

09/08/2019

3/20/2023 S:\Projects\NCDOT\Utilities\Engineering\UC\B5981\ut\_tsh\_UC01\_psh.dgn USERNAME

TIP PROJECT: B-5981

CONTRACT:

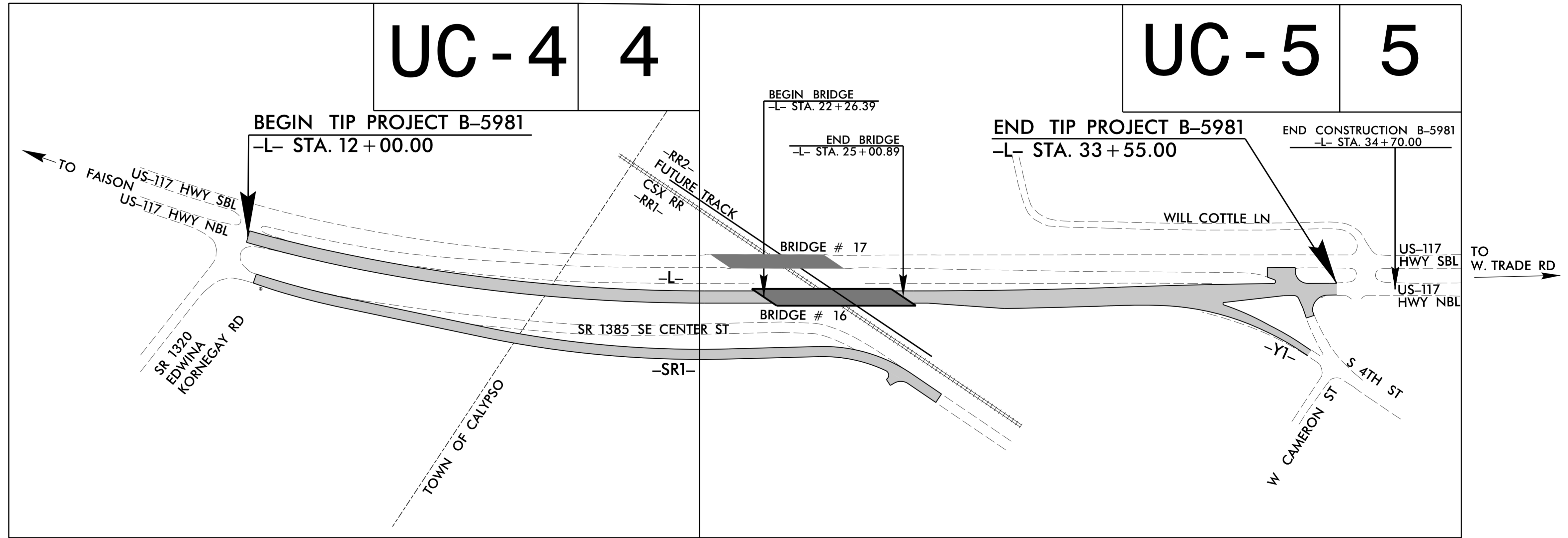
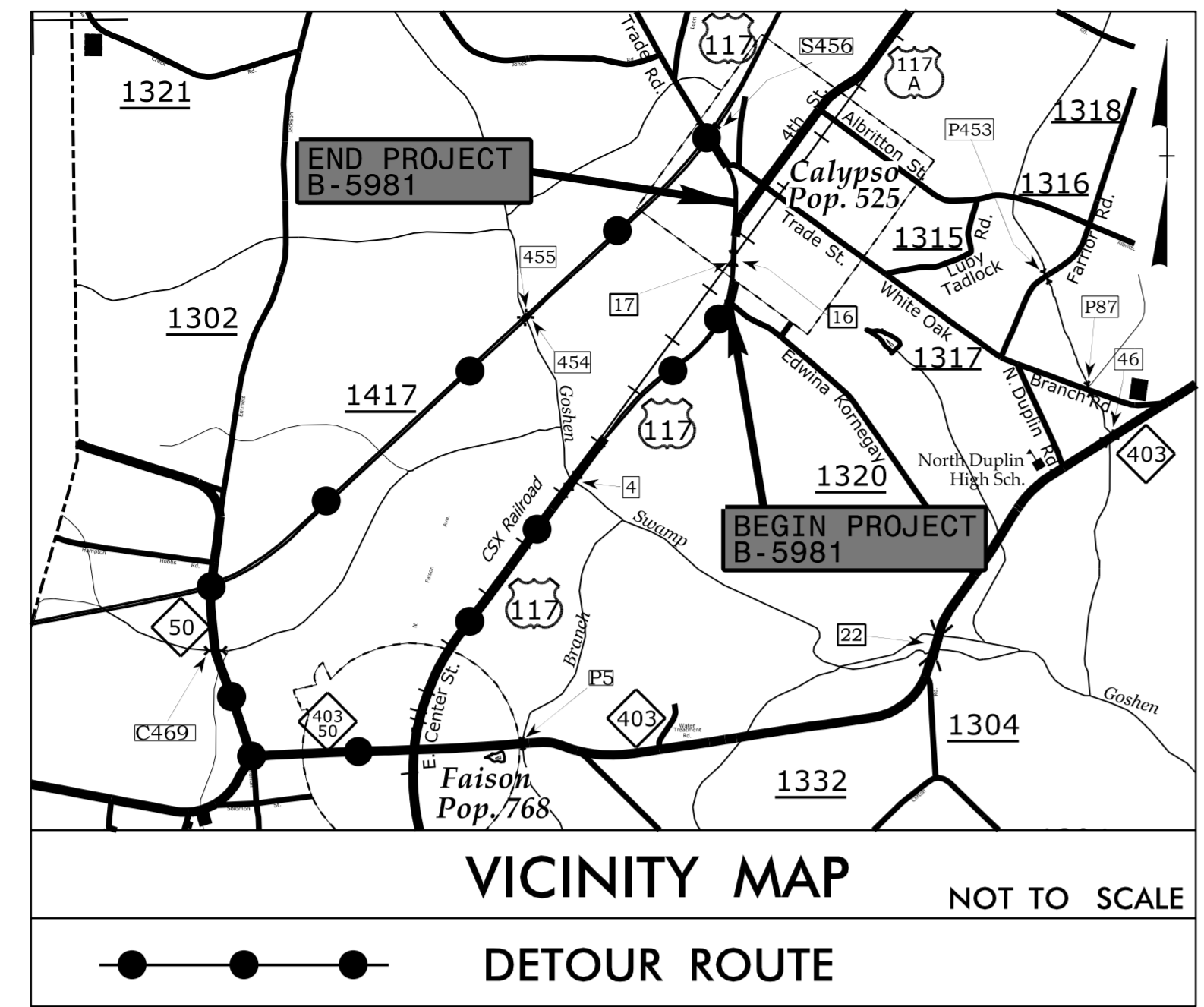
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-5981	UC-1

# UTILITY CONSTRUCTION PLANS DUPLIN COUNTY

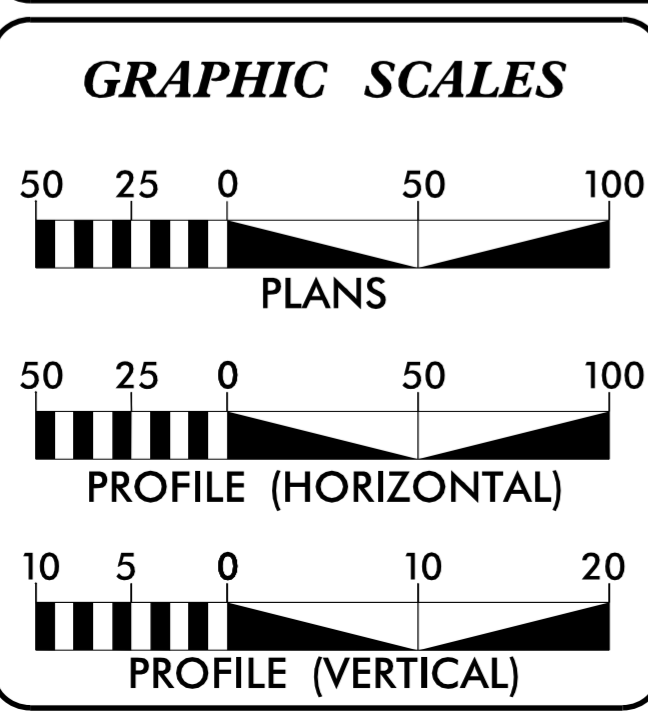
LOCATION: BRIDGE NO.16 OVER CSX RAILROAD ON  
US-117 NORTH BOUND LANES AND  
PRESERVATION OF BRIDGE NO.17 OVER CSX RAILROAD

TYPE OF WORK: WATER LINE RELOCATION



THE PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF CALYPSO.  
THIS IS A CONTROLLED-ACCESS FACILITY WITH ACCESS LIMITED TO INTERCHANGES OR AT GRADE INTERSECTIONS.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



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: DUPLIN COUNTY

PREPARED IN THE OFFICE OF

**CH** ENGINEERING  
DIVISION OF PENNONI

5430 WADE PARK BLVD., SUITE 106,  
RALEIGH, NC 27607 PHONE: 919.929.1173  
FAX: 919.493.6548 NC LICENSE #P-0189

ERIC TWEED, PE PROJECT ENGINEER  
MARY JO LEE, PE PROJECT MANAGER

SEAL

Eric Tweed 3/20/2023  
30DC2018190415

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

NABIL HAMDAN UTILITIES REGIONAL ENGINEER  
TANGA SAMPSON REGIONAL UTILITY COORDINATOR  
TYRON STALLINGS UTILITIES COORDINATOR

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	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
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	A/G Gas
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	A/G Water
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	ss
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		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

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

5/14/99  
8/22/2022  
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REV: 2/1/2012

# UTILITY CONSTRUCTION

**CH ENGINEERING**  
DIVISION OF PENNONI  
5430 WADE PARK BLVD., SUITE 106,  
RALEIGH, NC 27607 PHONE: 919.929.1173  
FAX: 919.493.6548 NC LICENSE #P-0189

PROJECT REFERENCE NO.	SHEET NO.
<b>B-5981</b>	<b>UC-3</b>
DESIGNED BY: EMT	
DRAWN BY: EMT	
CHECKED BY: BAW	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

## 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 DUPLIN COUNTY.
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. PROPOSED WATER LINE FROM -WL- LINE STATION 18+25 TO -WL- LINE STATION 19+10 SHALL BE R.J. (RESTRAINED JOINT) PIPE. OWNER PREFERS GRIP-RING STYLE TO BE USED FOR RESTRAINING.
2. 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.

## UTILITY CONSTRUCTION

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## LIST OF STANDARD DRAWINGS

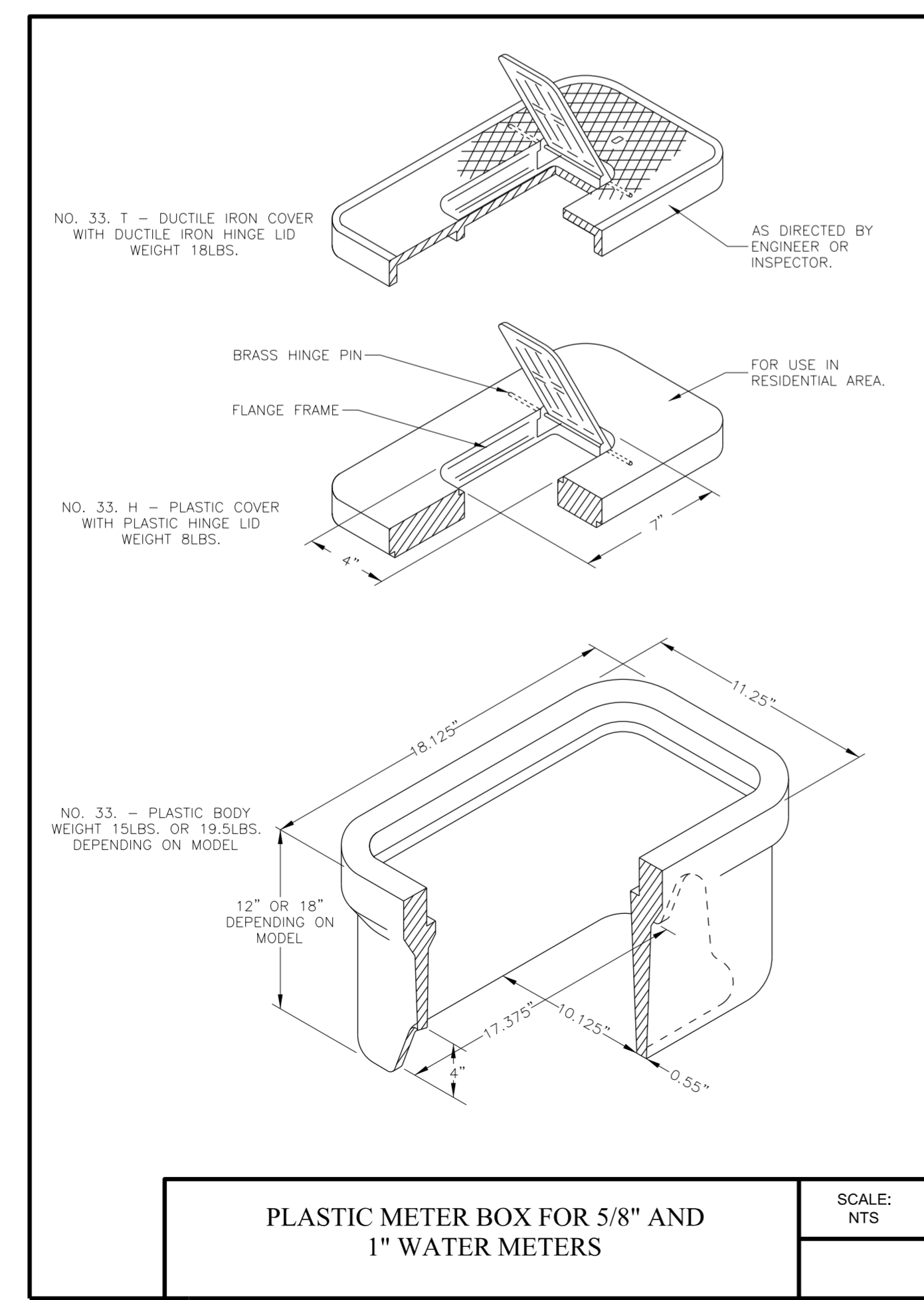
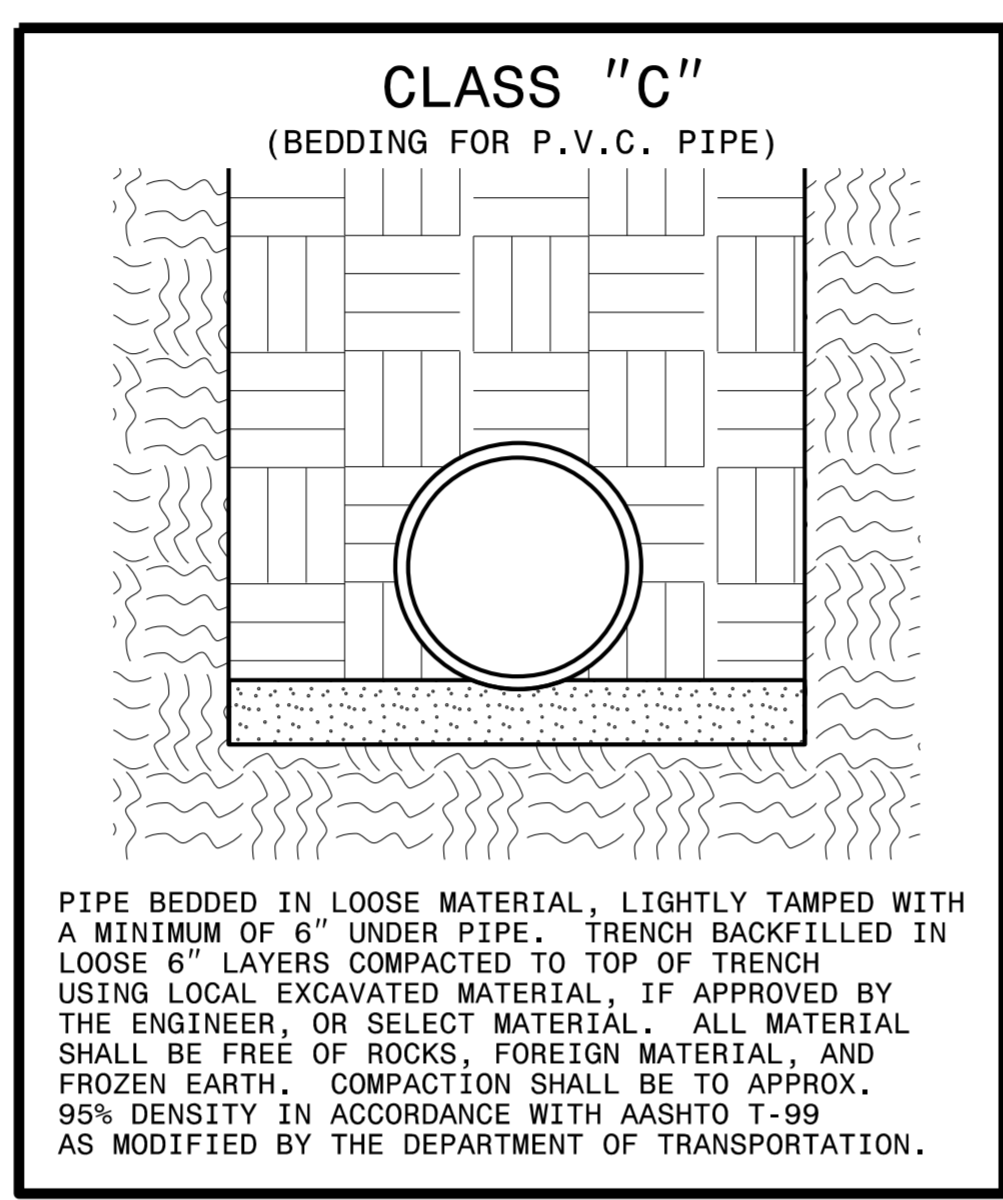
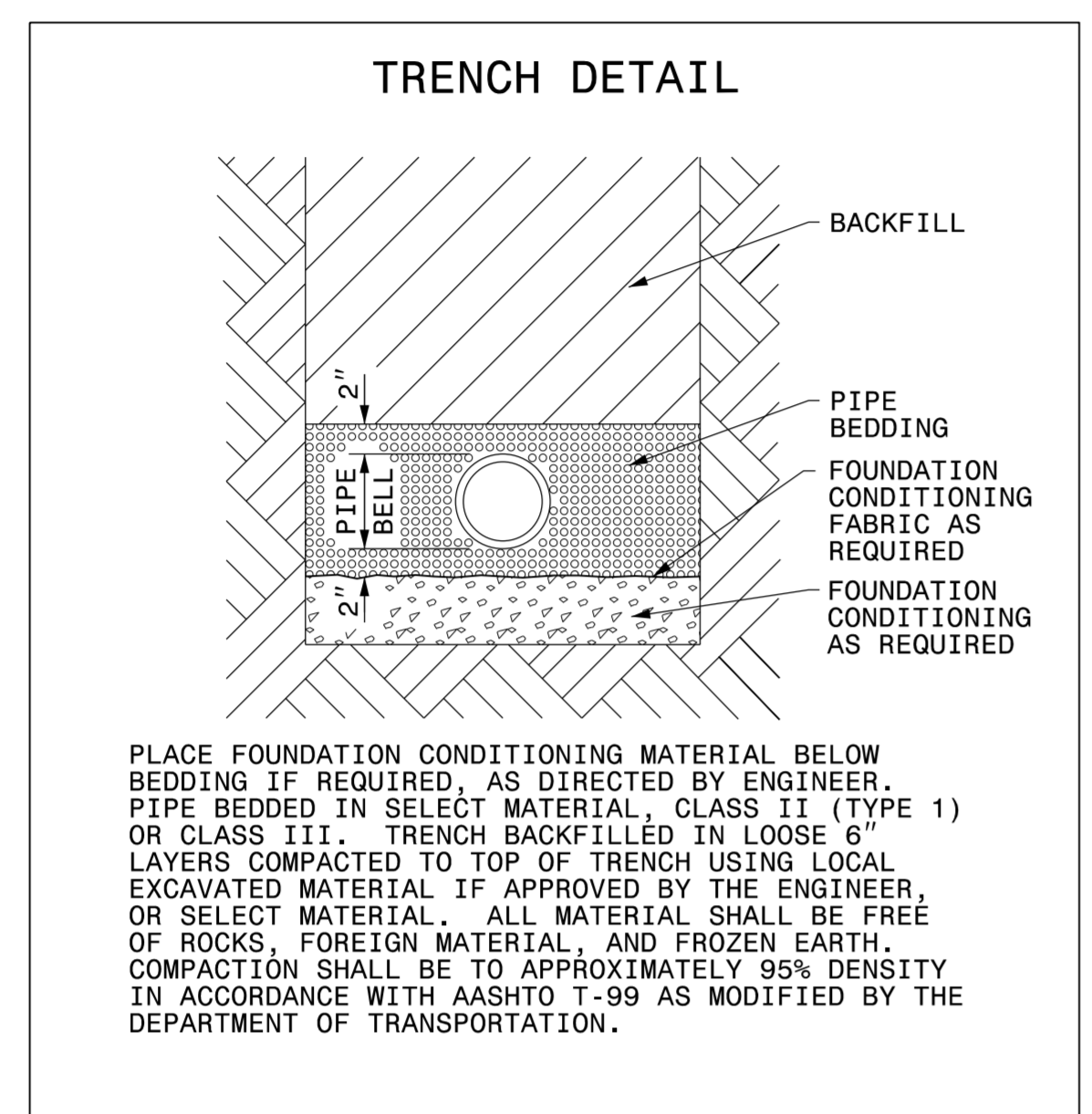
1515.01 WATER METER

PROJECT REFERENCE NO.	SHEET NO.
<b>B-5981</b>	<b>UC-3A</b>
DESIGNED BY: EMT	
DRAWN BY: EMT	
CHECKED BY: BAW	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY 3/20/2023	

# PROJECT TYPICAL DETAILS

## UTILITY CONSTRUCTION

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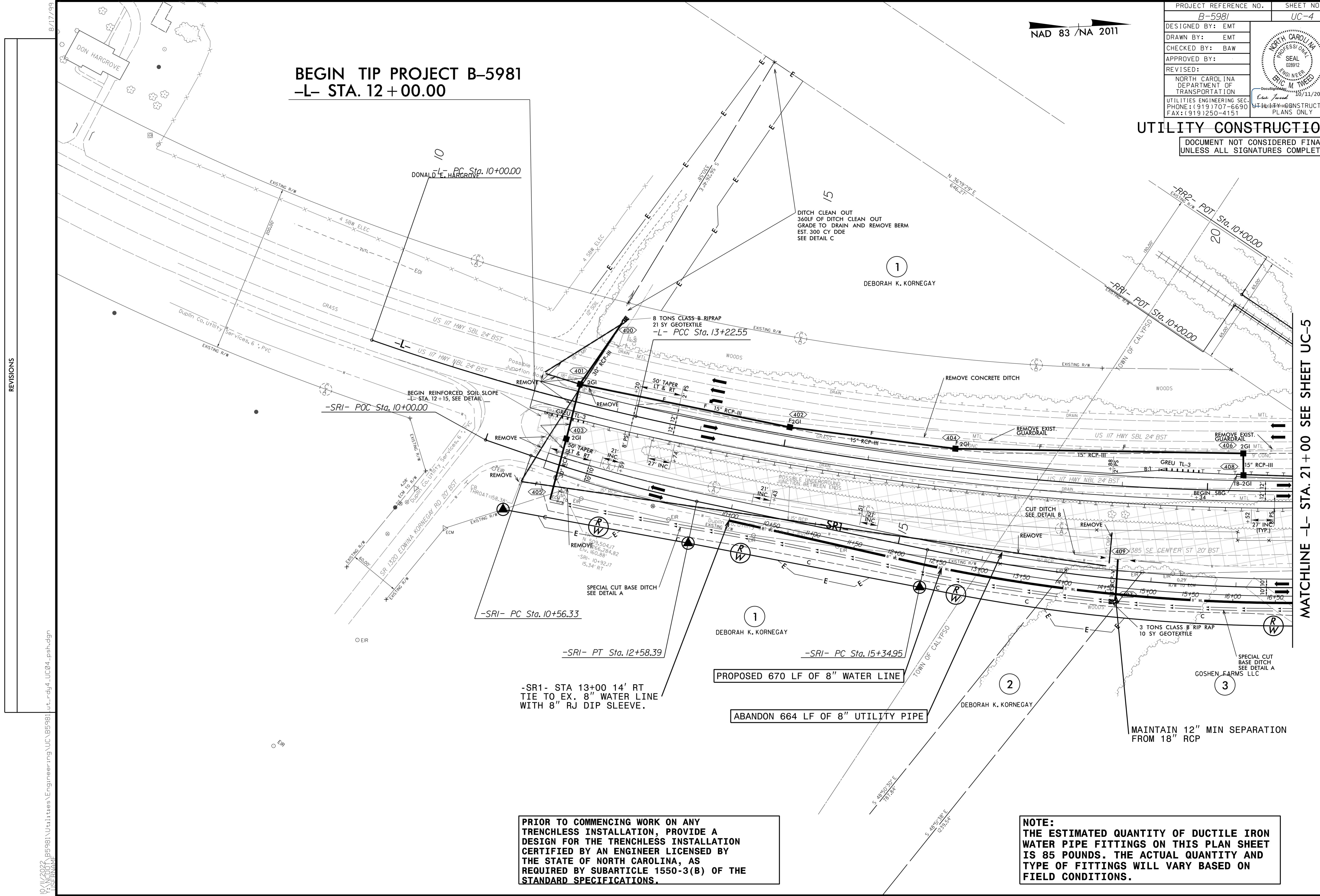
PROJECT REFERENCE NO.	SHEET NO.
B-5981	UC-4
DESIGNED BY: EMT	
DRAWN BY: EMT	
CHECKED BY: BAW	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

NAD 83 / NA 2011

# BEGIN TIP PROJECT B-5981 -L- STA. 12+00.00

## UTILITY CONSTRUCTION

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REVISIONS

MATCHLINE -L- STA. 21+00 SEE SHEET UC-5

**PRIOR TO COMMENCING WORK ON ANY TRENCHLESS INSTALLATION, PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION CERTIFIED BY AN ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3(B) OF THE STANDARD SPECIFICATIONS.**

**NOTE:**  
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 85 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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PROJECT REFERENCE NO.	SHEET NO.
B-5981	UC-5
DESIGNED BY: EMT	
DRAWN BY: EMT	
CHECKED BY: BAW	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
10/11/2022 CONSTRUCTION PLANS ONLY	

**PRIOR TO COMMENCING WORK ON ANY TRENCHLESS INSTALLATION, PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION CERTIFIED BY AN ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3(B) OF THE STANDARD SPECIFICATIONS.**

NAD 83 / NA 2011

**UTILITY CONSTRUCTION**

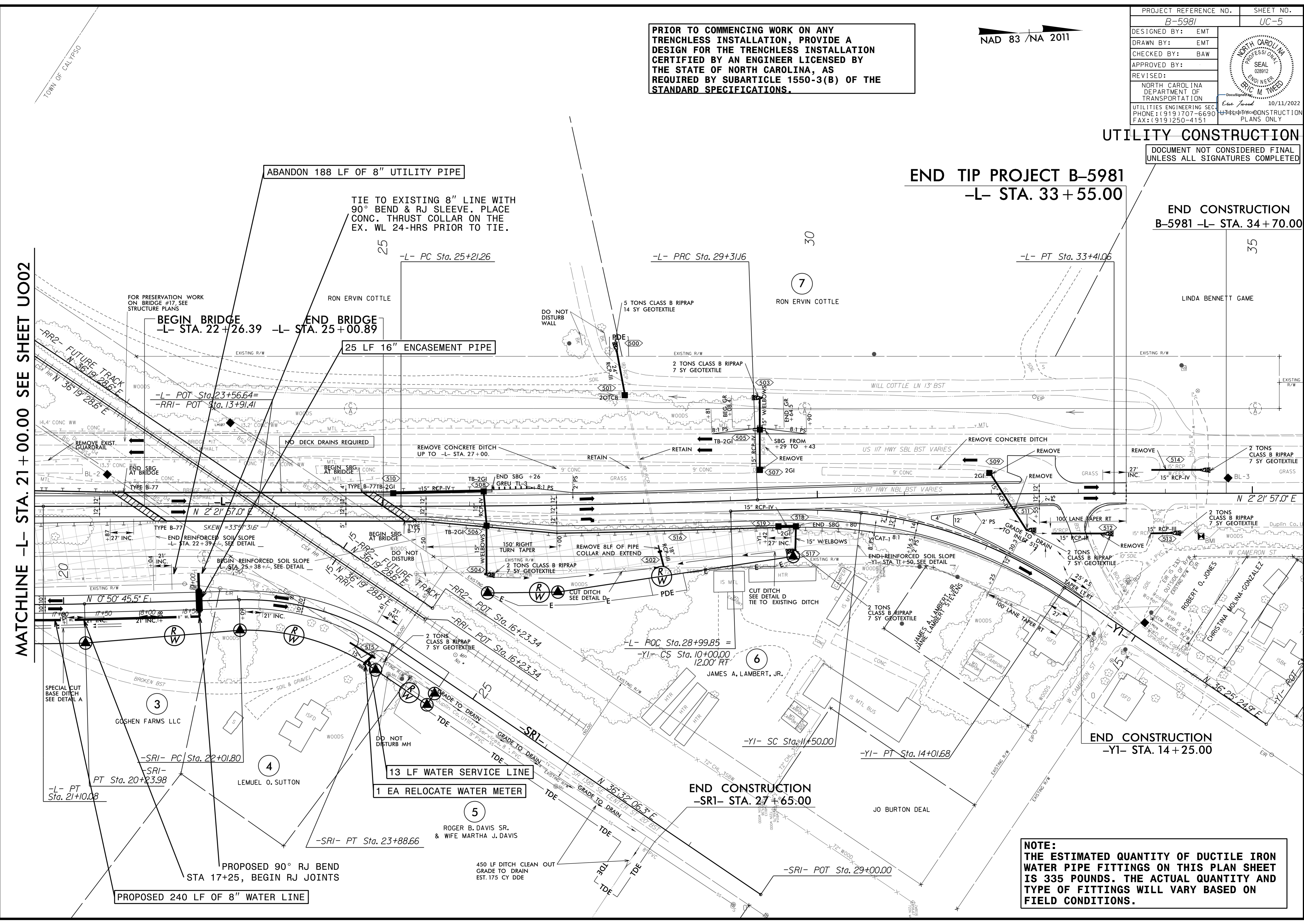
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**END TIP PROJECT B-5981  
-L- STA. 33+55.00**

**END CONSTRUCTION  
B-5981 -L- STA. 34+70.00**

MATCHLINE -L- STA. 21+00.00 SEE SHEET U002

8/17/19  
REVISIONS  
10/11/2022  
B-5981 Utilities Engineering\UC\B5981\ut\_rdy\05\_UC05\_psh.dgn  
14-FERRARI



**NOTE:**  
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 335 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

5/14/19

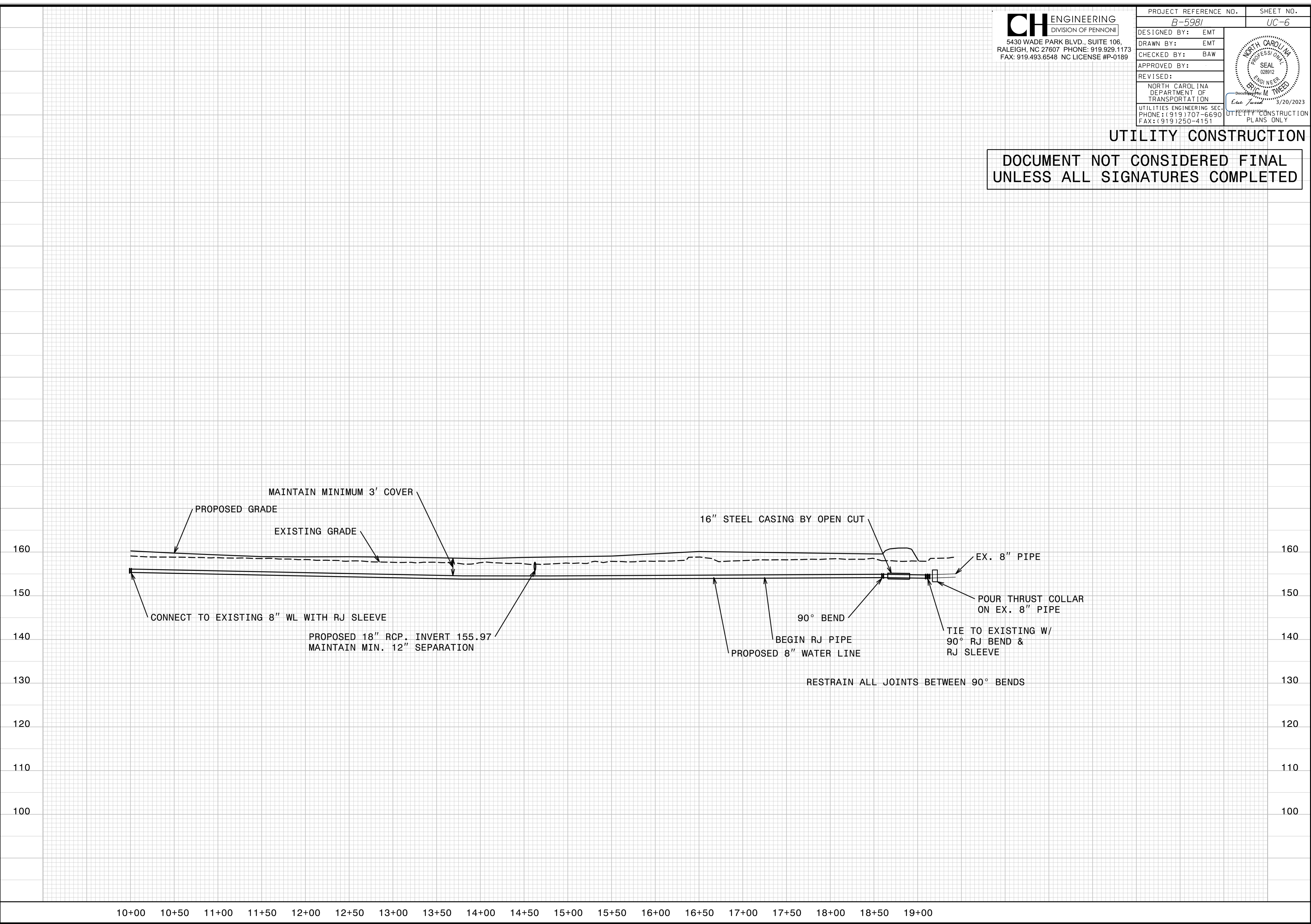
**CH ENGINEERING**  
 DIVISION OF PENNONI  
 5430 WADE PARK BLVD., SUITE 106,  
 RALEIGH, NC 27607 PHONE: 919.929.1173  
 FAX: 919.493.6548 NC LICENSE #P-0189

PROJECT REFERENCE NO.	SHEET NO.
B-5981	UC-6
DESIGNED BY: EMT	
DRAWN BY: EMT	
CHECKED BY: BAW	
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

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