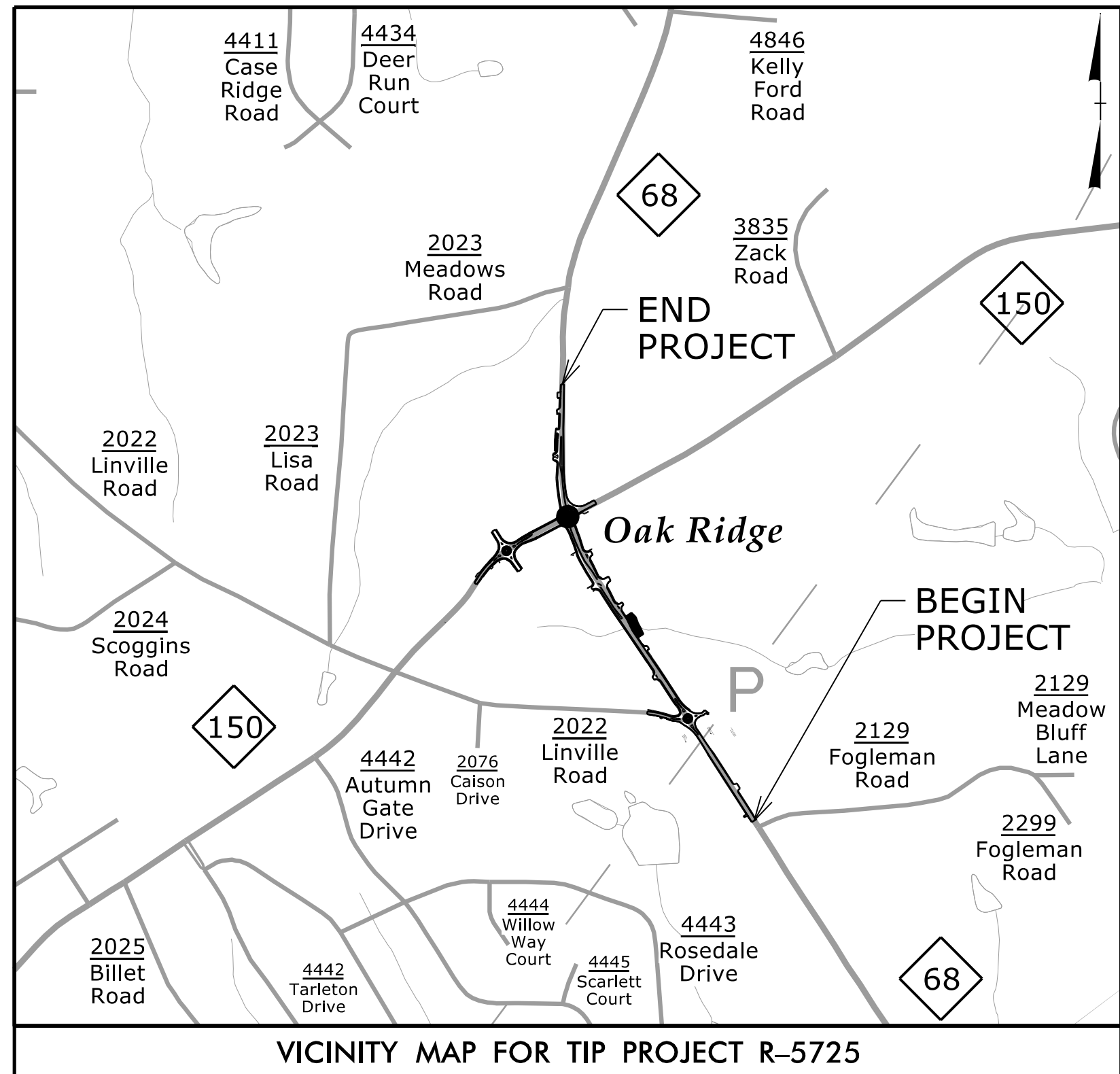


TIP PROJECT: R-5725



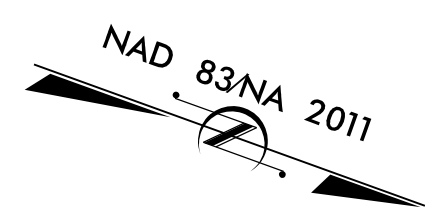
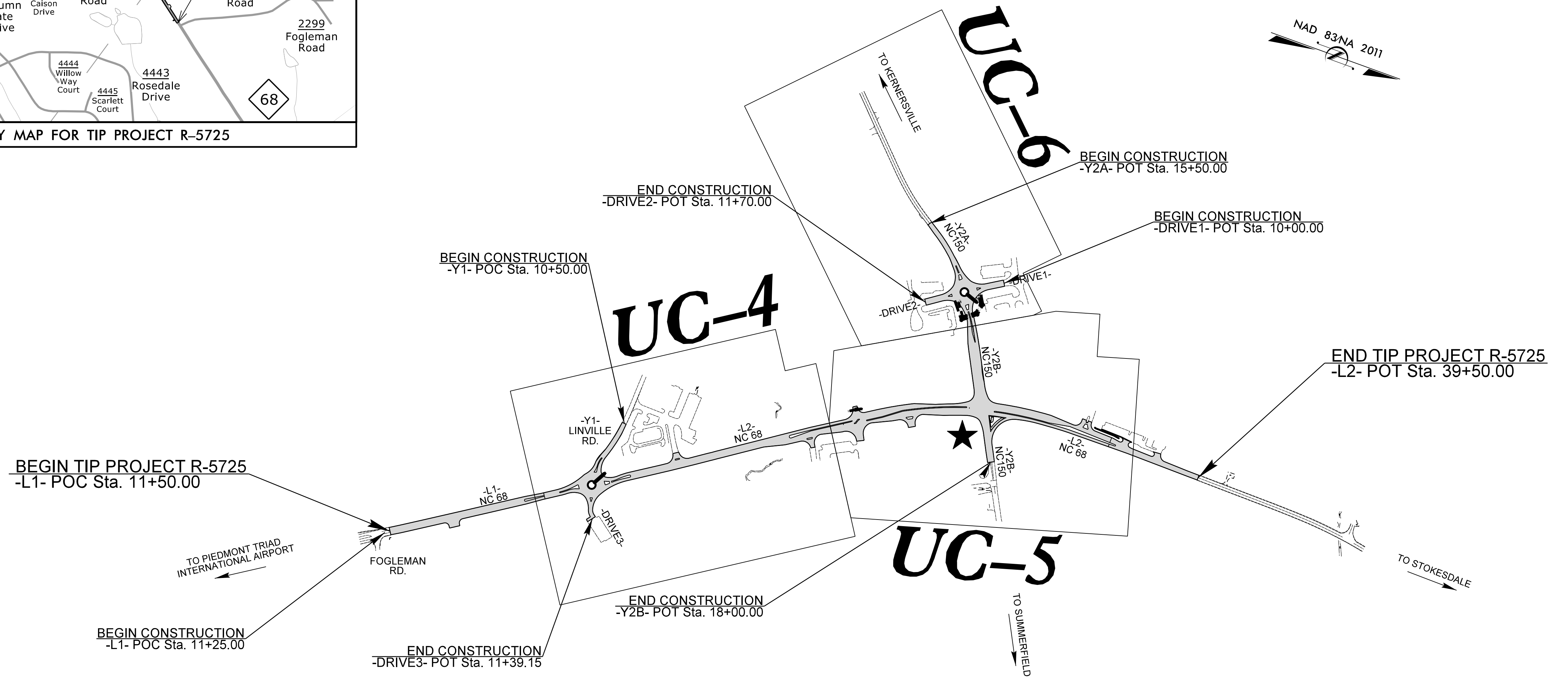
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
R-5725	UC-1

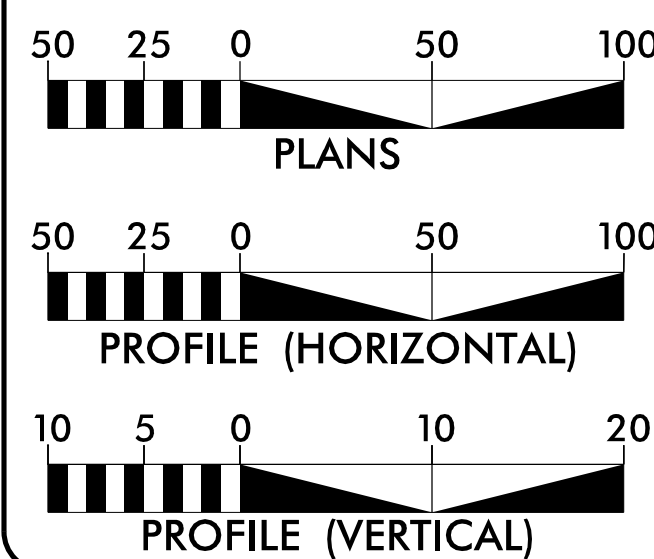
**UTILITY CONSTRUCTION PLANS
GUILFORD COUNTY**

**LOCATION: INTERSECTION IMPROVEMENTS ALONG NC 68
AND NC 150 IN OAK RIDGE**

TYPE OF WORK: WATER AND SEWER RELOCATION



GRAPHIC SCALES



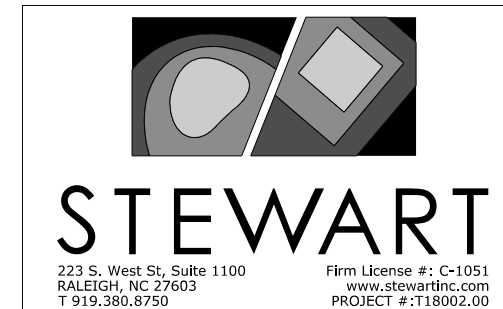
INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A	DETAILS
UC-4 THRU UC-5	UTILITY CONSTRUCTION SHEETS
UC-6	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

- (A) WATER - JPC UTILITIES, LLC
- (B) SEWER - JPC UTILITIES, LLC

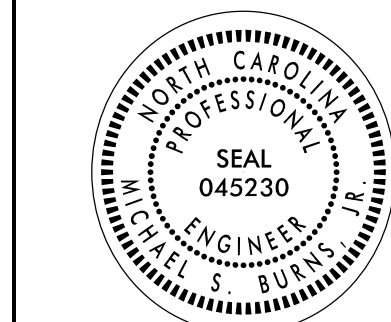
PREPARED IN THE OFFICE OF



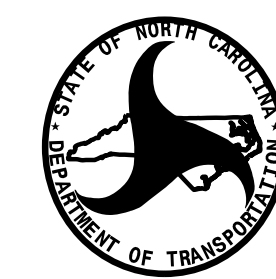
- MICHAEL BURNS, PE CONSULTANT CONTACT #1
- ANDY YOUNG, PE CONSULTANT CONTACT #2
- CONSULTANT CONTACT #3

SEAL

3/17/2023



Decal Signed by:
Michael S. Burns, Jr.



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

- ALI KOUCHEKI, PE UTILITIES REGIONAL ENGINEER
- UTILITIES ENGINEER
- C. DAYTON MARTIN, III UTILITIES REGIONAL COORDINATOR
- UTILITIES COORDINATOR

3/17/2023 U:\Proj\AR5725-ut-fsh_UC01_psh.dgn USER:mrburns

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ 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	

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 Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
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		Fire Hydrant	
Abandoned According to Utility Records		Sanitary Sewer Cleanout	
End of Information			

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

5/14/99
 2/9/2023
 11:55:00 AM
 REV: 2/1/2012

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 2018.

2. THE EXISTING UTILITIES BELONG TO JPC UTILITIES. THE UTILITY OWNER CONTACT IS:

JOHN PHILLIPS
ENGINEER
919-467-9972

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.

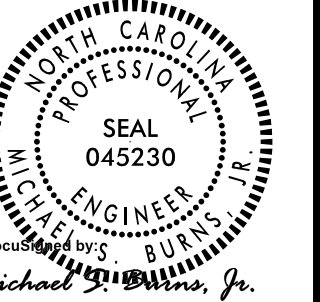
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.

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.

LIST OF STANDARD DRAWINGS

- 1515.01 WATER METER
- 1515.02 FIRE HYDRANT
- 1520.01 SEWER CLEAN OUT

PROJECT REFERENCE NO.	SHEET NO.
R-5725	UC-3
DESIGNED BY: MSB	3/17/2023
DRAWN BY: MSB	
CHECKED BY: APY	
APPROVED BY: APY	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

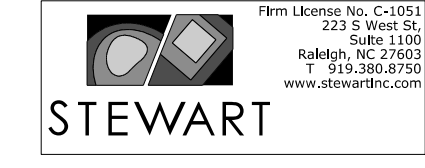


UTILITY CONSTRUCTION

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

PROJECT TYPICAL DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5725	UC-3A
DESIGNED BY: MSB	3/17/2023
DRAWN BY: MSB	
CHECKED BY: APY	
APPROVED BY: APY	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

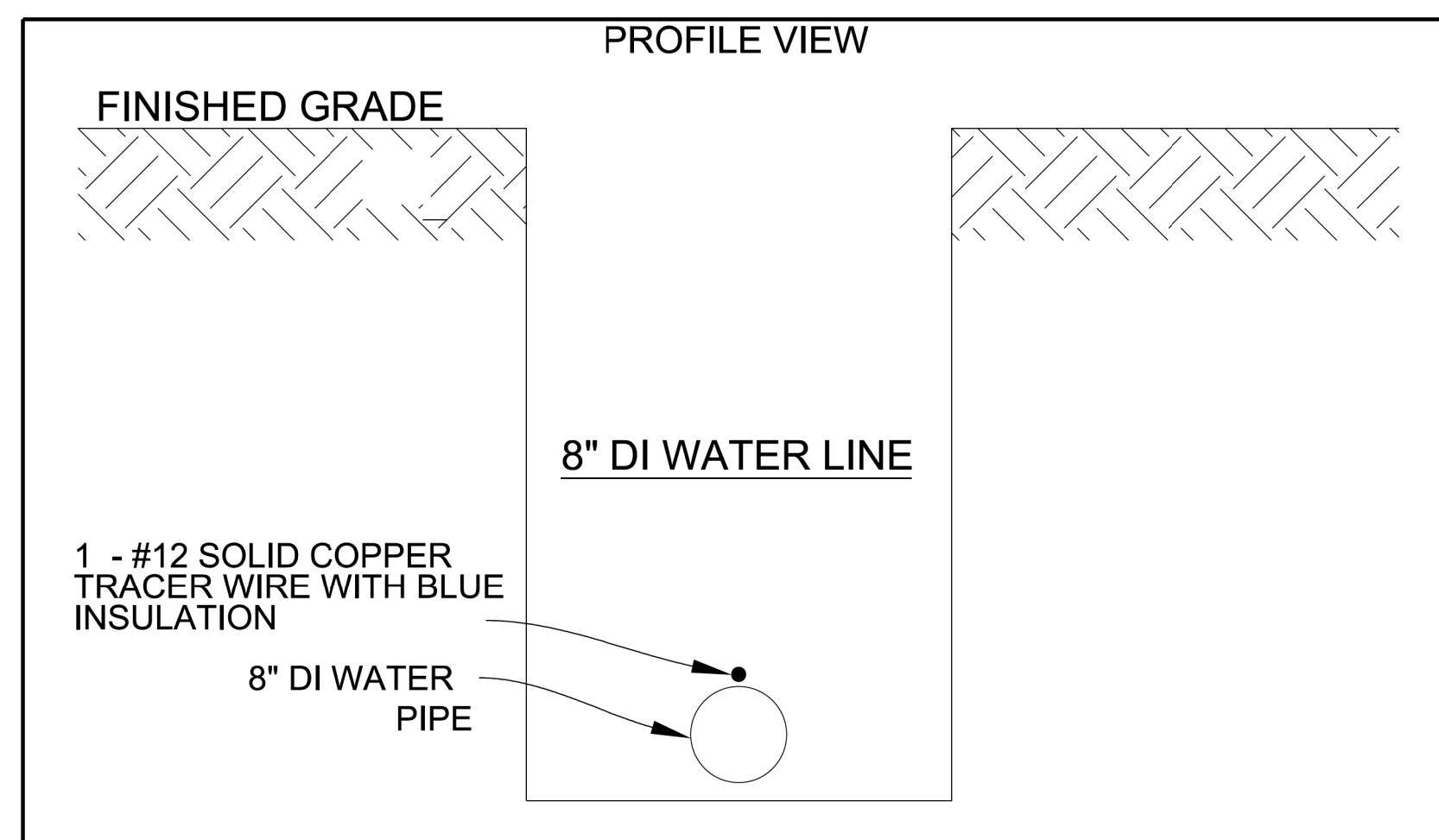


UTILITY CONSTRUCTION PLANS ONLY

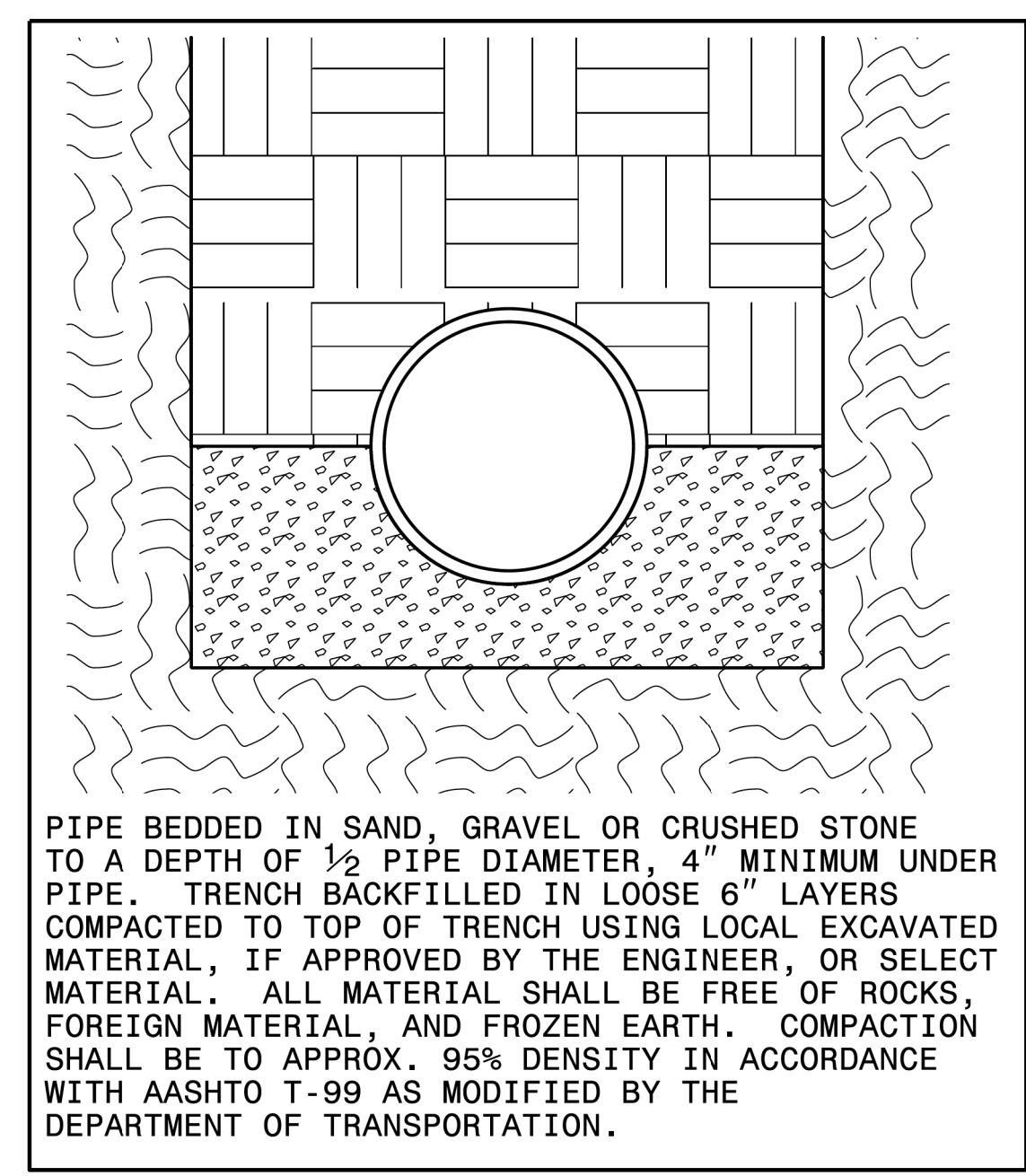
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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		

1 MAXIMUM TRENCH WIDTH AT TOP OF PIPE

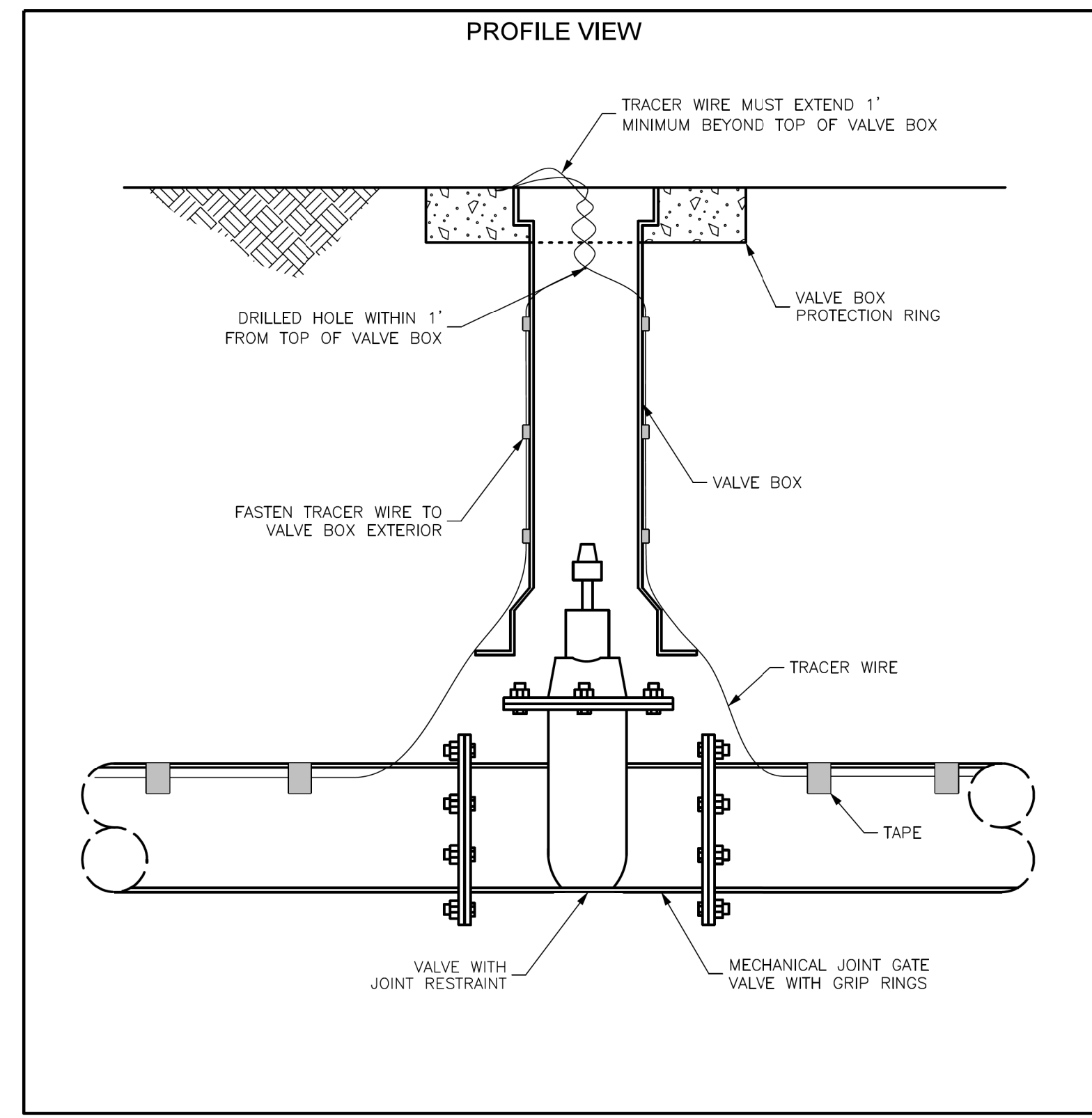


2 TRENCH DETAIL

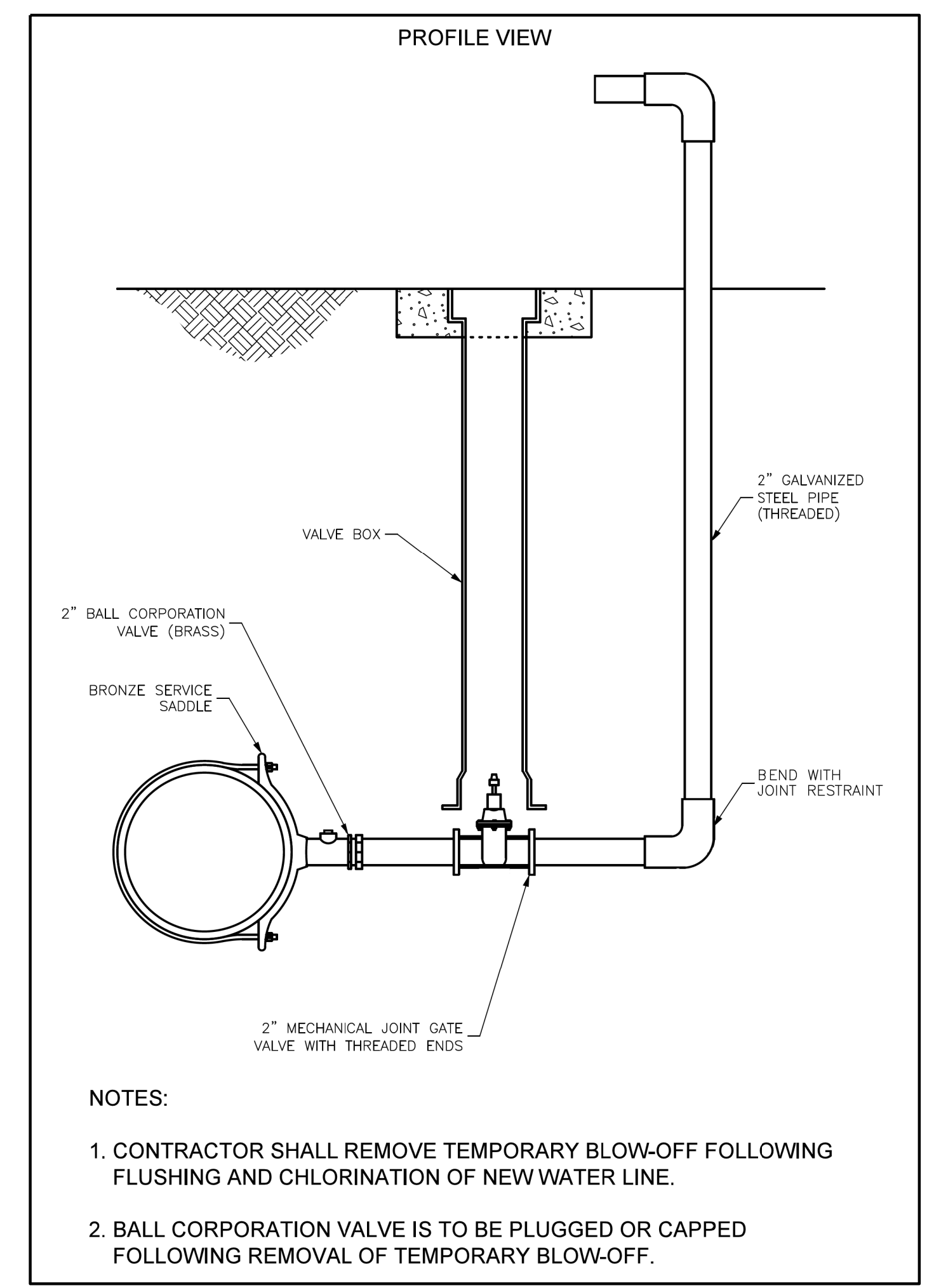


PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO A DEPTH OF 1/2 PIPE DIAMETER, 4" MINIMUM UNDER PIPE. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL, IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

3 PIPE BEDDING DETAIL



4 TRACER WIRE DETAIL



NOTES:
 1. CONTRACTOR SHALL REMOVE TEMPORARY BLOW-OFF FOLLOWING FLUSHING AND CHLORINATION OF NEW WATER LINE.
 2. BALL CORPORATION VALVE IS TO BE PLUGGED OR CAPPED FOLLOWING REMOVAL OF TEMPORARY BLOW-OFF.

5 2" TEMPORARY BLOW OFF DETAIL

5/14/99

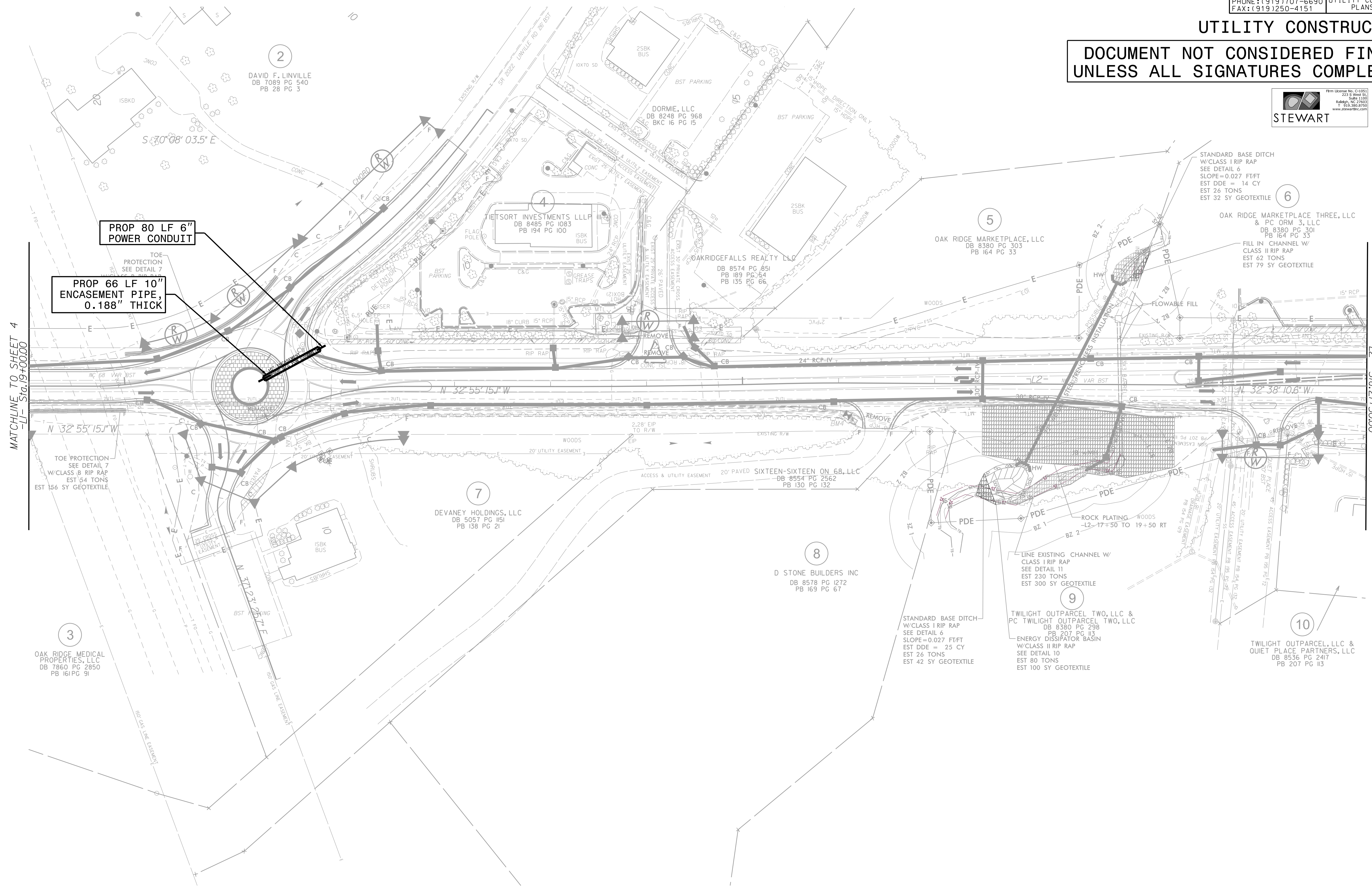
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PROJECT REFERENCE NO.	SHEET NO.
R-5725	UC-4
DESIGNED BY: MSB	5/17/2023
DRAWN BY: MSB	
CHECKED BY: APY	
APPROVED BY: APY	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



UTILITY CONSTRUCTION

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PROP 80 LF 6" POWER CONDUIT

PROP 66 LF 10" ENCASEMENT PIPE, 0.188" THICK

MATCHLINE TO SHEET 4
-12- Sta. 19+00.00

MATCHLINE TO SHEET 6
-12- Sta. 2450.00

REVISIONS

5/17/2023
5/17/2023
USER: mkenzie

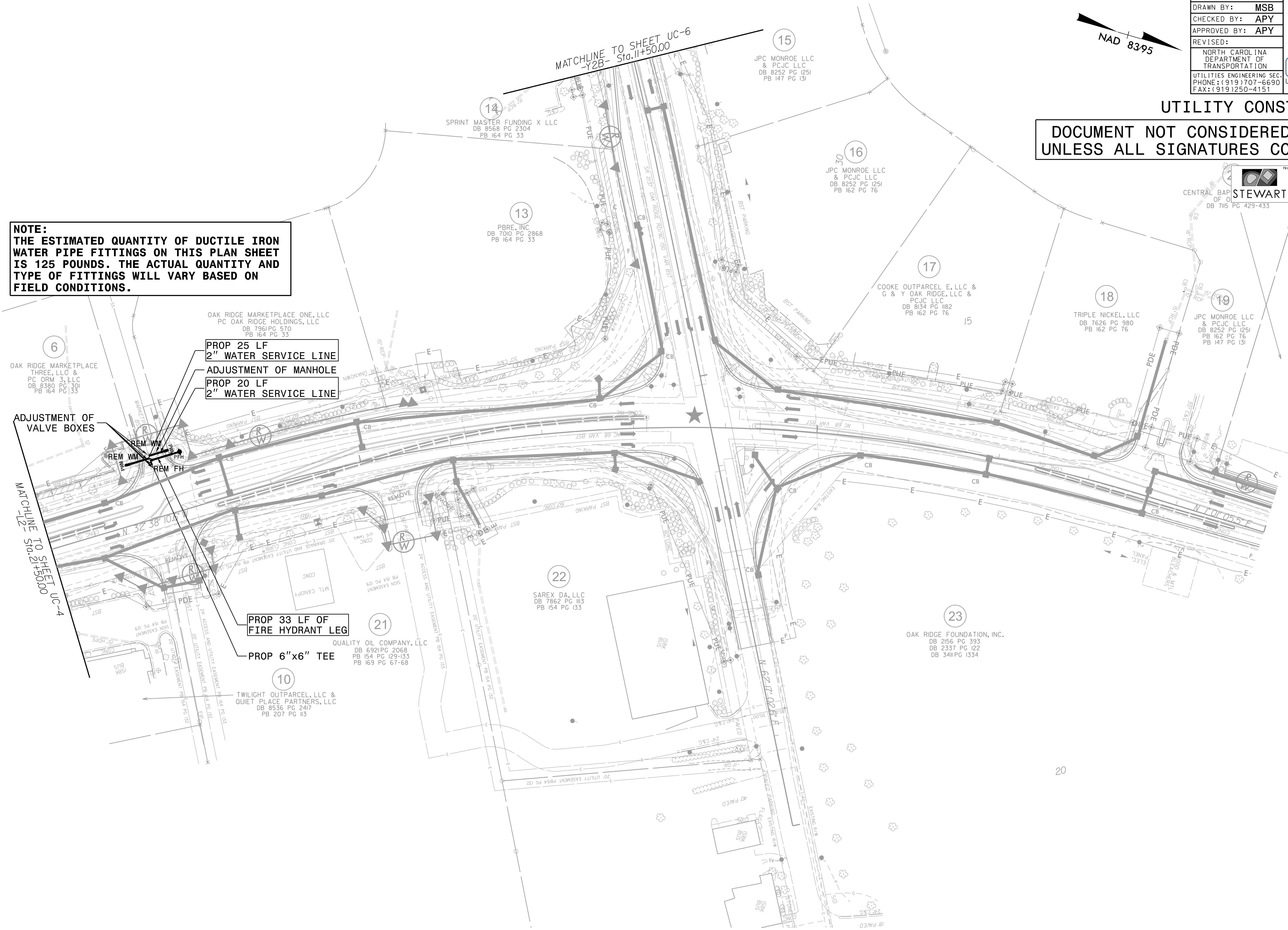
PROJECT REFERENCE NO.	SHEET NO.
R-5725	UC-5
DESIGNED BY: MSB	3/17/2023
DRAWN BY: MSB	
CHECKED BY: APY	
APPROVED BY: APY	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	



UTILITY CONSTRUCTION
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NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 WATER PIPE FITTINGS ON THIS PLAN SHEET
 IS 125 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.



OAK RIDGE MARKETPLACE ONE, LLC
 PC OAK RIDGE HOLDINGS, LLC
 DB 796 PG 570
 PB 164 PG 33

6
 OAK RIDGE MARKETPLACE
 THREE, LLC &
 PC ORM 3, LLC
 DB 838 PG 301
 PB 164 PG 333

PROP 25 LF
 2" WATER SERVICE LINE
 ADJUSTMENT OF MANHOLE
 PROP 20 LF
 2" WATER SERVICE LINE

ADJUSTMENT OF
 VALVE BOXES
 REM WM
 REM FH

MATCHLINE TO SHEET UC-4
 Sta. 21+50.00

PROP 33 LF OF
 FIRE HYDRANT LEG

PROP 6"x6" TEE

10
 TWILIGHT OUTPARCEL, LLC &
 QUIET PLACE PARTNERS, LLC
 DB 8536 PG 2417
 PB 207 PG 113

21
 QUALITY OIL COMPANY, LLC
 DB 692 PG 2068
 PB 154 PG 129-133
 PB 169 PG 67-68

22
 SAREX DA, LLC
 DB 7862 PG 113
 PB 154 PG 133

13
 PBRE, INC
 DB 7010 PG 2868
 PB 164 PG 33

14
 SPRINT MASTER FUNDING X LLC
 DB 8568 PG 2304
 PB 164 PG 33

15
 JPC MONROE LLC
 & PCJC LLC
 DB 8252 PG 1251
 PB 147 PG 131

16
 JPC MONROE LLC
 & PCJC LLC
 DB 8252 PG 1251
 PB 162 PG 76

17
 COOKE OUTPARCEL E, LLC &
 G & Y OAK RIDGE, LLC &
 PCJC LLC
 DB 8134 PG 1182
 PB 162 PG 76

18
 TRIPLE NICKEL, LLC
 DB 7626 PG 980
 PB 162 PG 76

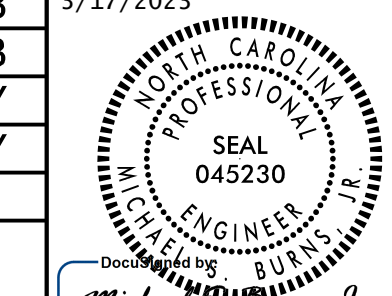
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 JPC MONROE LLC
 & PCJC LLC
 DB 8252 PG 1251
 PB 162 PG 76
 PB 147 PG 131

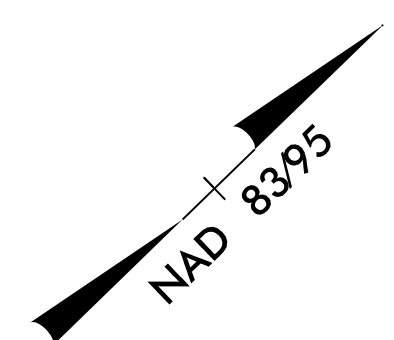
23
 OAK RIDGE FOUNDATION, INC.
 DB 2156 PG 393
 DB 2337 PG 122
 DB 3411 PG 1334

REVISIONS

3/17/2023
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 MSB

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-5725	UC-6
DESIGNED BY: MSB	3/17/2023
DRAWN BY: MSB	
CHECKED BY: APY	
APPROVED BY: APY	
REVISED:	
	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITY CONSTRUCTION PLANS ONLY	



UTILITY CONSTRUCTION

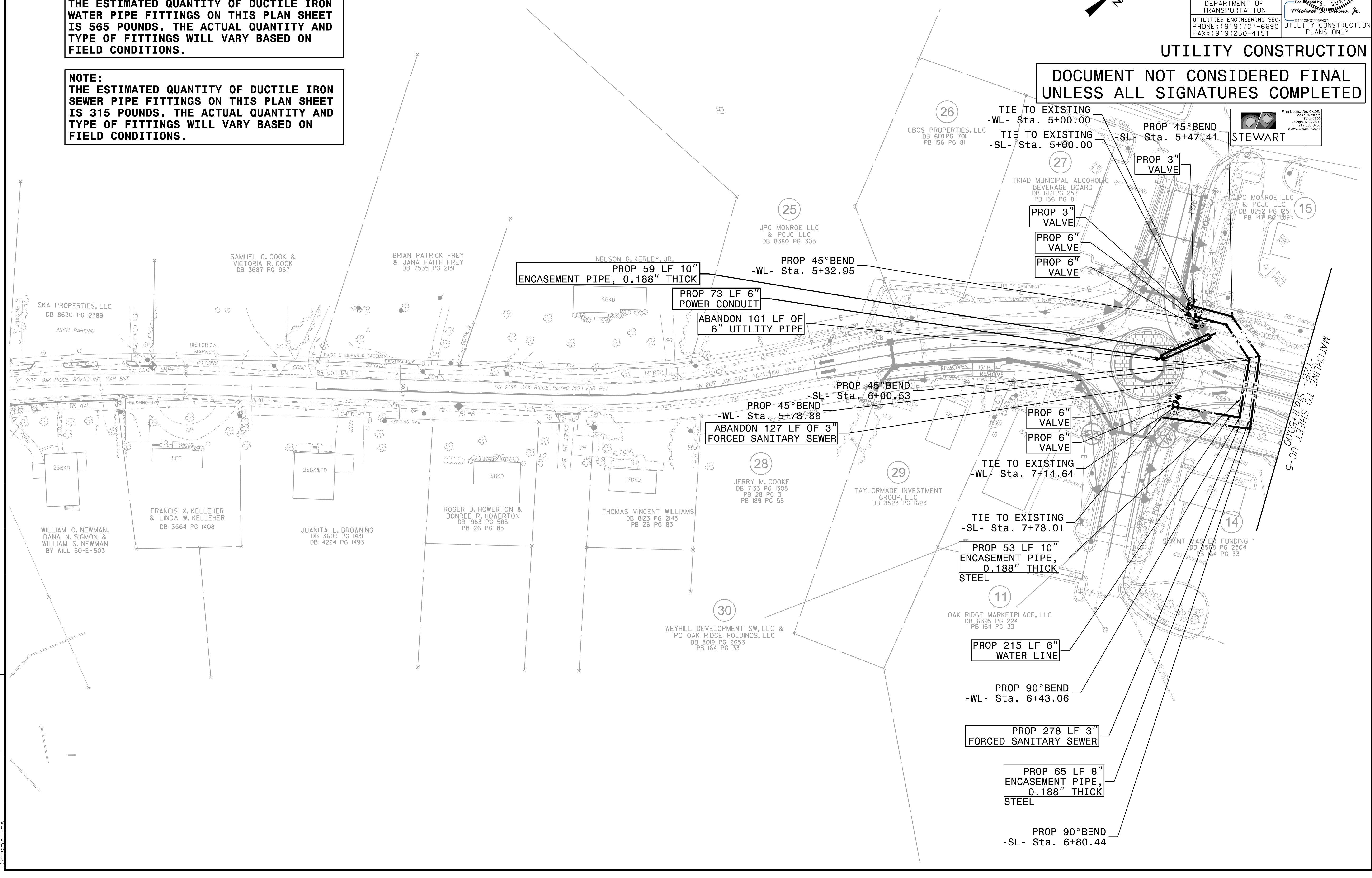
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

NOTE:
CONTRACTOR IS REQUIRED TO ENSURE ALL BENDS UTILIZE JOINT RESTRAINTS.

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 565 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 315 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

REVISIONS



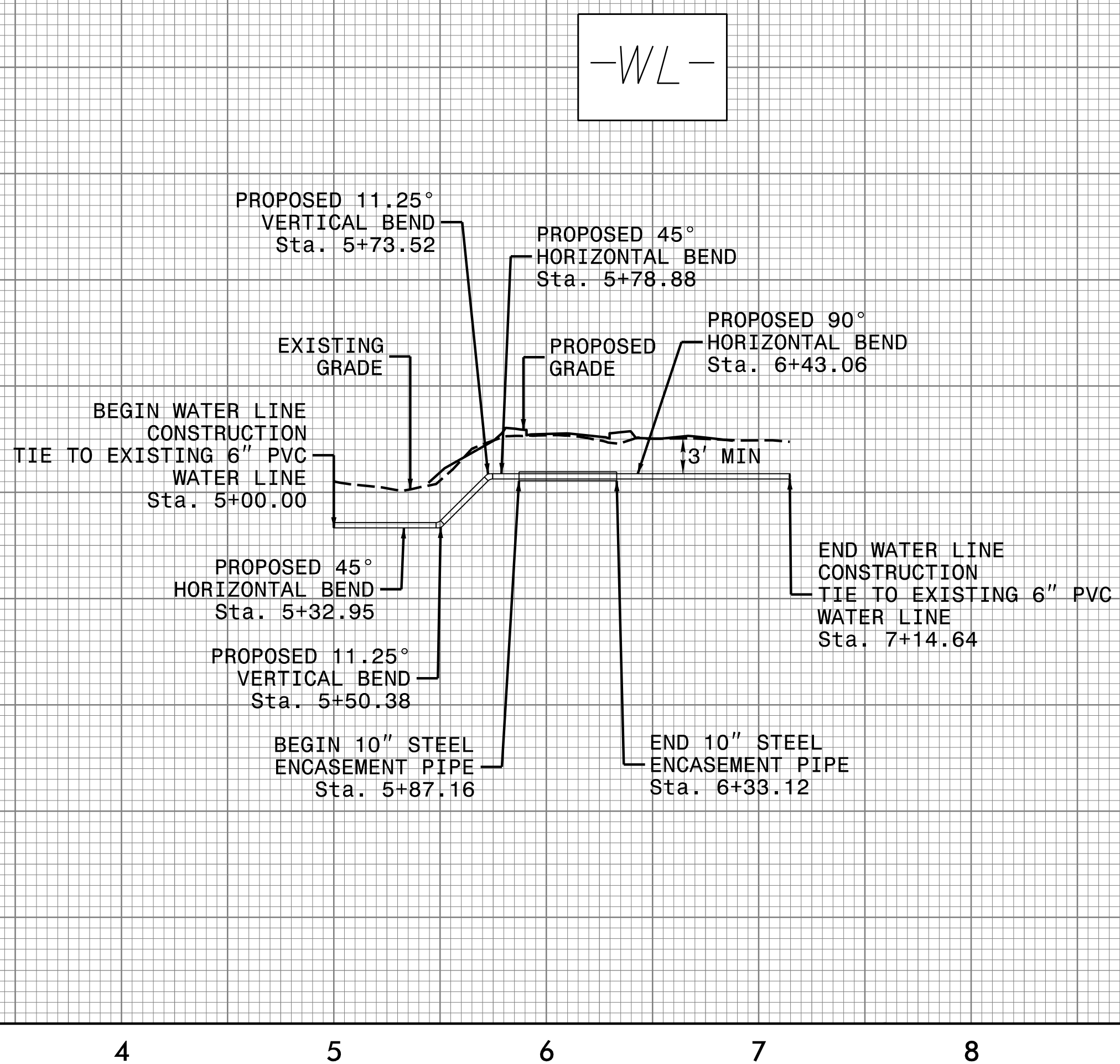
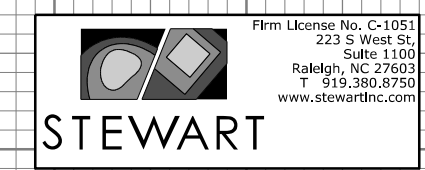
3/17/2023
 ut_rdy8_UC06_psh.dgn
 IJSEB:rburns

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-5725	UC-7
DESIGNED BY: MSB	3/17/2023
DRAWN BY: MSB	
CHECKED BY: APY	
APPROVED BY: APY	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

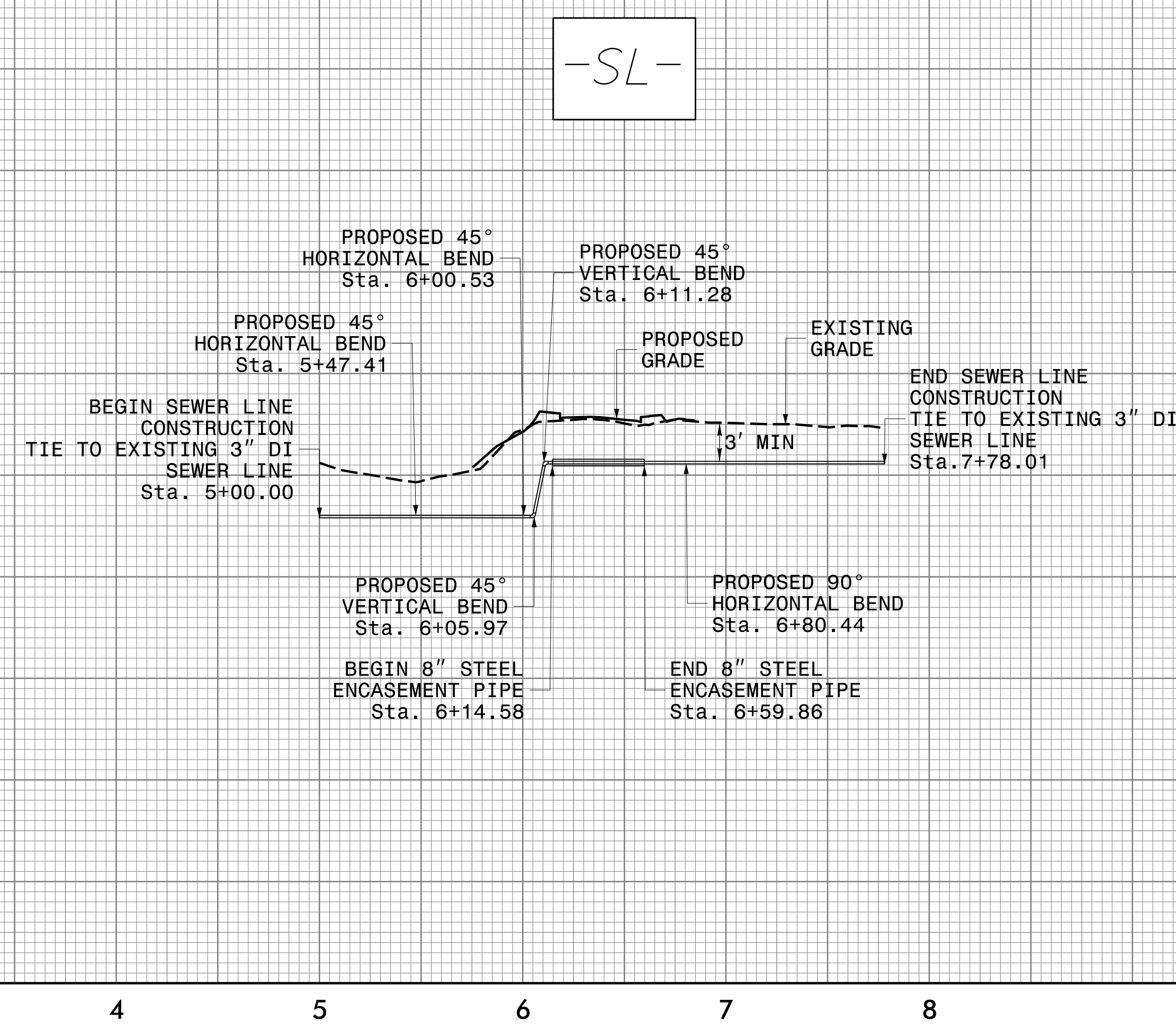
UTILITY CONSTRUCTION

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FOR -WL- PLAN, SEE SHEET UC-5

3/17/2023 11:55:59 AM R5725-ut-p1-UC07.psh.dgn



FOR -SL- PLAN, SEE SHEET UC-5