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09/08/2019

TIP PROJECT: B-5765

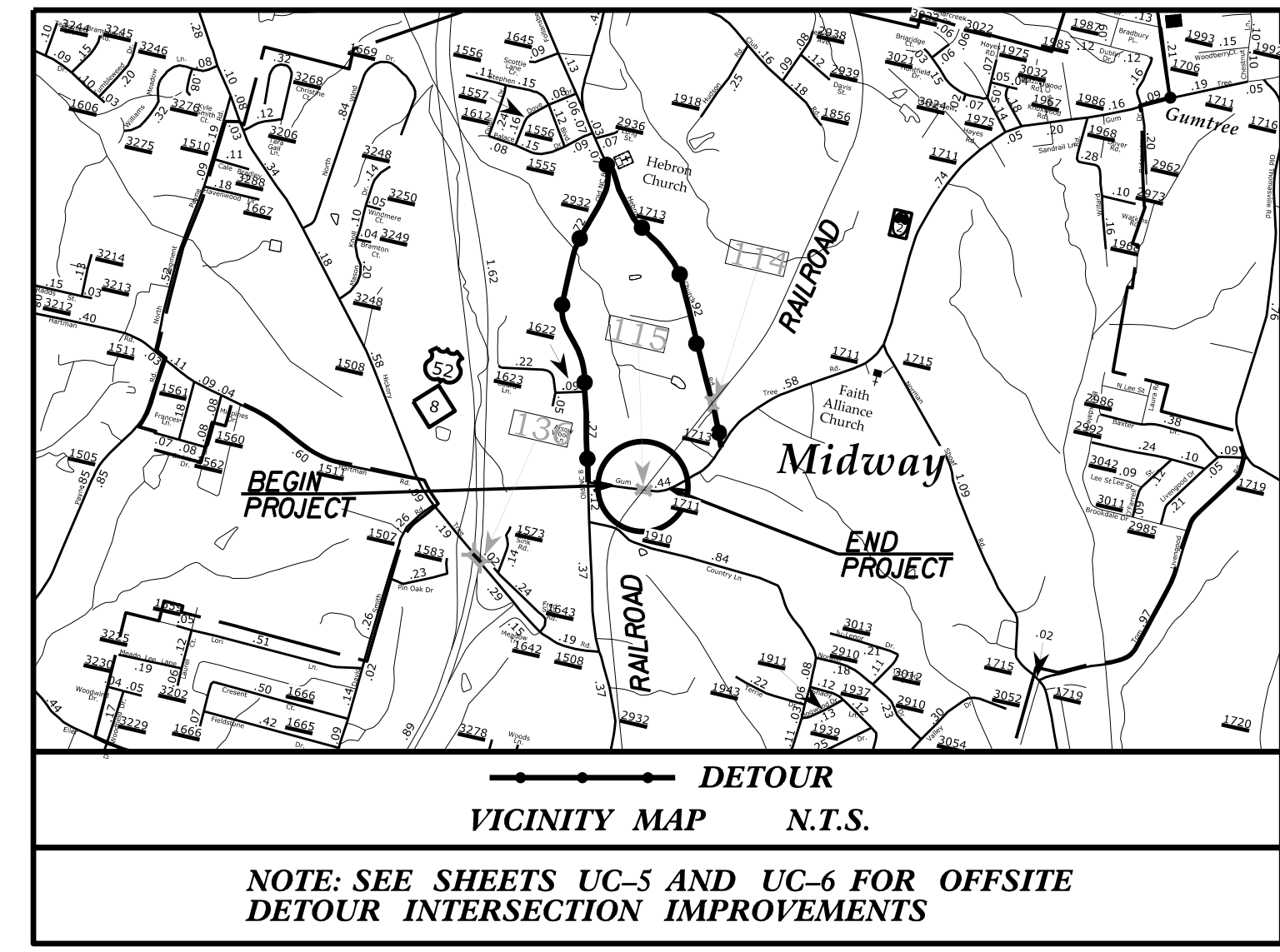
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-5765	UC-1

UTILITY CONSTRUCTION PLANS DAVIDSON COUNTY

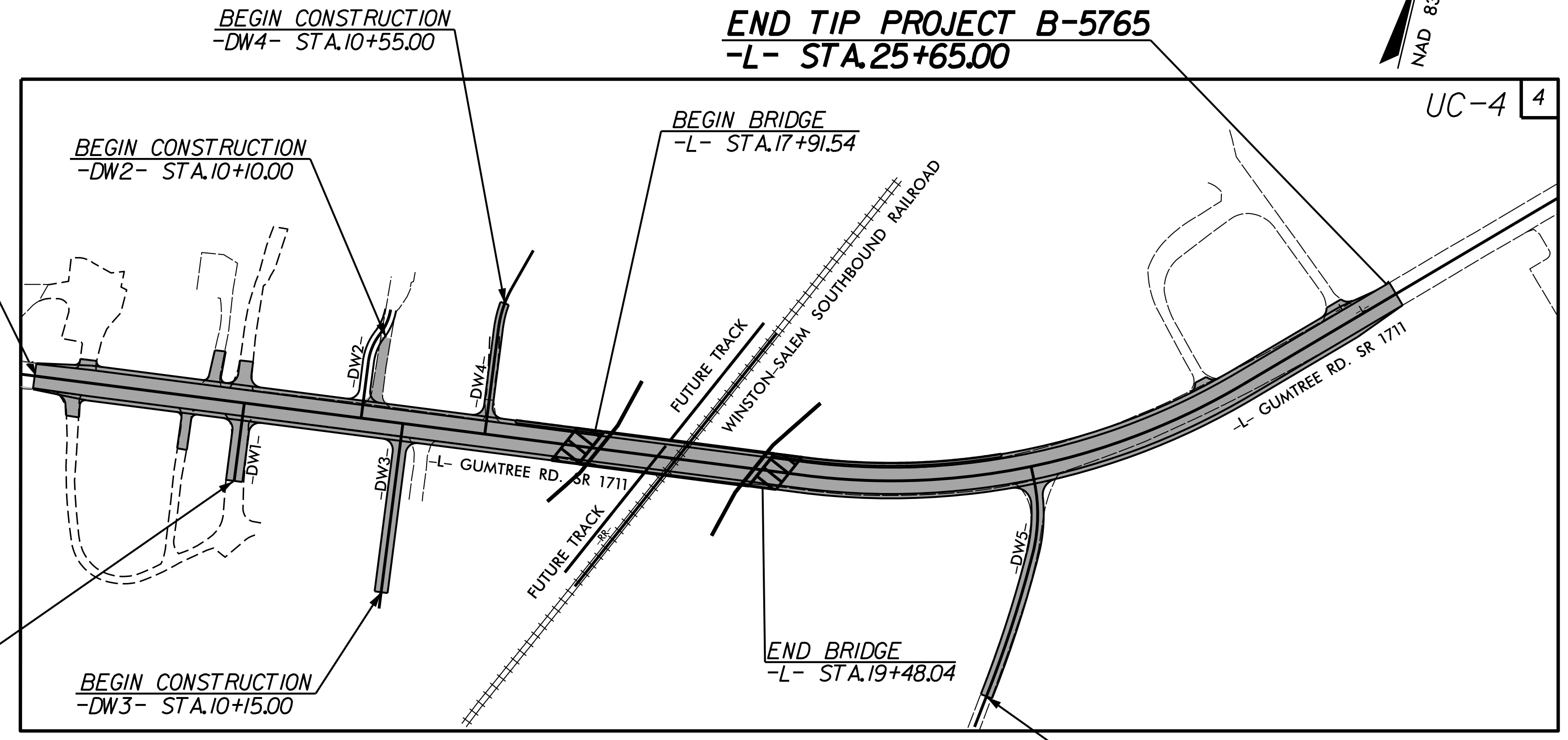
LOCATION: REPLACE BRIDGE NO. 115 ON SR 1711 (GUMTREE ROAD)
OVER WINSTON-SALEM SOUTHBOUND RAILROAD

TYPE OF WORK: UTILITY CONSTRUCTION



BEGIN TIP PROJECT B-5765
-L- STA.12+80.00

END TIP PROJECT B-5765
-L- STA.25+65.00



UC-4 4

BEGIN CONSTRUCTION
-DW1- STA.10+00.00

BEGIN CONSTRUCTION
-DW3- STA.10+15.00

BEGIN CONSTRUCTION
-DW4- STA.10+55.00

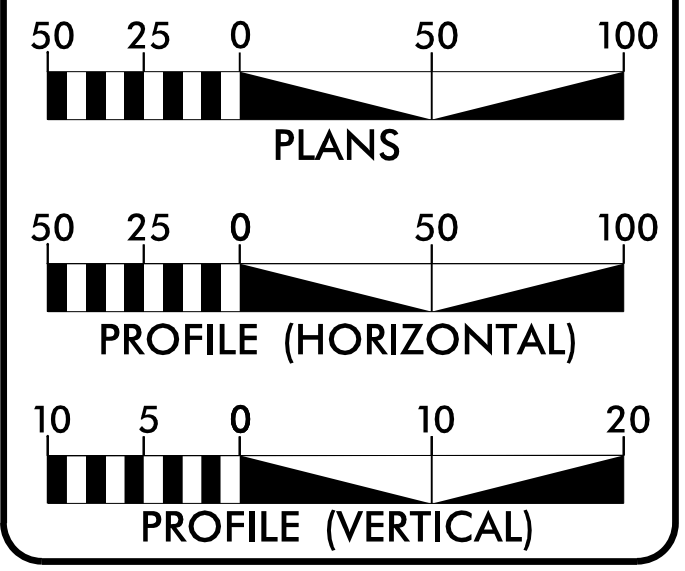
BEGIN BRIDGE
-L- STA.17+91.54

END BRIDGE
-L- STA.19+48.04

BEGIN CONSTRUCTION
-DW5- STA.10+80.00

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GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A	DETAILS
UC-4 THRU UC-6	UTILITY CONSTRUCTION SHEETS
UC-7 THRU UC-8	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

- A) WATER - DAVIDSON WATER, INC.
- B) SEWER - N/A

PREPARED IN THE OFFICE OF:
DAVIS • MARTIN • POWELL
ENGINEERS & SURVEYORS

6415 OLD PLANK RD., HIGH POINT, NC 27265
PHONE: (336)886-4821 FAX: (336)886-4438
WWW.DMP-INC.COM LICENSE: F-0245

- Andy Larrick, P.E. CONSULTANT CONTACT #1
- Steve McKee, P.E. CONSULTANT CONTACT #2
- Ralph Lowe CONSULTANT CONTACT #3

SEAL

3/4/2022

**DIVISION OF HIGHWAYS
UTILITIES UNIT**
1555 MAIL SERVICE CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

- Amy York CENTRAL UTILITIES MANAGER
- Ali Kouchehi, P.E. REGIONAL UTILITIES ENGINEER
- Jon Loughry SENIOR UTILITIES ENGINEER
- Dayton Martin REGIONAL UTILITY COORDINATOR
- Jon Gaillard UTILITY COORDINATOR

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$
\$\$\$\$\$ USER \$\$\$\$\$\$

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
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)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

NOTE
PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Utility Pole	
Utility Pole with Base	
H-Frame Pole	
Power Transmission Line Tower	
Water Manhole	
Power Manhole	
Telephone Manhole	
Sanitary Sewer Manhole	
Hand Hole for Cable	
Power Transformer	
Telephone Pedestal	
CATV Pedestal	
Gas Valve	
Gas Meter	
Located Miscellaneous Utility Object	
Abandoned According to Utility Records	
End of Information	

*Underground Power Line	
*Underground Telephone Cable	
*Underground Telephone Conduit	
*Underground Fiber Optics Telephone Cable	
*Underground TV Cable	
*Underground Fiber Optics TV Cable	
*Underground Gas Pipeline	
Aboveground Gas Pipeline	
*Underground Water Line	
Aboveground Water Line	
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	
*Underground SS Forced Main Line	
Underground Unknown Utility Line	
SUE Test Hole	
Water Meter	
Water Valve	
Fire Hydrant	
Sanitary Sewer Cleanout	

*For Existing Utilities
Utility Line Drawn from Record (Type as Shown)
Designated Utility Line (Type as Shown)

5/14/99
REV: 2/1/2012

5/14/2022

REVISIONS

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED WATER UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
2. THE EXISTING WATER UTILITIES BELONG TO DAVIDSON WATER, INC.
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 AND DAVIDSON WATER, INC.
4. THE UTILITY OWNERS OWN 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 OWNERS ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNERS 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 OWNERS' REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNERS 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, FOR PROPOSED 6" THRU 12" DIAMETER WATER MAINS, PIPE SHALL BE DUCTILE IRON, PC 350, AND RESTRAINED JOINT WHERE INDICATED ON PROFILES.
2. UNLESS OTHERWISE NOTED, FOR PROPOSED 2" AND 3" DIAMETER WATER MAINS, PIPE SHALL BE SDR 21 PVC PIPE, CONFORMING TO ASTM D2241, WITH A MINIMUM PRESSURE RATING OF 200 PSI.
3. FOR WATER SERVICE LATERALS, PIPE SHALL BE TYPE K COPPER, CONFORMING TO ASTM B88.
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. VALVES SHALL BE MUELLER, M&H, AMERICAN DARLING, KENNEDY, OR APPROVED EQUAL.
5. FIRE HYDRANTS SHALL MEET NCDOT STANDARD SPECS. HYDRANTS SHALL BE MUELLER SUPER CENTURION 200, M&H #129, AMERICAN DARLING MARK 731, KENNEDY K81A, OR APPROVED EQUAL.
6. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER CONCERNING THE TIMING AND SCHEDULE OF REQUIRED SHUT-DOWNS OF ANY EXISTING WATER MAINS.

LIST OF STANDARD DRAWINGS

- 1515.01 WATER METER
- 1515.02 FIRE HYDRANT

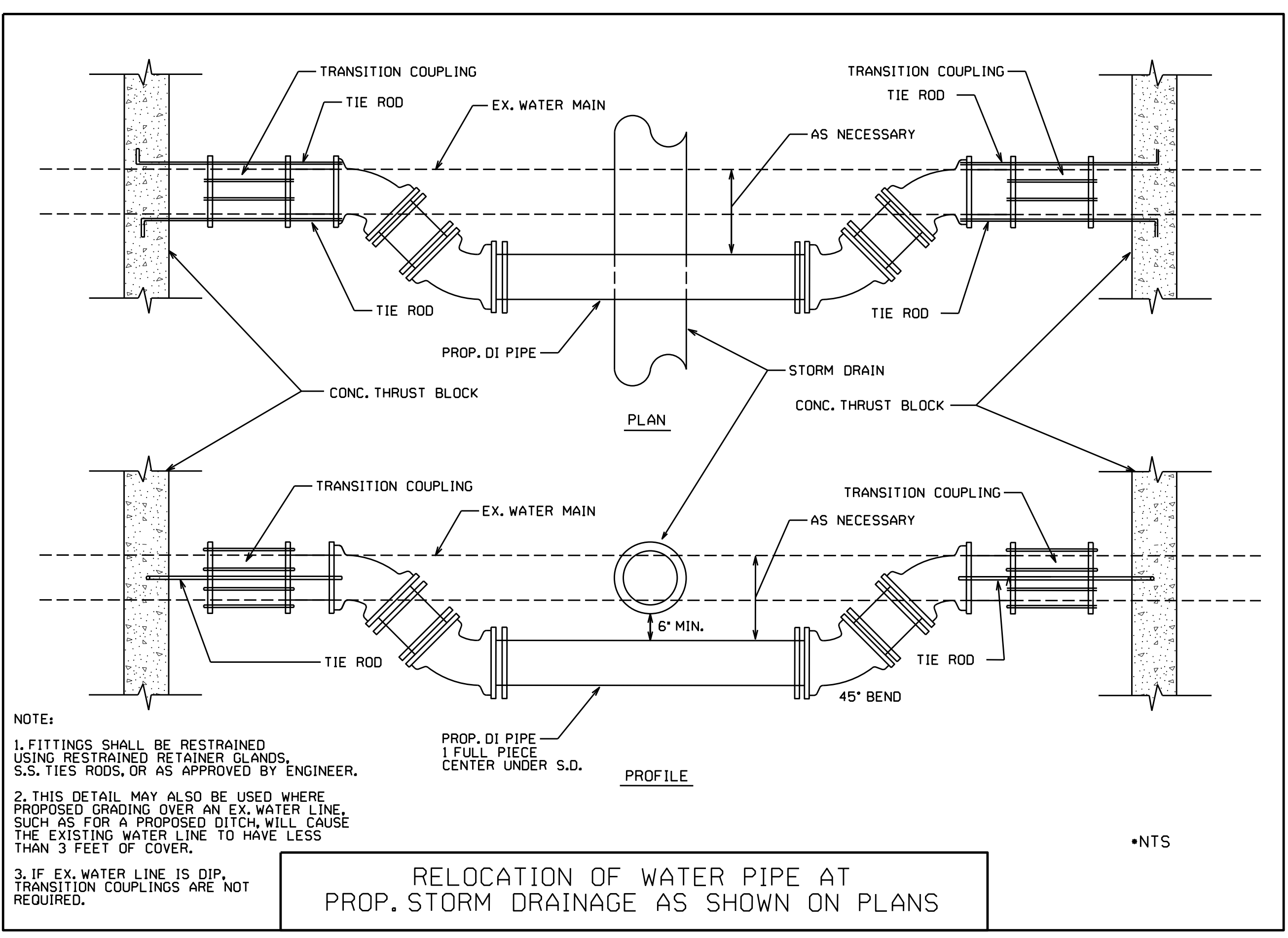
PROJECT REFERENCE NO. B-5765	SHEET NO. UC-3
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 3/4/2022	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

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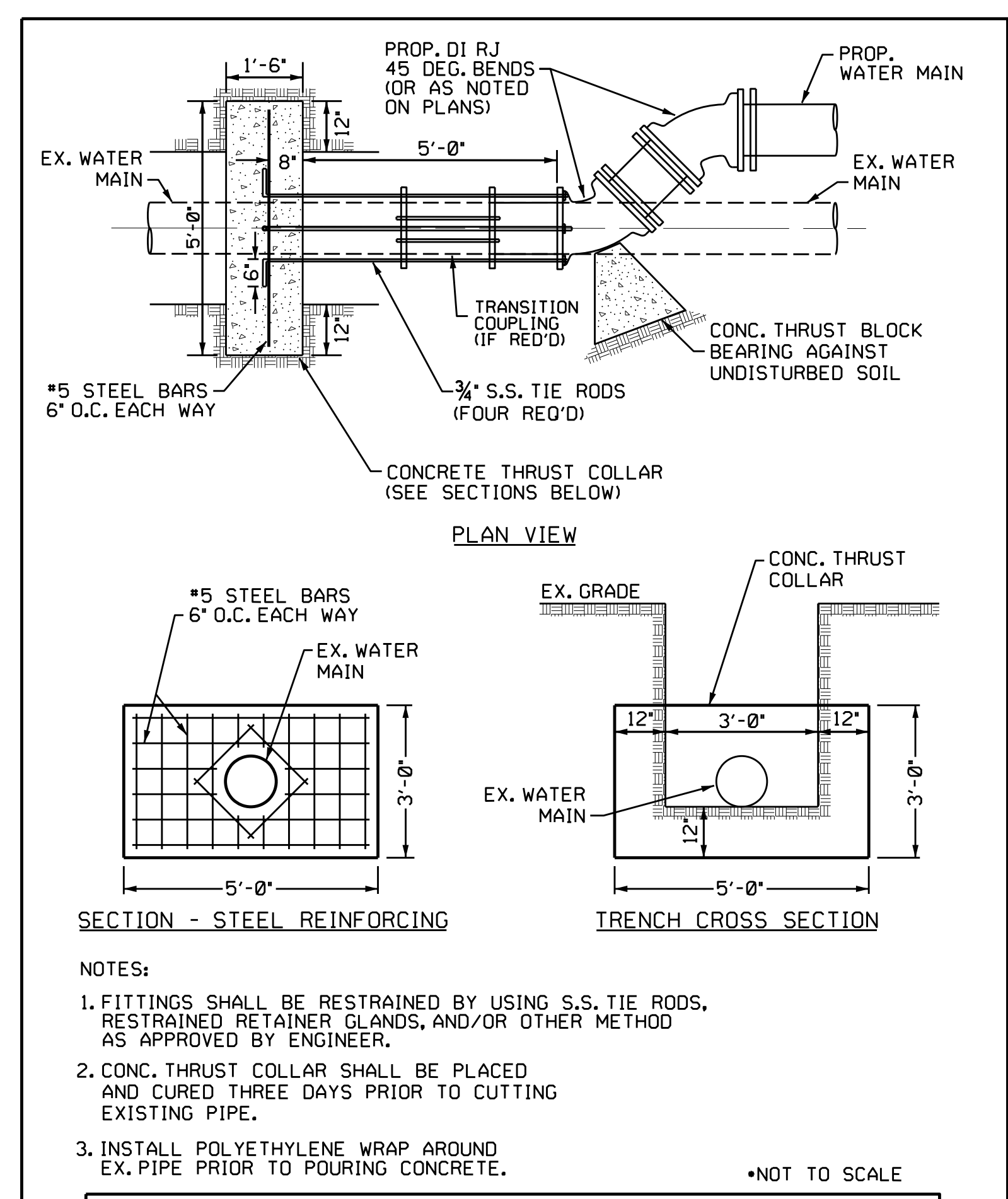
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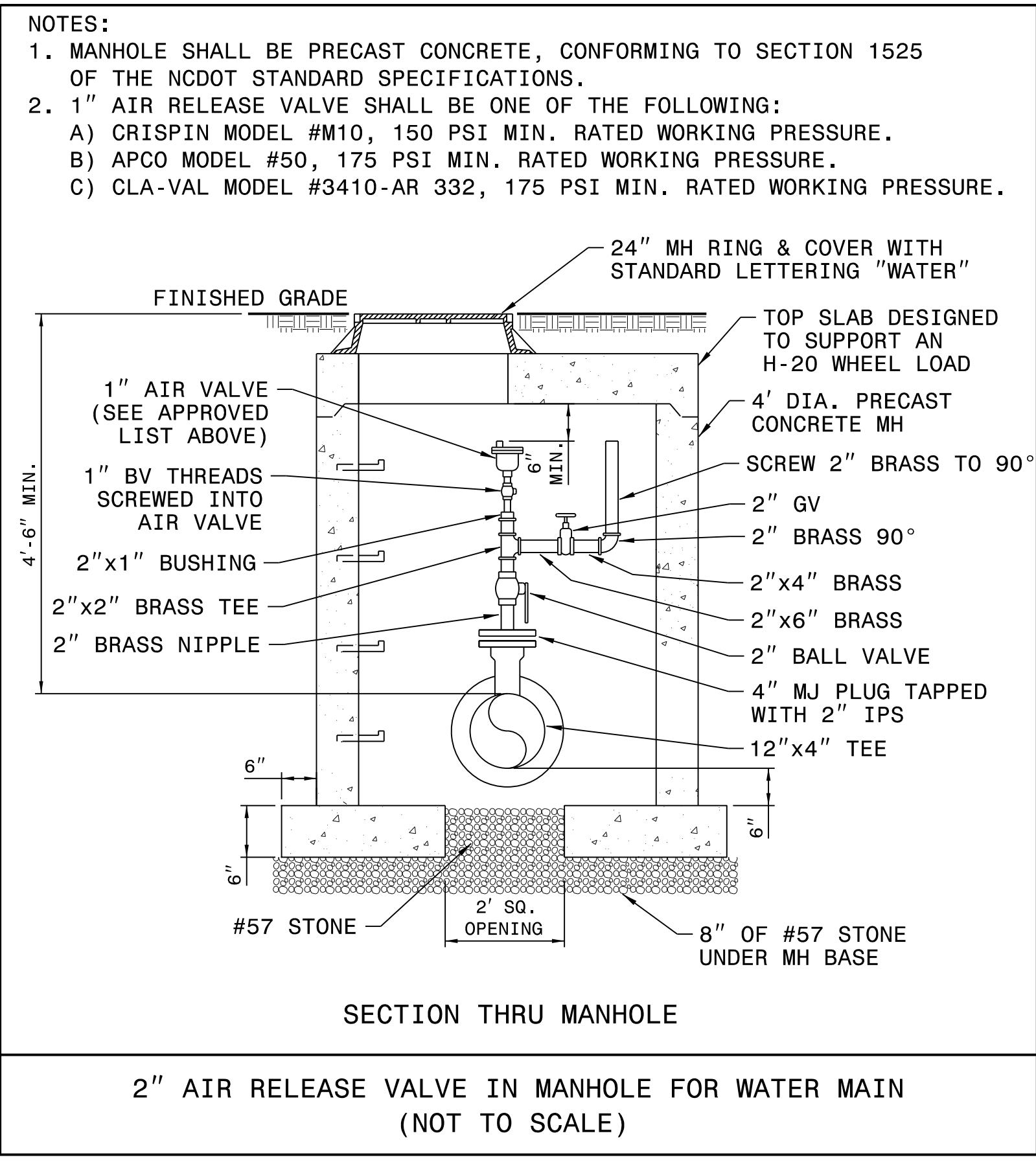
- NOTE:
- FITTINGS SHALL BE RESTRAINED USING RESTRAINED RETAINER GLANDS, S.S. TIES RODS, OR AS APPROVED BY ENGINEER.
 - THIS DETAIL MAY ALSO BE USED WHERE PROPOSED GRADING OVER AN EX. WATER LINE, SUCH AS FOR A PROPOSED DITCH, WILL CAUSE THE EXISTING WATER LINE TO HAVE LESS THAN 3 FEET OF COVER.
 - IF EX. WATER LINE IS DIP, TRANSITION COUPLINGS ARE NOT REQUIRED.

RELOCATION OF WATER PIPE AT PROP. STORM DRAINAGE AS SHOWN ON PLANS

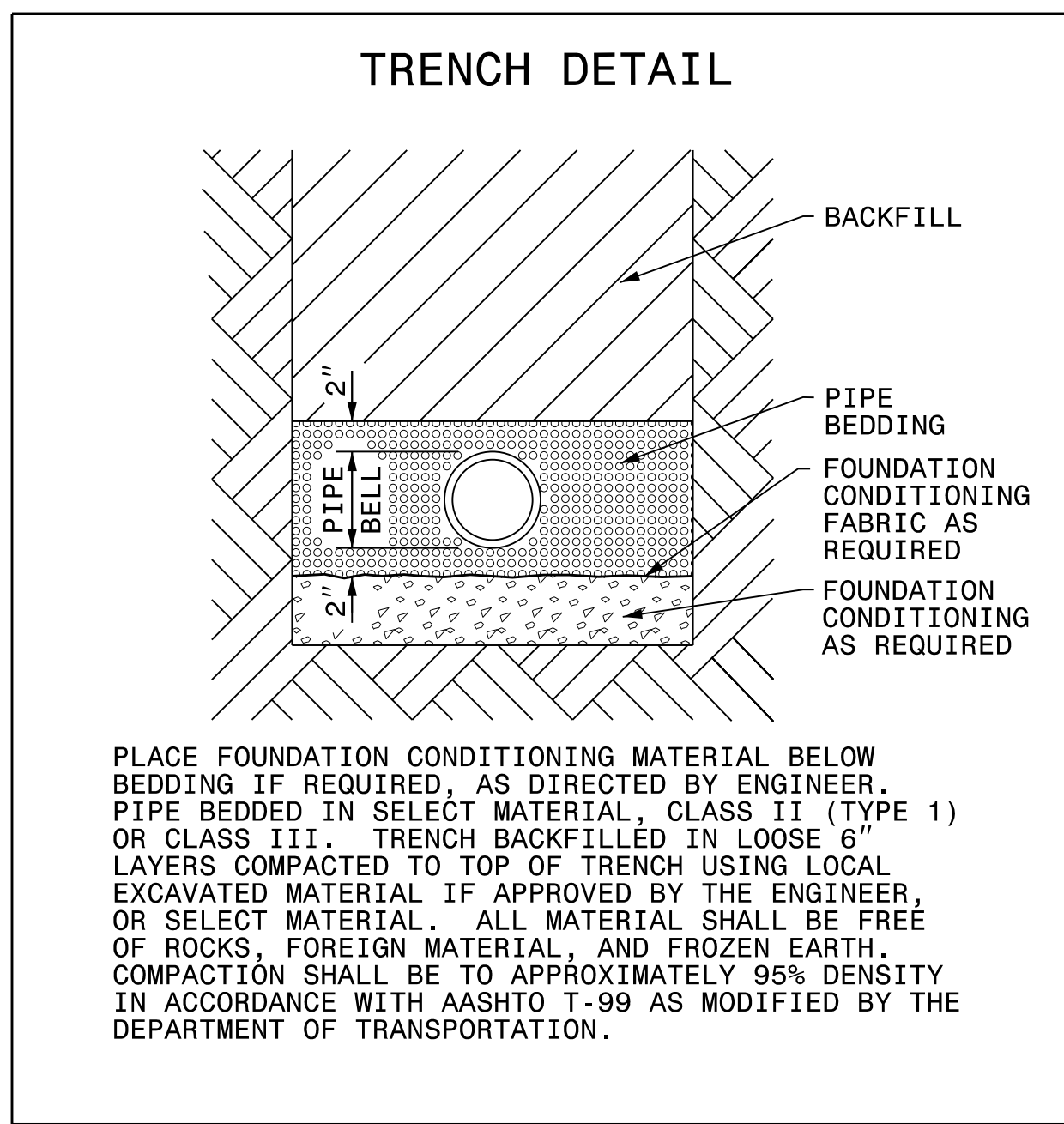


- NOTE:
- FITTINGS SHALL BE RESTRAINED BY USING S.S. TIE RODS, RESTRAINED RETAINER GLANDS, AND/OR OTHER METHOD AS APPROVED BY ENGINEER.
 - CONC. THRUST COLLAR SHALL BE PLACED AND CURED THREE DAYS PRIOR TO CUTTING EXISTING PIPE.
 - INSTALL POLYETHYLENE WRAP AROUND EX. PIPE PRIOR TO POURING CONCRETE.

THRUST RESTRAINT FOR TYING PROPOSED WATER MAIN TO EXISTING WATER MAIN



2" AIR RELEASE VALVE IN MANHOLE FOR WATER MAIN (NOT TO SCALE)



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	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		

REVISIONS

5/21/14/2014

OFFSITE DETOUR IMPROVEMENTS TO THE INTERSECTION OF OLD US 52 AND SR 1713 (HEBRON CHURCH ROAD)



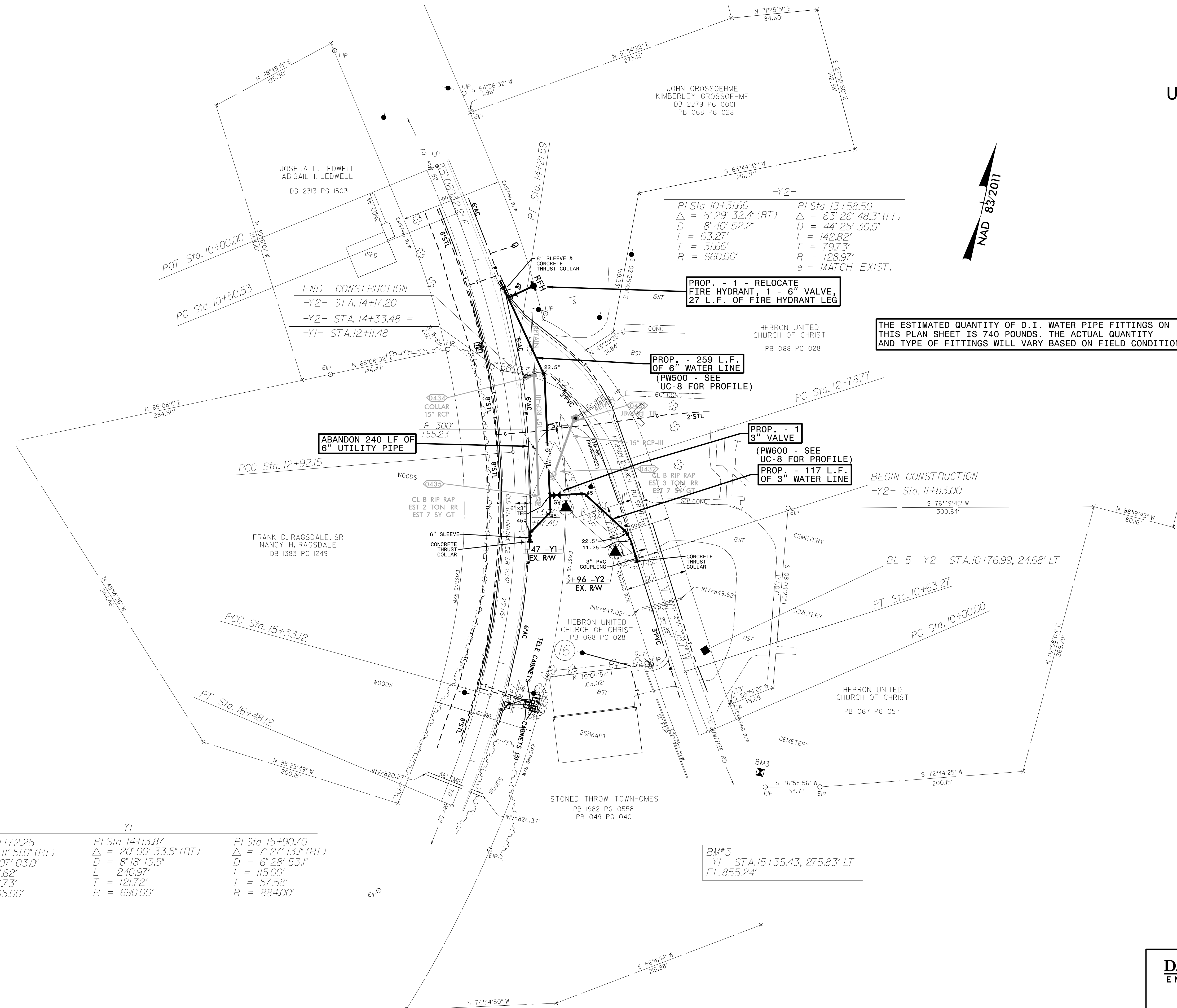
PROJECT REFERENCE NO.	SHEET NO.
B-5765	UC-6
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UTILITY CONSTRUCTION

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REVISIONS

PI Sta 11+72.25 Δ = 17° 11' 51.0" (RT) D = 7° 07' 03.0" L = 241.62' T = 121.73' R = 805.00'	-Y1- PI Sta 14+13.87 Δ = 20° 00' 33.5" (RT) D = 8° 18' 13.5" L = 240.97' T = 121.72' R = 690.00'	PI Sta 15+90.70 Δ = 7° 27' 13.1" (RT) D = 6° 28' 53.1" L = 115.00' T = 57.58' R = 884.00'
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THE ESTIMATED QUANTITY OF D.I. WATER PIPE FITTINGS ON THIS PLAN SHEET IS 740 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PROP. - 1 - RELOCATE FIRE HYDRANT, 1 - 6" VALVE, 27 L.F. OF FIRE HYDRANT LEG

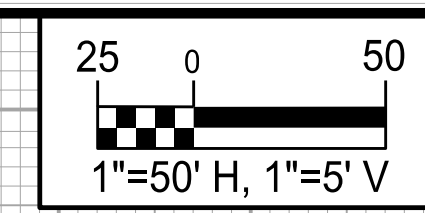
PROP. - 259 L.F. OF 6" WATER LINE (PW500 - SEE UC-8 FOR PROFILE)

PROP. - 1 3" VALVE (PW600 - SEE UC-8 FOR PROFILE)
PROP. - 117 L.F. OF 3" WATER LINE

ABANDON 240 LF OF 6" UTILITY PIPE

BM*3
-Y1- STA. 15+35.43, 275.83' LT
EL. 855.24'

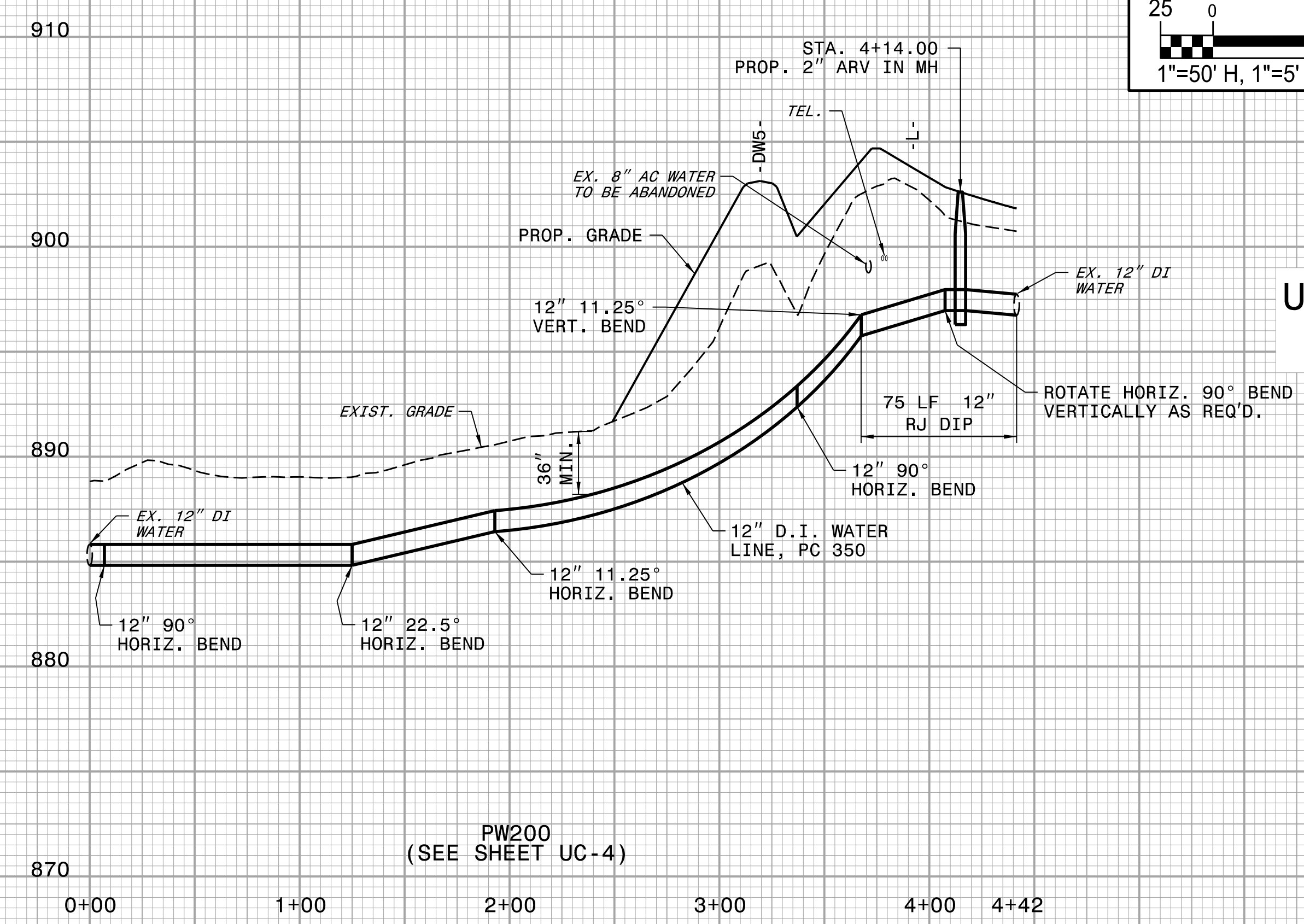
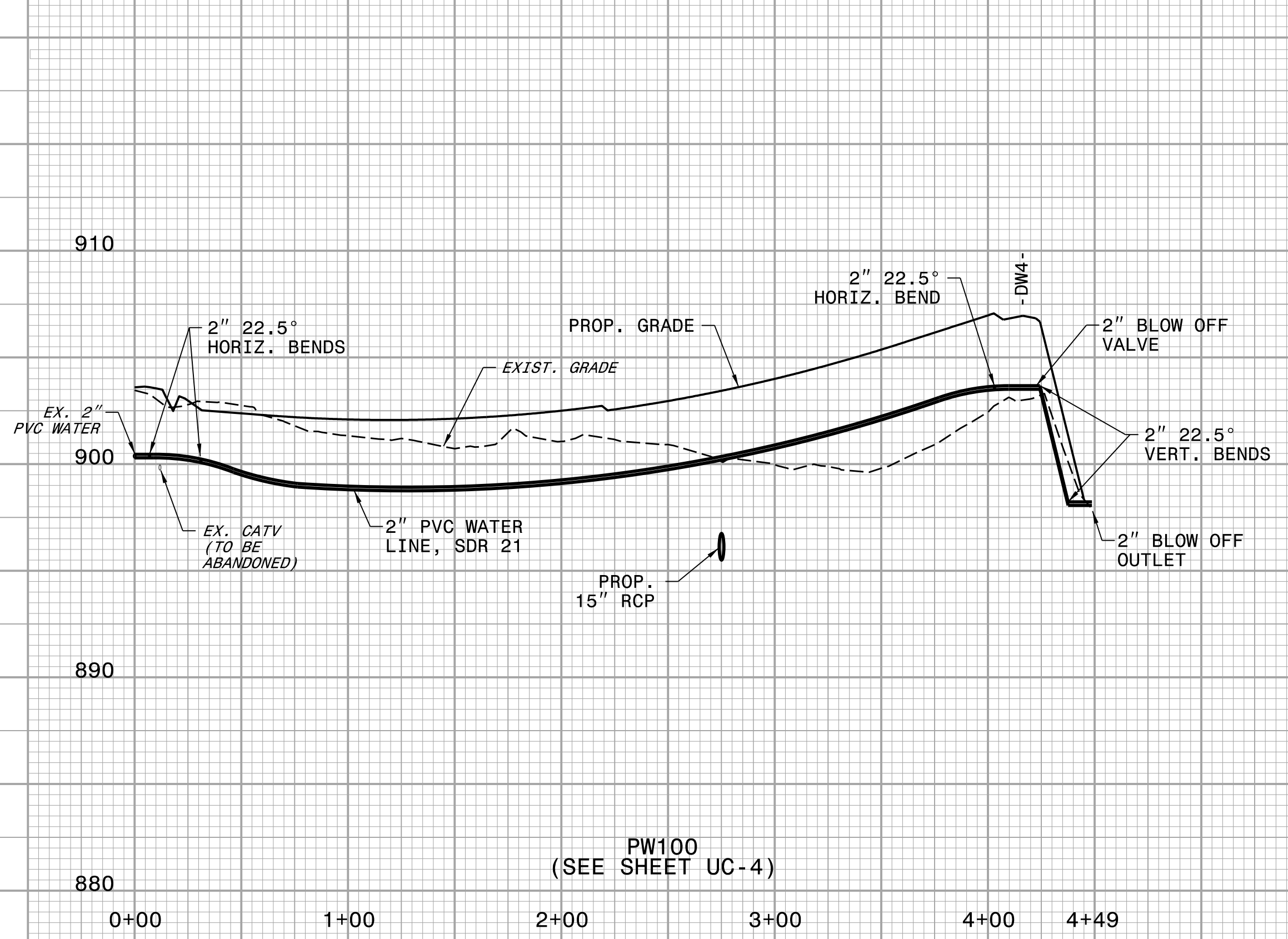
5/14/99



PROJECT REFERENCE NO.	SHEET NO.
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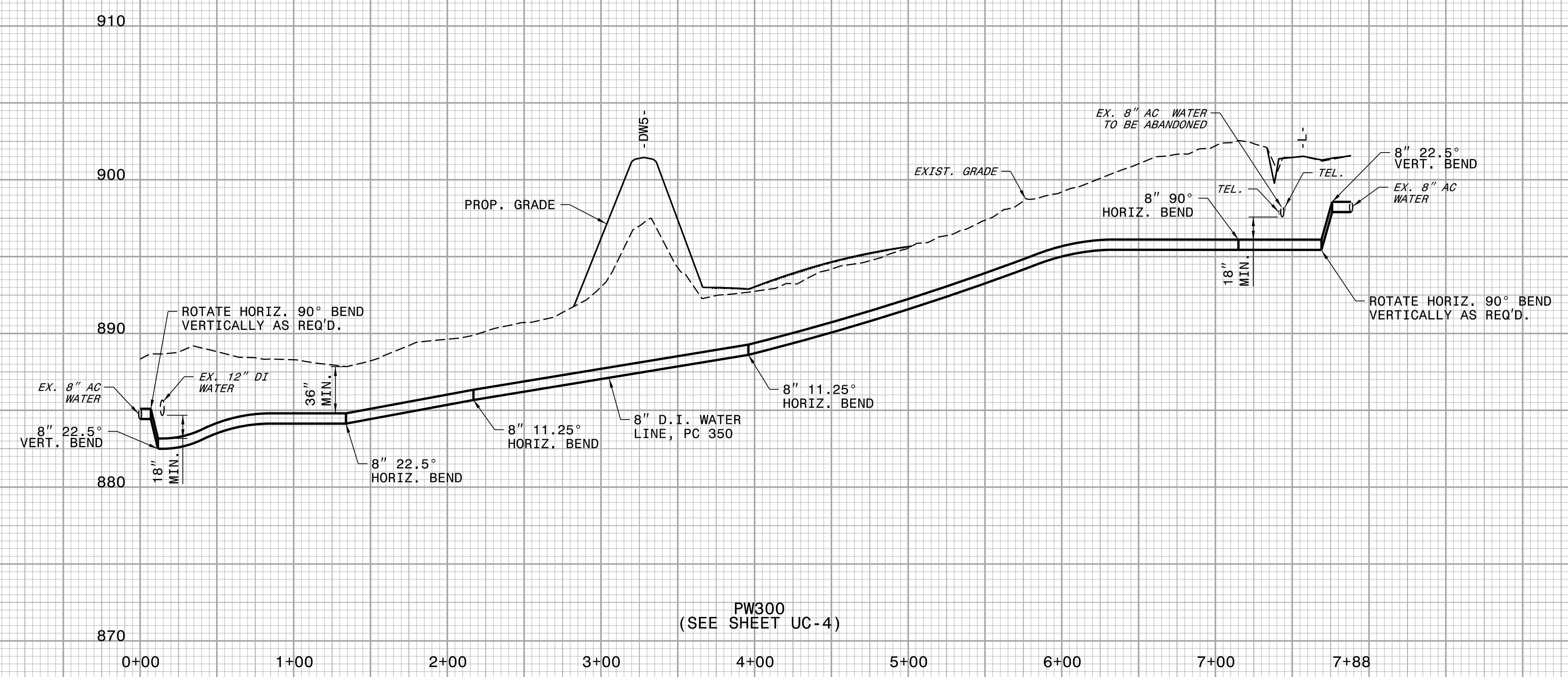
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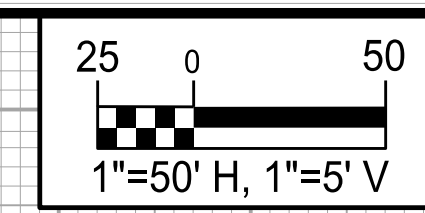
PW100
(SEE SHEET UC-4)

PW200
(SEE SHEET UC-4)



PW300
(SEE SHEET UC-4)

5/14/22



PROJECT REFERENCE NO. B-5765	SHEET NO. UC-8
DESIGNED BY: DMP	
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