF THE INSPECTOR DETERMINES THAT NEITHER LOCATION "A" NOR "B" IS FEASIBLE, THE INSPECTOR SHALL DECIDE WHAT IS THE BEST LOCATION.
 5. THE BURY LINE ON THE HYDRANT SHOULD BE AS CLOSE AS FEASIBLE TO 0.2 FT. ABOVE THE TOP OF CURB GRADE.

SHEET 1 OF 3

CITY OF GREENSBORO

HOUSE CONNECTION AND HYDRANT SETTING DETAIL

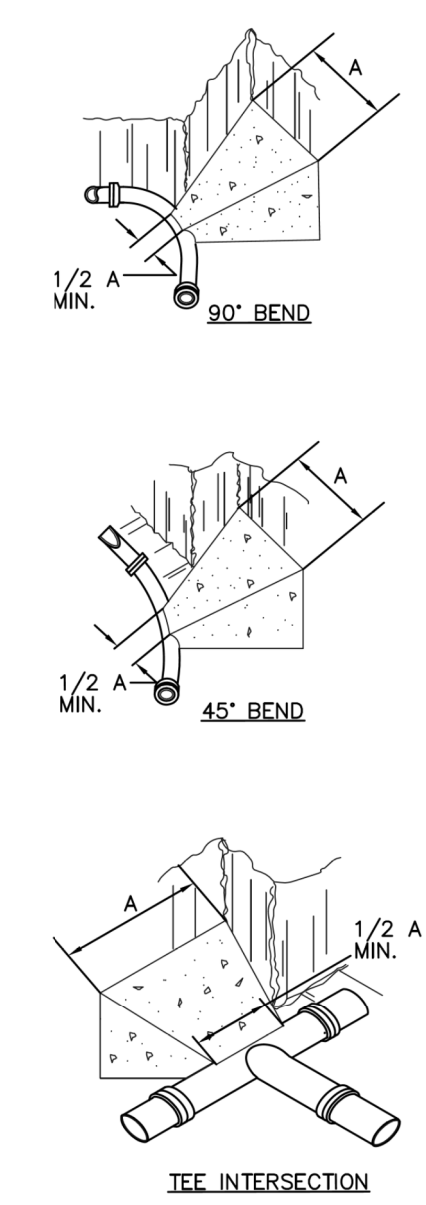
STD. NO.	REV.
101	09-19 12-12 03-15 06-16

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS									
BASED ON TEST PRESSURE OF 200 PSI									
SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	FAIRLY DRY CLAY 4,000 LB/SOFT	SOFT CLAY 2,000 LB/SOFT	GRAVEL COARSE 16,000 LB/SOFT	DRY CLAY - ALWAYS DRY 8,000 LB/SOFT	SAND - COMPACT/FIRM 8,000 LB/SOFT	SAND - CLEAN & DRY 4,000 LB/SOFT	ROCK 10,000 LB/SOFT	TIE RODS REQUIRED
6"									
11.25°	1108	1	1	1	1	1	1	1	
22.50°	2207	1	2	2	1	1	1	1	
45°	4328	2	3	3	1	1	2	1	
90°	7996	2	4	5	1	1	2	1	
PLUG	5665	2	3	4	1	1	2	1	2-1/2" DIA.
8"									
11.25°	1970	1	1	2	1	1	2	1	
22.50°	3922	1	2	3	1	1	3	1	
45°	7694	2	4	5	1	1	5	1	
90°	14215	4	8	9	2	2	8	2	
PLUG	10053	3	5	6	2	2	6	1	2-5/8" DIA.
12"									
11.25°	4433	2	3	3	1	1	2	1	
22.50°	8826	3	5	6	2	2	3	1	
45°	17312	5	9	11	3	3	5	2	
90°	31983	8	16	19	4	4	8	4	
PLUG	22619	6	12	14	3	3	6	3	4-3/4" DIA.

NOTES:

1. CONCRETE SHALL BE 3000 PSI.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.
4. USE 6" 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTORS.

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR



CITY OF GREENSBORO

UTILITY CONSTRUCTION PLANS PREPARED BY:

DAVIS • MARTIN • POWELL

ENGINEERS & SURVEYORS

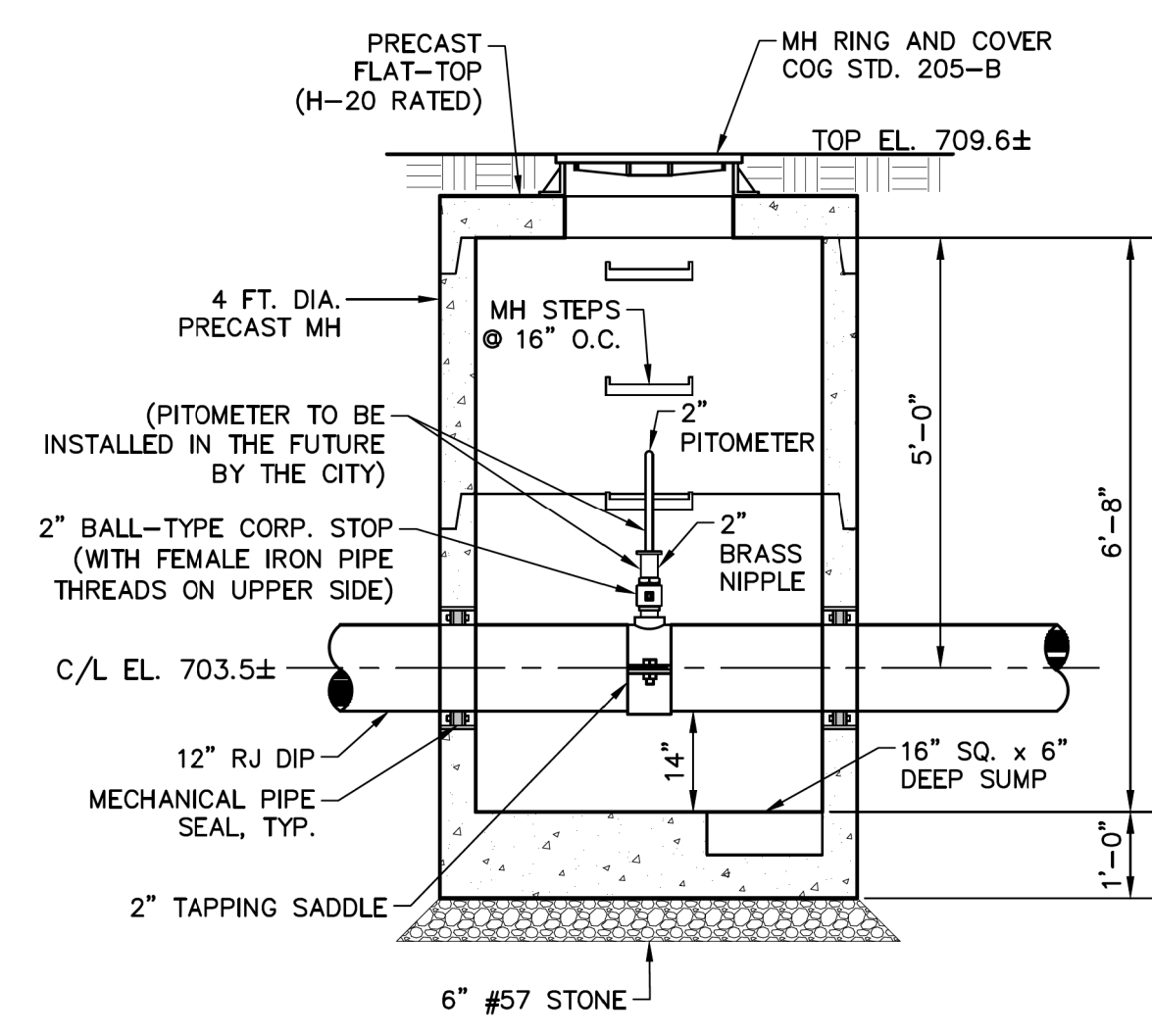
6415 OLD PLANK RD., HIGH POINT, NC 27265
 PHONE: (336) 886-4821 FAX: (336) 886-4458
 WWW.DMP-INC.COM LICENSE: F-0245

8/17/99

PROJECT REFERENCE NO. 17BP.7.R.116 - GUILFORD 224	SHEET NO. UC-3C
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

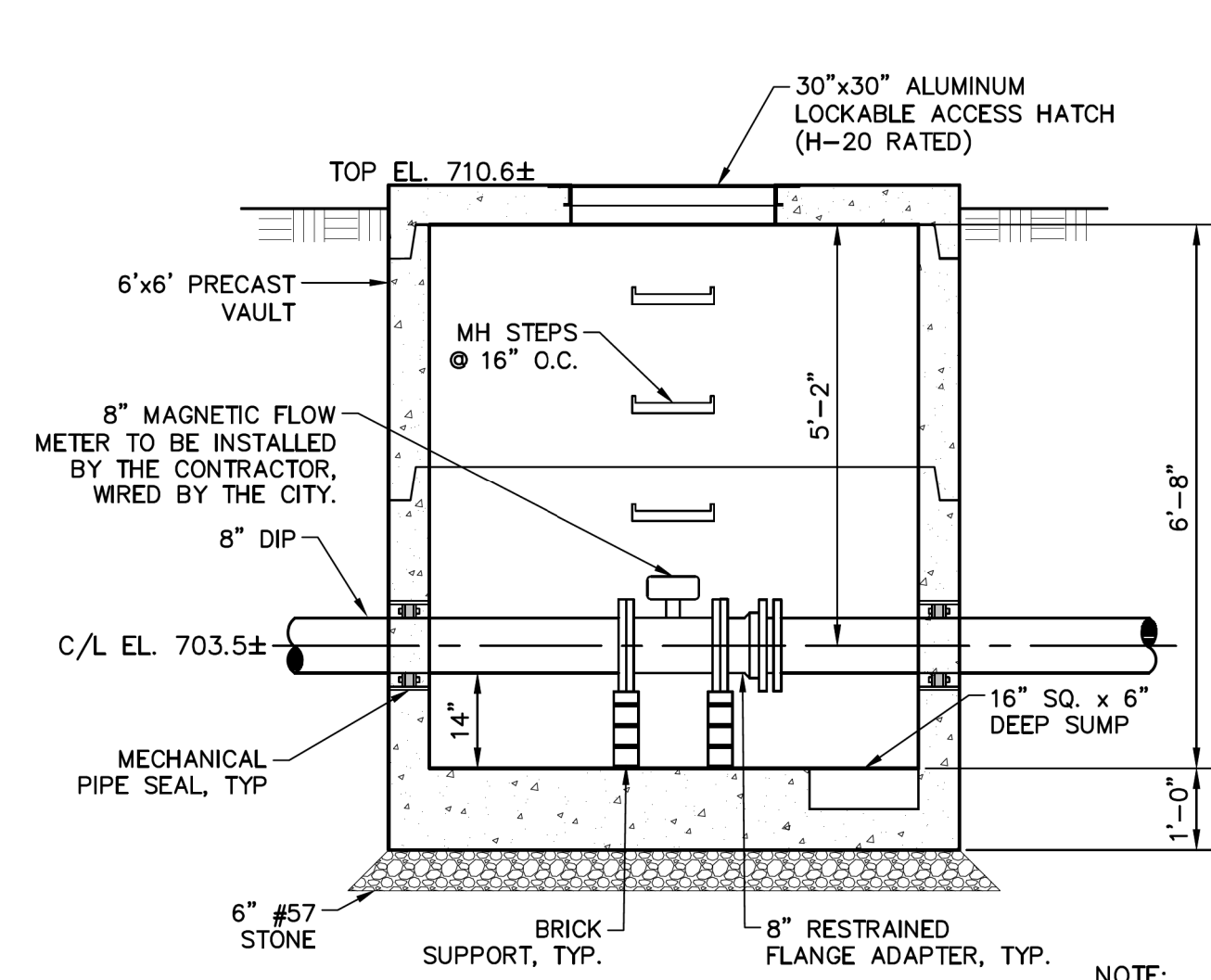
UTILITY CONSTRUCTION

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



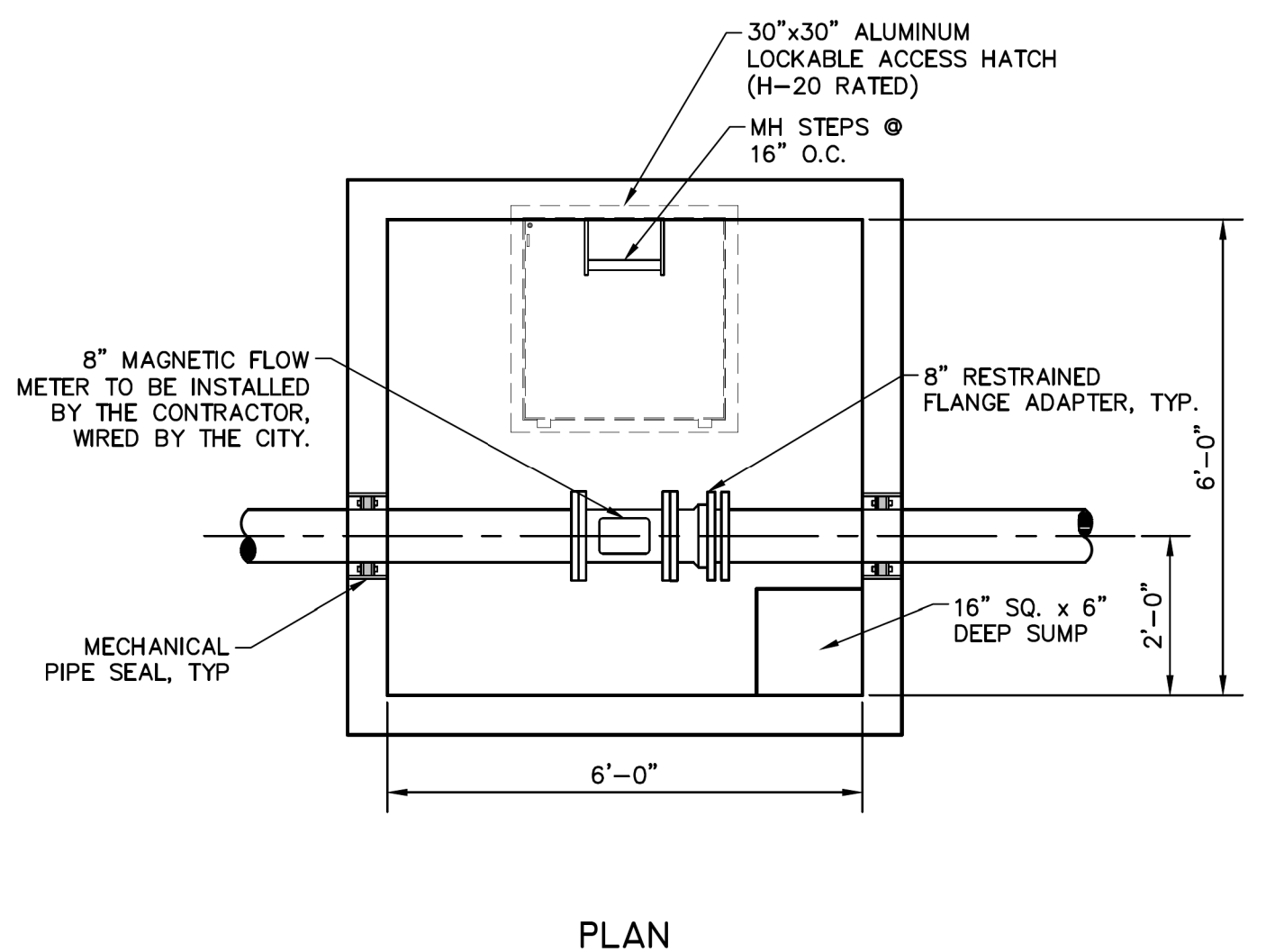
NOTE:
THE 2" PITOMETER TAP AND MANHOLE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, WIRING TO BE INSTALLED BY OTHERS.

2" PITOMETER TAP IN 4' DIA. MH
NTS

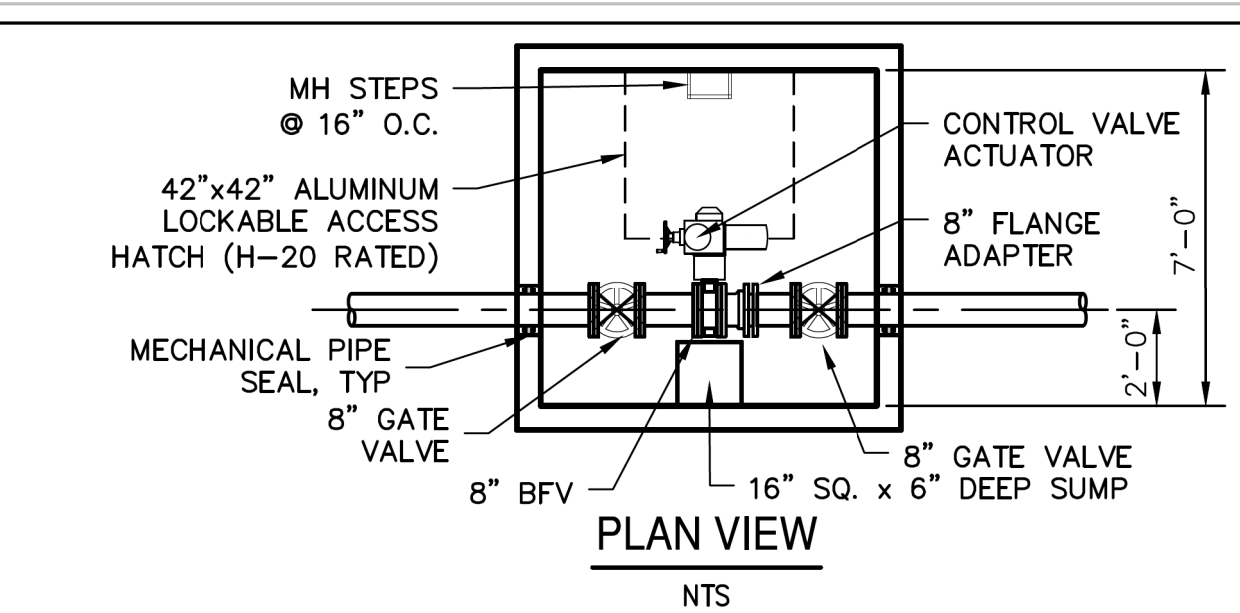


NOTE:
THE 8" FLOW METER AND VAULT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, WIRING TO BE INSTALLED BY OTHERS.

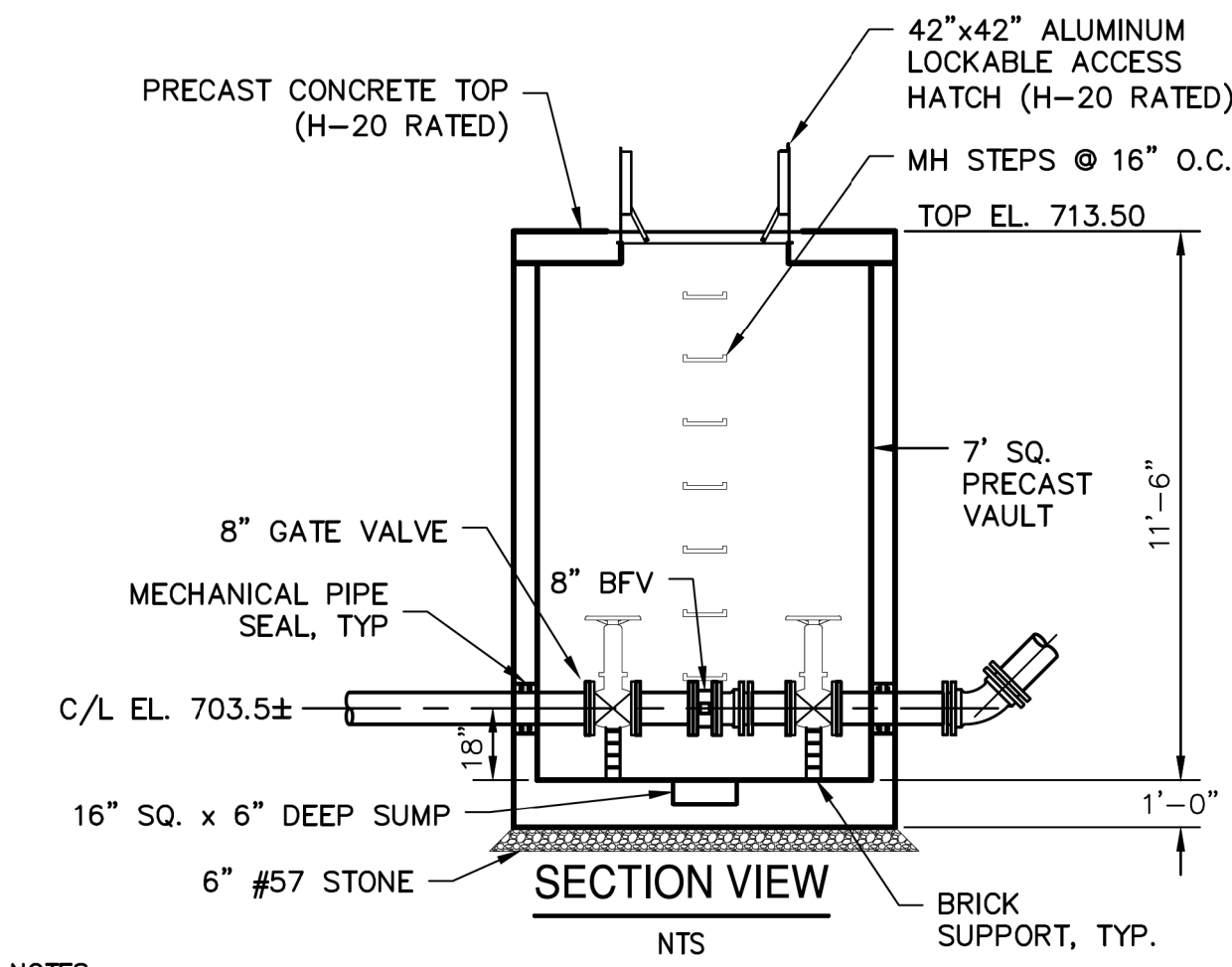
8" FLOW METER IN VAULT
NTS



PLAN



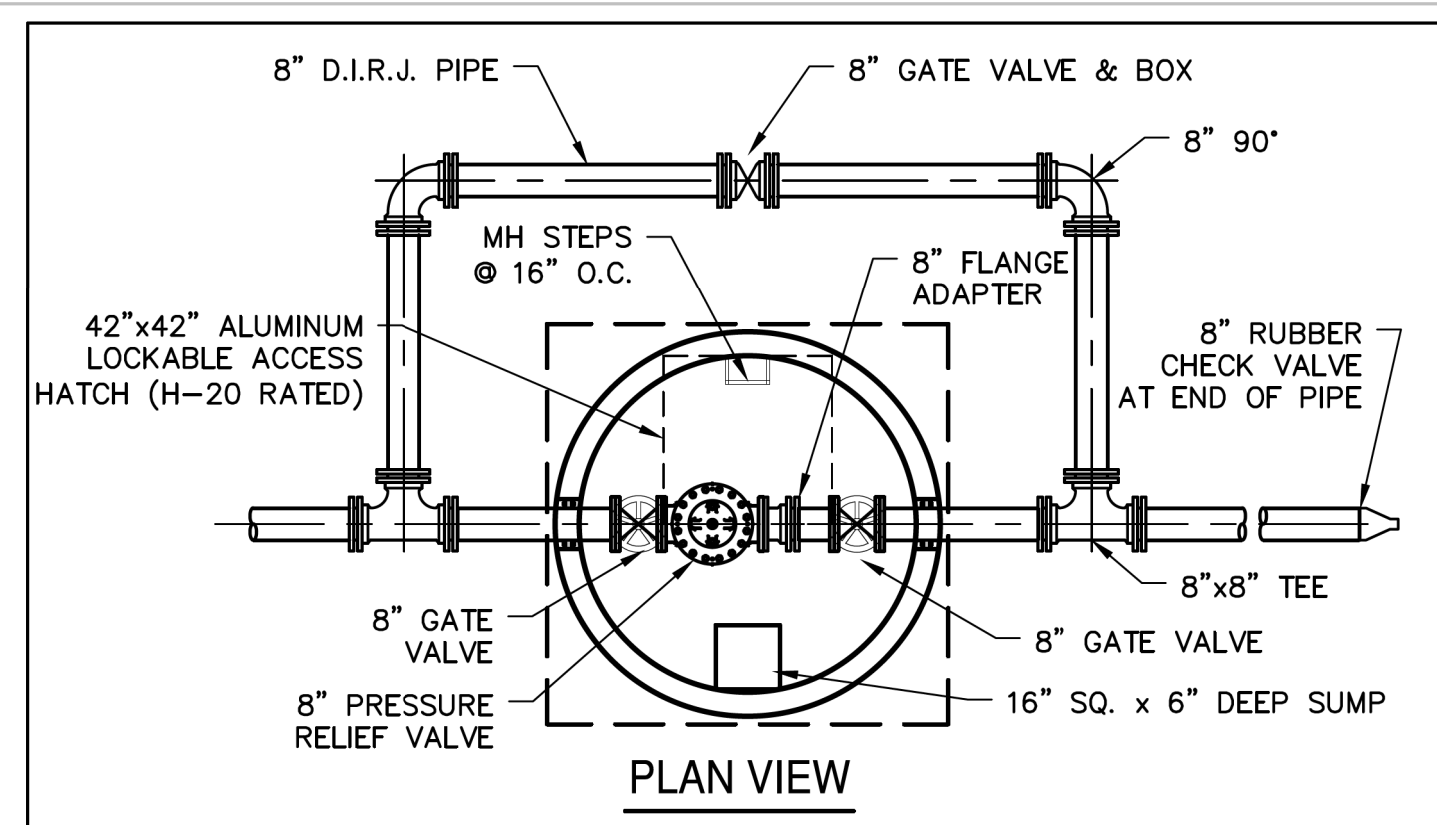
PLAN VIEW
NTS



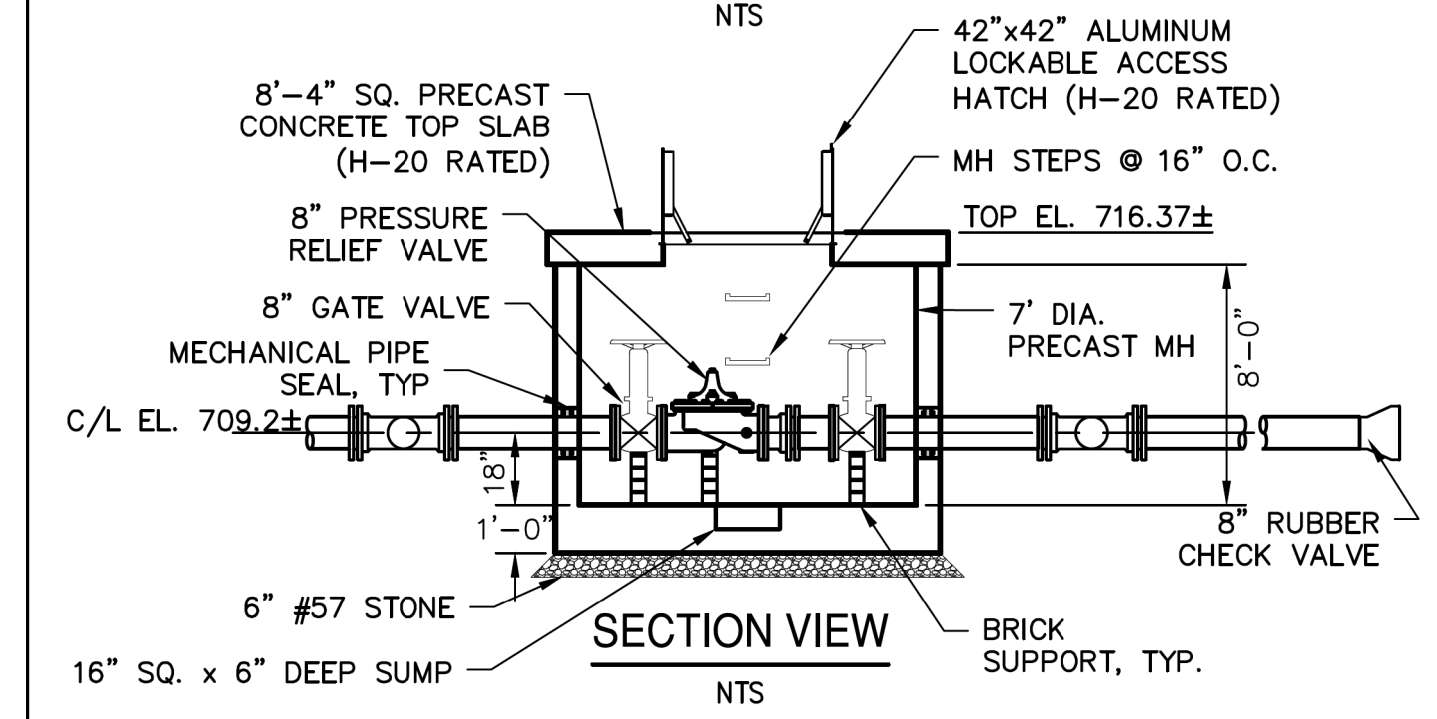
SECTION VIEW
NTS

- NOTES:**
- SEE UTILITY CONSTRUCTION PROJECT SPECIAL PROVISIONS FOR SPECIFICATIONS REGARDING THE CONTROL VALVE & ACTUATOR.
 - INSIDE VAULT, USE FLANGE JOINTS CONFORMING TO ANSI B16.1, CLASS 150, FOR SPECIFIED DIAMETER, DRILLING, & THICKNESS, UNLESS OTHERWISE NOTED.
 - FOR D.I. PIPE, FITTINGS, AND VALVES BURIED OUTSIDE THE MH, USE MECHANICAL JOINTS WITH RESTRAINED RETAINER GLANDS, OR D.I. RESTRAINED JOINT PIPE.
 - THE LUMP SUM PRICE SHALL INCLUDE THE VAULT, HATCH, PIPE, FITTINGS, VALVES. CONTROL VALVE ACTUATOR TO BE INSTALLED AND WIRED BY THE CITY OF GREENSBORO.
 - THE 8" CONTROL VALVE AND VAULT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, WIRING TO BE INSTALLED BY OTHERS.

8" CONTROL VALVE IN 7' SQ. VAULT



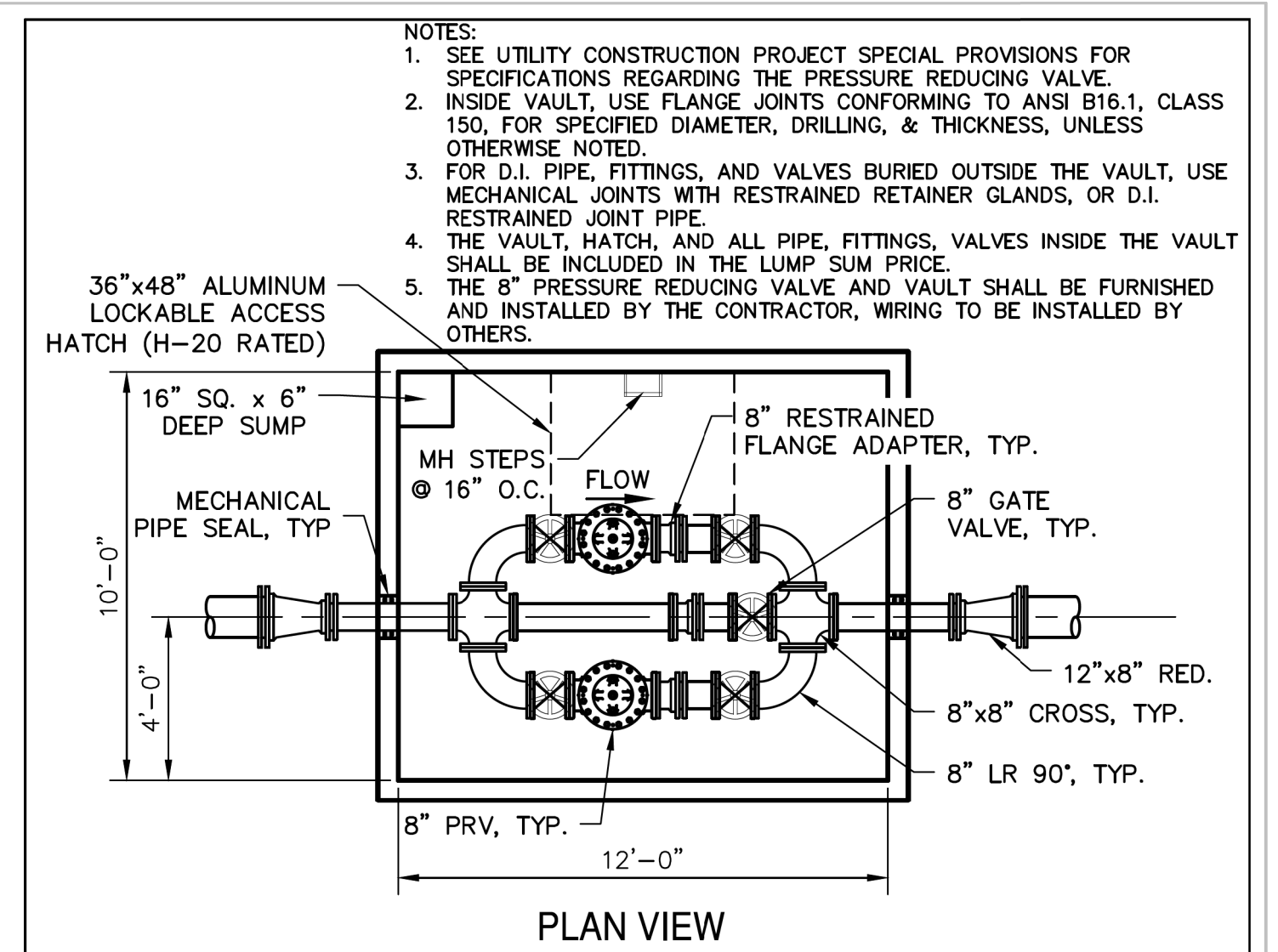
PLAN VIEW
NTS



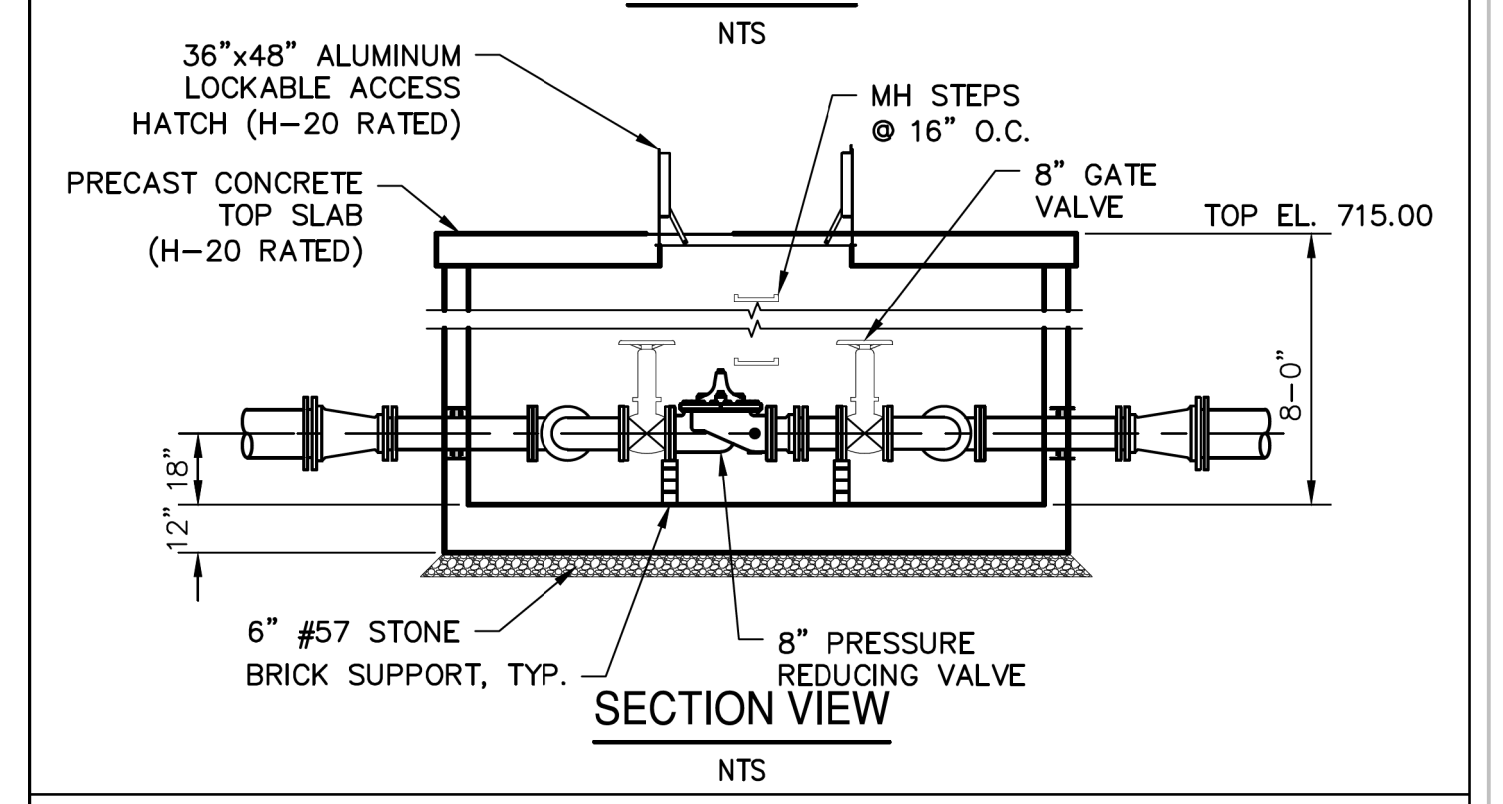
SECTION VIEW
NTS

- NOTES:**
- SEE UTILITY CONSTRUCTION PROJECT SPECIAL PROVISIONS FOR SPECIFICATIONS REGARDING THE PRESSURE RELIEF VALVE.
 - INSIDE MH, USE FLANGE JOINTS CONFORMING TO ANSI B16.1, CLASS 150, FOR SPECIFIED DIAMETER, DRILLING, & THICKNESS, UNLESS OTHERWISE NOTED.
 - FOR D.I. PIPE, FITTINGS, AND VALVES BURIED OUTSIDE THE MH, USE MECHANICAL JOINTS WITH RESTRAINED RETAINER GLANDS, OR D.I. RESTRAINED JOINT PIPE.
 - THE LUMP SUM PRICE SHALL INCLUDE THE MH, TOP SLAB, HATCH, PIPE, FITTINGS, & VALVES INSIDE THE MH, AND THE PIPE, FITTINGS, & VALVE ON THE BYPASS PIPING OUTSIDE THE MH (BETWEEN THE TEES), AND THE RUBBER CHECK VALVE AT THE END OF THE 8" DIP.
 - THE 8" PRESSURE RELIEF VALVE AND MANHOLE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, WIRING TO BE INSTALLED BY OTHERS.

8" PRESSURE RELIEF VALVE IN 7' DIA. MH, WITH BYPASS



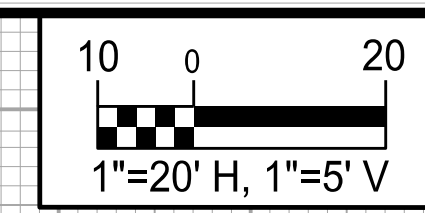
PLAN VIEW
NTS



SECTION VIEW
NTS

8" PRESSURE REDUCING VALVES IN VAULT

5/14/2019



PROJECT REFERENCE NO. 17BP.7.R.116 - GUILFORD 224	SHEET NO. UC-5
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

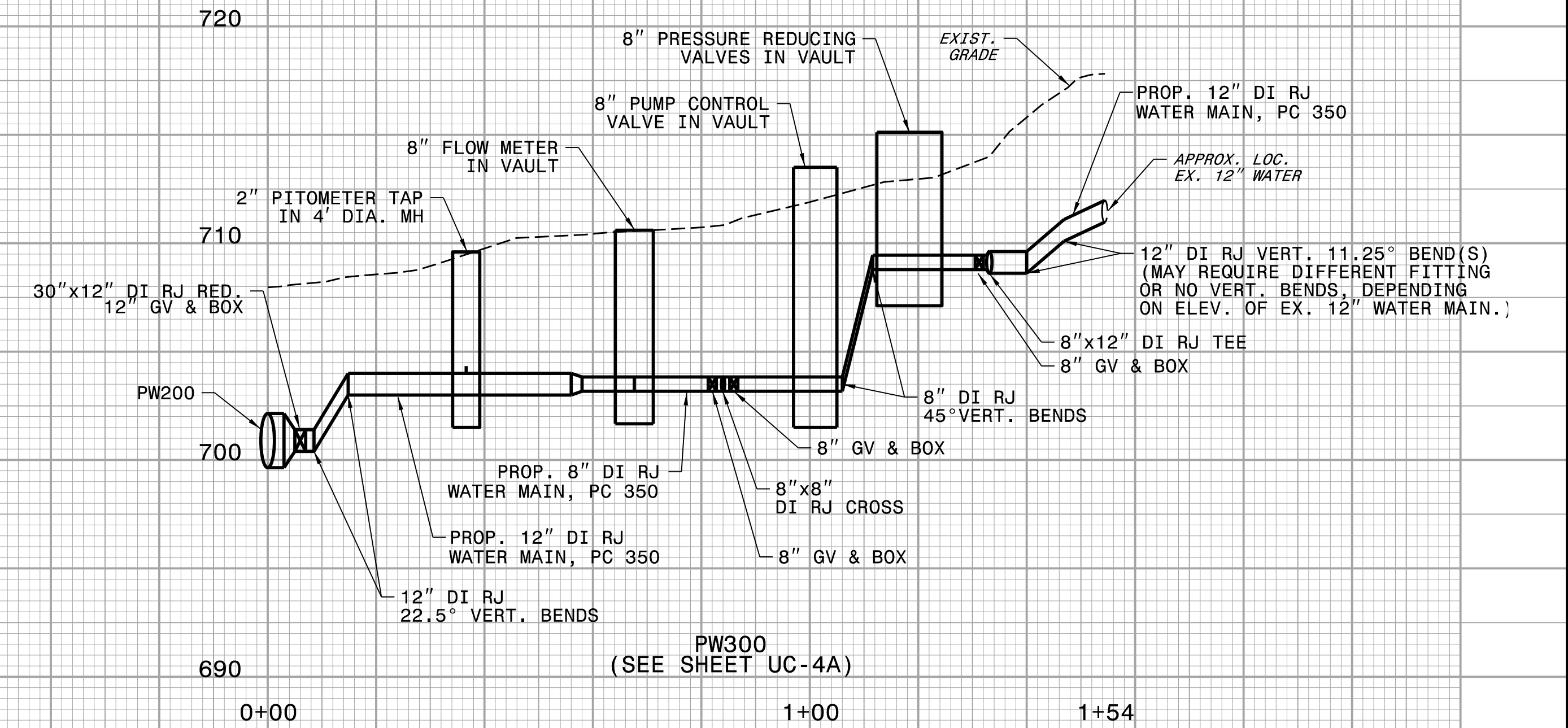
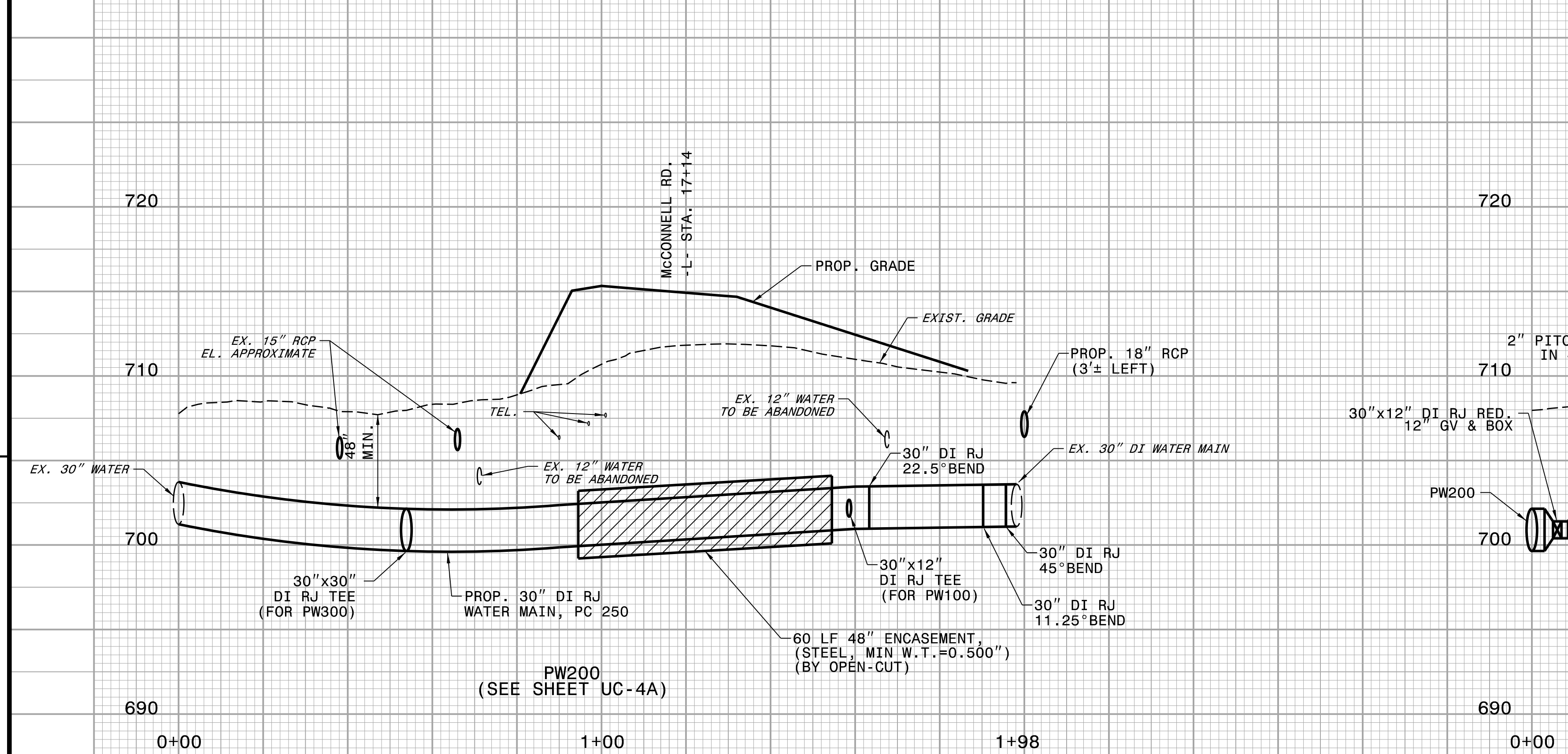
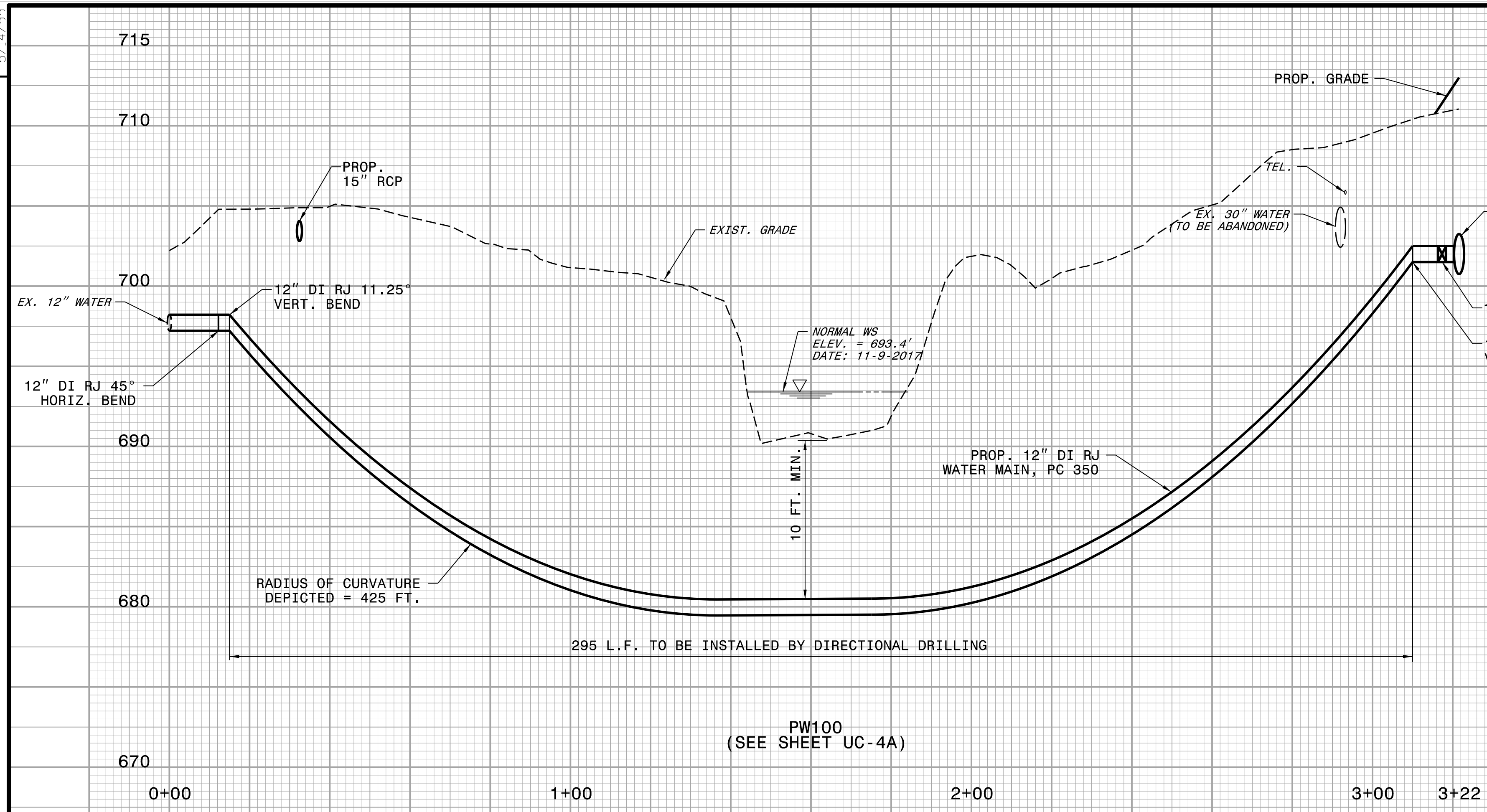
UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONSTRUCTION INSPECTION REQUIRED FOR 6" 8" 12" AND 30" WATERLINE INSTALLATION, CALL (336) 373-2377 TO SCHEDULE AN INSPECTOR.

ENCROACHMENT PERMIT IS REQUIRED THROUGH NCDOT FOR WATERLINE INSTALLATION, CALL (336) 487-0100 FOR PERMIT.

REVISIONS



- NOTE: SEE SHEET UC-3C FOR DETAILS FOR THE FOLLOWING:
1. 2" PITOMETER TAP IN 4' DIA MH
 2. 8" FLOW METER IN VAULT
 3. 8" PUMP CONTROL VALVE IN VAULT
 4. 8" PRESSURE RELIEF VALVE IN 7' DIA MH, WITH BYPASS
 5. 8" PRESSURE REDUCING VALVES IN VAULT

"K"