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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.3.R.28	UC-1	6

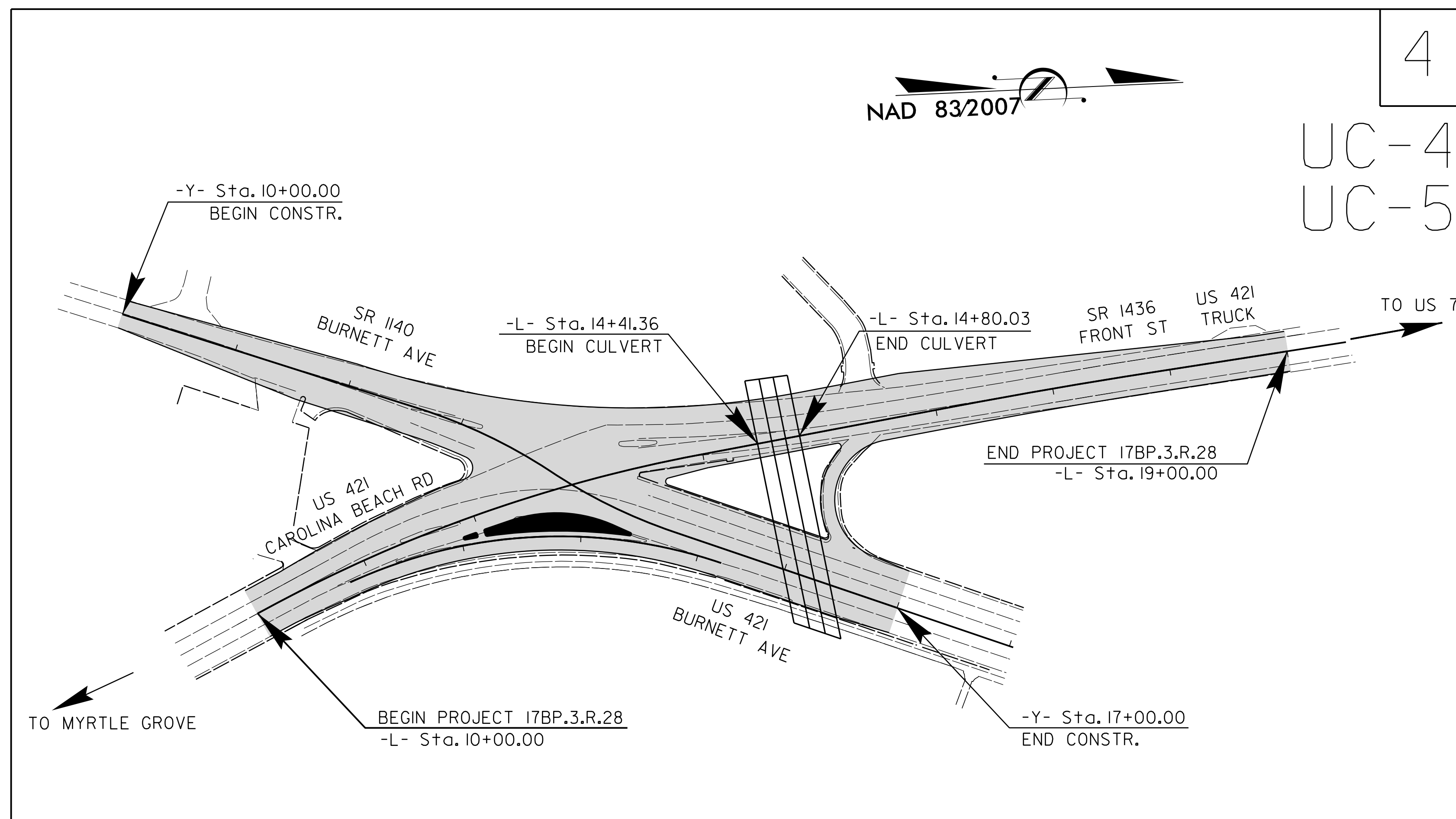
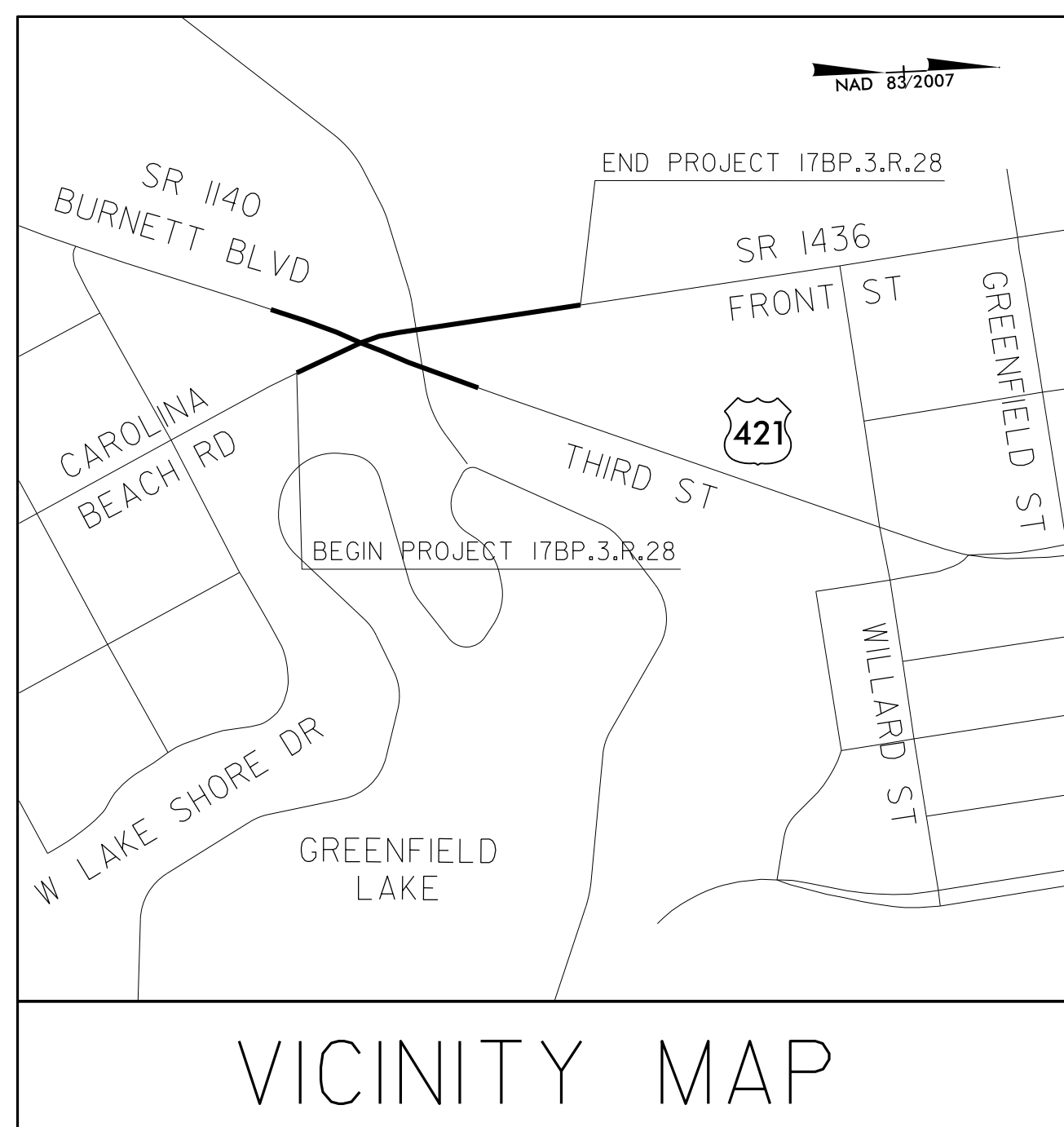
TIP PROJECT: 17BP.3.R.28

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS

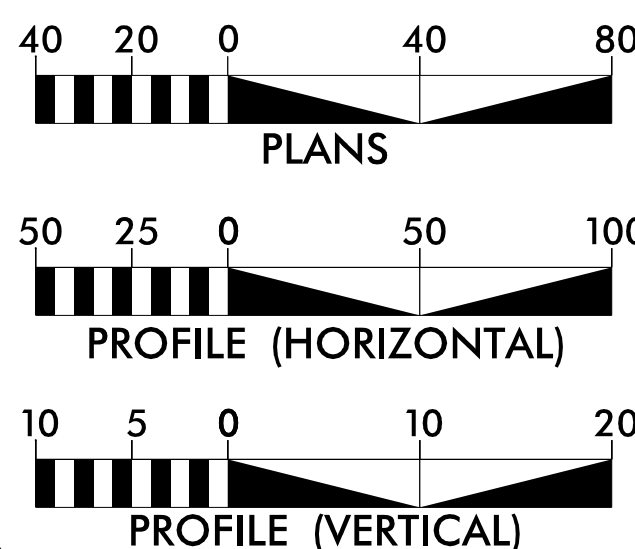
NEW HANOVER COUNTY

LOCATION: INTERSECTION OF SR 1436 /US 421 TRUCK
(FRONT STREET) AND SR 1140 (BURNETT BOULEVARD)
SOUTH OF WILLARD STREET



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WILMINGTON

GRAPHIC SCALES



UTILITY OWNERS ON PROJECT

CAPE FEAR PUBLIC UTILITY AUTHORITY

CONTACT:
PHIL BROWER OR DAVID DAILEY
PROJECT ENGINEER
235 GOVERNMENT CENTER DR
WILMINGTON, NC 28403
910-332-6626

INDEX OF SHEETS

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

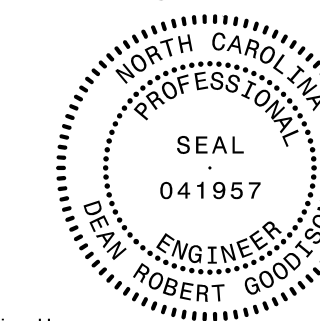
Prepared in the Office of:
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEE'S #F-0326

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: DECEMBER, 2013
DEAN R. GOODISON, PE
PROJECT ENGINEER

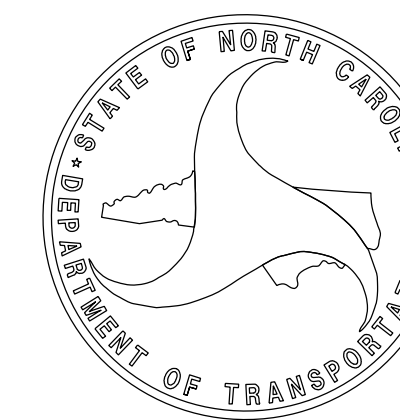
LETTING DATE: SEPTEMBER 20, 2016
NATHAN CHAPMAN, EI
PROJECT DESIGN ENGINEER

SEAL



DocuSigned by:
Dean R. Goodison
382010743108402
PROJECT ENGINEER

10/12/2016
DATE



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	


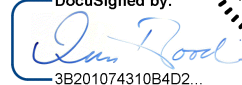
Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

NOTE
PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole		*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)

PROJECT REFERENCE NO. 17BP.3.R.28	SHEET NO. UC-2
RW SHEET NO.	
UTILITY ENGINEER	
	
DocuSigned by:  382010143108402	10/12/2016

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SPECIFICATIONS. THE PROPOSED WATER LINE CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY, 2012.

2. THE PROPOSED SEWER UTILITIES BELONG TO CAPE FEAR PUBLIC UTILITY AUTHORITY.

3. ALL WATER AND SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF WATER QUALITY. PERFORM ALL WORK WITHIN 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 UTILITY CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS BETWEEN THE UTILITY OWNER AND CONTRACTOR 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 A 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 THE DEPARTMENT PERSONNEL AND UTILITY OWNER TWO WEEKS PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNER'S 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 OF 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 THE 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.

10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TWO SEALED CONSTRUCTION DETAILS. A CONSTRUCTION DETAIL FOR TIMBER PILE CAPS TO BE INSTALLED AS SUPPORT FOR EACH SANITARY SEWER MANHOLE AND A CONSTRUCTION DETAIL AND PLAN FOR THE SEWER BYPASS PUMPING REQUIRED TO CONNECT THE NEW SANITARY SEWER LINES. THE DETAILS SHOULD BE SEALED BY AN ENGINEER LICENSED IN NORTH CAROLINA. THIS DETAIL IS SUBJECT TO APPROVAL BY THE RESIDENT ENGINEER.

11. WORK NOTED AS, "BY OTHERS" IS NOT PART OF THIS CONTRACT. HOWEVER, CONTRACTOR'S WORK MUST BE CLOSELY AND PROPERLY COORDINATED WITH THE OTHER CONTRACTOR TO ENSURE UNINTERRUPTED SEWERAGE FLOW. THE UTILITY OWNER SHALL HOLD A PRE-CONSTRUCTION MEETING WITH ALL PARTIES TO COORDINATE SCHEDULES AND OPERATIONS. THE DEPARTMENT AND THE RESIDENT ENGINEER IN CHARGE SHALL BE PRESENT AT THIS MEETING. THE TIMING OF OPERATIONS BY EACH CONTRACTOR IS VITAL TO ENSURING UNINTERRUPTED FLOW AND MINIMIZING THE NEED FOR TEMPORARY BYPASS PUMPING. COORDINATION, BYPASS PUMPING, AND OTHER OPERATIONS NECESSARY TO COMPLETE THE INSTALLATION OF THE SEWER CROSSING SHALL BE INCLUDED IN THE BASE BID OF THE SEWER PIPE INSTALLATION.

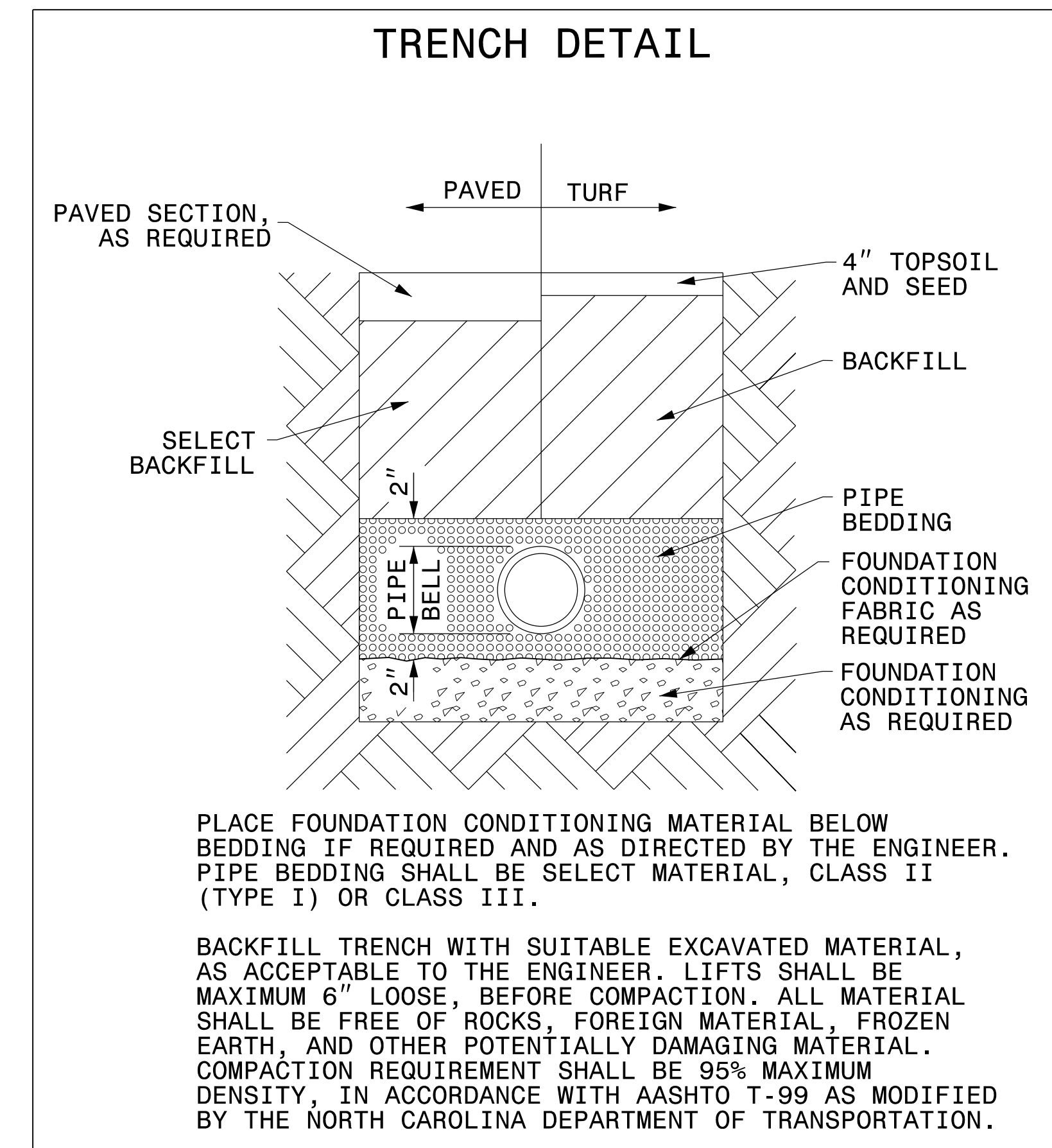
12. ABANDONMENT OF UTILITY PIPES AND STRUCTURES SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS, SECTION 1530.

13. PIPE ENCASEMENT SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS, SECTION 1540.

NCDOT STANDARD DRAWINGS:

1515.01	WATER METER
1525.06	PRECAST SANITARY SEWER MANHOLES



SANITARY SEWER CONSTRUCTION DETAILS



NOTE: ASPHALT PAVEMENT OVERLAY MATERIALS AND CONSTRUCTION ARE TO BE PROVIDED IN ACCORDANCE WITH THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012. THE CONTRACTOR SHOULD REFER TO THE PAVEMENT SCHEDULE SHOWN ON SHEET 2 FOR PAVEMENT TYPES AND LAYER DEPTHS.

PILE FOUNDATION SYSTEM REQUIRED FOR PROPOSED PROJECT MANHOLES
CONTRACTOR IS RESPONSIBLE FOR PROVIDING PILE-CAP
DETAIL FOR MAN HOLE INSTALLATION. SEE GENERAL
NOTE 10 ON SHEET UC-2.

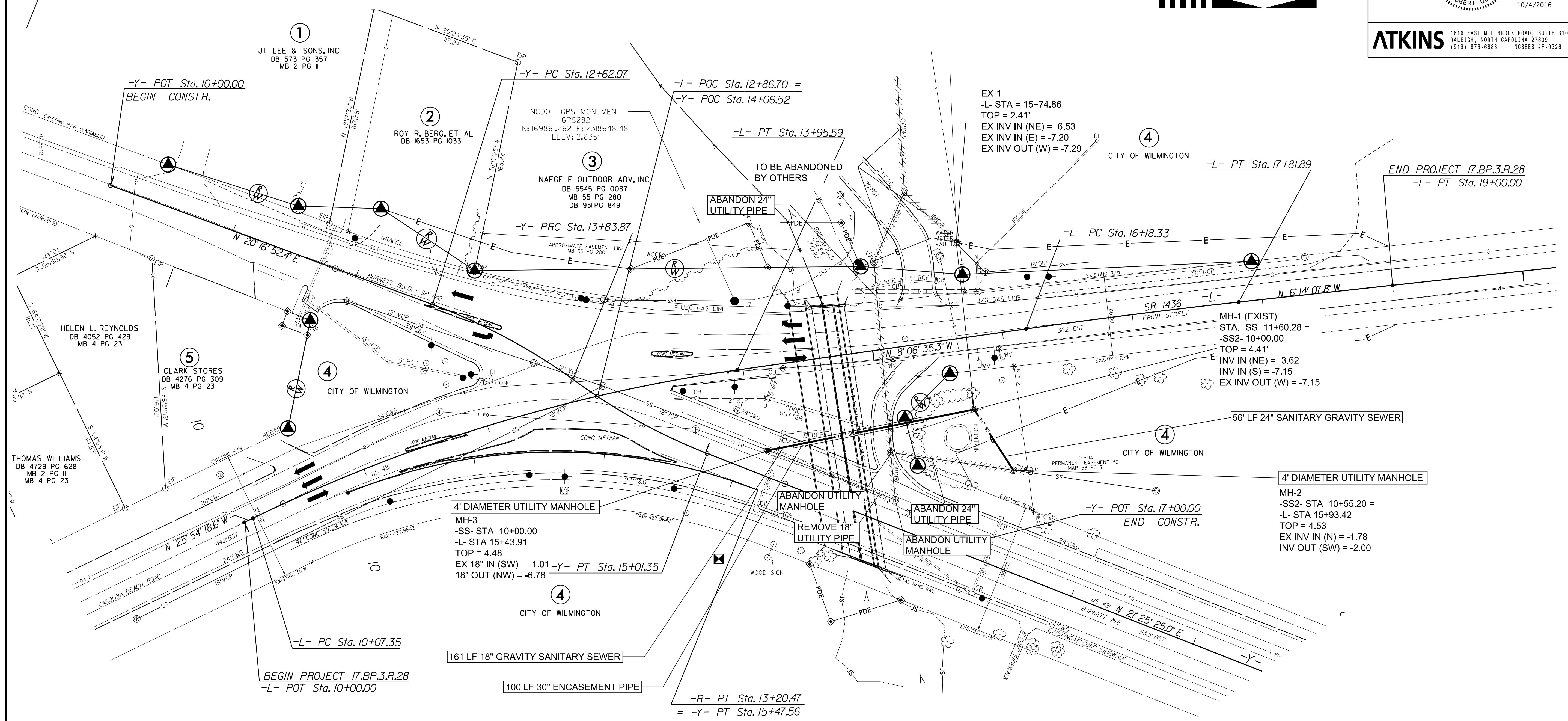
10/13/14

PROJECT REFERENCE NO. 17BP.3.R.28	SHEET NO. UC-4
RW SHEET NO.	
UTILITY ENGINEER	
	
10/4/2016	
	
<small>1616 EAST WILLOW ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-8888 NCBEES #F-0326</small>	

NAD 83/NSRS 2007



PROPOSED SANITARY SEWER CONSTRUCTION

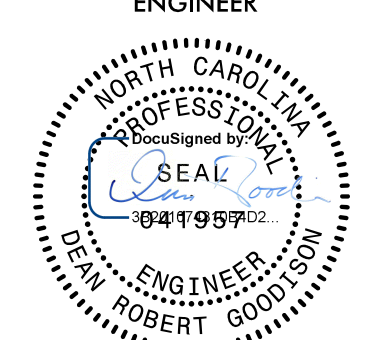


NOTES:

1. PROPOSED UTILITY CONSTRUCTION TO BE COMPLETED BEFORE CULVERT CONSTRUCTION BEGINS. SEE TMP SHEETS FOR CONSTRUCTION PHASING DETAILS.

SEE SHEET UC-6 FOR -SS- PROFILE

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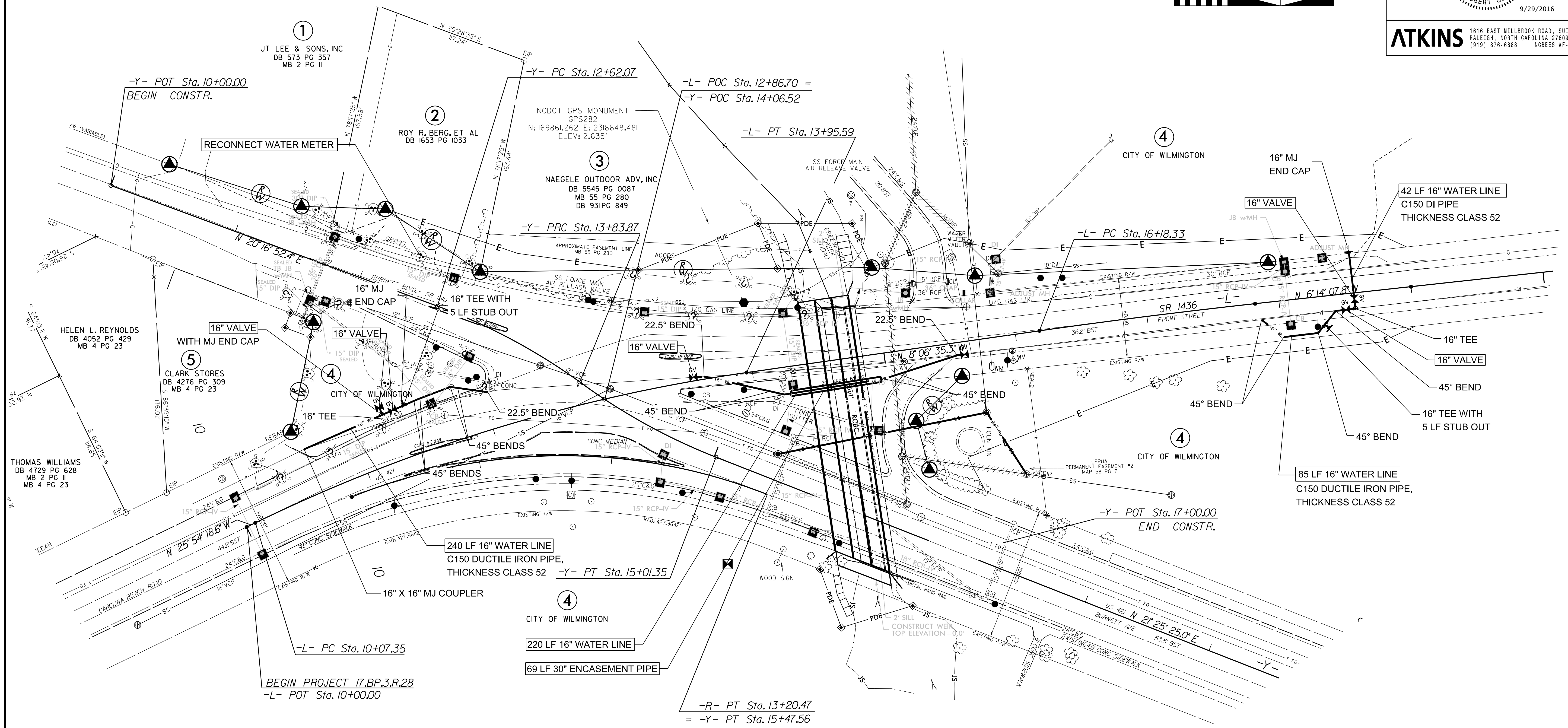
PROJECT REFERENCE NO. 17BP.3.R.28	SHEET NO. UC-5
RW SHEET NO.	
UTILITY ENGINEER	
	
9/29/2016	

ATKINS 1616 EAST WILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-8888 NCES #F-0326

NAD 83/NSRS 2007



PROPOSED WATER LINE CONSTRUCTION

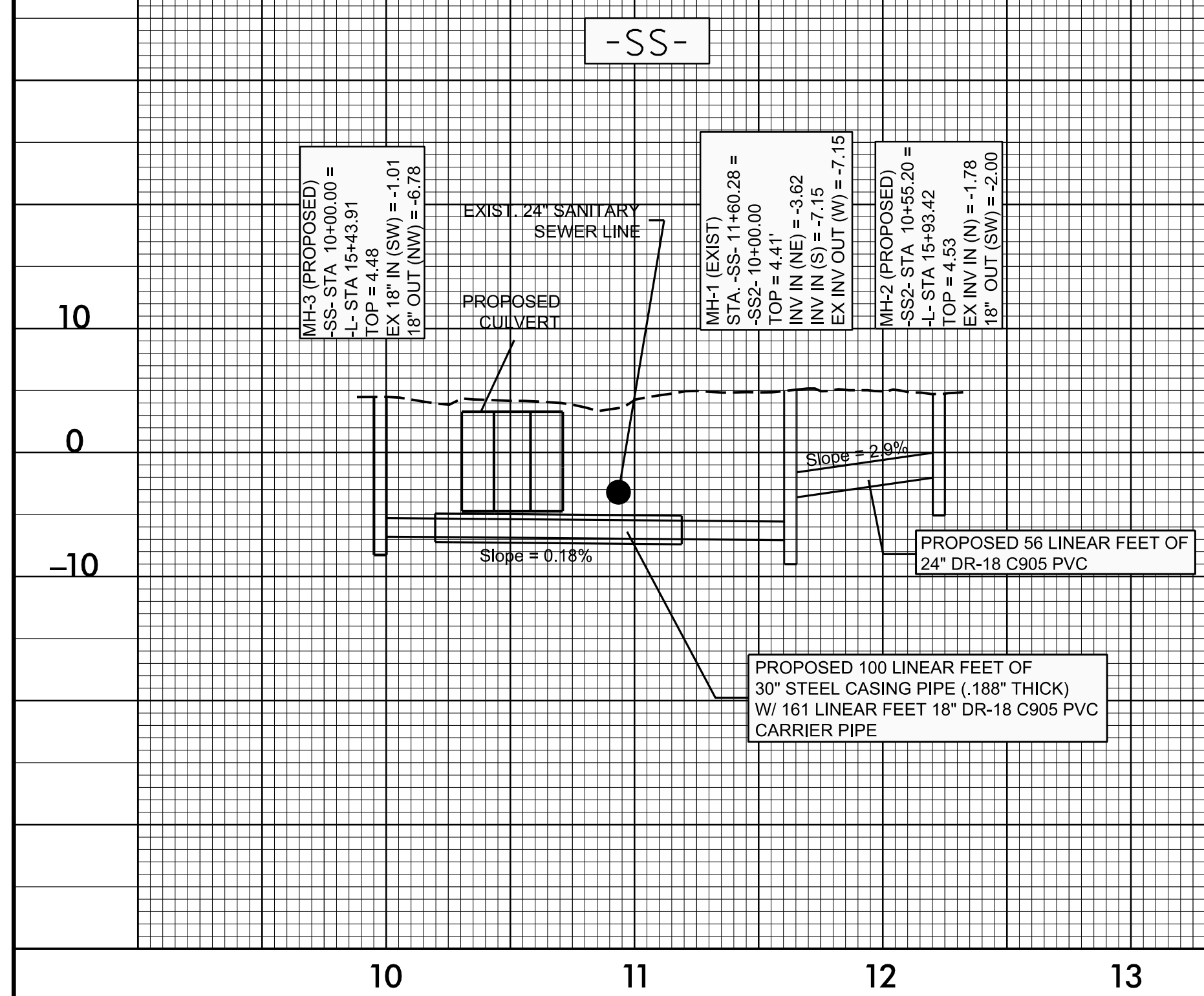


SEE SHEET UC-6 FOR -SS- PROFILE
SEE SHEET UC-3 FOR SEWER CONSTRUCTION DETAILS

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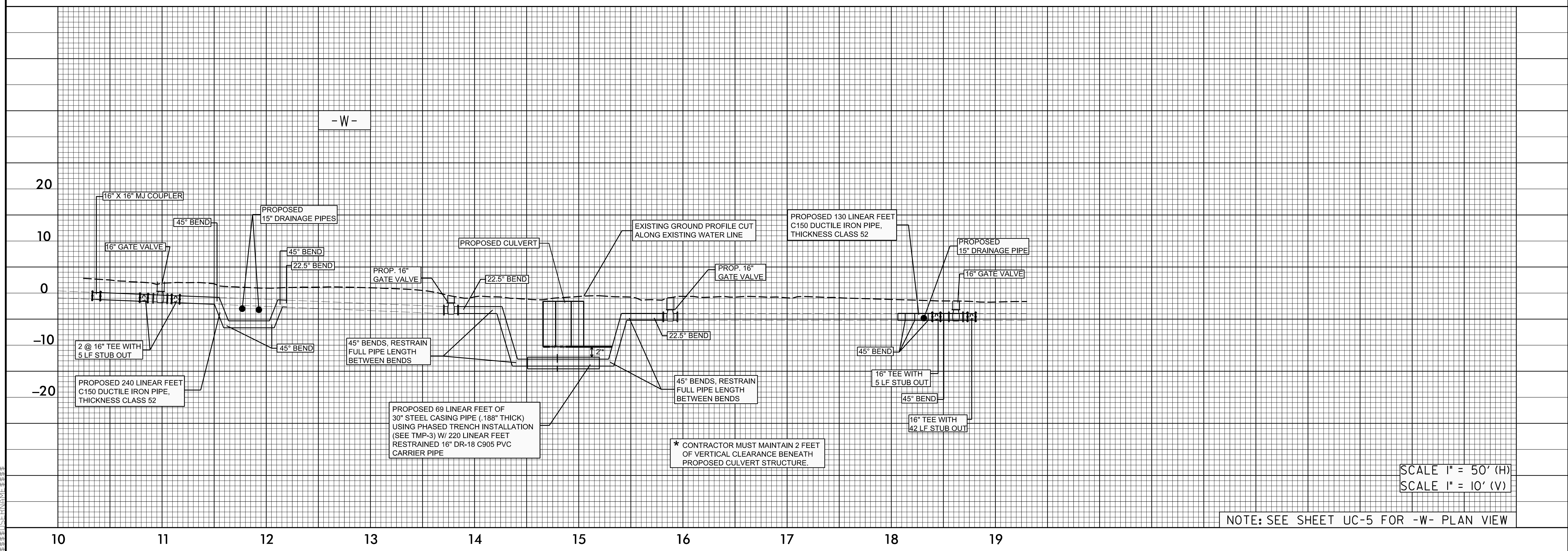
10-13-14

PROJECT REFERENCE NO. 17BP.3.R.28	SHEET NO. UC-6
UTILITY ENGINEER	
10/12/2016	
ATKINS <small>1616 EAST WILLOW ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-8888 NCEES #F-0826</small>	



SCALE 1" = 50' (H)
SCALE 1" = 10' (V)

NOTE: SEE SHEET UC-4 FOR -SS- PLAN VIEW



SCALE 1" = 50' (H)
SCALE 1" = 10' (V)

NOTE: SEE SHEET UC-5 FOR -W- PLAN VIEW

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