486

VICINITY MAP

TO TENNESSEE

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

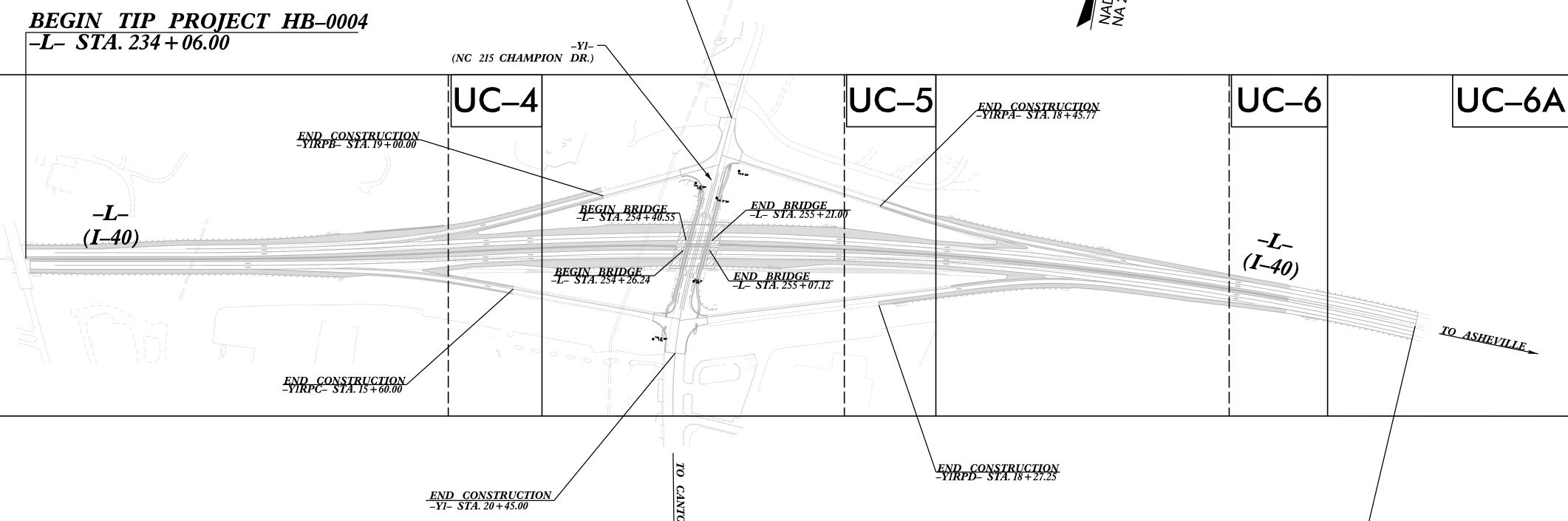
T.I.P. NO. SHEET NO. UC-1HB-0004

UTILITY CONSTRUCTION PLANS HAYWOOD COUNTY

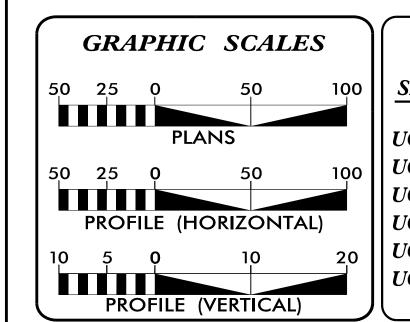
LOCATION: REPLACE BRIDGE NO. 243 OVER NC 215 (CHAMPION DRIVE)

TYPE OF WORK: WATER AND SEWER RELOCATION

(NC 215 CHAMPION DR.)



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INDEX OF SHEETS

DESCRIPTION: SHEET NO.:

TITLE SHEET UTILITY SYMBOLOGY **NOTES**

UC-3A THRU 3B **DETAILS** UC-4 THRU UC-6A UTILITY CONSTRUCTION SHEETS PROFILE SHEET

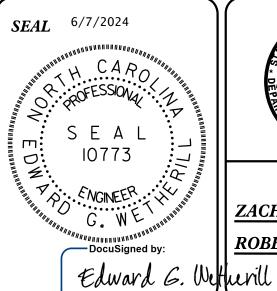
WATER AND SEWER OWNERS ON PROJECT

(A) WATER - TOWN OF CANTON (B) SEWER - TOWN OF CANTON



TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - SURVEY/SUE - UTILITIES - CONSTRUCTION OBSERVATION

UTILITY PROJECT MANAGER PANKIL K. PATEL TREVER REEVES UTILITY COORDINATOR



END TIP PROJECT HB-0004

-L- STA. 277 + 00.00



Prepared for: DIVISION OF HIGHWAYS DIVISION 14 253 Webster Road Sylva NC, 28779

ZACHARY SHULER, PE DIVISION 14 PROJECT MANAGER **DIVISION 14 UTILITY ENGINEER** ROBERT GOLDING

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ETHERILL ENGINEERING

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UTILITY CONSTRUCTION

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown) 11¹⁄₄ Degree Bend 22½ Degree Bend 45 Degree Bend 90 Degree Bend Plug Cross Reducer Gate Valve Butterfly Valve Tapping Valve Line Stop Line Stop with Bypass Blow Off Fire Hydrant Relocate Fire Hydrant Remove Fire Hydrant Water Meter Relocate Water Meter Remove Water Meter Water Pump Station RPZ Backflow Preventer DCV Backflow Preventer Relocate RPZ Backflow Preventer Relocate DCV Backflow Preventer

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	12" SS———
Force Main Sewer Line (Sized as Shown)	12" FSS-
Manhole (Sized per Note)	
Sewer Pump Station PS(SS)	

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

Power Pole ····································	Thrust Block
Telephone Pole	Air Release Valve
Joint Use Pole	Utility Vault
Telephone Pedestal	Concrete Pier
Utility Line by Others(Type as Shown)	Steel Pier
Trenchless Installation ————————————————————————————————————	Remove Pole REM
Encasement by Open Cut	Plan Note
Encasement	Pay Item Note PAY ITEM
Directionally Drilled Conduit	PATILW

EXISTING	UTILITIES SYMBOLS
Power Pole	*Underground Power Line
Telephone Pole	*Underground Telephone Cable
Joint Use Pole	*Underground Telephone Conduit
Utility Pole	*Underground Fiber Optics Telephone Cable
Utility Pole with Base	*Underground TV Cable
H-Frame Pole	*Underground Fiber Optics TV Cable
Power Transmission Line Tower	*Underground Gas Pipeline
Water Manhole ····································	Aboveground Gas Pipeline
Power Manhole ·····	*Underground Water Line
Telephone Manhole	Aboveground Water Line
Sanitary Sewer Manhole®	*Underground Gravity Sanitary Sewer Liness
Hand Hole for Cable	Aboveground Gravity Sanitary Sewer Line A/G Sanitary Sewer
Power Transformer	*Underground SS Forced Main Line
Telephone Pedestal	Underground Unknown Utility Line
CATV Pedestal	SUE Test Hole
Gas Valve	Water Meter
Gas Meter ···································	Water Valve ····································
Located Miscellaneous Utility Object o	Fire Hydrant
Abandoned According to Utility Records AATUR	Sanitary Sewer Cleanout ······
End of Information E.O.I.	*For Existing Utilities

UTILITY CONSTRUCTION

1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN /IL/SITE DESIGN - GIS/GPS - SURVEY/SUE - UTILITIES - CONSTRUCTION OBSERVA

PROJECT REFERENCE NO. | SHEET NO. UC-3 HB-0004 DESIGNED BY: PKP CAPO Fax: 919 851 8107 DRAWN BY: JDS : GFESSION // CHECKED BY: PKP SEAL PPROVED BY: EGW 10773 REVISED: DEDWARD G. Withun NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 UTILITY CONSTRUCTION
FAX: (919)250-4151 PLANS ONLY FAX:(919)250-4151

UTILITY CONSTRUCTION

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GENERAL NOTES:

- 1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATIONS "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
- 2. THE EXISTING UTILITIES BELONG TO TOWN OF CANTON. CONTACT MICHAEL GANTT, TOWN OF CANTON WATER AND SEWER DEPARTMENT HEAD, AT 828-648-2363 OR NICK SCHEUER, TOWN MANAGER, AT 828-648-2363.
- 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.
- 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.
- 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.
- 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 FACILITIÉS. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
- 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.
- 10. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWER MAINS.

PROJECT SPECIFIC NOTES:

- PROPOSED WATER LINES (WL-1 & WL-2) SHALL BE 8" PC350 DIP, INSTALLED BY OPEN CUT METHOD.
- 2. PROPOSED SEWER LINE (FSS-1) SHALL BE 6" PC350 DIP, INSTALLED BY OPEN CUT METHOD.
- CONTRACTOR TO BORE PROPOSED NCDOT CONDUITS FROM JUNCTION BOX TO JUNCTION BOX. IF HDD RIG CANNOT HANDLE ADDITIONAL RODS, CONTRACTOR SHOULD BORE FROM A MID-SPAN POINT (BORE PIT) BOTH WAYS TO EACH RESPECTIVE JUNCTION BOX, THEN COUPLE (E-LOC) THE CONDUITS TOGETHER.

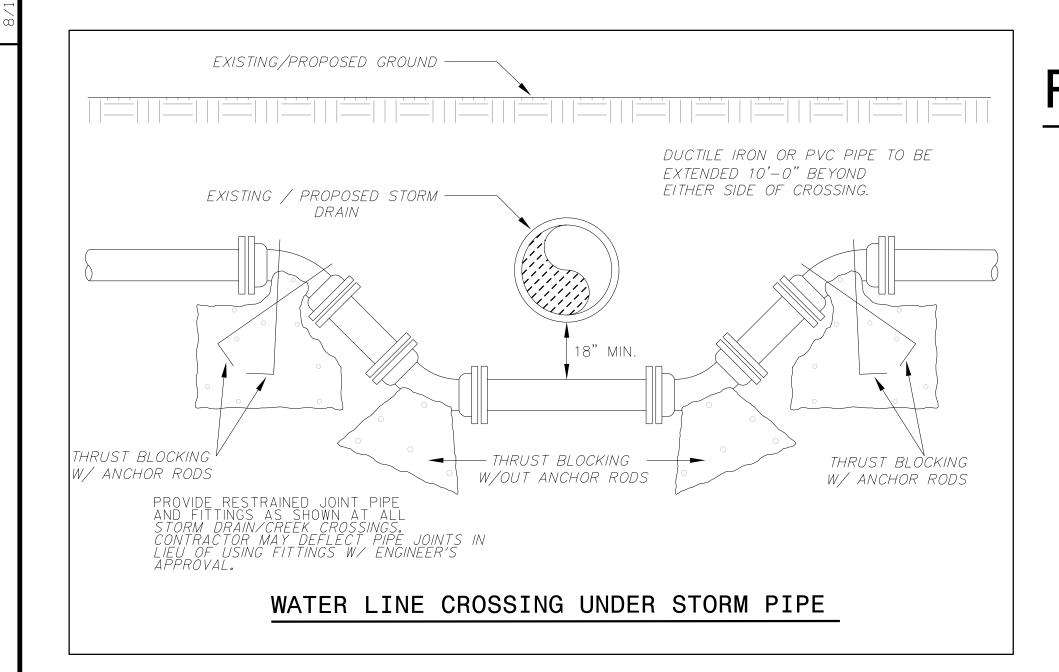
SEWER INSTALLATION NOTES

- 1. CONTRACTOR SHALL FULLY INSTALL. PRESSURE & LEAKAGE TEST NEW SEWER MAIN PRIOR TO CONNECTION TO EXISTING SYSTEM.
- 2. CONTRACTOR SHALL PERFORM THE CONNECTION DURING OFF PEAK HOURS WITH A MAXIMUM SHUT DOWN TIME OF FIVE HOURS. (12 PM MIDNIGHT TO 5 AM)
- 3. ANY TEST PERFORMED WITHOUT NOTIFICATION TO TOWN SHALL BE PERFORMED AT THE CONTRACTOR'S RISK. TESTING SHALL BE PERFORMED IN THE PRESENCE OF TOWN OF CANTON PERSONNEL. CONTACT MR. MICHAEL GANTT AT 828-648-2363 OR MR. NICK SCHEUER AT 828-648-2363.
- 4. NEW SEWER MAIN SHALL NOT BE CONNECTED TO EXISTING MAIN WITHOUT PRIOR APPROVAL AND COORDINATION WITH TOWN OF CANTON.
- 5. FOR NEW SEWER MAIN CONNECTIONS, USE GRIP RING PIPE RESTRAINER AS REQUIRED.

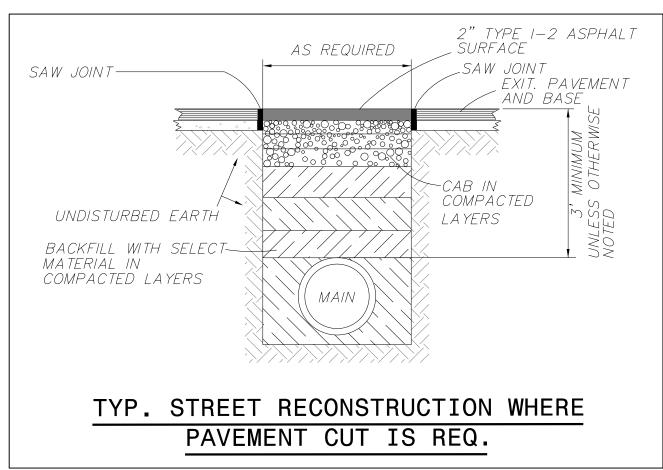
WATER INSTALLATION NOTES

- 1. CONTRACTOR SHALL FULLY INSTALL, PRESSURE & LEAKAGE TEST, AND CHLORINATE NEW WATER MAIN PRIOR TO CONNECTION TO EXISTING SYSTEM.
- 2. CONTRACTOR SHALL PERFORM THE CONNECTION DURING OFF PEAK HOURS WITH A MAXIMUM SHUT DOWN TIME OF FIVE HOURS. (12 PM MIDNIGHT TO 5 AM).
- 3. ANY WORK OR TEST PERFORMED WITHOUT NOTIFICATION AND CONTACT WITH TOWN OF CANTON FIELD INSPECTORS SHALL BE PERFORMED AT THE CONTRACTOR'S RISK. TESTING SHALL BE PERFORMED IN THE PRESENCE OF TOWN OF CANTON PERSONNEL.
- 4. OPERATION OF EXISTING GATE VALVES SHALL BE DONE BY TOWN OF CANTON OPERATIONS STAFF.
- 5. TIE NEW WATER MAIN INTO EXISTING. INSTALL THRUST BLOCKS AND RODDING AS REQUIRED.
- 6. NEW WATER MAIN SHALL NOT BE CONNECTED TO EXISTING MAIN WITHOUT PRIOR APPROVAL AND COORDINATION WITH TOWN OF CANTON.

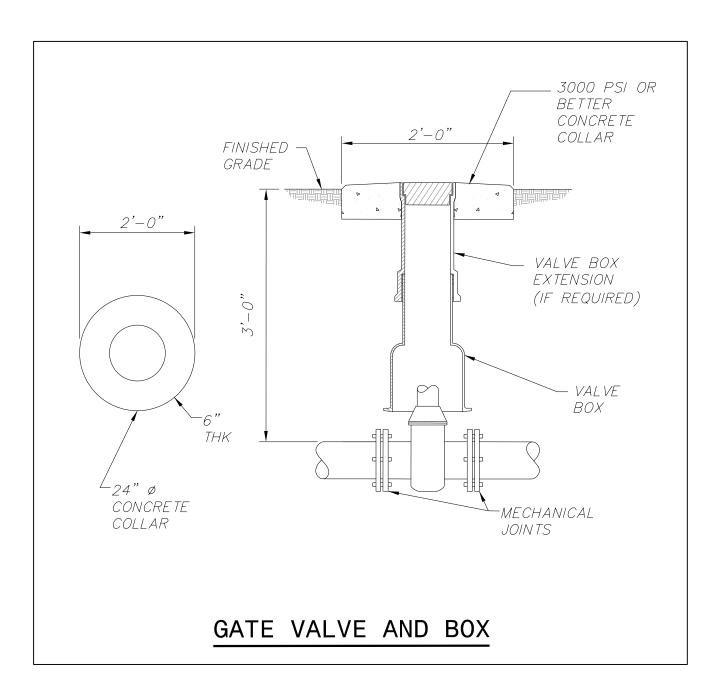
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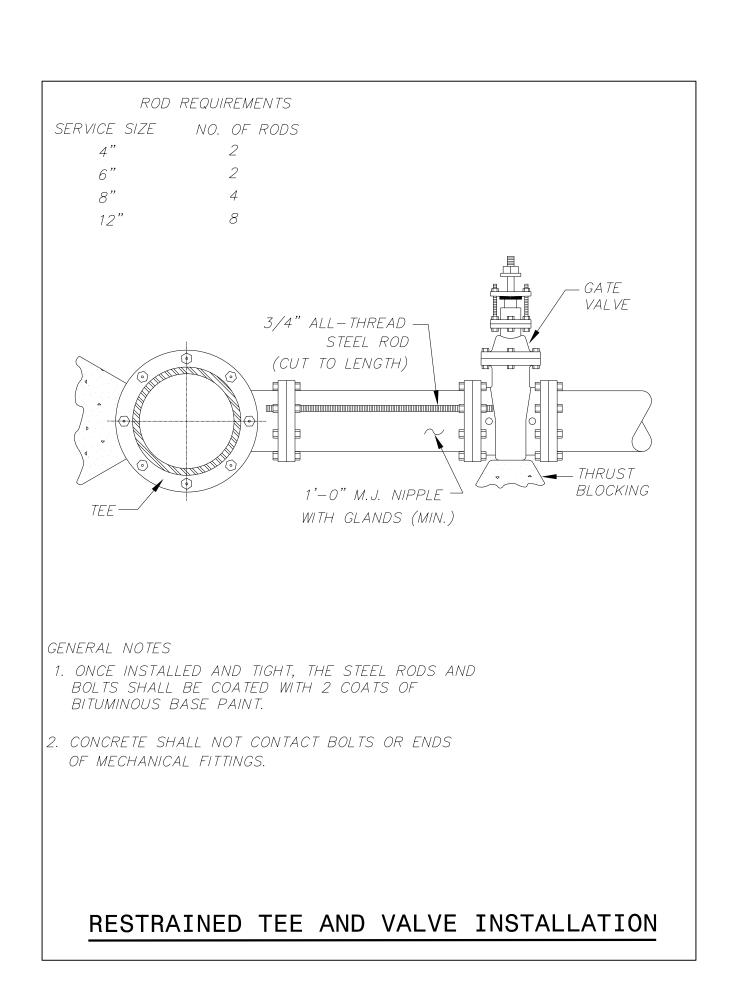


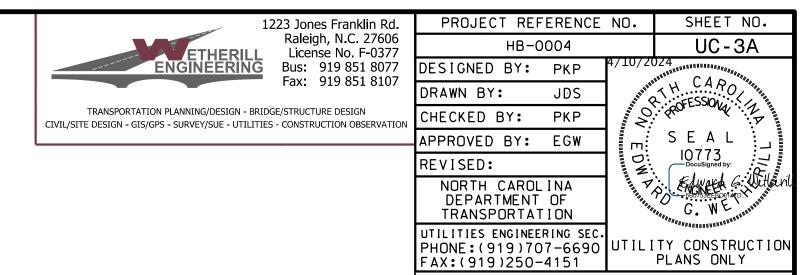
MINIMUM REQUIRED FOR PIPE SAW CUT SAW CUT PROVIDE 12" CABC MIN. TYPICAL RECONSTRUCTION OF NCDOT PAVEMENT



PROJECT TYPICAL DETAILS

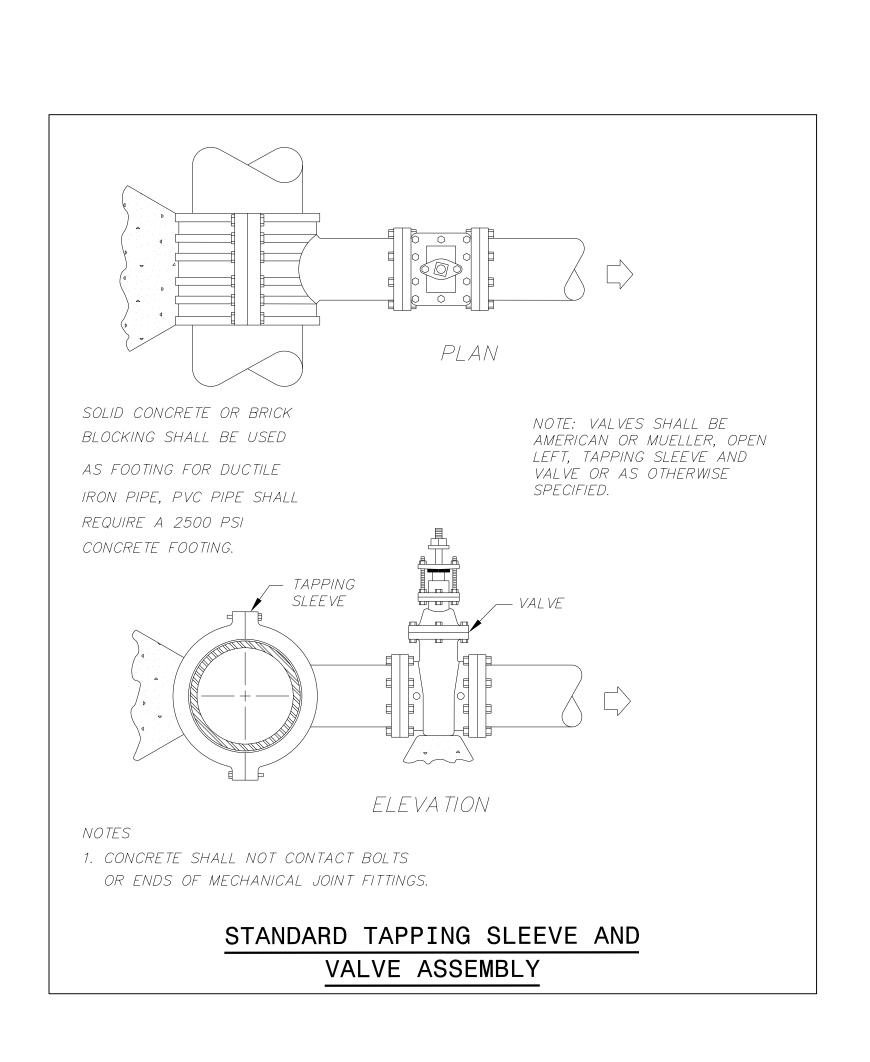






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PROJECT TYPICAL DETAILS



PROJECT REFERENCE NO. SHEET NO.

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DRAWN BY: JDS

CHECKED BY: PKP

APPROVED BY: EGW

REVISED:

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PROJECT REFERENCE NO. SHEET NO.

SHEET NO.

HB-0004

UC-3B

4/10/2024

LICENSED:

APPROVED BY: PKP

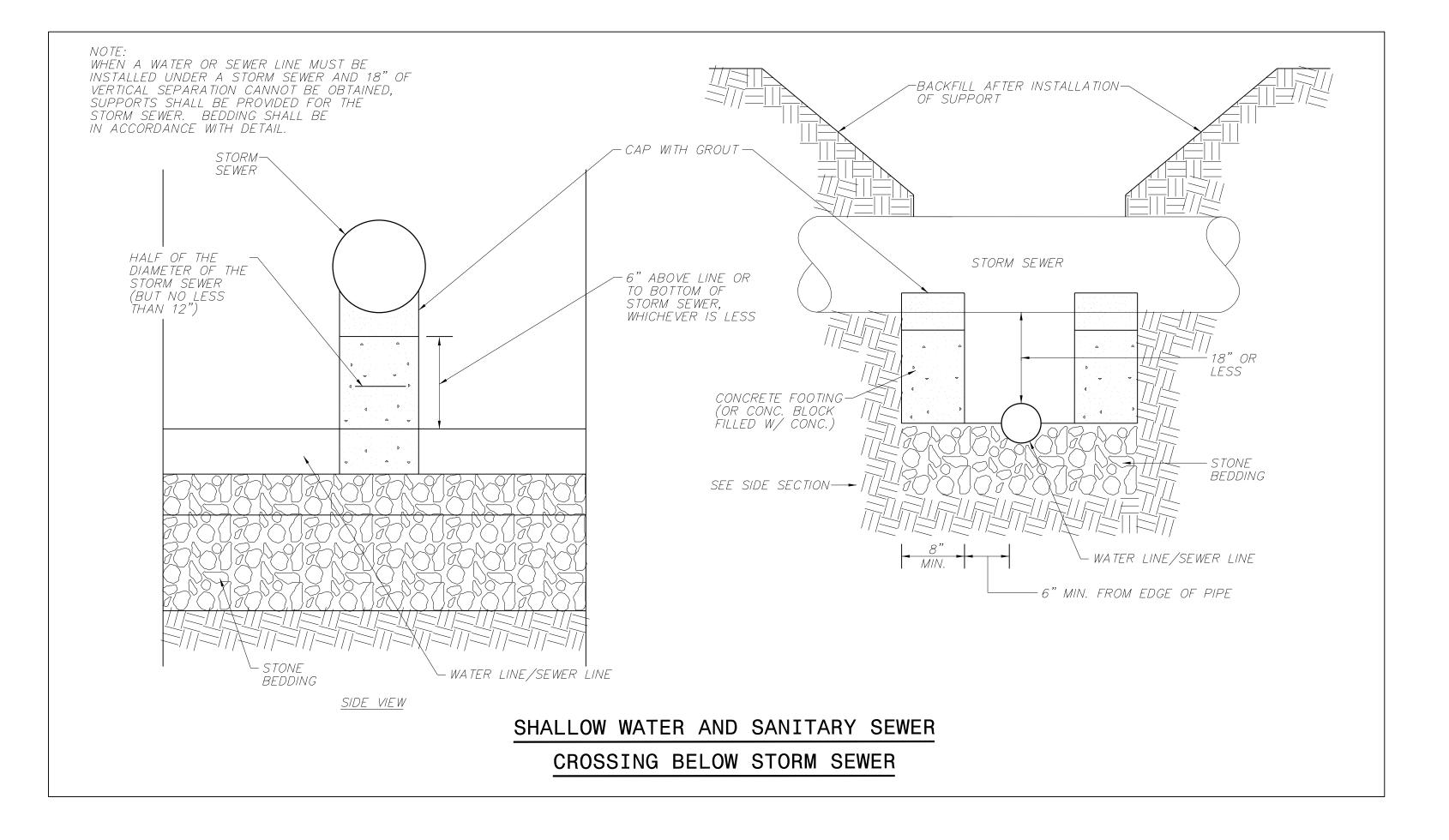
APPROVED BY: EGW

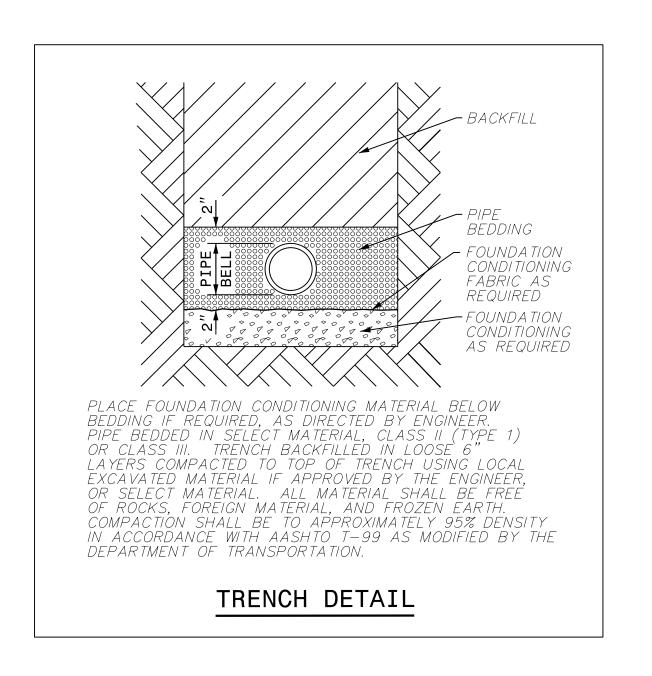
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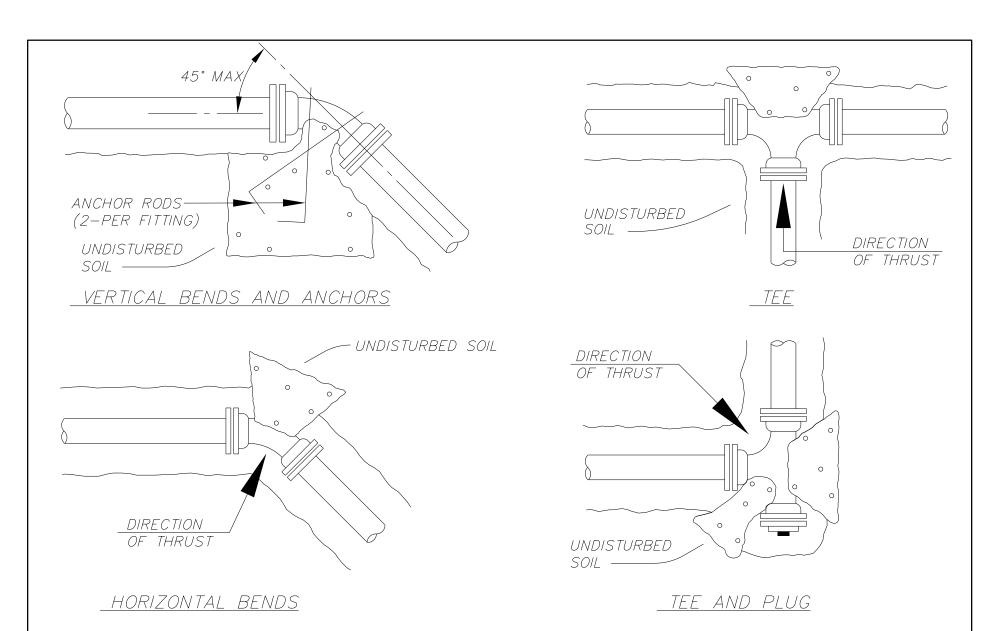
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CONC	ONCRETE THRUST BLOCKING SCHEDULE					CONCRETE SCHEDULE VERTICAL BENDS			ANCHOR ROD SIZE	
FITTING	BEARING AREA IN SQUARE FEET				MIN.	MIN. CU. YARDS CONCRETE			FOR VERTICAL	
SIZE	TEE/PLUG	90°	45°	22-1/2°	11-1/4°	90°	45°	22-1/2°	11-1/2°	BEND AND ANCHORS
4"	1	2	1	1	1	1	1	1	1	1/2"
6"	3	3	2	1	1	1	1	1	1	
8"	4	6	3	2	1	2	2	1	1	3/4"
10"	7	9	5	3	2	3	3	2	1	
12"	9	12	7	4	2	5	3	2	1	7/8"
14"	12	17	9	5	3	6	4	3	2	
16"	16	22	12	6	3	8	6	3	2	
18"	20	27	15	8	4	10	7	4	2	
20"	24	34	18	10	5	12	9	5	3	
24"	34	48	26	14	7	17	12	7	4	1-1/8"
30"	53	75	41	21	11	27	19	10	5	
36"	77	108	59	30	15	38	27	15	8	1-3/8"

NOTES:

- 1. MINIMUM BEARING AREA (IN SQUARE FEET) AGAINST UNDISTURBED TRENCH WALL OF SAND.
- 2. AREAS SHOWN ARE FOR 150 PSI TEST PRESSURE. IF TEST PRESSURE IS OTHER THAN 150 PSI, ADJUST AREA OF REACTION BACKING IN DIRECT PROPORTION.

 3. OTHER SOIL CONDITIONS CEMENTED SAND OR HARDPAN MULTIPLY ABOVE BY 0.5
- GRAVEL OR HARD DRY CLAY MULTIPLY ABOVE BY 0.7
 SOFT CLAY MULTIPLY ABOVE BY 2.0
 MUCK: SECURE ALL FITTINGS WITH APPROVED HARNESS OR TIE ROD CLAMPS, WITH
 CONCRETE REACTION BACKING THE SAME AS LISTED FOR SAND CONDITIONS.

THRUST BLOCKING AND ANCHORING

4/4/2024 ...\HBQQQ4_ut_UC_notes-deta1ls.dgn

