T.I.P. NO.	SHEET NO.
U-2519CB	UC-1

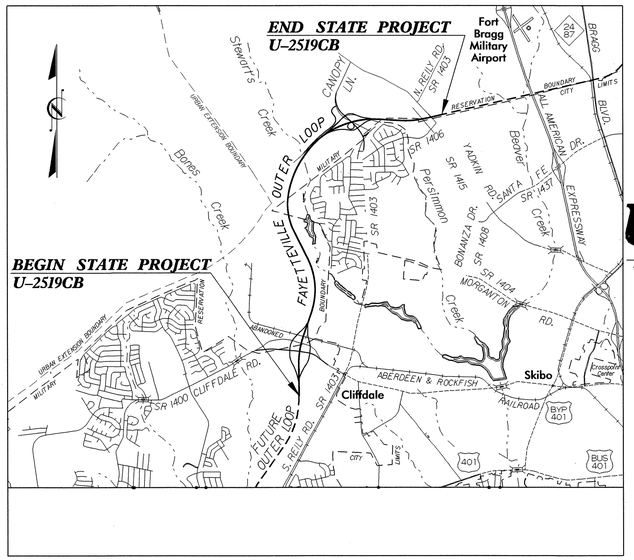
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

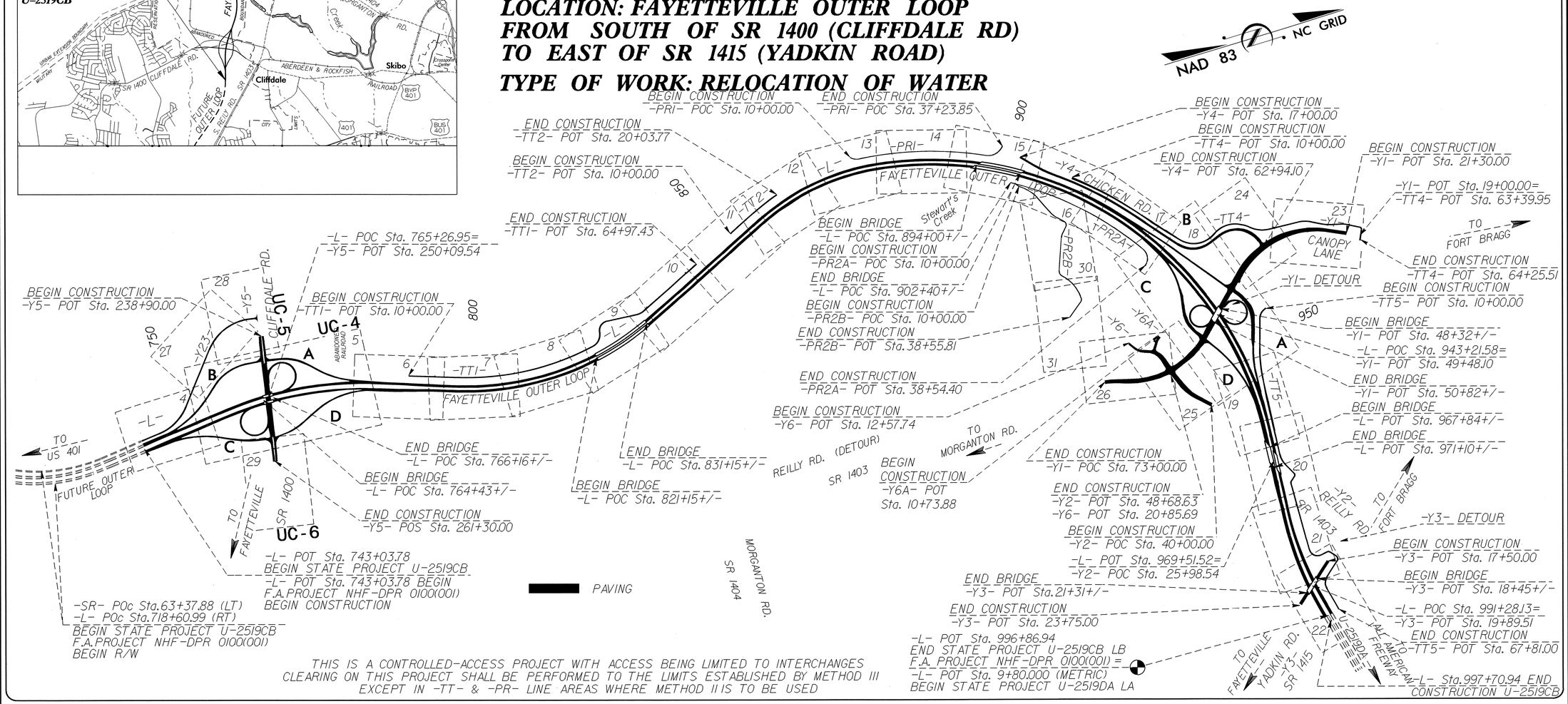
CUMBERLAND COUNTY
UTILITY CONSTRUCTION PLANS

LOCATION: FAYETTEVILLE OUTER LOOP FROM SOUTH OF SR 1400 (CLIFFDALE RD) TO EAST OF SR 1415 (YADKIN ROAD)

TYPE OF WORK: RELOCATION OF WATER

TIP PROJECT: U-2519CB





GRAPHIC SCALES

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PLANS

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PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

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UC-2	SYMBOLOGY
UC-3 THRU UC-3A	NOTES
UC-3B THRU UC-3C	DETAILS
UC-4 THRU UC-6	UTILITY CONSTRUCTION SHEETS
UC-7 THRU UC-15	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) WATER- FAYETTEVILLE PUBLIC WORKS COMMISSION

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 01/13/14 COREY D. BOUSQUET

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1555 MAIL SERVICES CENTER
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Mariko Hafeez	UTILITIES PROJECT DESIGNER

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rev. date: 12-16-02
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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-2

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

- Water Line (Sized as Shown) — 12" WL
- 11¼ Degree Bend
- 22½ Degree Bend
- 45 Degree Bend
- 90 Degree Bend
- Plug
- Tee
- Cross
- Reducer
- Gate Valve — GV
- Butterfly Valve — BV
- Tapping Valve — TGV
- Line Stop — LS
- Line Stop with Bypass — LS/BP
- Blow Off — BO
- Fire Hydrant — PFH
- Relocate Fire Hydrant — RFH
- Remove Fire Hydrant — REM FH
- Water Meter — PWM
- Relocate Water Meter — RWM
- Remove Water Meter — REM WM
- Water Pump Station — PS(W)
- RPZ Backflow Preventer — PRPZ
- DCV Backflow Preventer — PBFP
- Relocate RPZ Backflow Preventer — RRPZ
- Relocate DCV Backflow Preventer — RBFP

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
- Telephone Pole
- Joint Use Pole
- Telephone Pedestal — TEL PED
- Utility Line by Others (Type as Shown) — PROP O/H POW LINES
- Trenchless Installation — 12" TL INSTALL
- Encasement by Open Cut — 24" ENCAS BY OC
- Encasement — 24" ENCASEMENT
- Thrust Block
- Air Release Valve — AR
- Utility Vault — UV
- Concrete Pier — CP
- Steel Pier — SP
- Plan Note — NOTE
- Pay Item 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 — AATUR
- End of Information — E.O.I.
- *Underground Power Line — P
- *Underground Telephone Cable — T
- *Underground Telephone Conduit — TC
- *Underground Fiber Optics Telephone Cable — T FO
- *Underground TV Cable — TV
- *Underground Fiber Optics TV Cable — TV FO
- *Underground Gas Pipeline — G
- Aboveground Gas Pipeline — A/G Gas
- *Underground Water Line — W
- Aboveground Water Line — A/G Water
- *Underground Gravity Sanitary Sewer Line — SS
- Aboveground Gravity Sanitary Sewer Line — A/G Sanitary Sewer
- *Underground SS Forced Main Line — FSS
- Underground Unknown Utility Line — ?UTL
- SUE Test Hole
- Water Meter
- Water Valve
- Fire Hydrant
- Sanitary Sewer Cleanout

*For Existing Utilities

- Utility Line Drawn from Record (Type as Shown) — W
- Designated Utility Line (Type as Shown) — W

REV: 2/1/2012

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-3
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 23041 01/07/14 ENGINEER COREY D. BUSQUET

UTILITY CONSTRUCTION

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 2012.

2. THE EXISTING UTILITIES BELONG TO PUBLIC WORKS COMISSION .

3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, 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 AND NATURAL RESOURCES, 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 OPPROTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING. PWC PROJECT COORDINATOR MUST WITNESS ALL TESTING ON THE PWC WATER UTILITIES. PWC PROJECT COORDINATOR WILL TAKE SAMPLES FOR DISINFECTION TESTING AND THE PWC LAB WILL PROCESS THE SAMPLES

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 ADDITONAL 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

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-3A

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 01/07/14 ENGINEER CHEY D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

1. CONTRACTOR SHALL REPAIR ALL WATER LATERALS AND MAINS DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL REPORT IMMEDIATELY ALL WATER MAIN AND LATERAL BREAKS TO THE PWC PROJECT COORDINATOR. THE CONTRACTOR SHALL INITIATE IMMEDIATE REPAIRS IN ACCORDANCE WITH PWC STANDARDS. CONTRACTOR SHALL NOT OPERATE PWC WATER MAIN VALVES WITHOUT PWC APPROVAL AND SHALL COORDINATE ALL VALVE CLOSINGS WITH PWC.

2. THE CONTRACTOR SHALL NOT USE HOUSE HOSE BIBBS OR ANY OTHER METHOD OF BLOW OFF WHICH ALLOWS DOMESTIC WATER CONTAINING SEDIMENTS OR HIGH LEVELS OF CHLORINE TO PASS THRU RESIDENT'S METERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES RESULTING FROM ALLOWING "DIRTY" WATER TO ENTER RESIDENT'S PLUMBING SYSTEM, SUCH AS WATER HEATERS, STAINED CLOTHING, CLOGGED SCREENS, ETC.

3. WATER MAINS AND LATERALS SHALL BE INSTALLED UTILIZING A PWC APPROVED CUT-SHEET INDICATING INSTALLATION DEPTH.

4. TRANSFER OF WATER SERVICES SHALL BE ACCOMPLISHED AS FOLLOWS:
   A. INSTALL, TEST AND STERILIZE NEW MAIN AND LATERALS. LATERALS SHALL BE INSTALLED 18" INSIDE R/W UNLESS OTHERWISE DIRECTED BY PWC.
   B. TRANSFER EXISTING METER TO NEW METER BOX AND TIE NEW WATER LATERAL TO EXISTING DOMESTIC SERVICE UTILIZING BRASS FITTINGS. SAME METER NUMBER SHALL BE INSTALLED ON SAME ADDRESS AND/OR CUSTOMER. BLOW OFF SERVICE AT HOSE BIBB ON HOUSE ONLY AFTER METER HAS BEEN TRANSFERRED.
   C. AFTER ALL SERVICES ARE TRANSFERRED TO THE NEW SYSTEM, SHUT OFF VALVE ON EXISTING SYSTEM AND ABANDON EXISTING MAINS IN ACCORDANCE WITH PWC DETAILS.
   D. CONTRACTOR SHALL SUPPLY NEW METER BOXES AND DISPOSE OF EXISTING METER BOXES.

5. WHEN MAIN IS NOT TO BE ABANDONED, CONTRACTOR SHALL UNCOVER OLD CORPORATION AT MAIN, CLOSE AND PLUG CORPORATION TO ABANDON OLD SERVICE.

6. SEPARATION REQUIREMENTS:
   A. **LATERAL SEPARATION OF SEWERS AND WATER MAINS:** WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWER MAIN/LATERAL, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION - IN WHICH CASE:

      i. THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAIN/LATERAL; OR

      ii. THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER MAIN/LATERAL WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAIN/LATERAL.

   B. **CROSSING A WATER MAIN OVER A SEWER:** WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER MAIN/LATERAL, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAIN/LATERAL, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND SEWER MAIN/LATERAL SHALL BE DUCTILE IRON IN ACCORDANCE WITH PWC REQUIREMENTS.

   C. **CROSSING WATER MAIN UNDER A SEWER:** WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN/LATERAL, BOTH THE WATER MAIN AND THE SEWER MAIN/LATERAL SHALL BE DUCTILE IRON IN ACCORDANCE WITH PWC REQUIREMENTS. A FULL JOINT OF DUCTILE IRON PIPE SHALL BE INSTALLED ON THE WATER MAIN CENTERED AT THE POINT OF CROSSING.

   D. **CROSSING STORM DRAINAGE LINES:** A MINIMUM OF 12-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN A WATER LINE CROSSING OVER A STORM DRAINAGE LINE UNLESS DUCTILE IRON PIPE IS USED. IN ADDITION, THREE AND A HALF (3.5) FEET OF COVER MUST BE MAINTAINED OVER THE WATER MAIN OR IT SHALL BE DUCTILE IRON. IF DUCTILE IRON PIPE IS USED THEN TWO AN A HALF (2.5) FEET OF COVER MUST BE MAINTAINED OVER THE WATER MAIN AND A MINIMUM OF 4-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND THE STORM DRAINAGE LINE. WHERE A WATER MAIN CROSSES UNDER A STORM DRAINAGE LINE THE MINIMUM OF TWELVE (12) INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED AND THE WATER MAIN SHALL BE DUCTILE IRON FOR A DISTANCE OF 10-FEET ON EACH SIDE OF THE CROSSING.

WATER UTILITY NOTES			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. W.1	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT		1	JAN 05	REVISED NOTE 5A
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.			2	JUL 11	REVISED NOTES & ADDED NOTE 6

2013-W1 WATER UTILITY NOTES.dwg

7. **WATER OUTAGES:** THE CONTRACTOR SHALL SCHEDULE A COORDINATION MEETING WITH THE PWC PROJECT COORDINATOR AND PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO ANY PLANNED WATER OUTAGE. THE COORDINATION MEETING SHALL BE CONDUCTED PRIOR TO ANY NOTICES BEING ISSUED. ADDITIONALLY, THE CONTRACTOR SHALL LOCATE (VERTICALLY AND HORIZONTALLY) ANY UTILITIES WITHIN THE WORK AREA, IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS. THE LOCATIONS OF ALL UTILITIES WITHIN THE WORK AREA SHALL BE DETERMINED PRIOR TO THE COORDINATION MEETING. ANY CONFLICTS WITH THE PENDING WORK AND THE EXISTING UTILITIES SHALL BE IDENTIFIED, AND A PLAN FOR RESOLVING ANY CONFLICTS SHALL BE PRESENTED. THE PURPOSE OF THIS COORDINATION MEETING IS TO ENSURE THAT THE CONTRACTOR HAS A GOOD UNDERSTANDING OF THE REQUIREMENTS RELATED TO THE PENDING OUTAGE, VERIFY THAT THERE ARE NO UTILITY CONFLICTS THAT WILL PREVENT THE WORK FROM BEING COMPLETED, ALL EQUIPMENT IS IN GOOD WORKING ORDER, ALL EQUIPMENT IS FUNCTIONAL, ALL MATERIALS ARE ON SITE, ALL NECESSARY TOOLS ARE ON SITE, DISCUSS ANY NECESSARY CONTINGENCY PLANS, AND ANY OTHER ITEMS NECESSARY TO ENSURE THAT THE PUBLIC WORKS COMMISSION HAS CONFIDENCE THAT THE WORK CAN BE ACCOMPLISHED WITHIN THE GIVEN TIME PERIOD. SHOULD, FOR ANY REASON, THE PUBLIC WORKS COMMISSION DEEM THAT THE CONTRACTOR IS NOT PREPARED FOR THE PROPOSED OUTAGE, THE OUTAGE NOTIFICATIONS WILL NOT BE DISTRIBUTED AND THE OUTAGE SHALL BE POSTPONED A MINIMUM OF TWO (2) WEEKS. THE PUBLIC WORKS COMMISSION WILL PROVIDE WRITTEN NOTIFICATION TO THE CONTRACTOR OF THIS DECISION. NO ADDITIONAL CONTRACT TIME WILL BE GRANTED FOR THIS DELAY. SHOULD THE CONTRACT TIME EXPIRE WITHIN THAT TWO (2) WEEK PERIOD, THE PUBLIC WORKS COMMISSION RESERVES THE RIGHT TO ASSESS LIQUIDATED DAMAGES, AS OUTLINED IN THESE CONTRACT DOCUMENTS.

ONCE THE WATER OUTAGE NOTIFICATIONS HAVE BEEN ISSUED, A FOLLOW-UP COORDINATION MEETING WITH THE PWC PROJECT COORDINATOR AND PROJECT ENGINEER SHALL BE HELD A MINIMUM OF 24 HOURS PRIOR TO THE SCHEDULED OUTAGE. THE PURPOSE OF THIS MEETING IS TO VERIFY THAT THE CONTRACTOR IS PREPARED TO PROCEED WITH THE OUTAGE, AND THAT ALL EQUIPMENT, MATERIALS, TOOLS, AND ALL OTHER INCIDENTALS ARE ON THE PROJECT SITE AND FUNCTIONING. IF FOR ANY REASON THE PUBLIC WORKS COMMISSION DEEMS THAT THE CONTRACTOR IS NOT PREPARED, THE OUTAGE SHALL BE POSTPONED AND ALL CUSTOMERS IMMEDIATELY NOTIFIED OF THE CANCELLATION. THE OUTAGE SHALL BE POSTPONED A MINIMUM OF TWO (2) WEEKS. NO ADDITIONAL CONTRACT TIME WILL BE GRANTED FOR THIS DELAY. SHOULD THE CONTRACT TIME EXPIRE WITHIN THAT TWO (2) WEEK PERIOD, THE PUBLIC WORKS COMMISSION RESERVES THE RIGHT TO ASSESS LIQUIDATED DAMAGES, AS OUTLINED IN THESE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL COMPLETE THE REQUIRED WORK AND RESTORE WATER SERVICE WITHIN THE GIVEN TIME PERIOD FOR THE OUTAGE. SHOULD THE CONTRACTOR FAIL TO COMPLETE THE WORK WITHIN THE ALLOTTED TIME, THE PUBLIC WORKS COMMISSION SHALL ASSESS A PENALTY OF $500 PER 15-MINUTE INTERVAL OR ANY PORTION THEREOF UNTIL WATER SERVICE IS RESTORED. THIS PENALTY WILL BE DEDUCTED FROM THE CONTRACTOR'S PAY APPLICATION OR BE BILLED DIRECTLY TO THE CONTRACTOR. THE PENALTY MAY BE WAIVED FOR CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL, AS DEEMED BY THE PUBLIC WORKS COMMISSION. THE PWC PROJECT COORDINATOR AND/OR PROJECT ENGINEER RESERVE THE RIGHT TO CANCEL OR POSTPONE THE OUTAGE AT ANY GIVEN TIME, IF DEEMED NECESSARY.

WATER UTILITY NOTES			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 2 OF 2	DWG. NO. W.1	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT		1	JAN 05	REVISED NOTE 5A
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.			2	JUL 11	REVISED NOTES & ADDED NOTE 6

2013-W1 WATER UTILITY NOTES.dwg

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-3B

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
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FAX:(919)250-4151

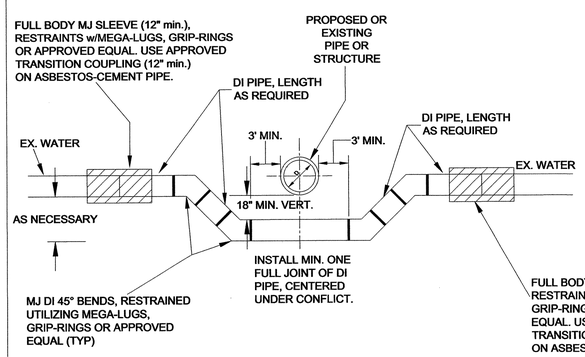
NORTH CAROLINA PROFESSIONAL SEAL 23041 8/1/07 ENGINEER COREY D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

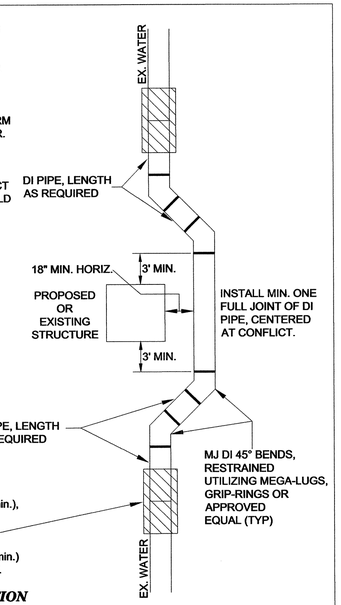
UTILITY CONSTRUCTION

NOTES:

1. ALL PIPE AND FITTINGS SHALL BE APPROVED BY PWC.
2. CONTRACTOR TO COORDINATE NECESSARY OUTAGES WITH PWC AND AFFECTED CUSTOMERS. MINIMUM 48 HOUR NOTICE REQUIRED.
3. NEW WATER MAIN TO BE SWABBED WITH A CHLORINE SOLUTION AND FLUSHED PRIOR TO PLACING INTO SERVICE.
4. ALL NEW FITTINGS AND PIPE TO BE RESTRAINED UTILIZING MEGA-LUGS, GRIP-RINGS OR APPROVED EQUAL.
5. ALL PIPE AND FITTINGS TO BE DUCTILE IRON.
6. PWC PROJECT COORDINATOR TO BE PRESENT DURING WORK.
7. BACKFILL AND COMPACT TO CITY OF FAYETTEVILLE OR N.C.D.O.T. REQUIREMENTS.
8. PROVIDE STONE BEDDING (NO. 5 OR NO. 57 STONE) TO SUPPORT RELOCATED WATER MAIN AND/OR NEW STORM DRAIN, AS APPROVED BY PWC PROJECT COORDINATOR.
9. MJ RESTRAINTS NOT ALLOWED ON PVC PIPE.
10. DIMENSIONS ARE GIVEN AS GENERAL GUIDANCE, EXACT DIMENSIONS ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS AND AS DIRECTED BY PWC.



VERTICAL RELOCATION



HORIZONTAL RELOCATION

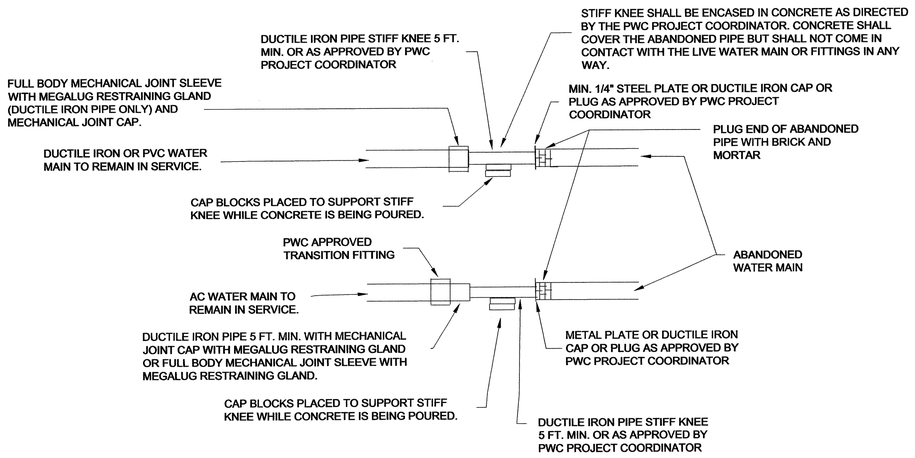
ONLY PERTAINS TO THE WATER LINE RELOCATION SHOWN ON PROFILE SHEET UC-7. ALL OTHER AREAS THE PROPOSED WATER LINE SHALL BE FACTORY RJ DI WATER PIPE

PIPE RELOCATION DETAIL (N.T.S.)			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO.: W.26	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT		1	1/12	REVISED NOTES, ADDED HORIZ. RELOCATION
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.					

2013-W26 PIPE RELOCATION DETAIL.dwg

NOTES:

1. KILL OUT SHALL BE DONE A MIN. OF 5 FT. FROM ANY FITTING ON THE EXISTING WATER MAIN THAT IS TO REMAIN IN SERVICE
2. IRON PIPE SHALL BE 4" DIAMETER FOR MAINS 12" OR LESS. UTILIZE 8" PIPE OR LARGER AS DIRECTED BY THE PWC COORDINATOR FOR ALL MAINS LARGER THAN 12".
3. ALLOW CONCRETE TO SET-UP PRIOR TO PLACING BACKFILL.
4. VOLUME OF CONCRETE FOR THRUST BLOCK SHALL BE IN ACCORDANCE WITH PWC STANDARD DETAIL W.17.
5. ALL OUTAGES SHALL BE COORDINATED WITH THE PWC PROJECT COORDINATOR.
6. PIPE SHALL BE GROUT OR REMOVED IN ACCORDANCE WITH NCDOT SPECIFICATIONS WHEN LOCATED IN THE STATE RIGHT OF WAY. ALL OTHER INSTANCES SHALL BE IN ACCORDANCE WITH PWC SPECIFICATIONS.



WATER MAIN KILL-OUT N.T.S.			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. W.22	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT				
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.					

2013-W22 WATERMAIN KILLOUT.dwg

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-3C

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
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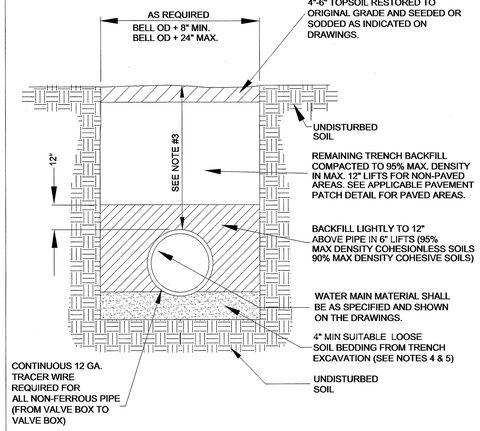
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 01/07/14 CHRISTOPHER D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

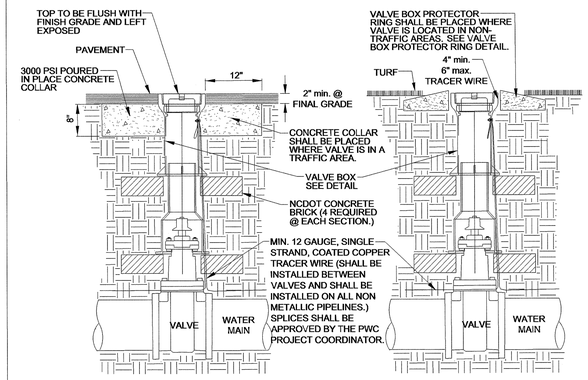


NOTES:

1. ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION", CHAPTER XVII OF TITLE 29, CFR, PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON SITE AT ALL TIMES DURING EXCAVATION AND BACKFILLING.
2. CONTRACTOR SHALL USE TRENCH BOX SHORING IN ALL OPEN CUTS IN PAVED AREAS. TRENCH WIDTH SHALL BE MAINTAINED AT THE MINIMUM PRACTICAL WIDTH.
3. TYPE 3 TRENCH CONDITIONS AND A MINIMUM OF 4' OF COVER MUST BE MAINTAINED WHERE RESTRAINT JOINT PIPE IS SPECIFIED AND 3.5' OF COVER IN ALL OTHER LOCATIONS UNLESS SHOWN OTHERWISE ON THE PLAN PROFILE.
4. LOOSE SOIL OR SELECT MATERIAL IS DEFINED AS "NATIVE" SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH.
5. BEDDING MATERIAL SHALL EXTEND TO UNDISTURBED TRENCH WALLS AND TRENCH BOTTOM. BEDDING MATERIAL WILL NOT BE PAID FOR UNLESS SPECIFICALLY APPROVED BY THE PROJECT REPRESENTATIVE AND ONLY FOR THE AUTHORIZED QUANTITY.
6. BEDDING MATERIAL SHALL BE PROPERLY RODDED AND COMPACTED AROUND THE PIPE HAUNCHES.
7. TEST FOR DENSITY OF COMPACTION MAY BE MADE AT THE OPTION OF THE ENGINEER AND DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE ENGINEER MAY HAVE COMPACTION TEST PERFORMED AFTER THE BACKFILL IS COMPLETE. CONTRACTOR SHALL BE REQUIRED TO EXCAVATE TO VARIOUS ELEVATIONS FOR DENSITY TESTING EXCAVATION, BACKFILL AND RECOMPACTION SHALL BE PERFORMED AT NO ADDITIONAL COSTS TO THE OWNER.

TYPE 3 TRENCH WATER MAIN BEDDING DETAIL			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. W.19	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT				
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.					

2013-W19 WATER BEDDING.dwg



VALVE IN TRAFFIC AREA

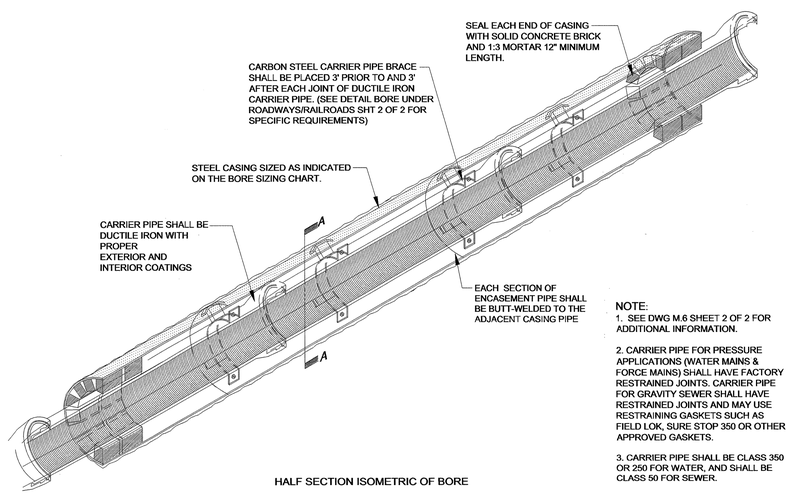
VALVE IN NON-TRAFFIC AREA

NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH PWC STANDARDS.
2. RESILIENT WEDGE GATE VALVE SHALL BE AS MANUFACTURED BY MUELLER CORP., AMERICAN DARLING OR CLOW CORP.
3. ALL VALVES SHALL HAVE 2" SQUARE OPERATING NUT AND SHALL OPEN COUNTERCLOCKWISE.
4. VALVE BODY, BONNET AND GATE SHALL BE IN ACCORDANCE WITH AWWA C-509/C-515 AND NSF61.
5. VALVE BODY AND BONNET SHALL BE COATED ON ALL INTERIOR AND EXTERIOR SURFACES WITH A FUSION BONDED EPOXY IN ACCORDANCE WITH AWWA C-550-90.
6. ALL VALVES 24" AND SMALLER SHALL HAVE A SAFE WORKING PRESSURE OF 250 PSI.
7. SEE VALVE BOX DETAIL FOR ADDITIONAL INFORMATION.
8. SEE VALVE BOX PROTECTOR RING DETAIL FOR ADDITIONAL INFORMATION.
9. VALVE BOX SECTIONS ARE REQUIRED. THE USE OF PIPE IN LIEU OF VALVE BOX SECTIONS SHALL NOT BE PERMITTED.

GATE VALVE (N.T.S.)			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. W.6	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT		1	6/06	ADDED NOTE #9
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.			2	7/09	CLARIFIED NOTES

2013-W6 GATEVALVE.dwg



HALF SECTION ISOMETRIC OF BORE

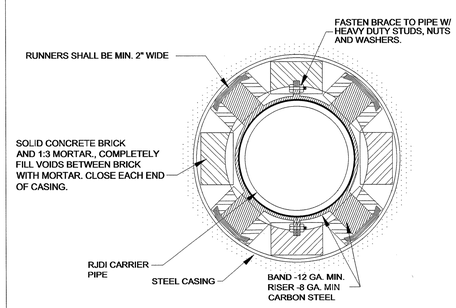
NOTE:

1. SEE DWG M.6 SHEET 2 OF 2 FOR ADDITIONAL INFORMATION.
2. CARRIER PIPE FOR PRESSURE APPLICATIONS (WATER MAINS & FORCE MAINS) SHALL HAVE FACTORY RESTRAINED JOINTS. CARRIER PIPE FOR GRAVITY SEWER SHALL HAVE RESTRAINED JOINTS AND MAY USE RESTRAINING GASKETS SUCH AS FIELD LOK, SURE STOP 350 OR OTHER APPROVED GASKETS.
3. CARRIER PIPE SHALL BE CLASS 350 OR 250 FOR WATER, AND SHALL BE CLASS 50 FOR SEWER.

BORE UNDER ROADWAYS/RAILROADS			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. M.6	DWG. BY: PWC	WATER RESOURCES ENGINEERING DEPARTMENT		1.	JAN 05	ADDED NOTES 2 & 3
	DATE: JULY 01, 2013	APPROVED BY: J.E.G.			2.	OCT 09	Clarified restraint requirements.

2013-M6 BORE_ROAD_RAIL.dwg

ENCASEMENT SIZING CHART			
CARRIER PIPE SIZE	MIN. CASING SIZE	ROADWAYS MIN. WALL THICKNESS	RAILROADS MIN. WALL THICKNESS
4"	10"	0.188"	0.188"
6"	12"	0.25"	0.281"
8"	16"	0.25"	0.281"
12"	24"	0.25"	0.375"
16"	30"	0.312"	0.469"
18"	30"	0.312"	0.469"
24"	36"	0.375"	0.532"
30"	42"	0.500"	0.625"
36"	48"	0.500"	0.688"



SECTION "A-A" CARBON STEEL CARRIER PIPE BRACE

NOTES:

1. INSTALLATION SHALL BE BY OPEN CUT
2. SEE ENCASEMENT SIZING CHART FOR CARRIER PIPE SIZE AND STEEL CASING SIZE , MIN. DIA. AND WALL THICKNESS.
3. CASING PIPE SHALL BE IN ACCORDANCE WITH ASTM A-53, GRADE B WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI
4. EACH END OF ENCASEMENT TO BE PLUGGED WITH BRICK. ALL VOIDS OUTSIDE THE CASING PIPE SHALL BE COMPLETELY FILLED WITH 1:3 PORTLAND CEMENT GROUT AT SUFFICIENT PRESSURE TO INSURE NO SETTLEMENT OF ROADWAY/ RAILROAD. METHOD OF GROUTING SHALL BE AS APPROVED BY THE PERMITTING AGENCY.
5. SUBCONTRACTORS SHALL ADHERE TO ALL PERMIT REQUIREMENTS AND SHALL PROVIDE APPROVED INSURANCE CERTIFICATES AS REQUIRED.
6. CONTRACTOR SHALL EXECUTE AND PERFORM ALL REQUIREMENTS AND CONDITIONS STIPULATED BY THE PERMITTING AGENCY.
7. SEE DWG. M.6 SHEET 1 OF 2 FOR ADDITIONAL INFORMATION.
8. CARRIER PIPE FOR PRESSURE APPLICATIONS SHALL BE FACTORY RESTRAINTED JOINT DI PIPE.

STEEL ENCASEMENT BY OPEN CUT			PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.	PWC	NO.	DATE	REVISION
			WATER RESOURCES ENGINEERING DEPARTMENT				

5/14/99
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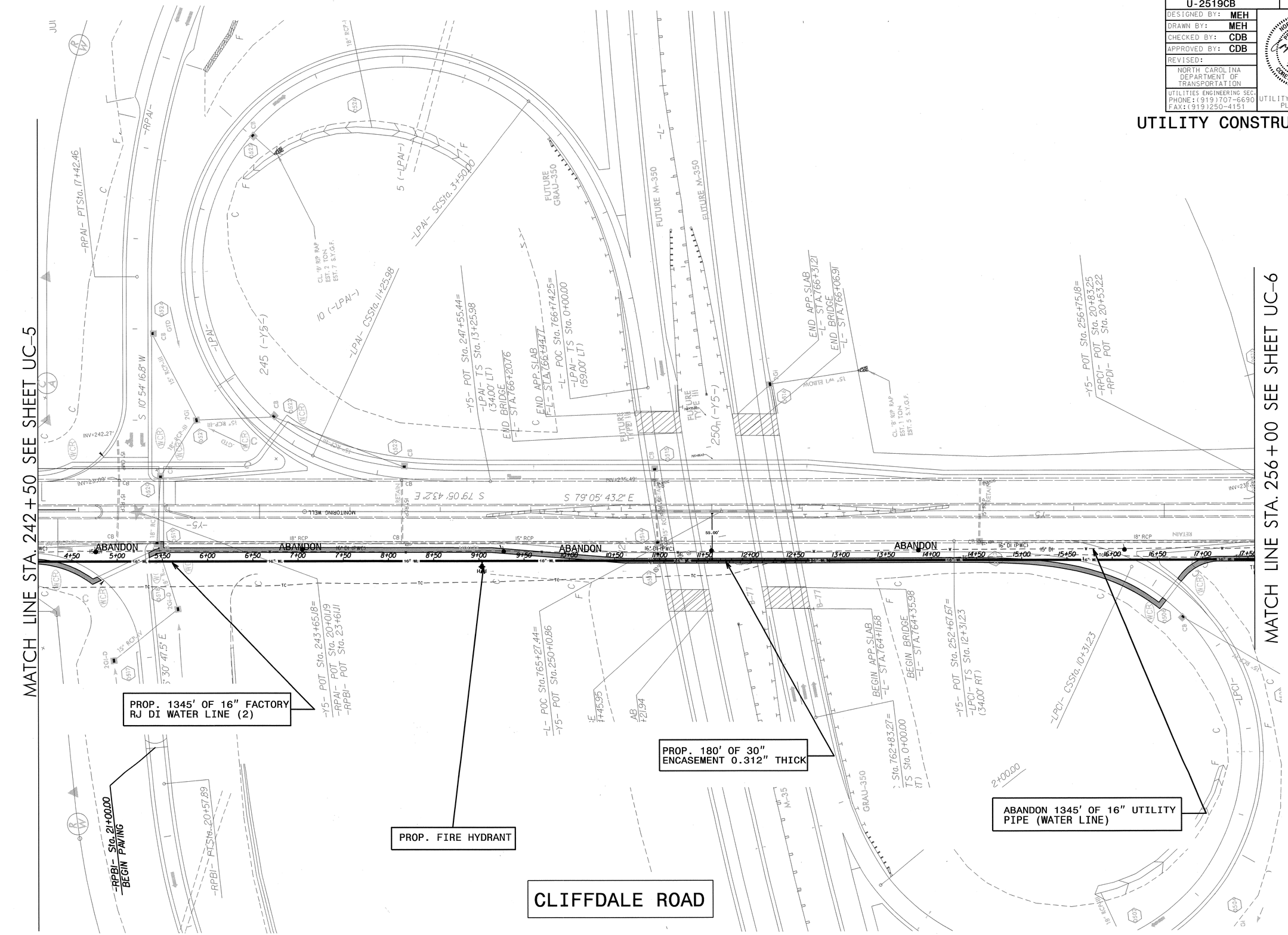
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-4
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER CORNEY D. BOUSQUET 2/5/14

UTILITY CONSTRUCTION



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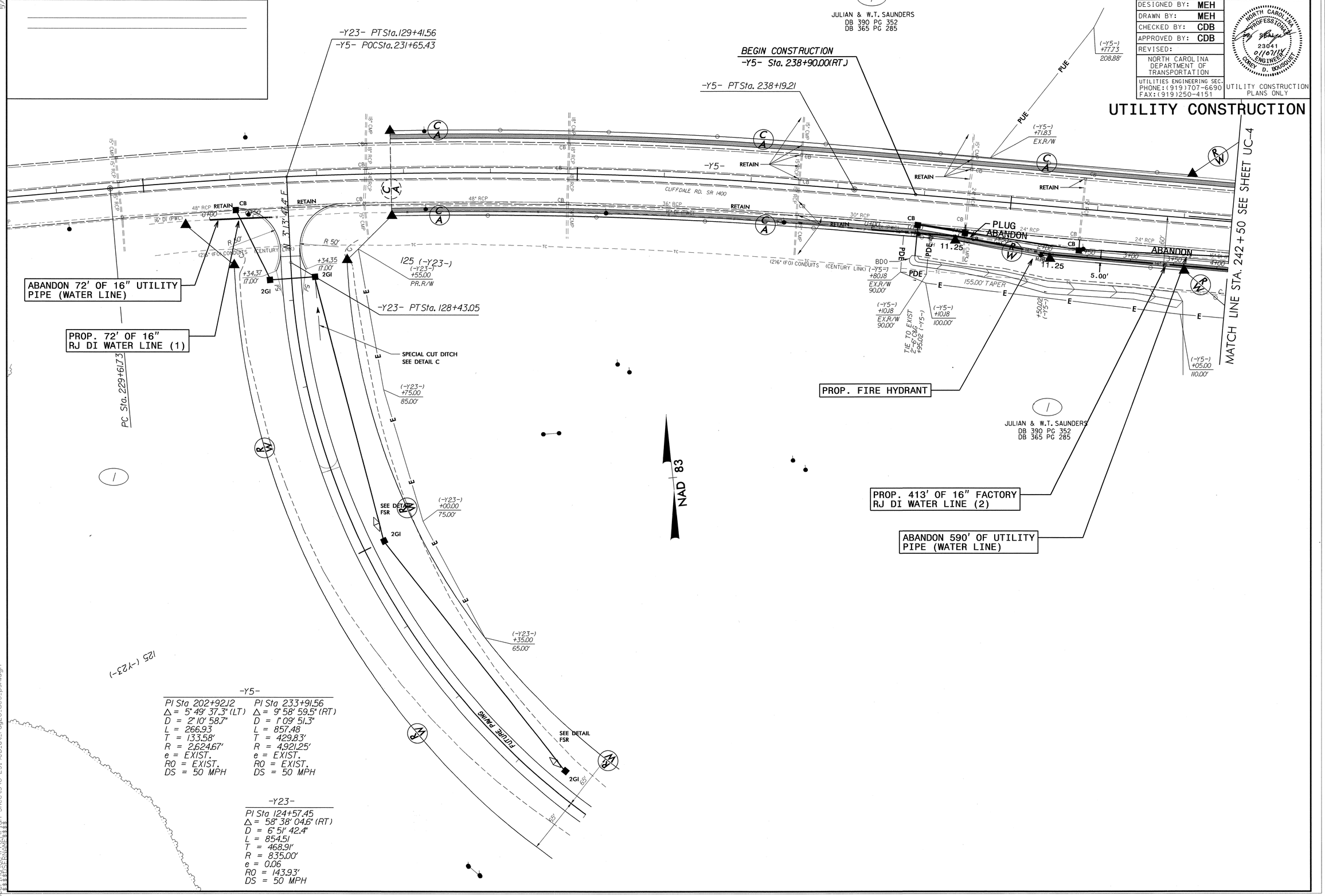
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-5
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 01/07/14 COREY D. BOUSQUET

UTILITY CONSTRUCTION



-Y5-

PI Sta 202+92.12	PI Sta 233+91.56
Δ = 5° 49' 37.3" (LT)	Δ = 9° 58' 59.5" (RT)
D = 2° 10' 58.7"	D = 1° 09' 51.3"
L = 266.93	L = 857.48
T = 133.58'	T = 429.83'
R = 2,624.67'	R = 4,921.25'
e = EXIST.	e = EXIST.
R0 = EXIST.	R0 = EXIST.
DS = 50 MPH	DS = 50 MPH

-Y23-

PI Sta 124+57.45
Δ = 58° 38' 04.6" (RT)
D = 6° 51' 42.4"
L = 854.51
T = 468.91'
R = 835.00'
e = 0.06
R0 = 143.93'
DS = 50 MPH

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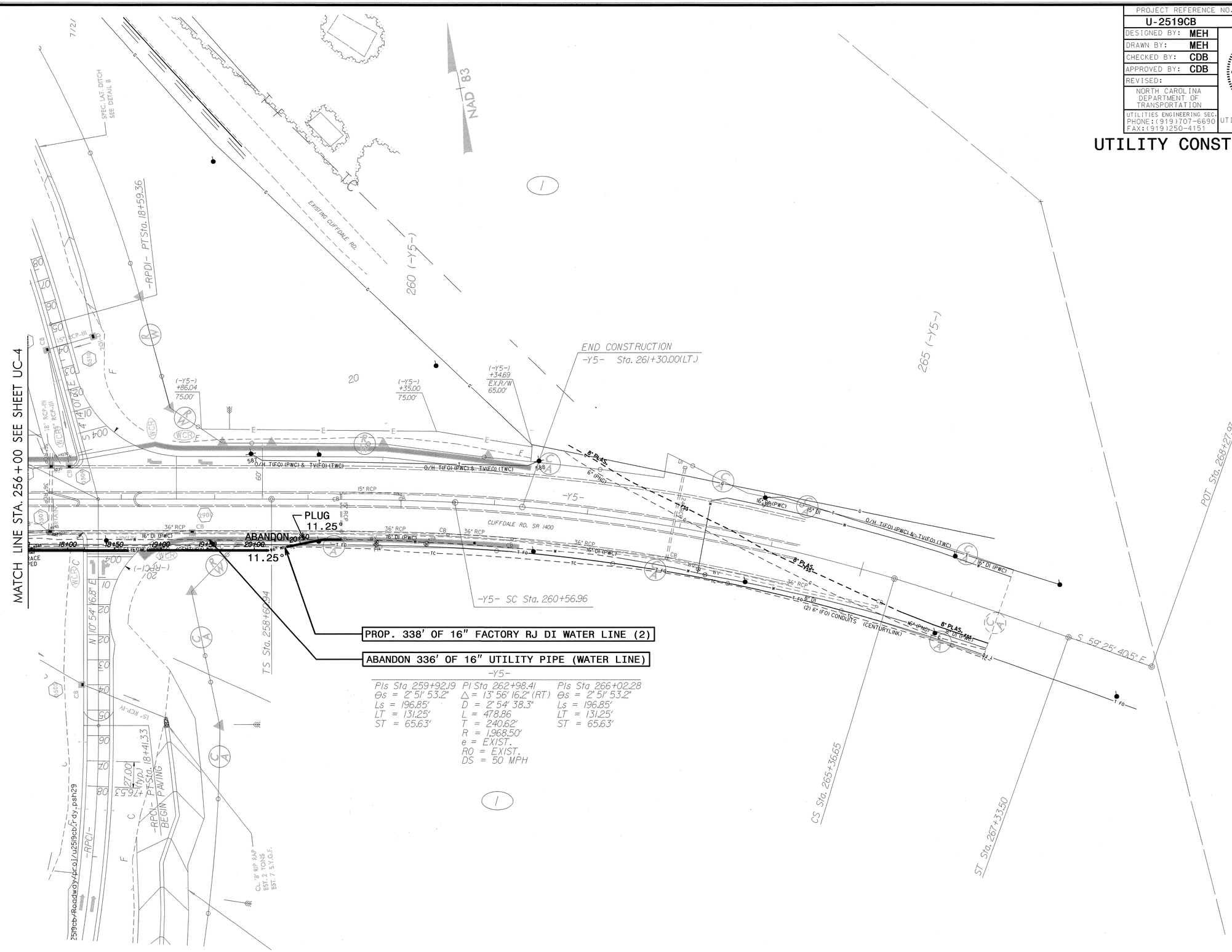
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-6
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 2/5/16

UTILITY CONSTRUCTION



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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-7

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

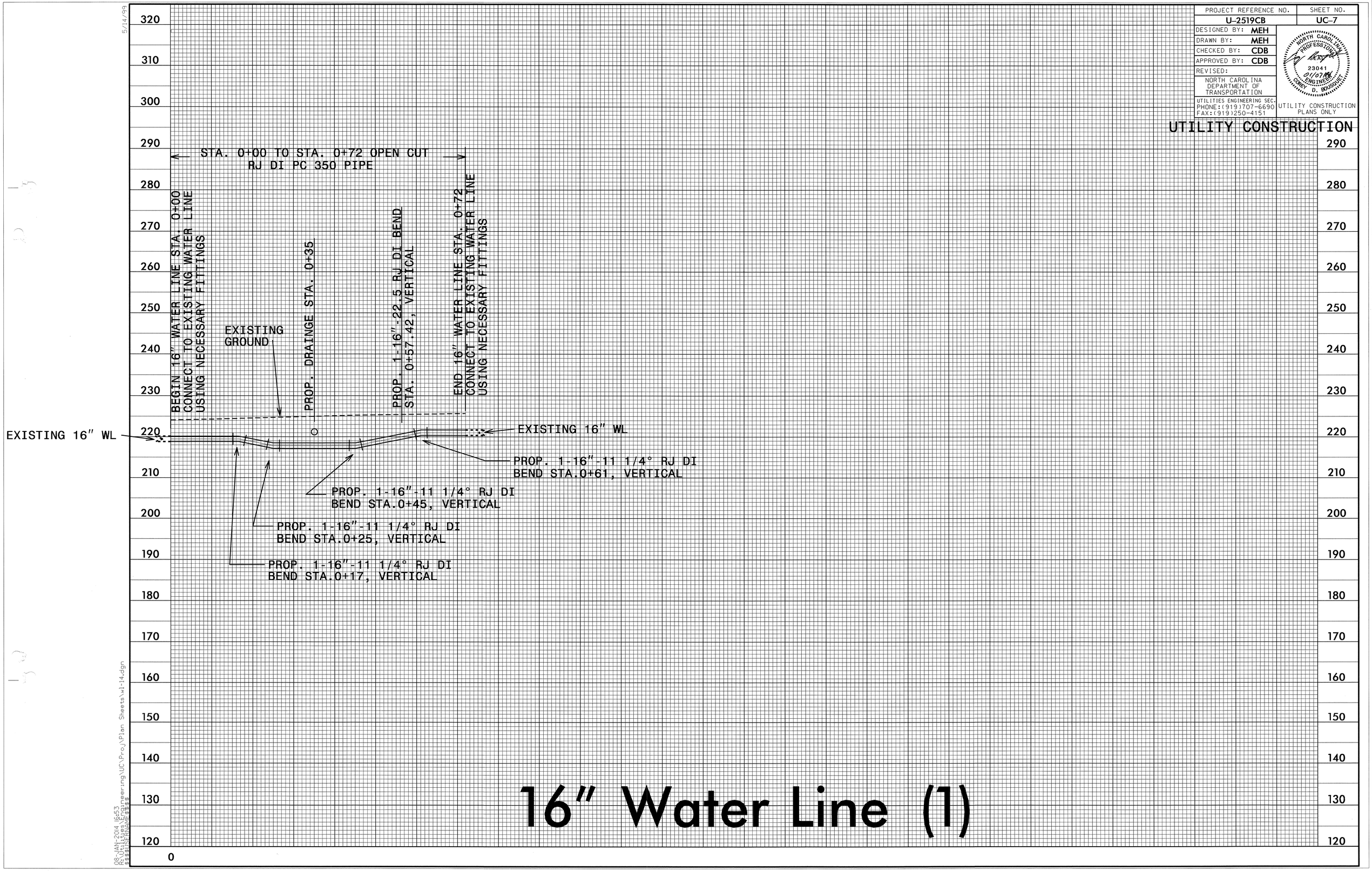
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 01/07/14

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



16" Water Line (1)

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-8

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
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FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 2/5/14

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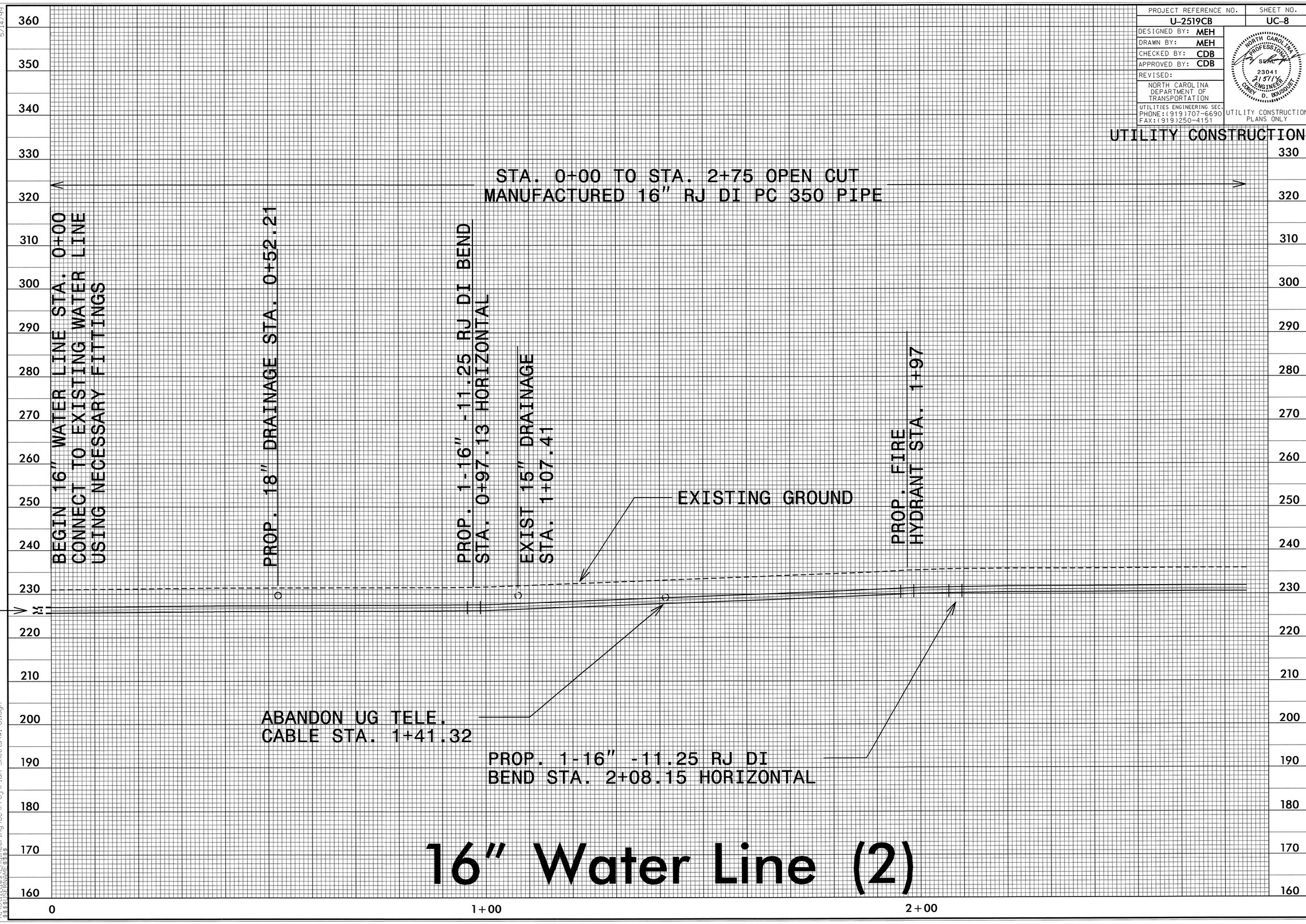

16" Water Line (2)

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-9

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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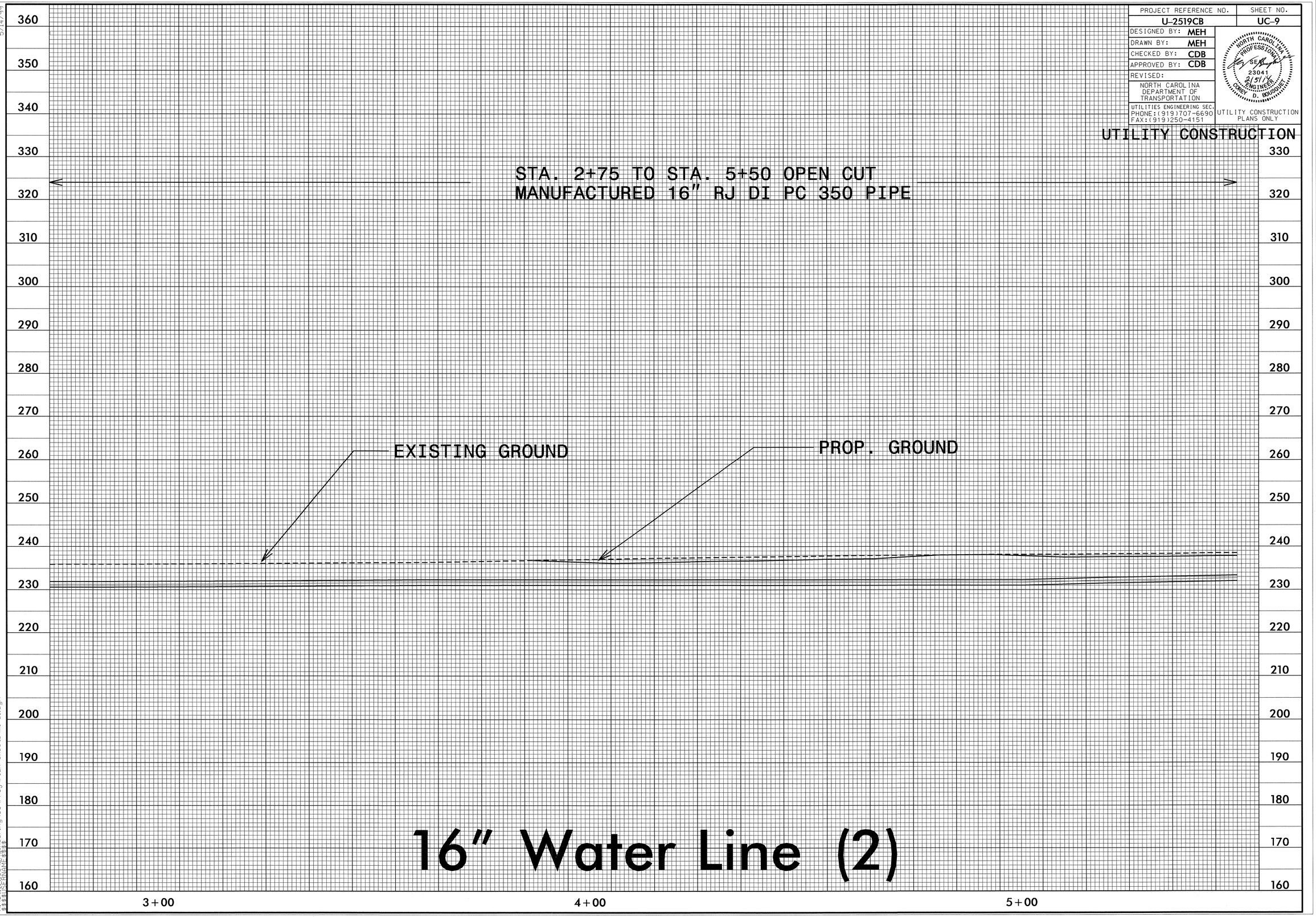
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 23041 2/5/14 COREY D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



16" Water Line (2)

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-10

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
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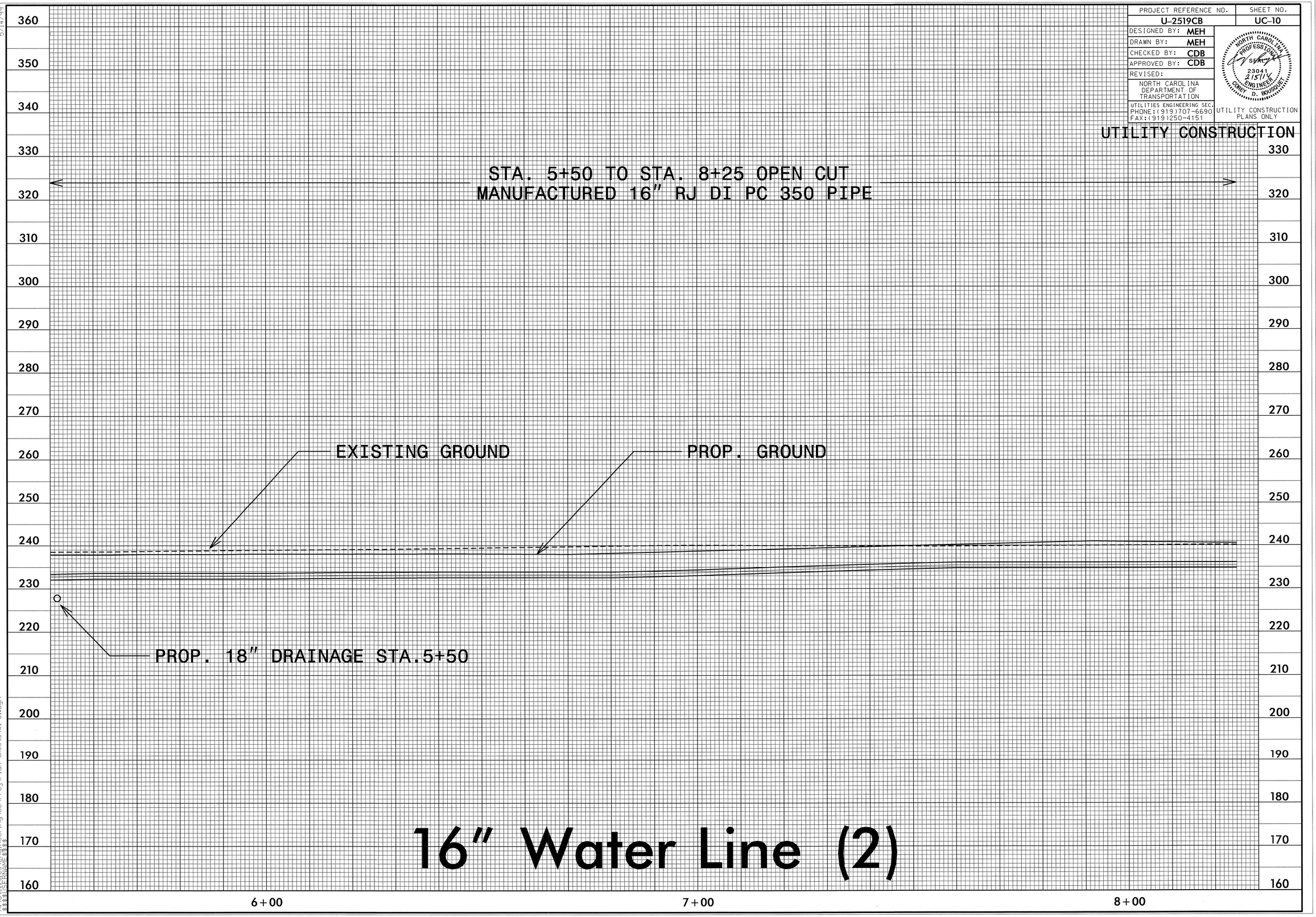
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 2/5/14

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



16" Water Line (2)

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-11

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

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FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 02/15/14 ENGINEER COREY D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

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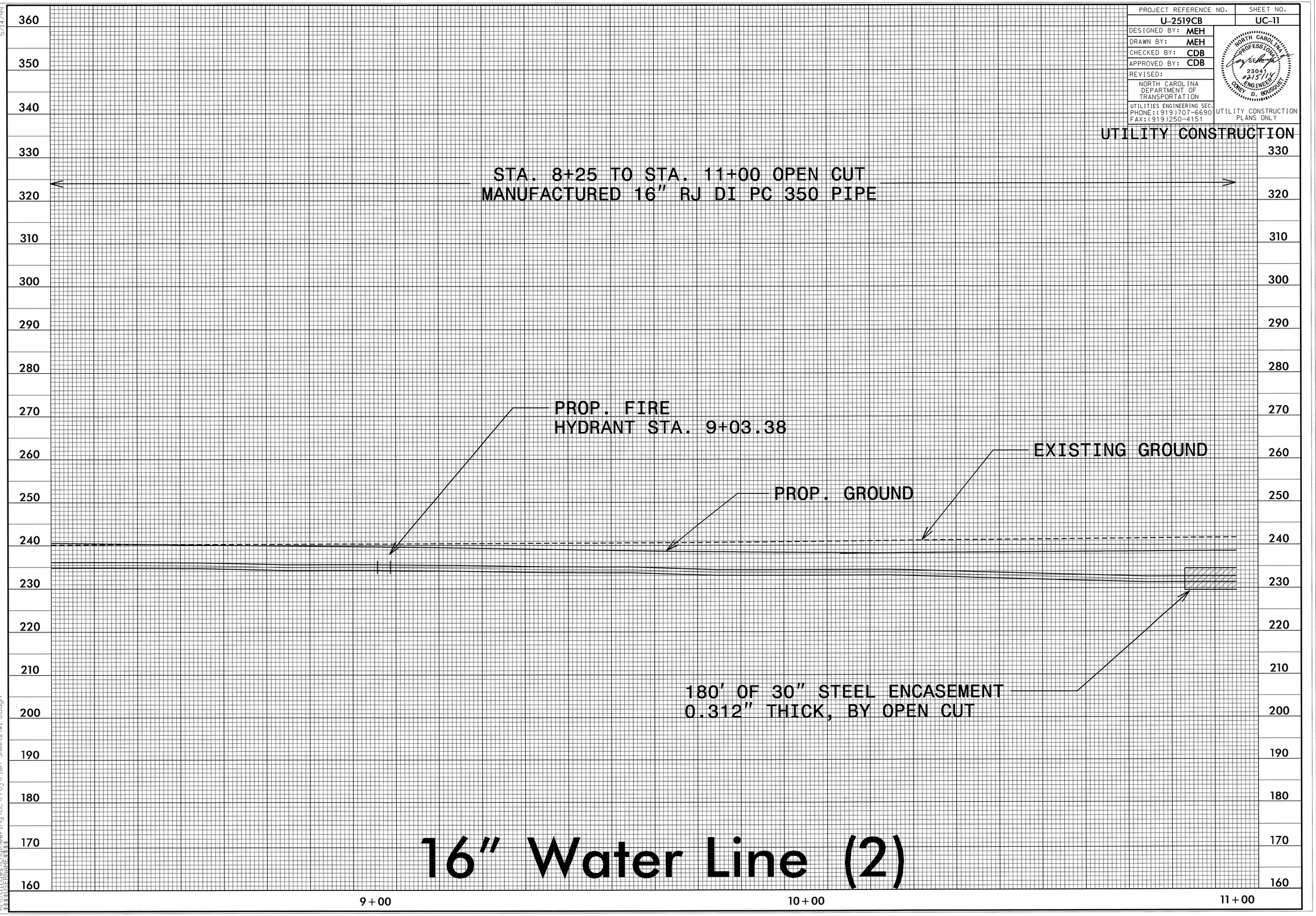

16" Water Line (2)

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-12

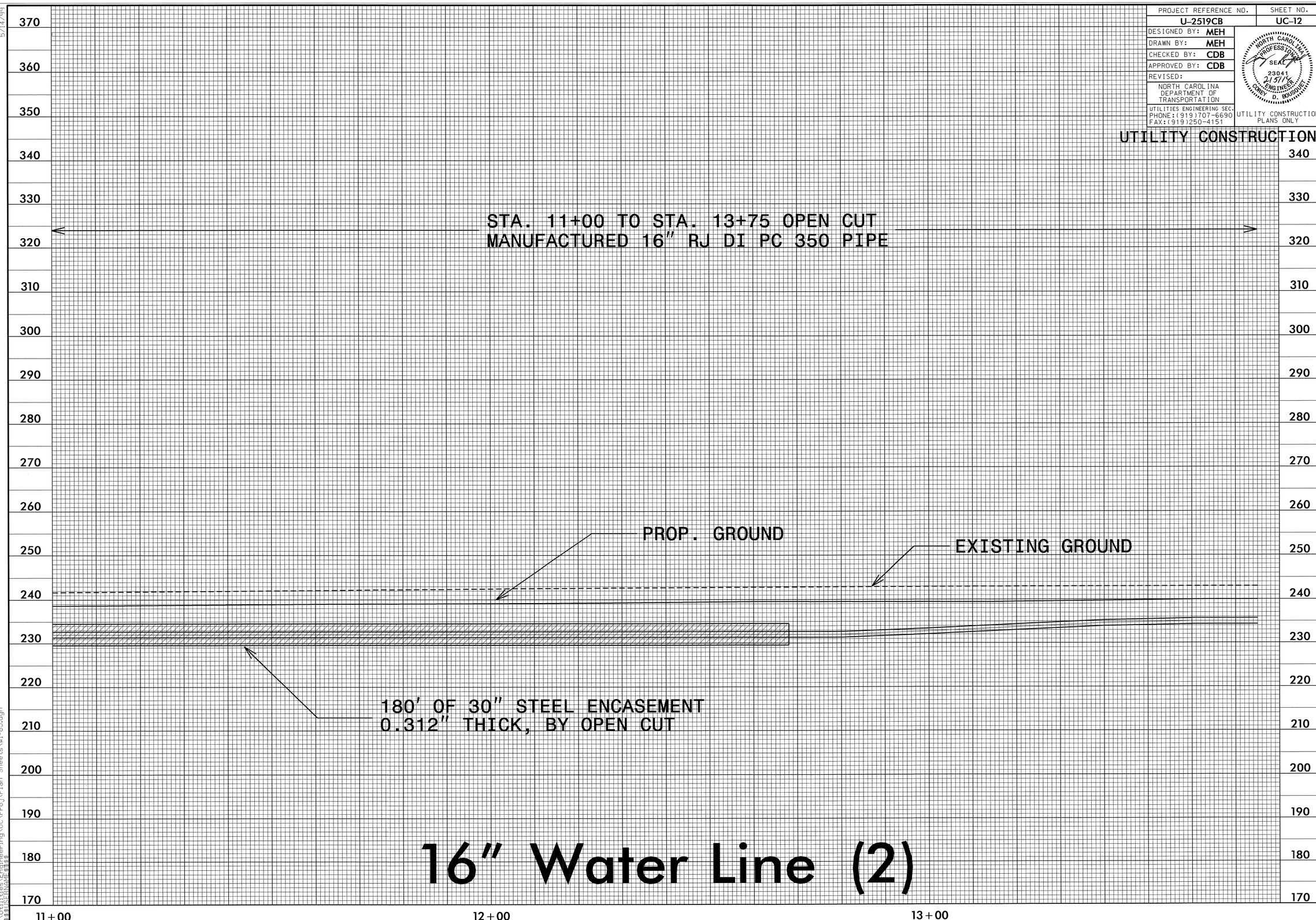
DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 21511 ENGINEER COREY D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



16" Water Line (2)

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-13

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

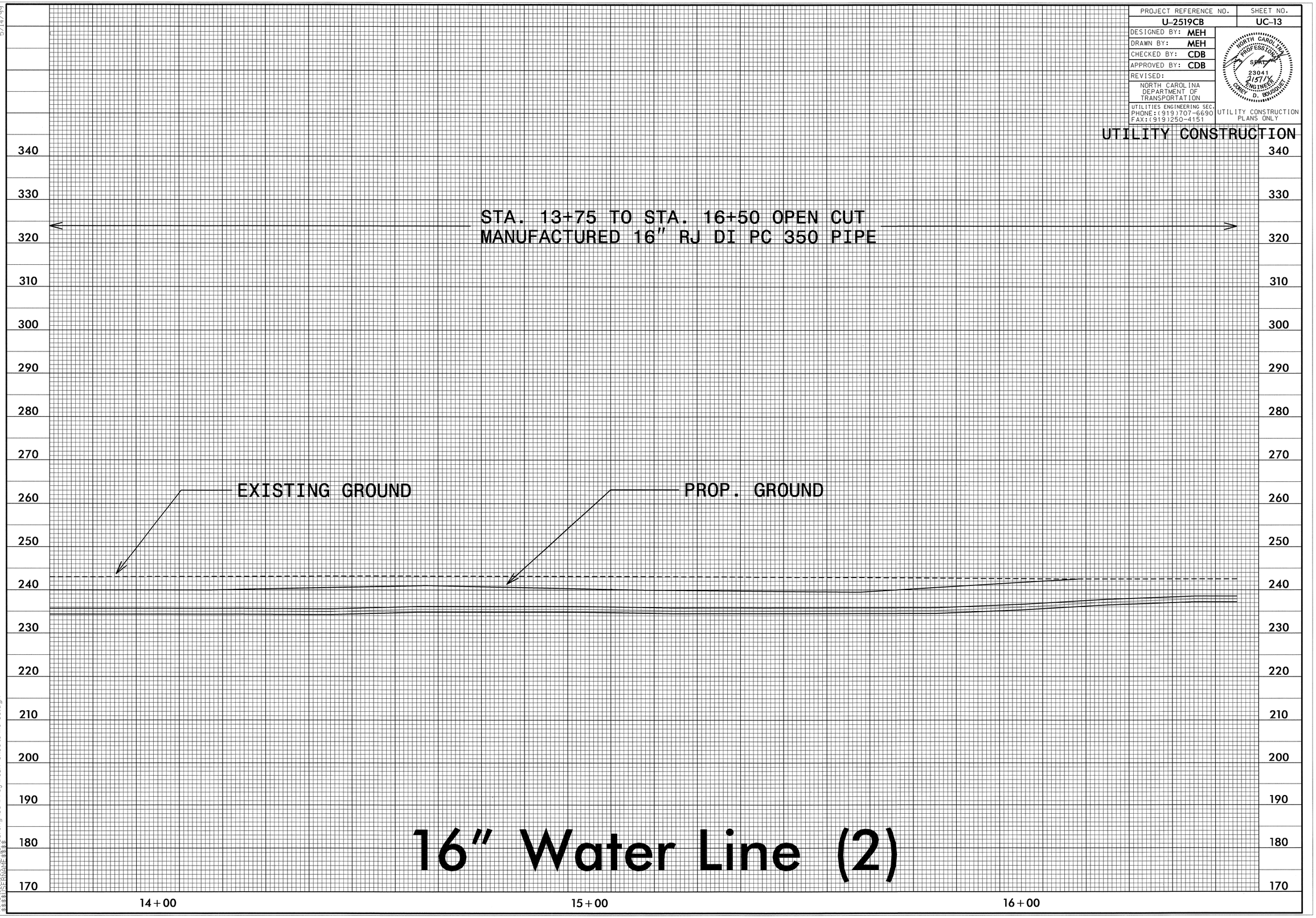
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 23041 21/37/K DONNEY D. BOUGHTON

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-14

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

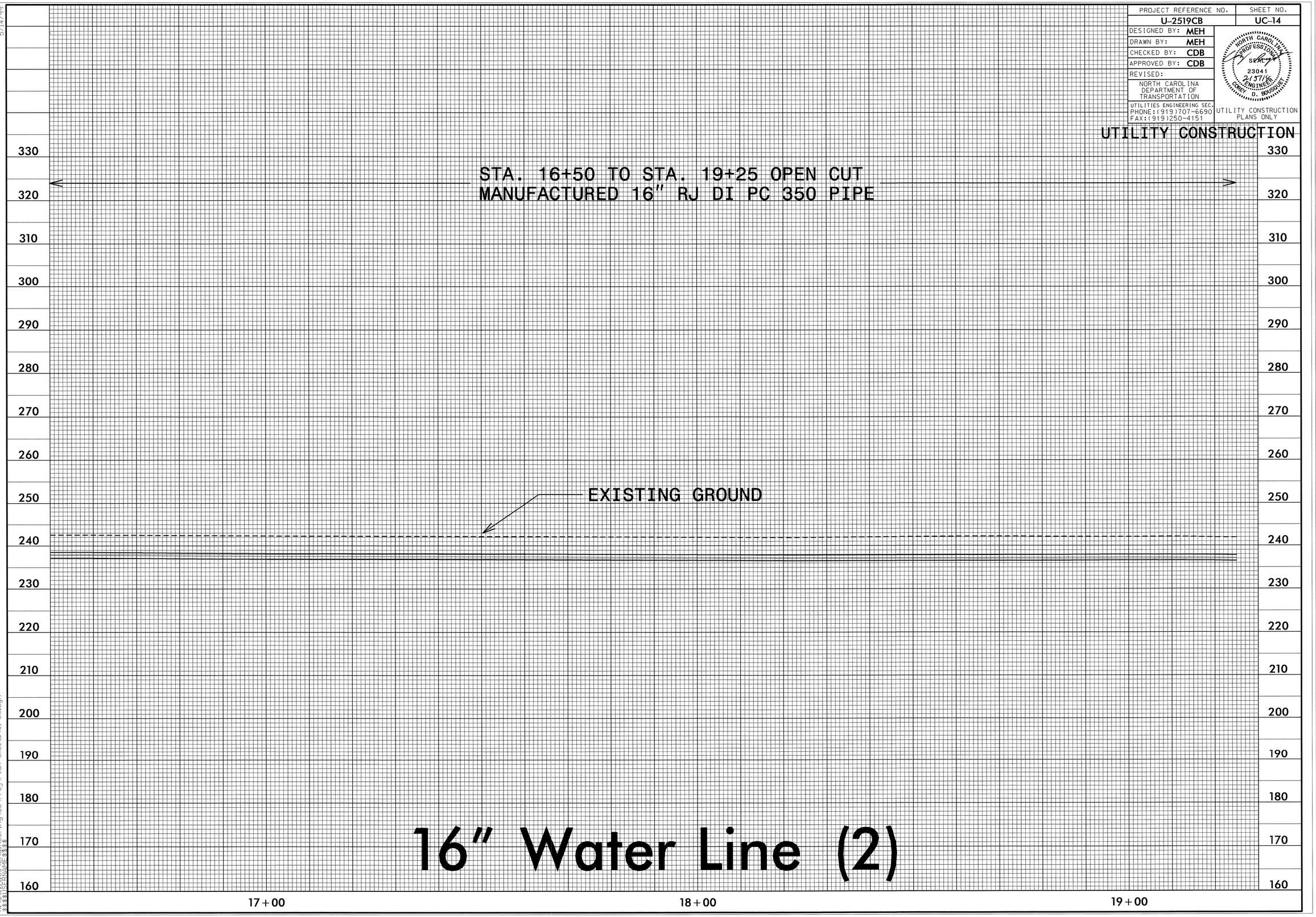
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER CORNEY D. BOUGHMAN 2/27/15

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



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PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UC-15

DESIGNED BY: MEH
DRAWN BY: MEH
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

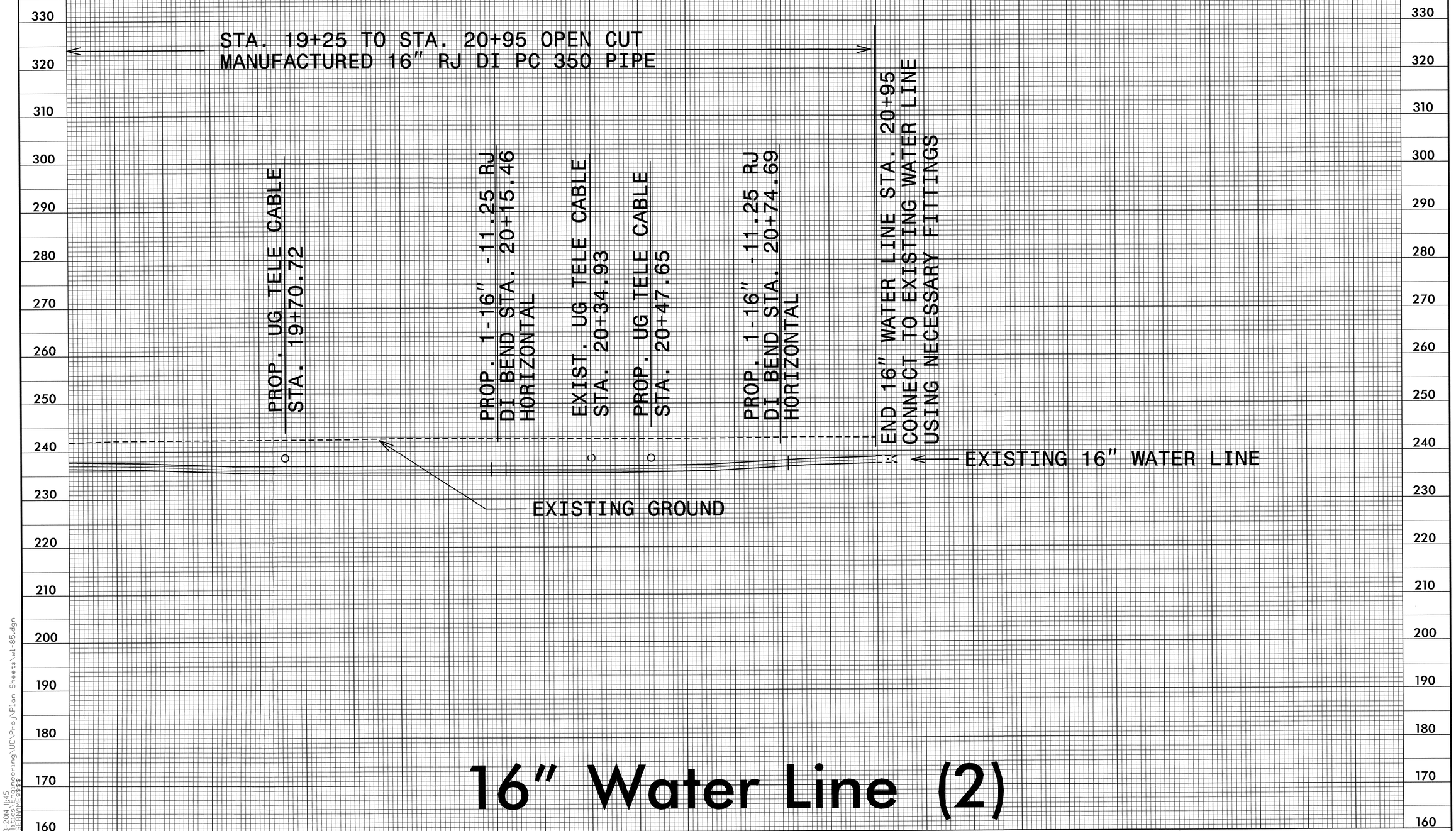
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 2/5/16

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



16" Water Line (2)

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5/14/99

09/08/99

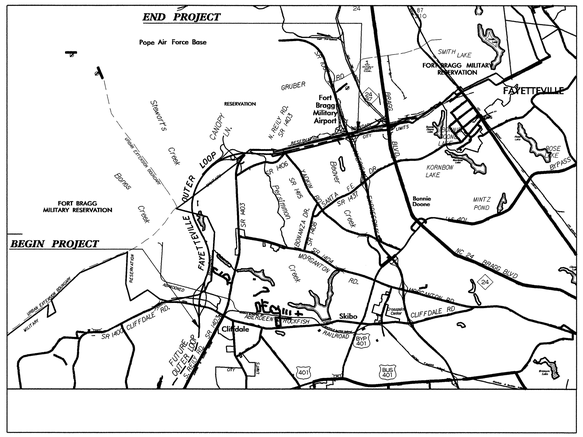
TIP PROJECT: U-2519CB

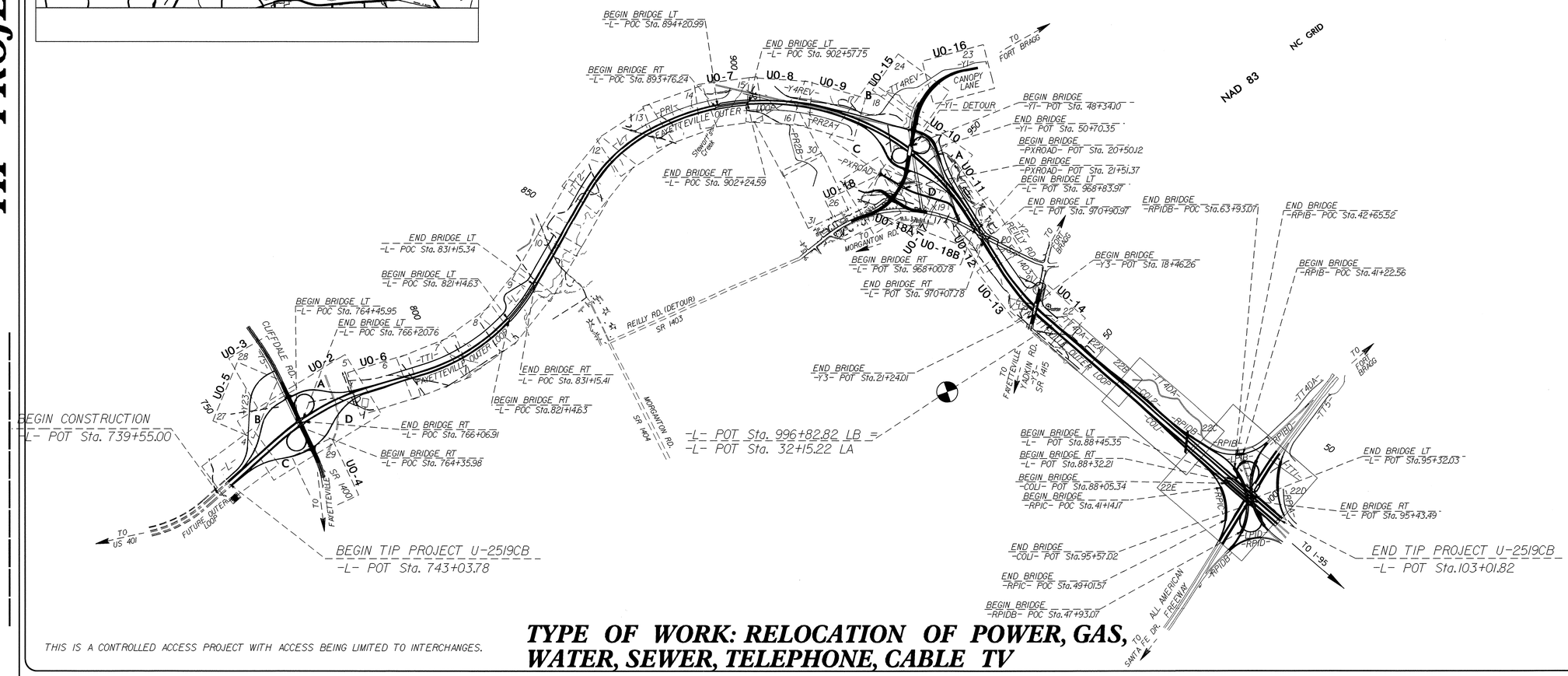
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-2519CB	UO-1

UTILITIES BY OTHERS PLANS
CUMBERLAND COUNTY

LOCATION: FAYETTEVILLE OUTER LOOP FROM SOUTH OF SR 1400 CLIFFDALE ROAD TO EAST OF ALL AMERICAN FREEWAY





THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

TYPE OF WORK: RELOCATION OF POWER, GAS, WATER, SEWER, TELEPHONE, CABLE TV

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-18	UTILITY BY OTHERS PLAN SHEETS
UO-18A THRU UO-18B	ACP DETAIL SHEETS

UTILITY OWNERS ON PROJECT

(A) PIEMONT GAS (GAS)
(B) DUKE PROGRESS (TRANSMISSION)
(C) DUKE PROGRESS (DISTRIBUTION)
(D) FAYETTEVILLE PUBLIC WORKS COMMISSION (POWER)
(E) SANDHILLS UTILITY (POWER - FORT BRAGG)
(F) CENTURY LINK (CENTURYLINK)
(G) OLD NORTH UTILITIES (WATER AND SEWER - FORT BRAGG)
(H) TIME WARNER CABLE (CATV)
(I) FORT BRAGG - (TELEPHONE)
(J) FORT BRAGG (GAS)

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING
1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. — UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. — UTILITIES SQUAD LEADER PROJECT ENGINEER
Mariko Hafeez — UTILITIES PROJECT DESIGNER

20-MAY-2014 17:27
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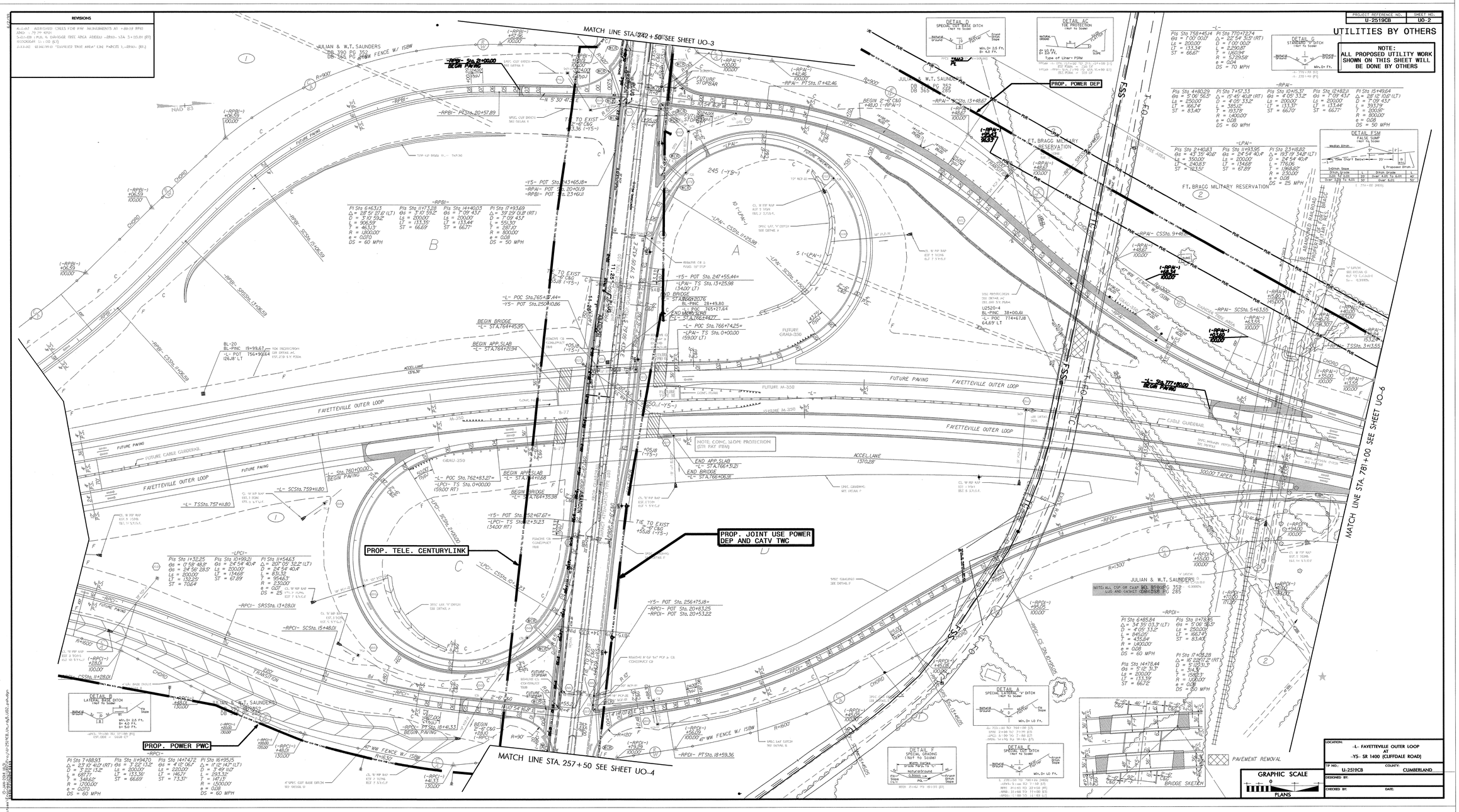
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-2

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS



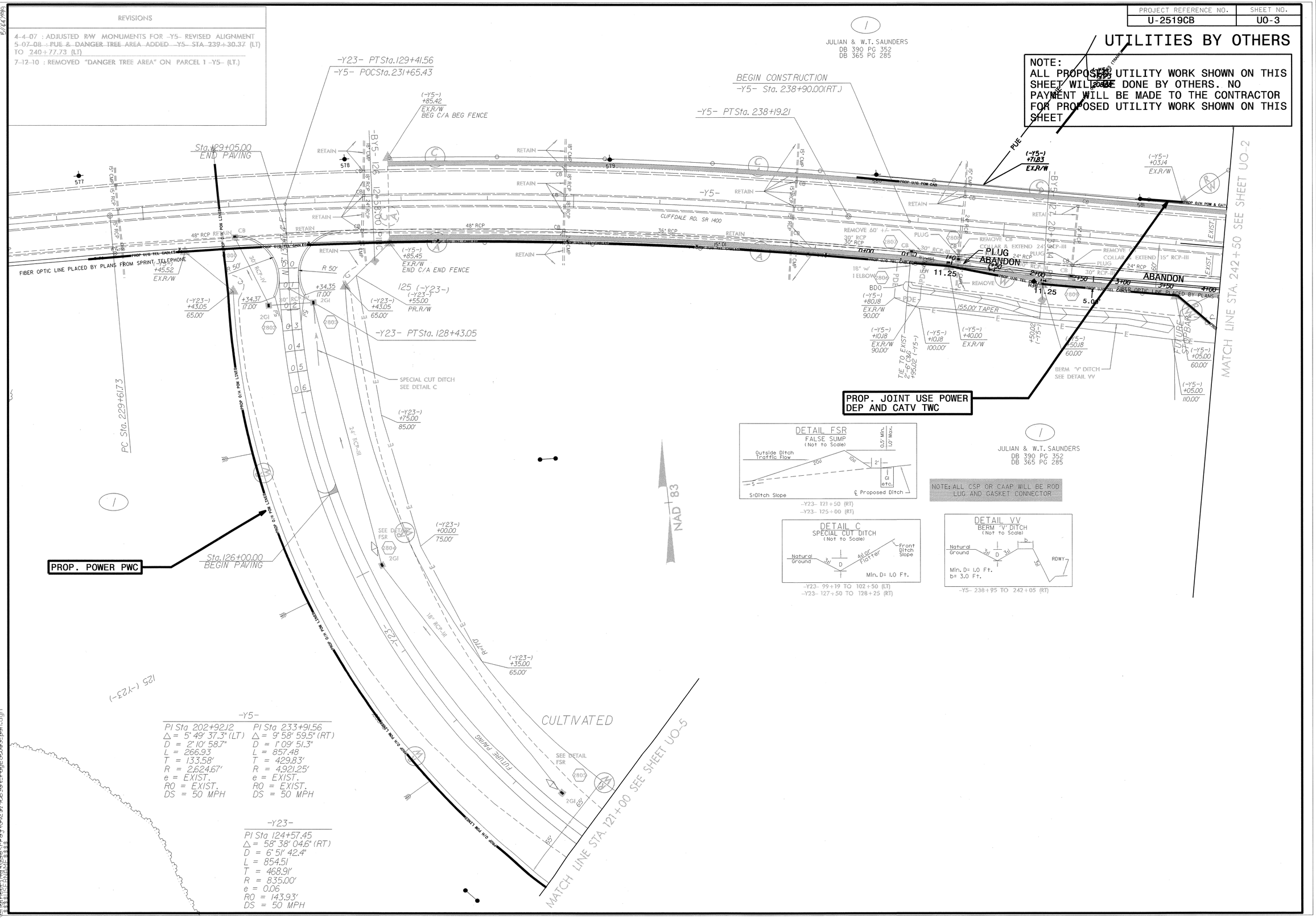
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-3

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET

REVISIONS

4-4-07 : ADJUSTED R/W MONUMENTS FOR -Y5- REVISED ALIGNMENT
~~5-07-08 : PUE & DANGER TREE AREA ADDED -Y5- STA. 239+30.37 (LT) TO 240+77.73 (LT)~~
7-12-10 : REMOVED "DANGER TREE AREA" ON PARCEL 1 -Y5- (LT.)



-Y5-

PI Sta 202+92.12	PI Sta 233+91.56
Δ = 5° 49' 37.3" (LT)	Δ = 9° 58' 59.5" (RT)
D = 2° 10' 58.7"	D = 1° 09' 51.3"
L = 266.93	L = 857.48
T = 133.58'	T = 429.83'
R = 2,624.67'	R = 4,921.25'
e = EXIST.	e = EXIST.
RO = EXIST.	RO = EXIST.
DS = 50 MPH	DS = 50 MPH

-Y23-

PI Sta 124+57.45
Δ = 58° 38' 04.6" (RT)
D = 6° 51' 42.4"
L = 854.51
T = 468.91'
R = 835.00'
e = 0.06
RO = 143.93'
DS = 50 MPH

DETAIL FSR
FALSE SUMP
(Not to Scale)

-Y23- 121+50 (RT)
-Y23- 125+00 (RT)

JULIAN & W.T. SAUNDERS
DB 390 PG 352
DB 365 PG 285

NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR

DETAIL C
SPECIAL CUT DITCH
(Not to Scale)

-Y23- 99+19 TO 102+50 (LT)
-Y23- 127+50 TO 128+25 (RT)

DETAIL VV
BERM 'V' DITCH
(Not to Scale)

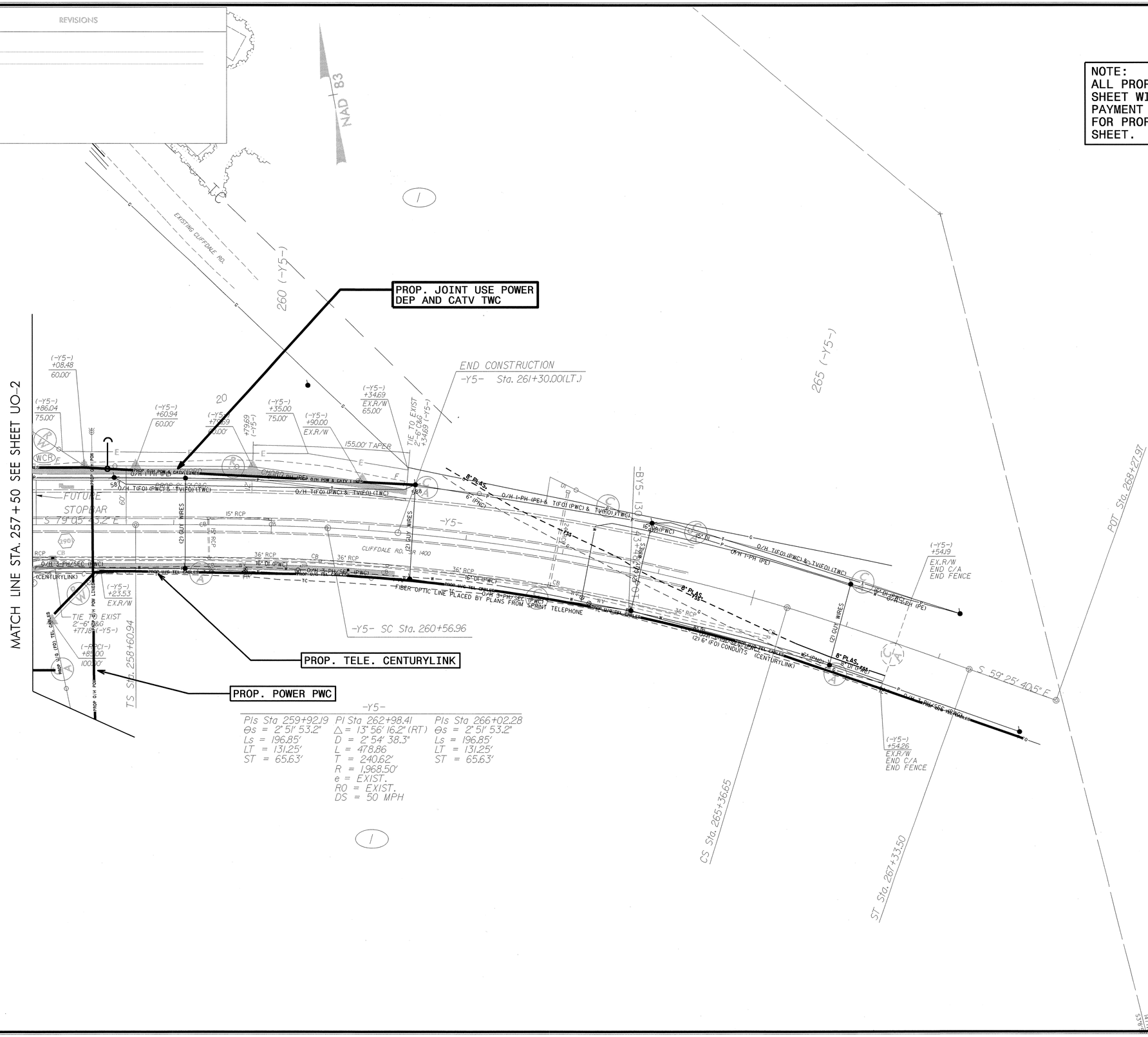
-Y5- 238+95 TO 242+05 (RT)

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-4

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

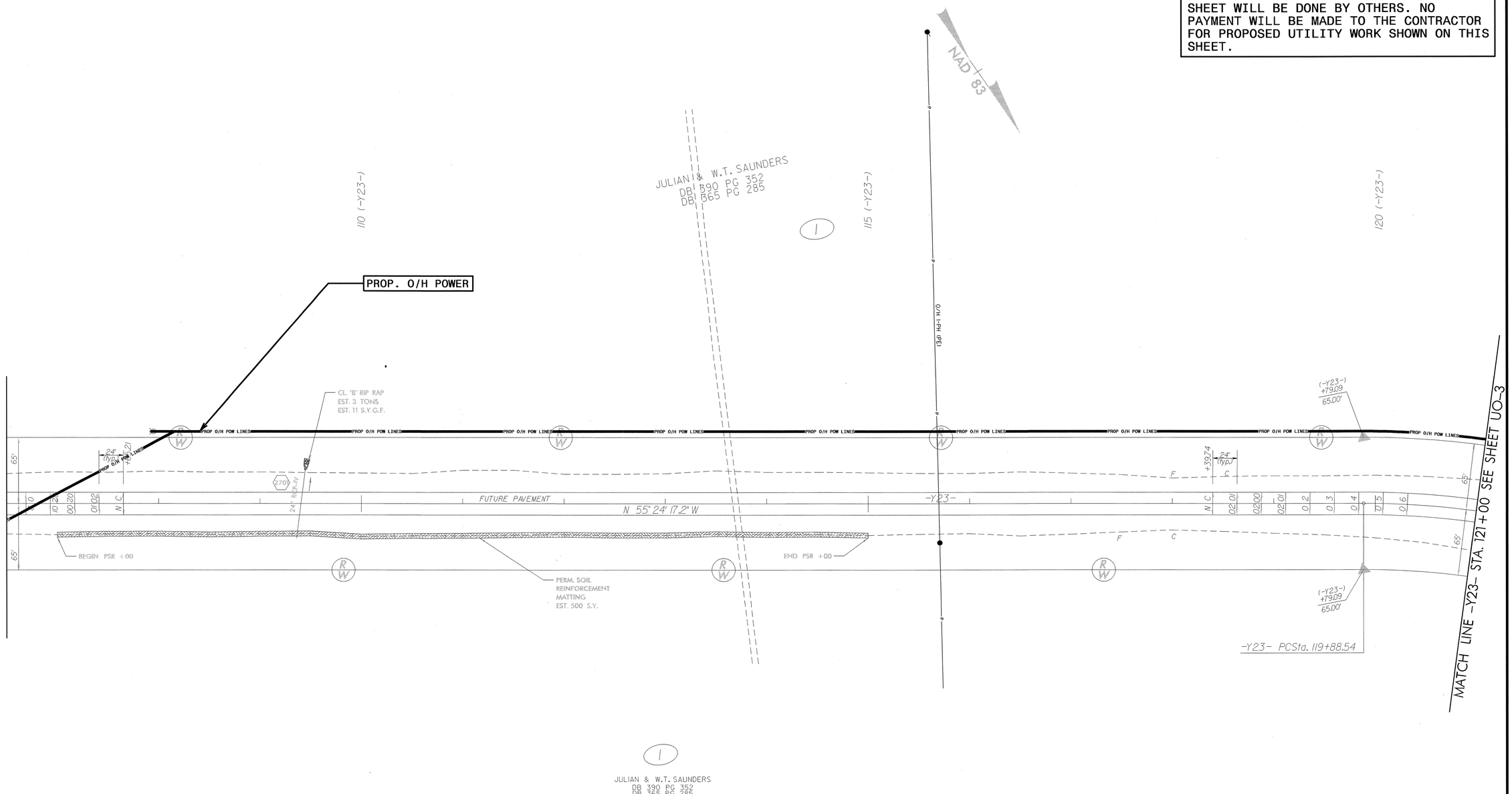
REVISIONS



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-5

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



5/14/99

13-JAN-2014 13:22
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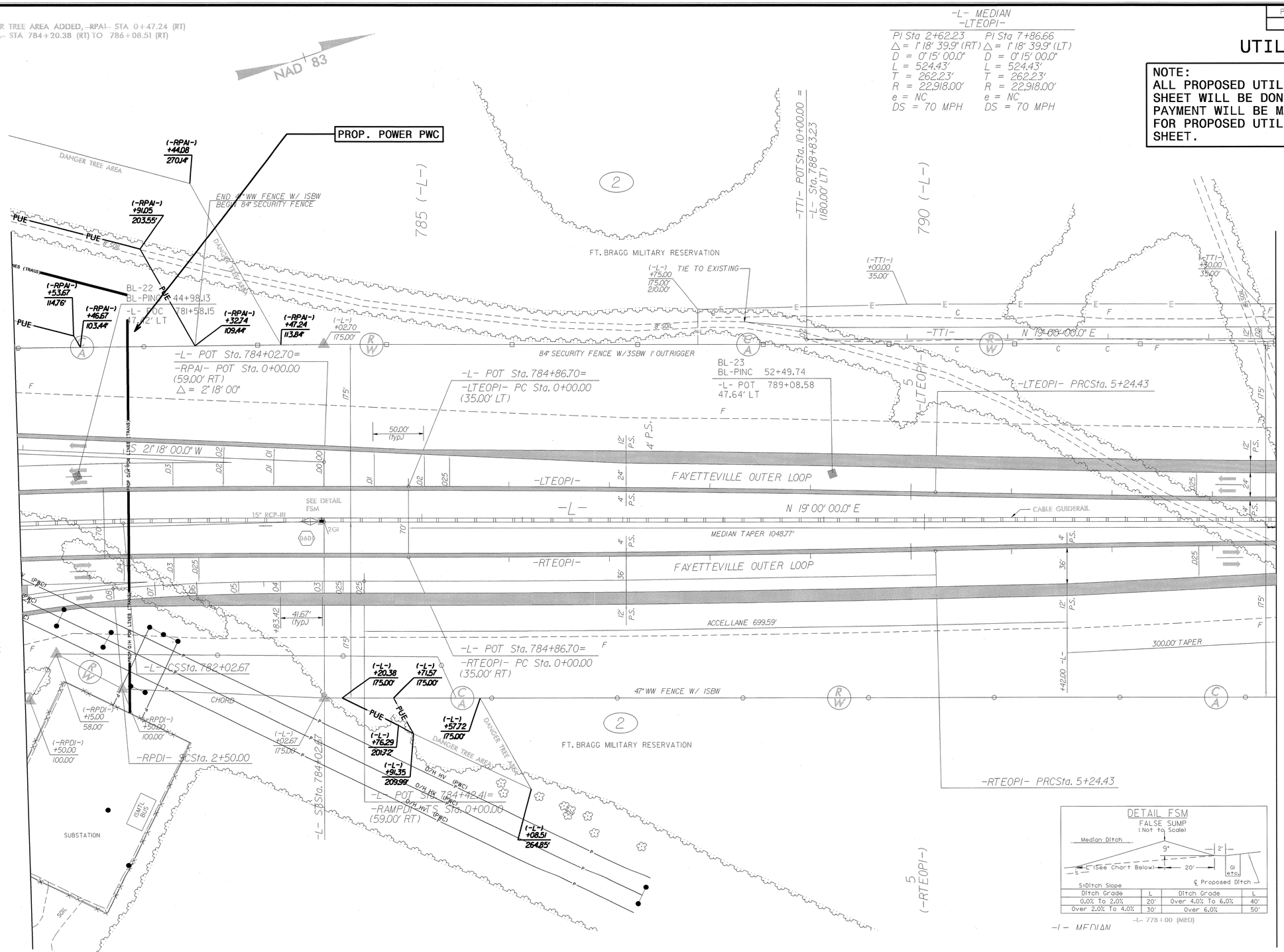
5-07-08 : PUBLIC DANGER TREE AREA ADDED, -RPAI- STA 0+47.24 (RT) TO 3+05.01 (RT) AND -L- STA 784+20.38 (RT) TO 786+08.51 (RT)

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-6

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



DETAIL FSM
FALSE SUMP
(Not to Scale)

S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

-L- 778+00 (MED)

13-JAN-2014 13:17
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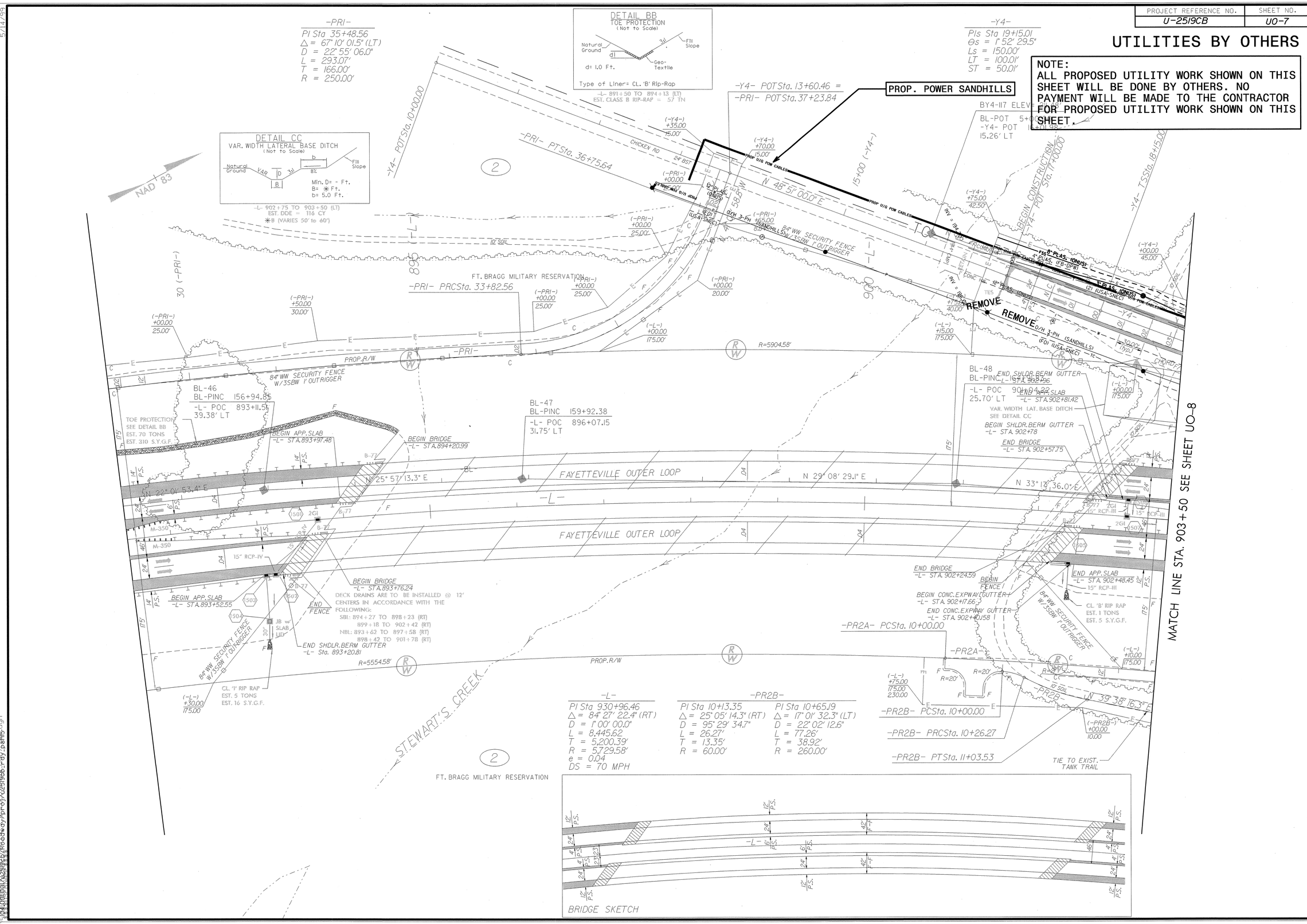
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-7

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



5/14/99

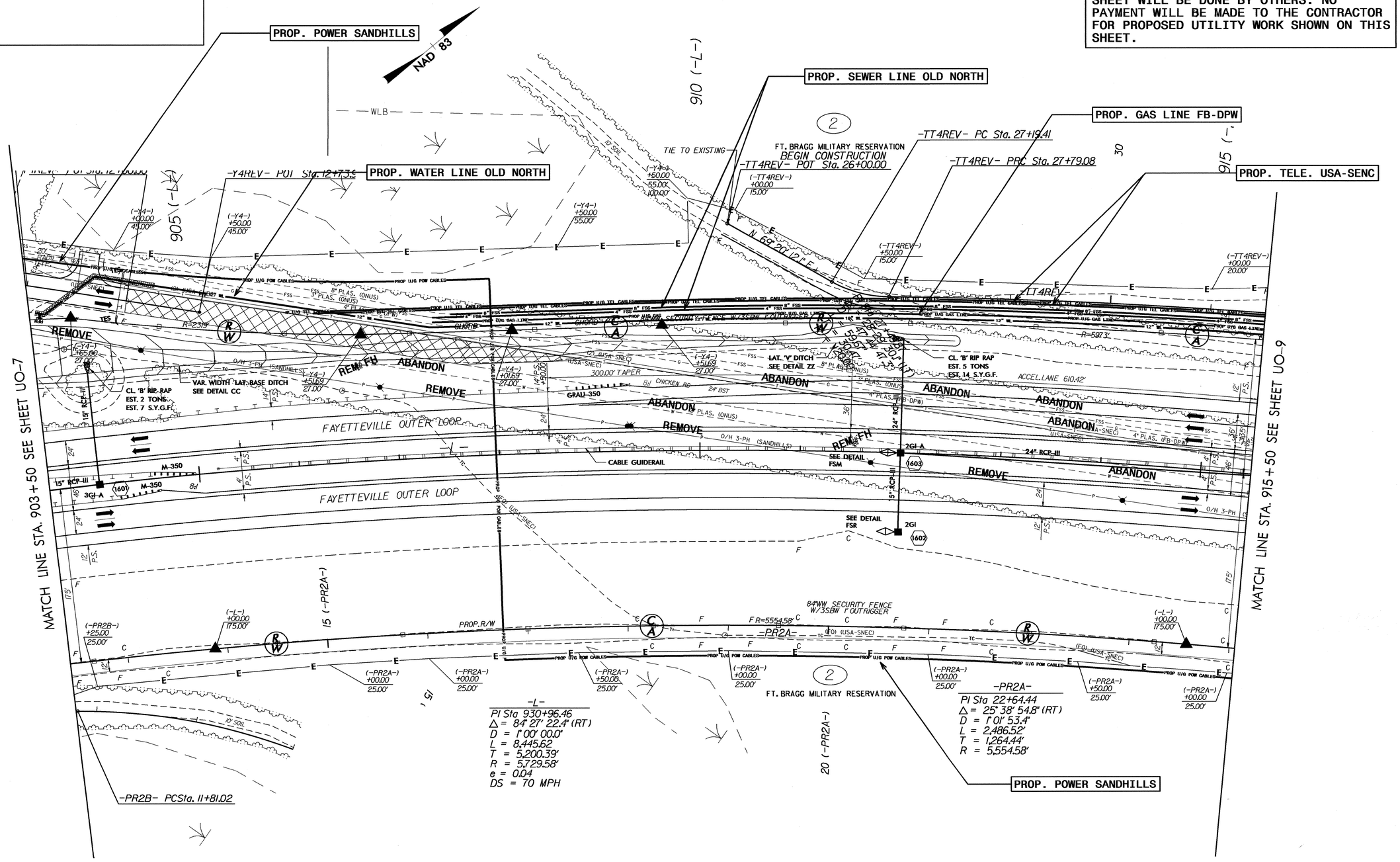
13-JAN-2014 13:16

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-8

REVISIONS

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

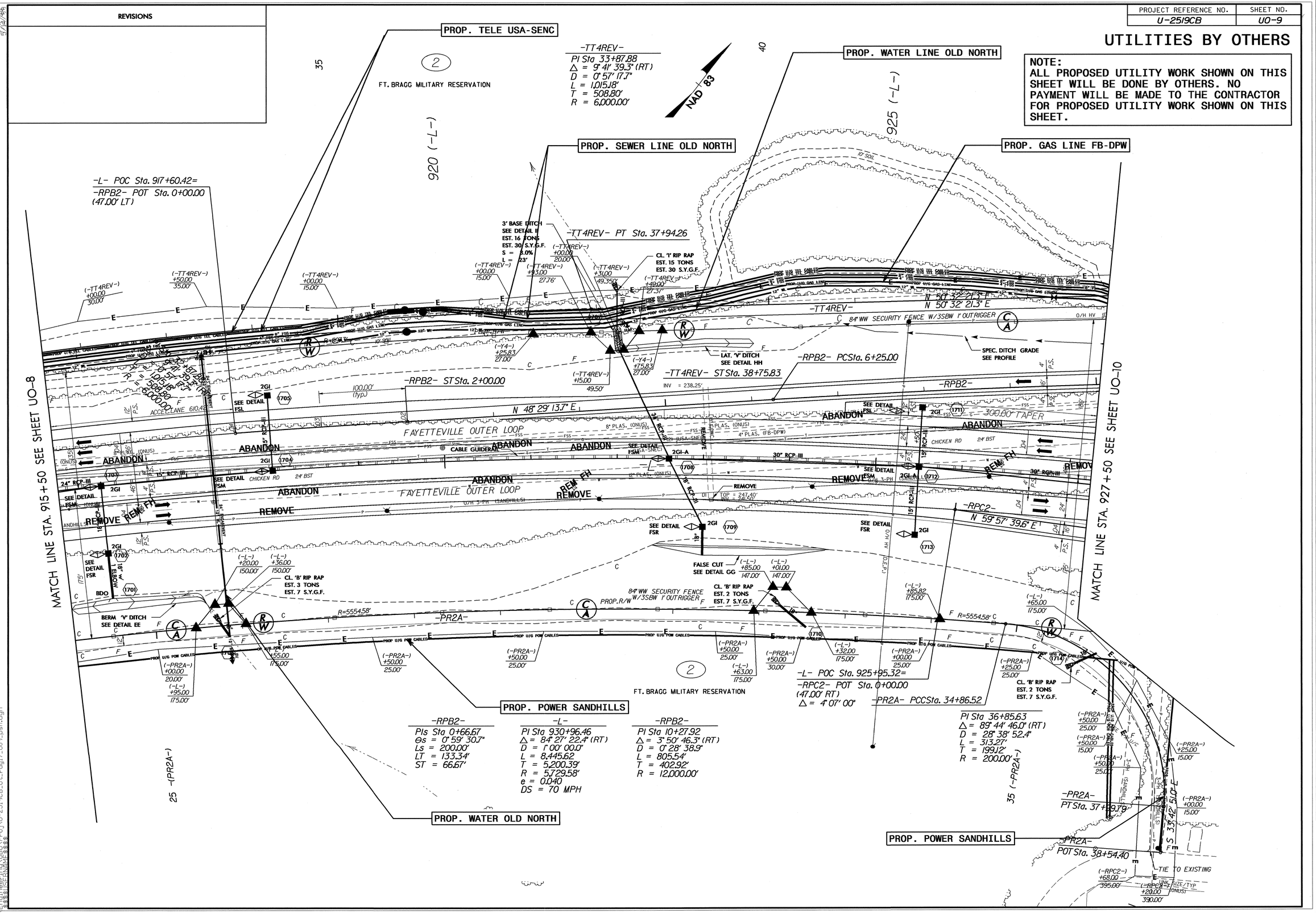


PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-9

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

REVISIONS



29-JUL-2014 15:48
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$$$$DATE$$$$
$$$$FILENAME$$$$
$$$$DGN$$$$

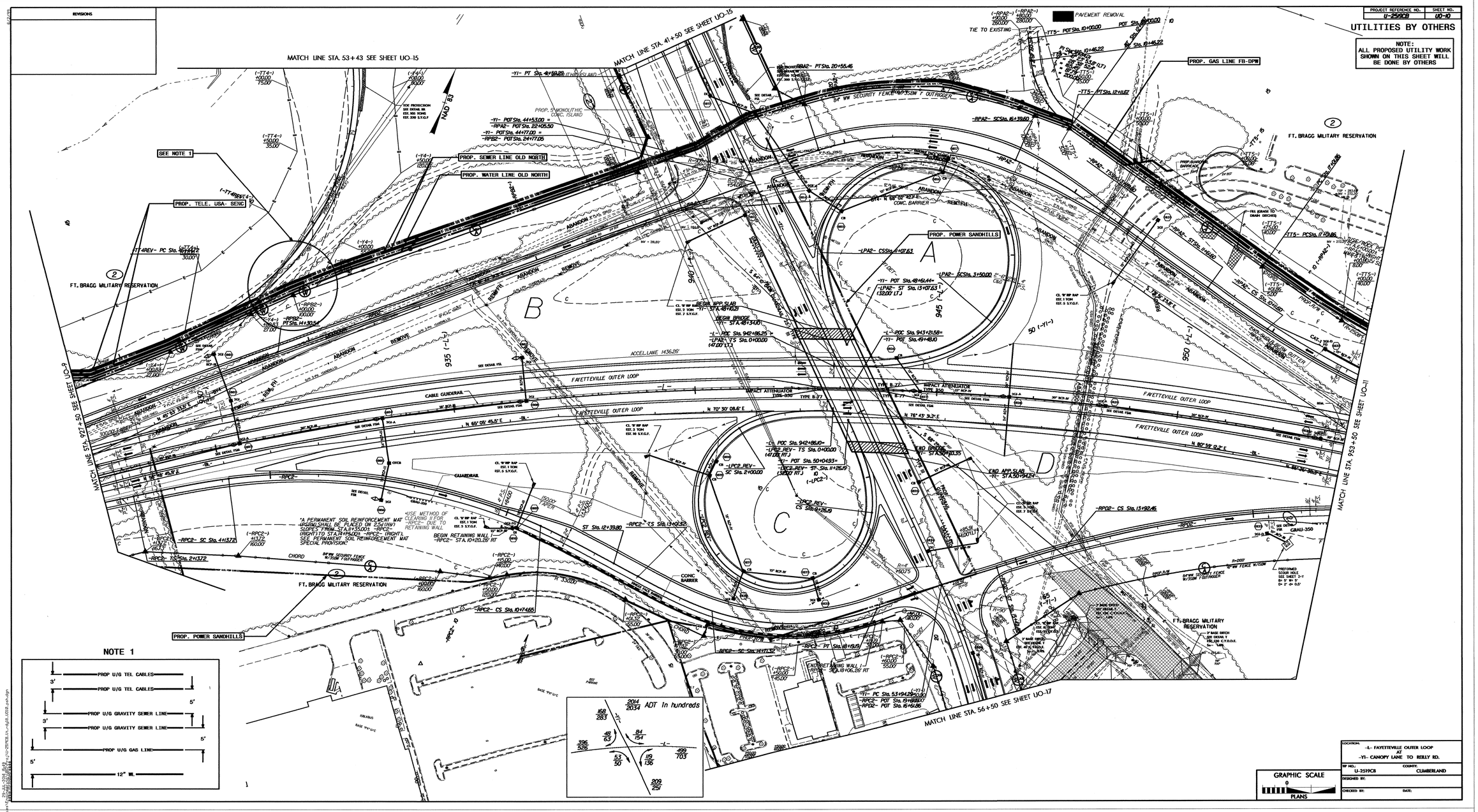
5-22-07 : ATTACHED UPDATED UTILITY FILE SHOWING WATERLINE
5-07-08 : PUE & DANGER TREE AREA ADDED -Y1- STA. 41+50 (R1) TO -RPB1- STA. 21+54.05 (L1) AND -Y1- STA. 56+50 (R1) TO -RPD1- STA. 14+73.74 (R1)

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-10

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

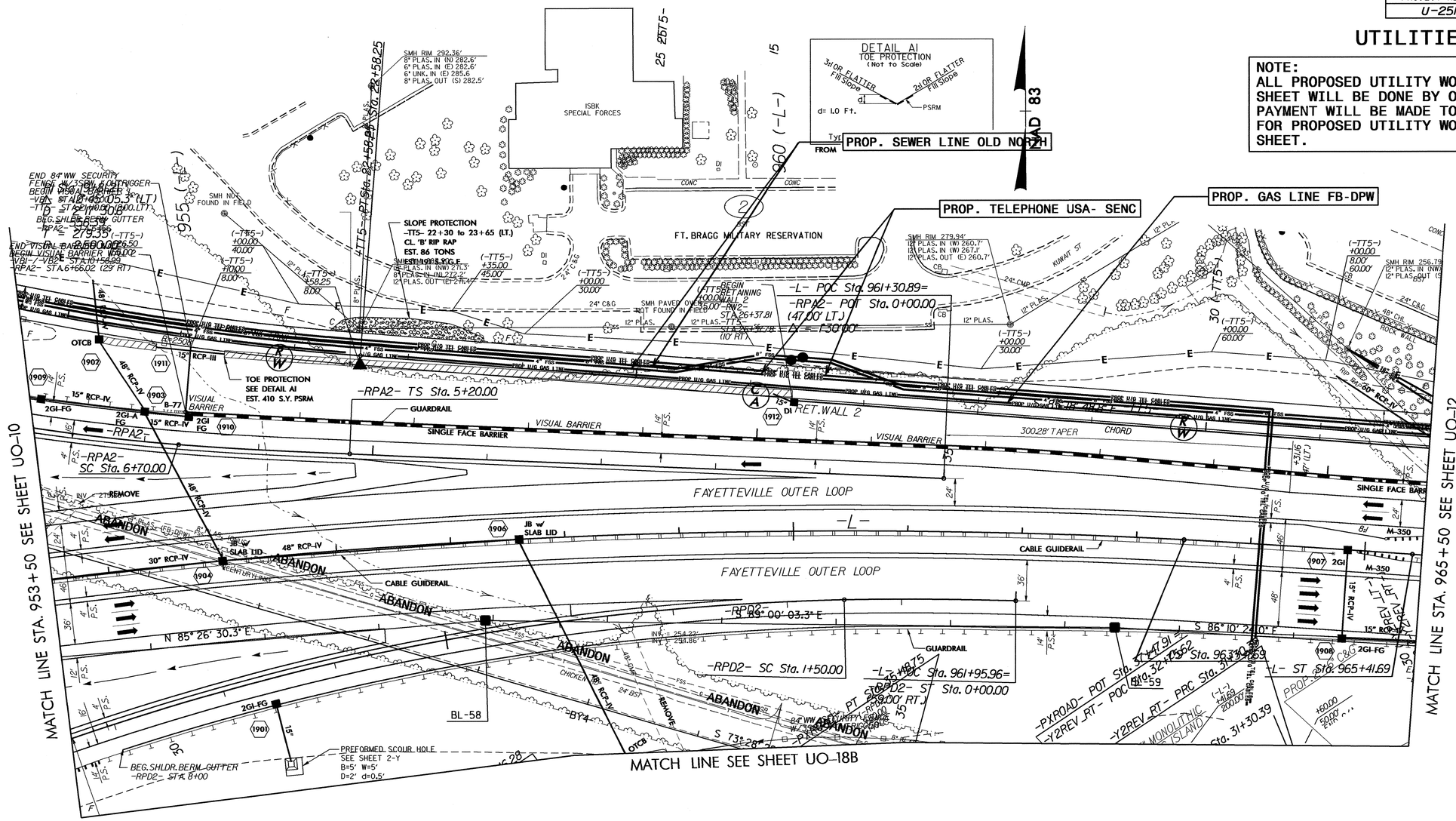


LOCATION: -L- FAYETTEVILLE OUTER LOOP AT -Y1- CANOPY LANE TO REILLY RD.	
TIP NO.: U-2519CB	COUNTY: CUMBERLAND
DESIGNED BY:	
CHECKED BY:	DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-11

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



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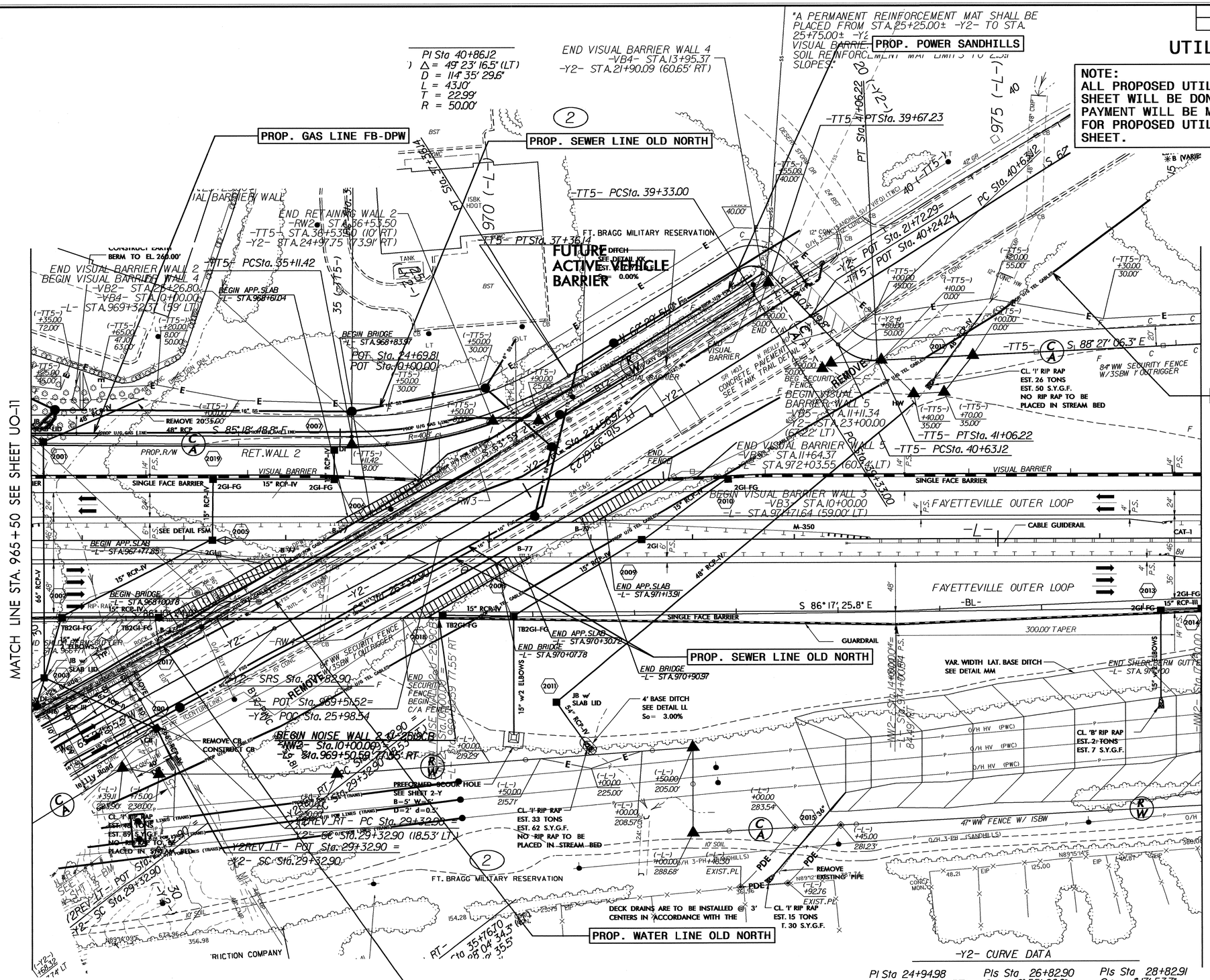
$$$$USER:PNEWMAN$$$

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-12

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



PI Sta 24+94.98	PIs Sta 26+82.90	PIs Sta 28+82.91
Δ = 3° 24' 00.0" (RT)	Θs = 0° 55' 26.9"	Θs = 1° 17' 53.7"
D = 1° 13' 55.8"	Ls = 150.00'	Ls = 150.00'
L = 275.94'	LT = 100.00'	LT = 100.00'
T = 138.01'	ST = 50.00'	ST = 50.00'
R = 4,650.00'		

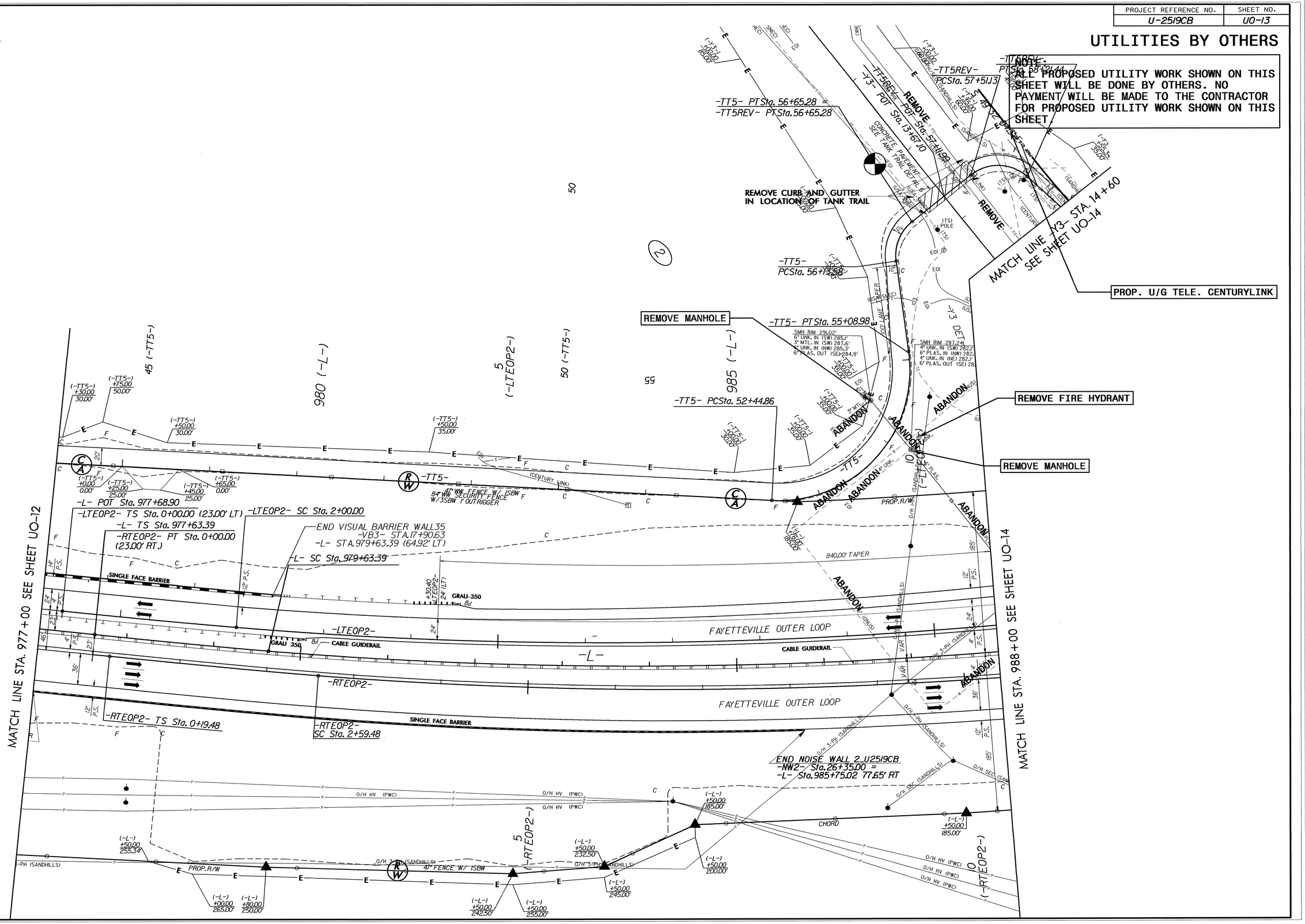
5/14/99

29-JUL-2014 15:50
$FDOT_INSERNAME$

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-13

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



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29-JUL-2014 15:51
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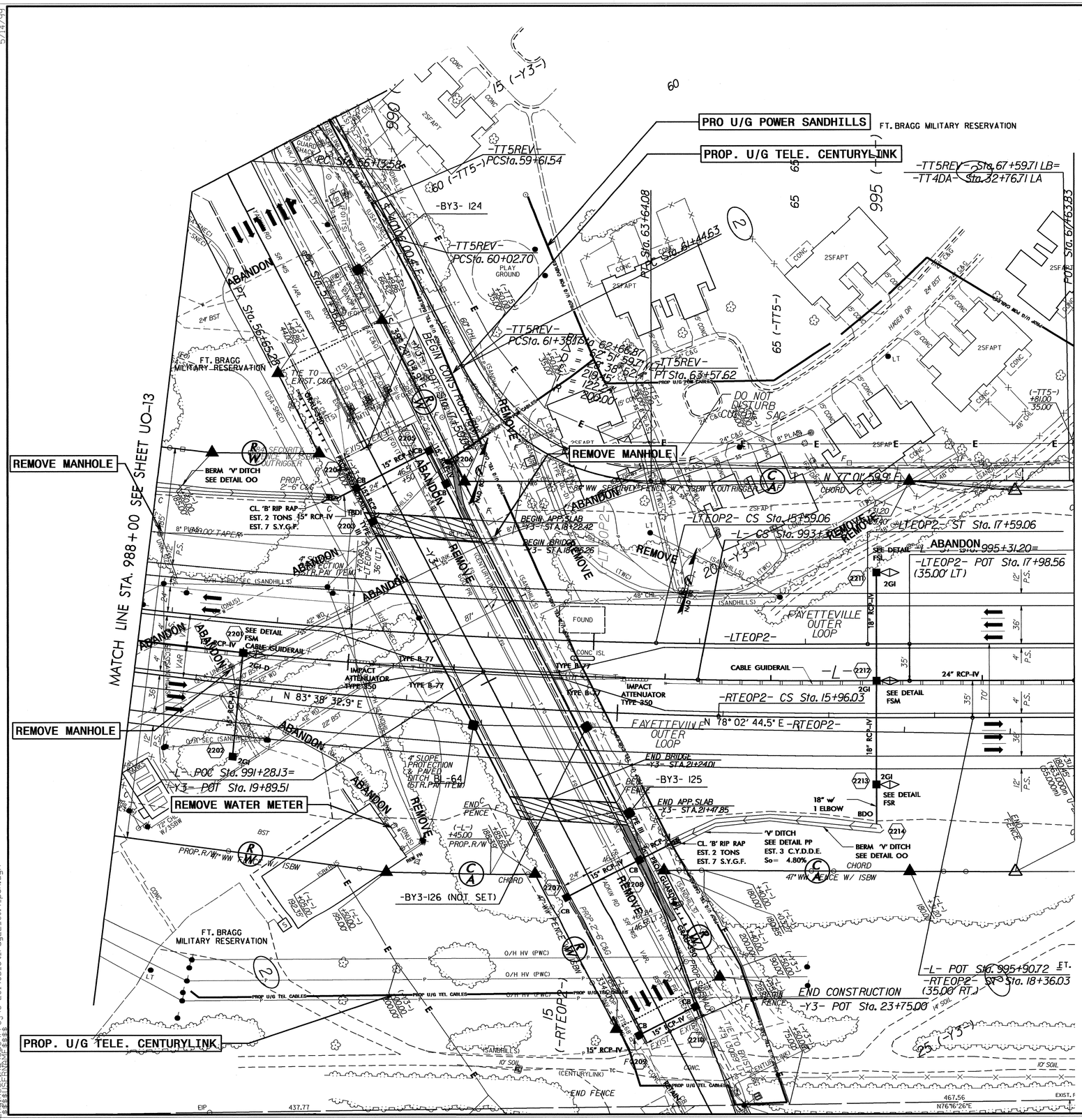
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-14

UTILITIES BY OTHERS

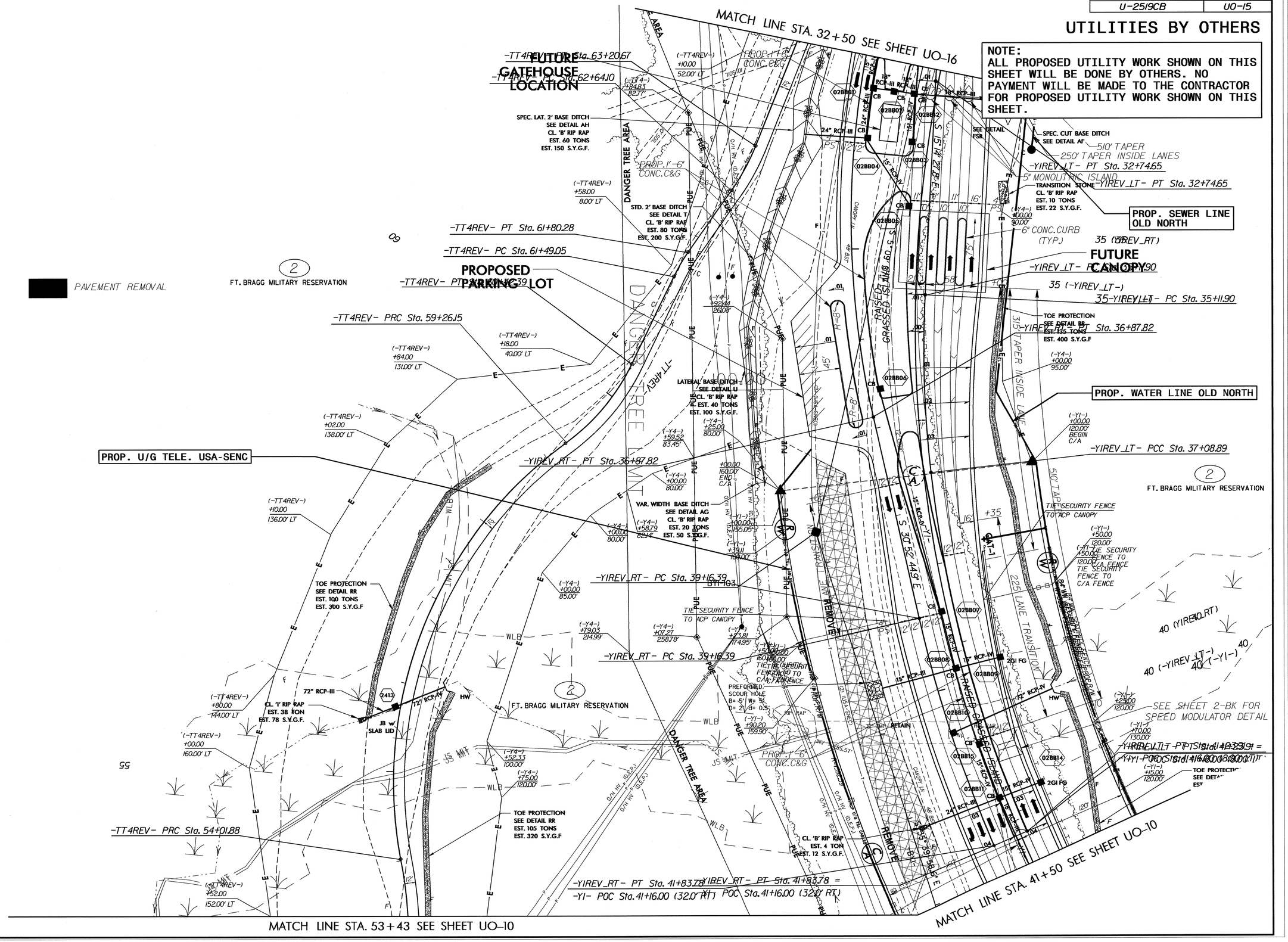
NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-15

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

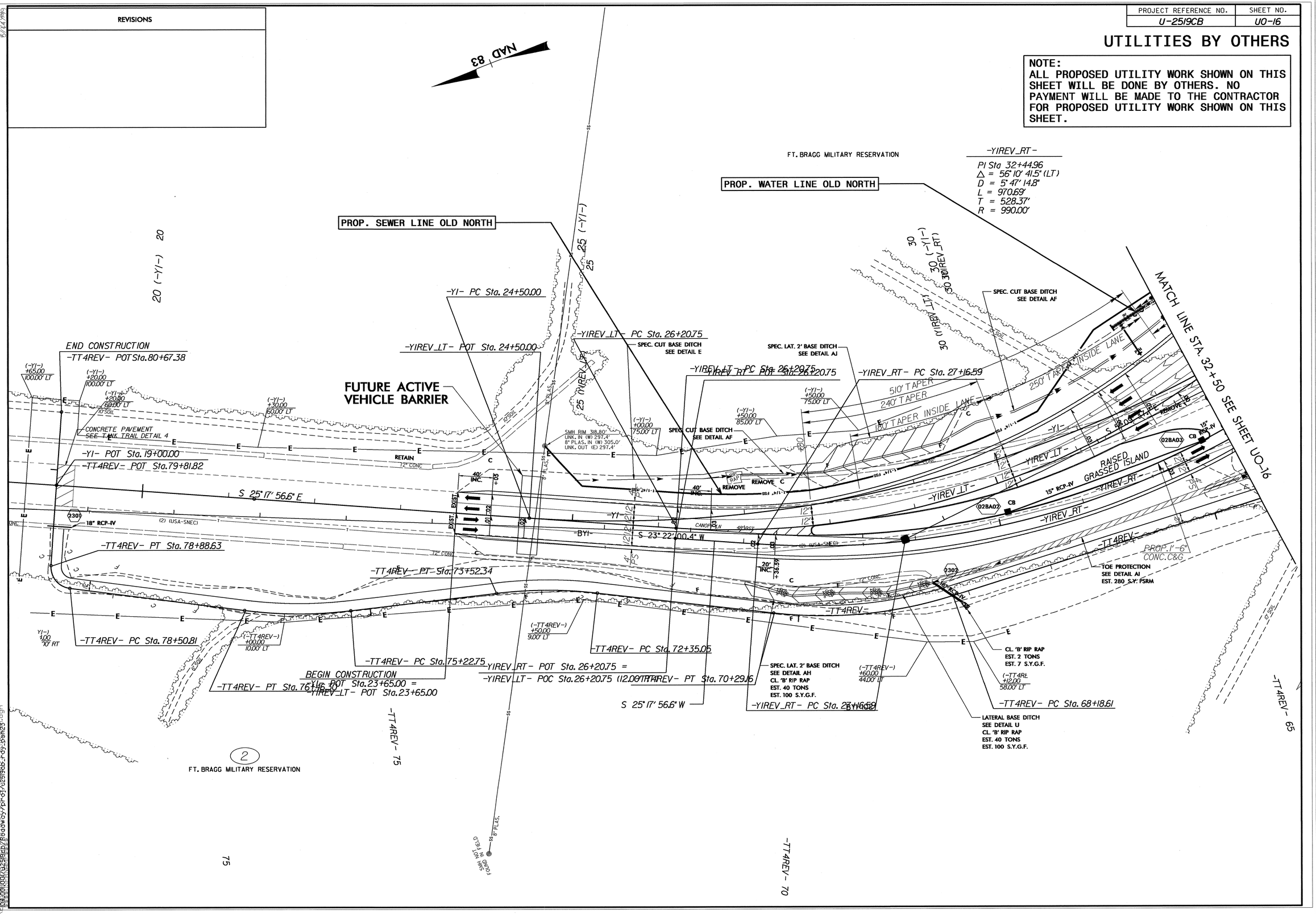


PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-16

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

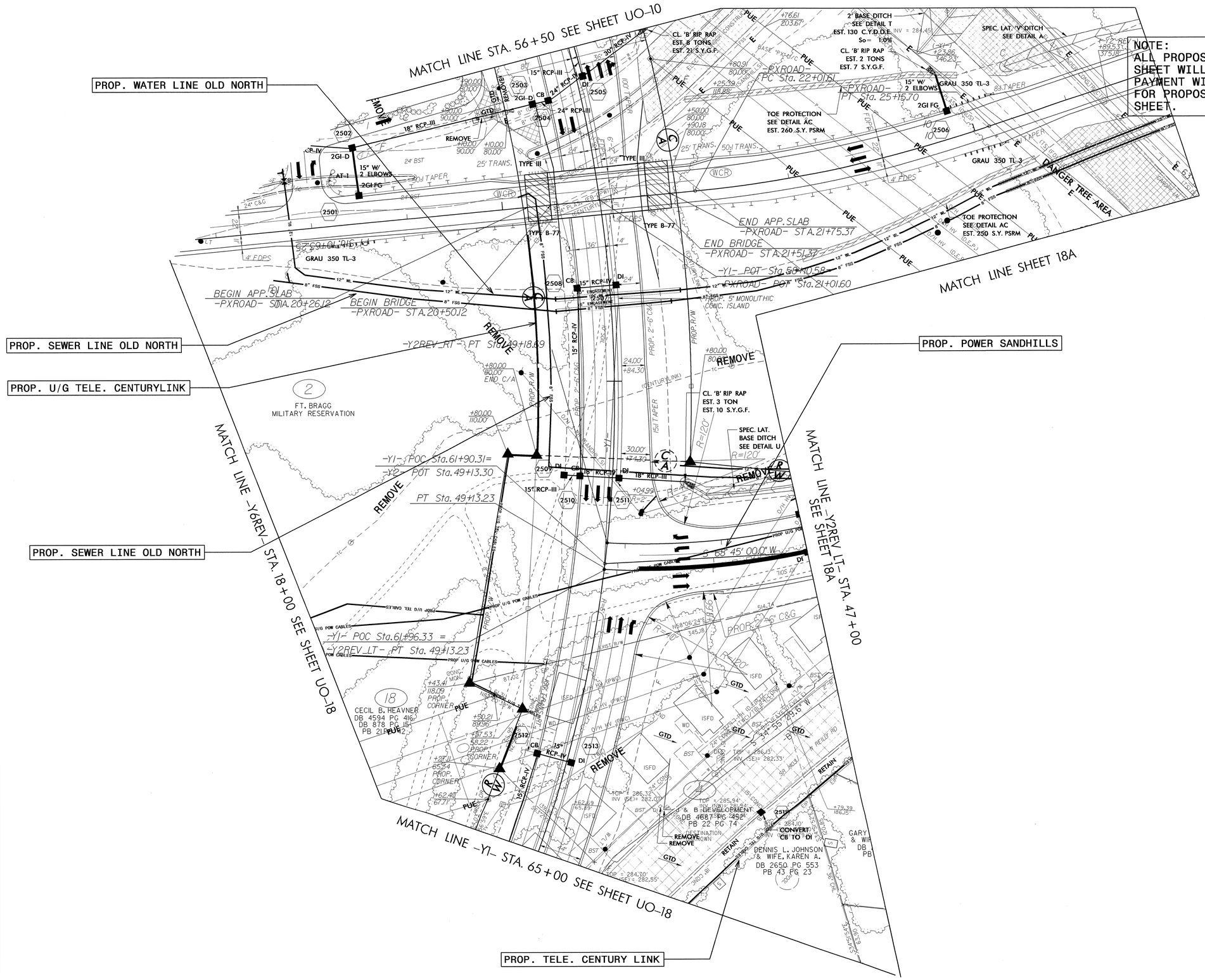
REVISIONS



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-17

UTILITIES BY OTHERS

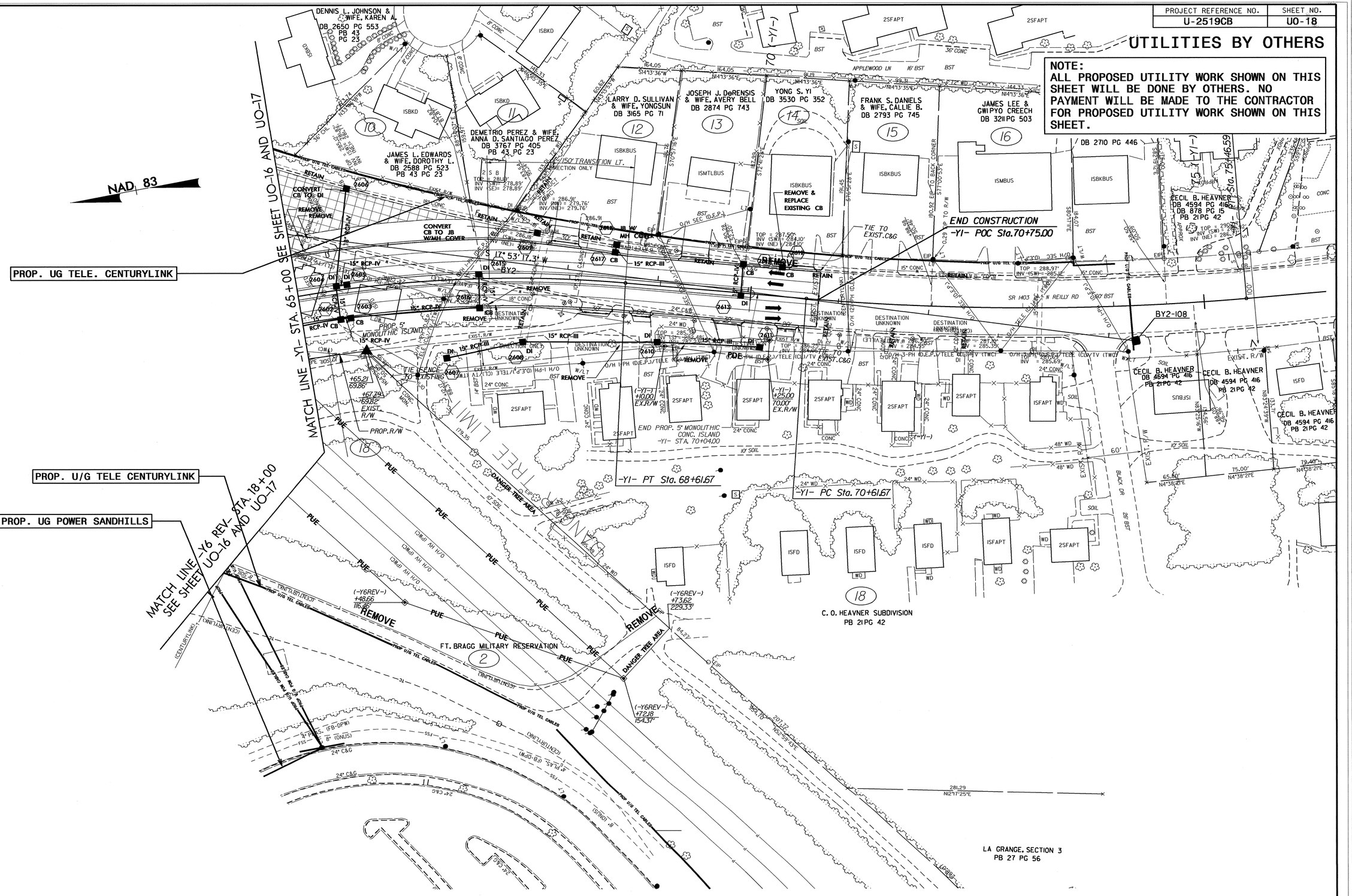
NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	U0-18

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



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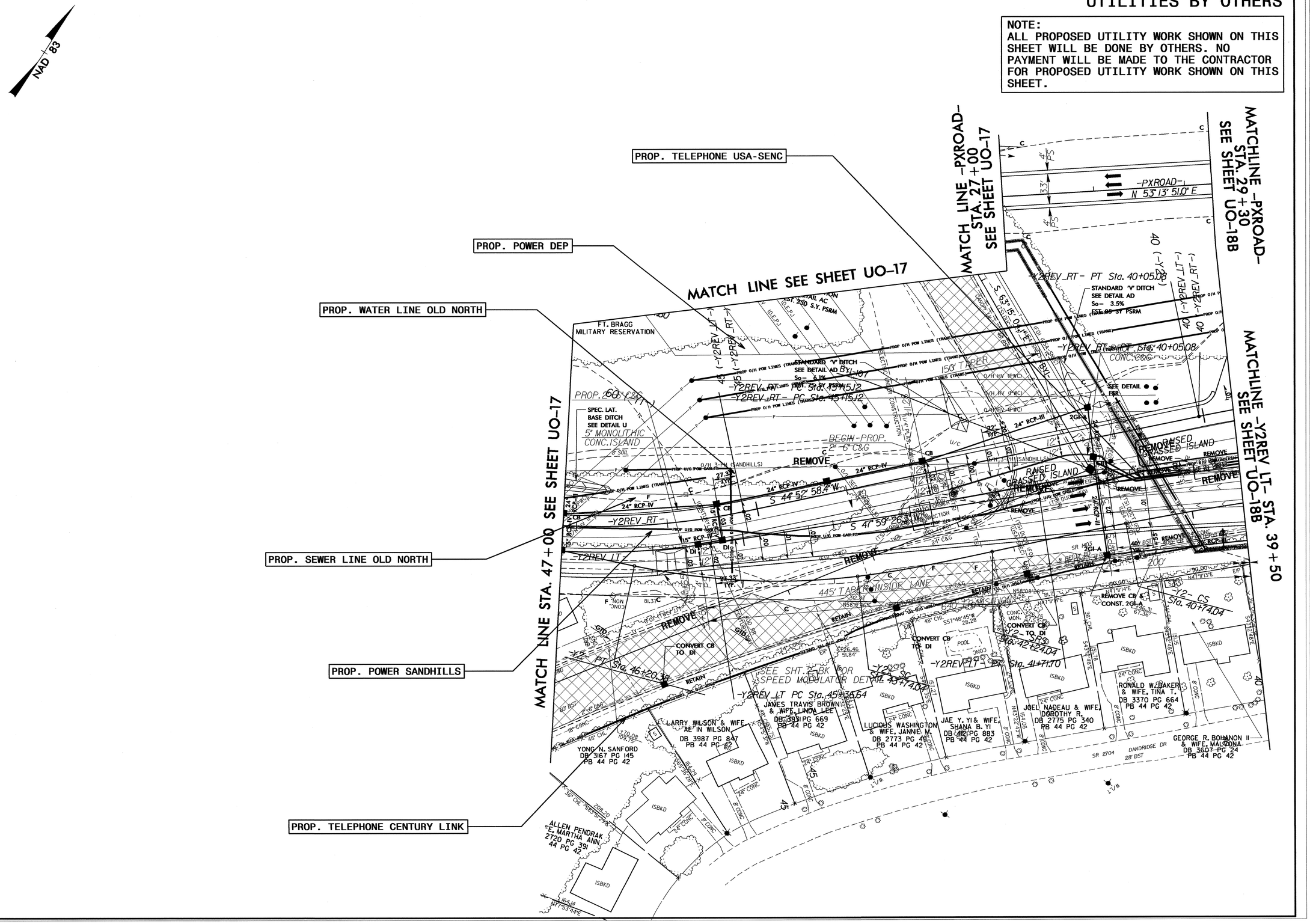
29-JUL-2014 15:47
$$$$USER$$$$
$$$$FILENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-18A

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



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29-JUL-2014 15:46
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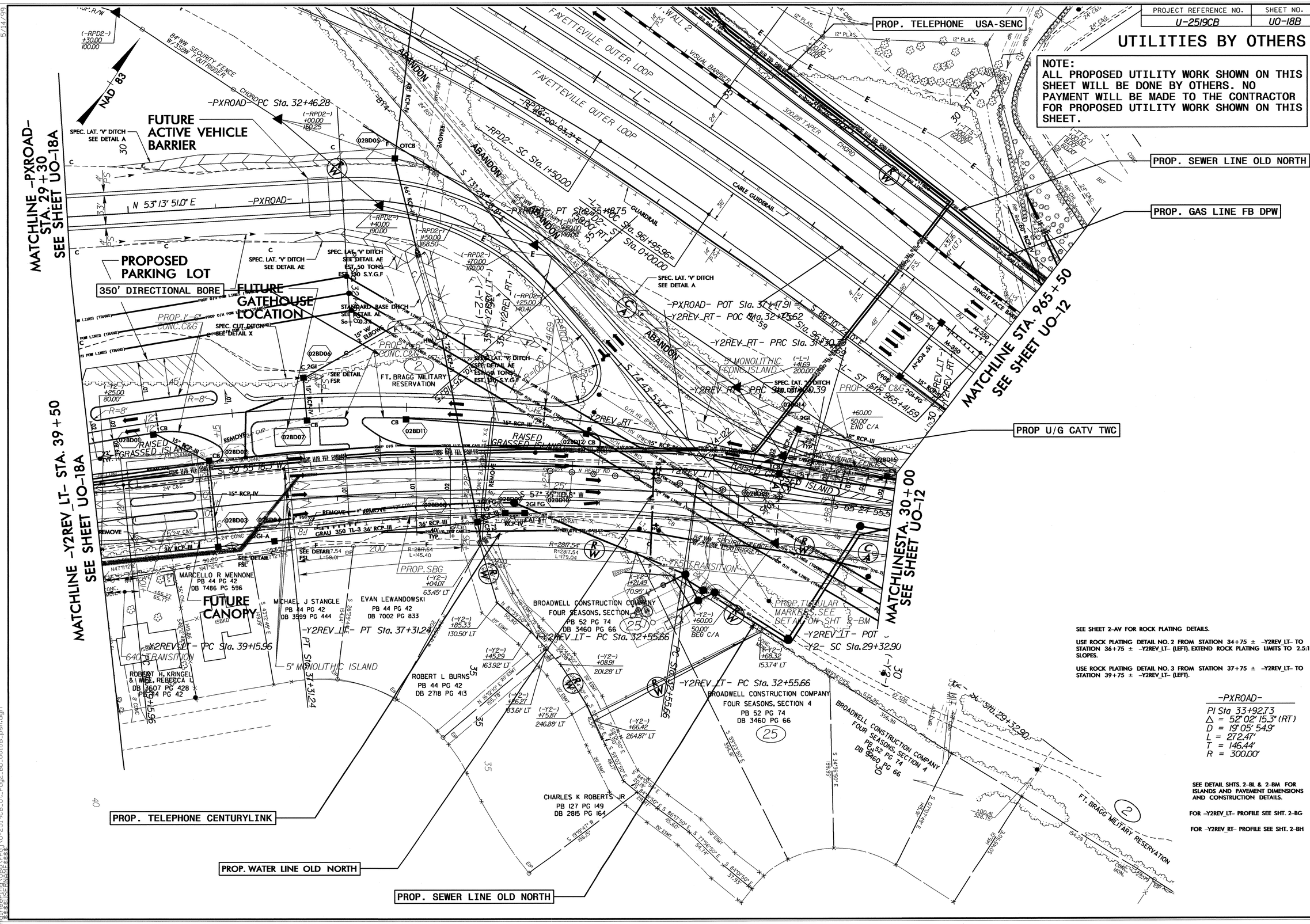
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	UO-18B

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



SEE SHEET 2-AV FOR ROCK PLATING DETAILS.

USE ROCK PLATING DETAIL NO. 2 FROM STATION 34+75 ± -Y2REV_LT- TO STATION 36+75 ± -Y2REV_LT- (LEFT). EXTEND ROCK PLATING LIMITS TO 2.5:1 SLOPES.

USE ROCK PLATING DETAIL NO. 3 FROM STATION 37+75 ± -Y2REV_LT- TO STATION 39+75 ± -Y2REV_LT- (LEFT).

-PXROAD-

PI Sta 33+92.73
Δ = 52° 02' 15.3" (RT)
D = 19° 05' 54.9"
L = 272.47'
T = 146.44'
R = 300.00'

SEE DETAIL SHTS. 2-BL & 2-BM FOR ISLANDS AND PAVEMENT DIMENSIONS AND CONSTRUCTION DETAILS.

FOR -Y2REV_LT- PROFILE SEE SHT. 2-BG

FOR -Y2REV_RT- PROFILE SEE SHT. 2-BH

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