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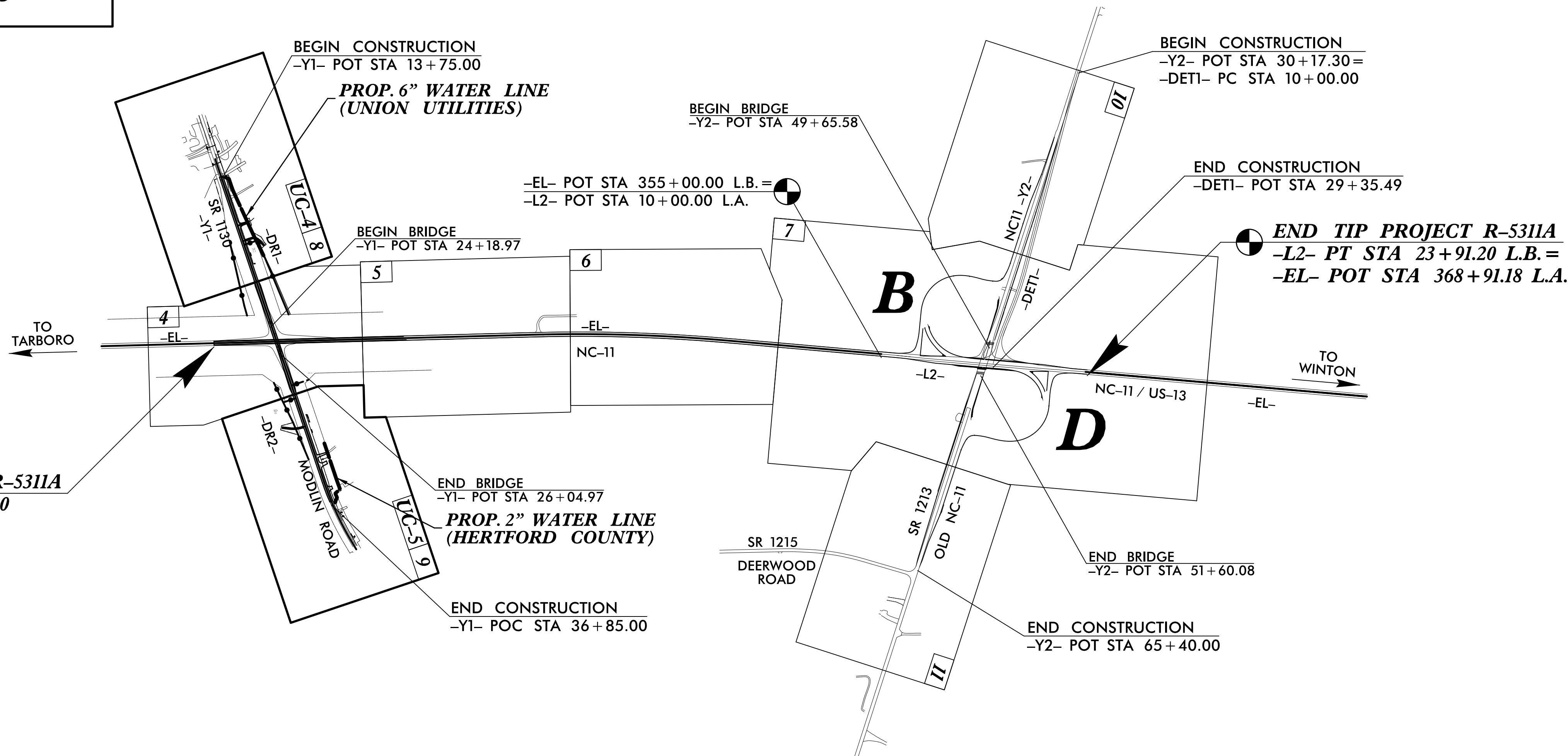
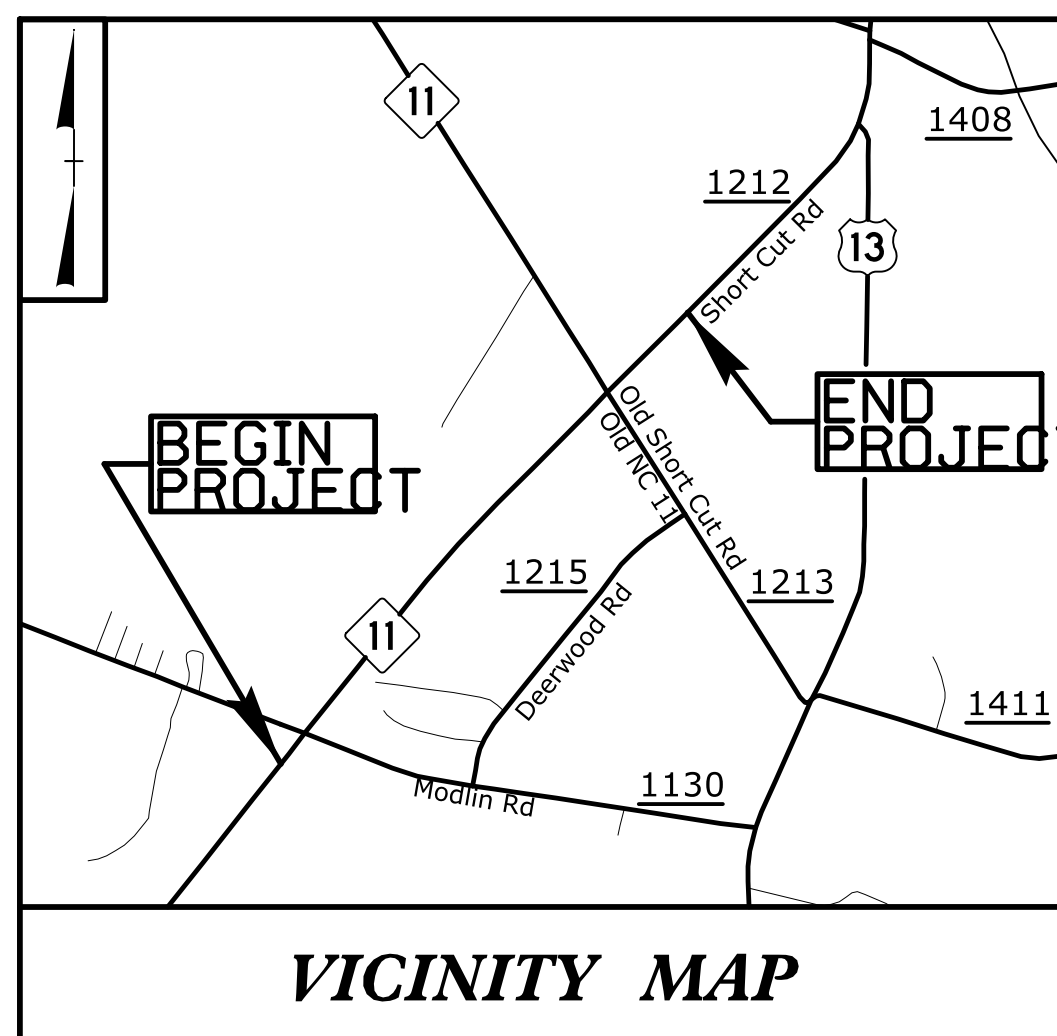
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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

HERTFORD COUNTY

**LOCATION: WEST OF MODLIN ROAD TO EAST OF
NC 11/SR 1213 (OLD NC 11 ROAD). CONSTRUCT GRADE
SEPARATION AT SR 1130 (MODLIN ROAD) AND
INTERCHANGE AT OLD NC 11/SR 1213 (OLD NC 11 ROAD).**

TYPE OF WORK: UTILITY RELOCATION OF WATER LINES



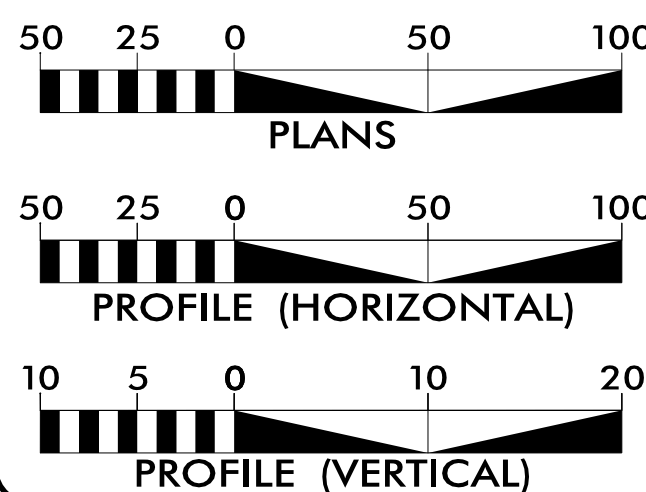
NOTES:

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

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

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 SHEET

WATER AND SEWER OWNERS ON PROJECT

- (A) 2" WATER - HERTFORD COUNTY
- (B) 6" WATER - UNION UTILITIES

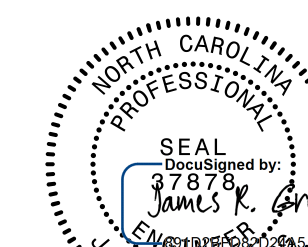
PREPARED IN THE OFFICE OF



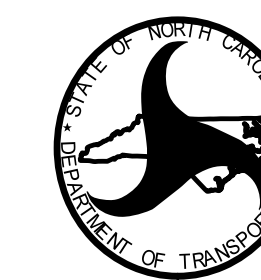
THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE
120 North Boylan Avenue Raleigh NC 27603-1423
919.828.0531 fax 919.834.3589
License Number: F-0115

James R. Gregg, P.E. CONSULTANT CONTACT #1
CONSULTANT CONTACT #2
CONSULTANT CONTACT #3

SEAL



3/20/2017



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

Bo Hemphill, PE UTILITIES REGIONAL ENGINEER
Kifah Kamil UTILITIES ENGINEER
Kyle Pleasant UTILITIES AREA COORDINATOR
Larry James UTILITIES COORDINATOR

TIP PROJECT: R-5311A

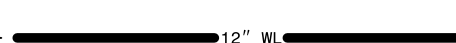






















09/08/99

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\$\$\$\$\$USERNAME\$\$\$\$\$

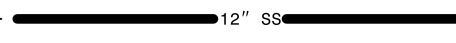
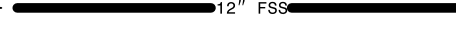

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS





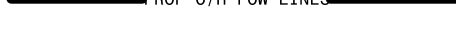



PROPOSED WATER SYMBOLS

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	PS(W)
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS




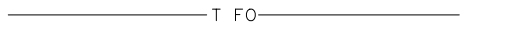








Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	PS(SS)

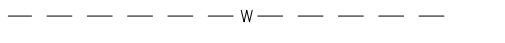
PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

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	


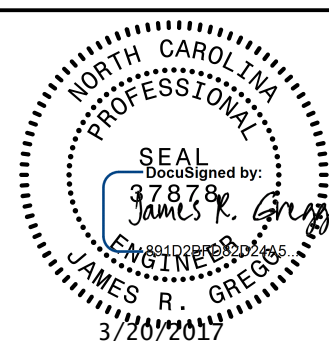
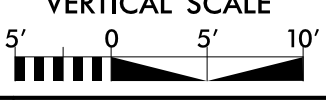

EXISTING UTILITIES SYMBOLS

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	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
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 REV: 2/1/2012

UTILITY CONSTRUCTION

PREPARED IN THE OFFICE OF:  THE WOOTEN COMPANY ENGINEERING PLANNING ARCHITECTURE 120 North Spade Avenue Raleigh, NC 27603-1423 919.878.0511 fax 919.878.5989 License Number: F-0115	PROJECT REFERENCE NO.	SHEET NO.
	R-5311A	UC-3
DESIGNED BY: JRG		
DRAWN BY: TK		
CHECKED BY: JRG		
APPROVED BY: JRG		
REVIS:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
VERTICAL SCALE 5' 0 5' 10' 	HORIZONTAL SCALE 25' 0 25' 50' 	UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151

UTILITY CONSTRUCTION

NCDOT GENERAL NOTES:

1. THE EXISTING UTILITIES BELONG TO HERTFORD COUNTY (2-INCH MAIN) AND UNION UTILITIES (6-INCH MAIN).
2. THE PROPOSED UTILITY CONSTRUCTION IN HERTFORD COUNTY SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.
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. 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 AND THE UTILITY OWNER. 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 A MINIMUM OF ONE WEEK PRIOR TO SERVICE INTERRUPTIONS AND TESTING. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPROTUNITY 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 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.

NCDOT PROJECT SPECIFIC NOTES:


1. PROPOSED WATER LINE SHALL BE PVC SDR 21, C900 DR-18, RJDI CLASS 350 (RESTRAINED JOINT DUCTILE IRON) AS INDICATED ON THE CONSTRUCTION DRAWINGS.
2. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS AND APPLICABLE HERTFORD COUNTY AND/OR UNION UTILITIES STANDARDS 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.
3. EXISTING CONDITIONS SURVEY AND PROPOSED ROADWAY PLANS PROVIDED TO THE WOOTEN COMPANY BY NCDOT, MAY 19, 2016.

PROJECT TYPICAL WATER DETAILS

NCDOT STANDARD DETAILS:

1. 300.01 (SHEETS 1,2, AND 3)

PREPARED IN THE OFFICE OF:



THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE
120 North Spade Avenue Raleigh, NC 27603-1423
919.878.0311 fax 919.878.1599
License Number: F-4015

PROJECT REFERENCE NO. **R-5311A** SHEET NO. **UC-3A**

DESIGNED BY: JRG
DRAWN BY: TK
CHECKED BY: JRG
APPROVED BY: JRG

REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

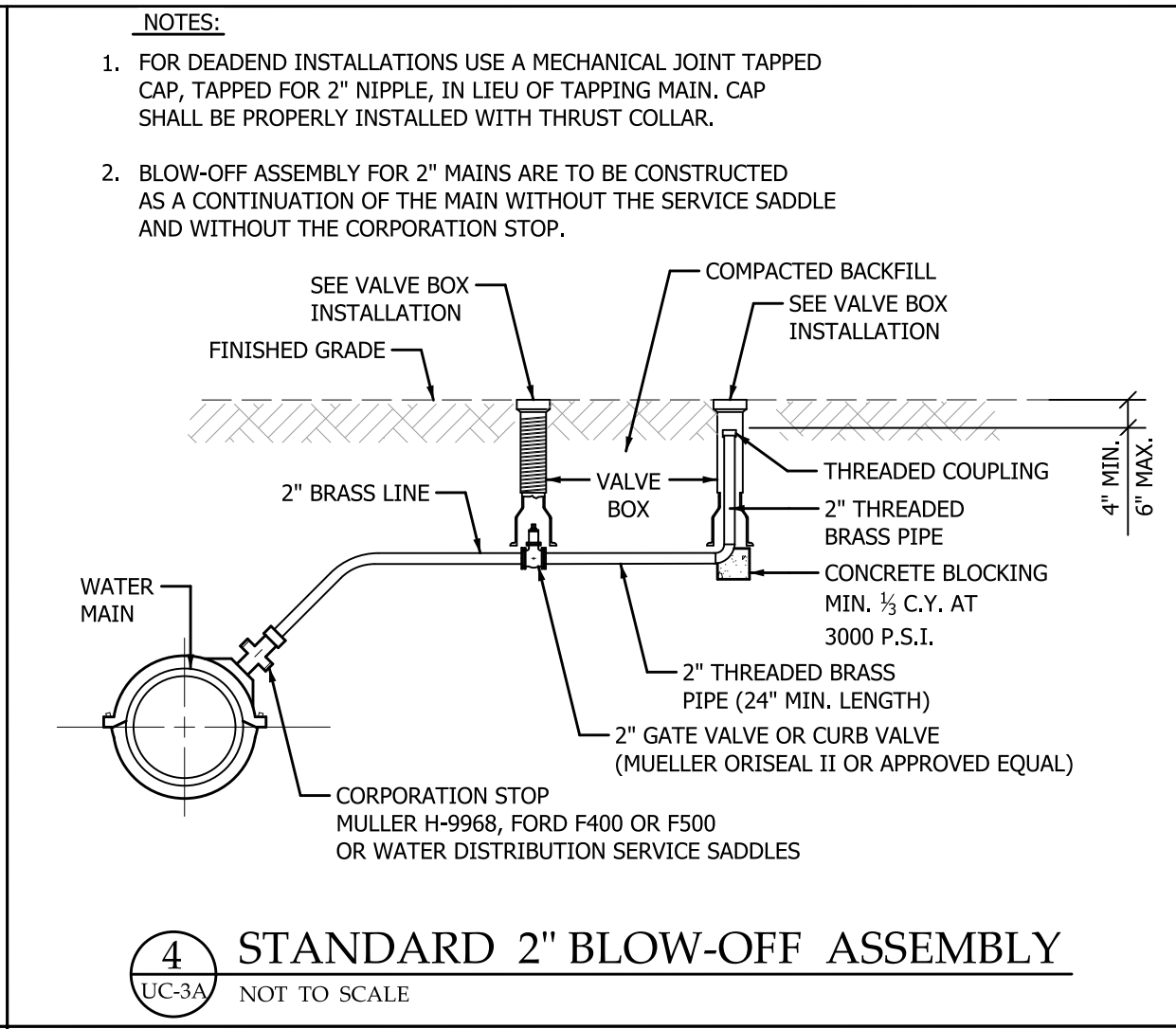
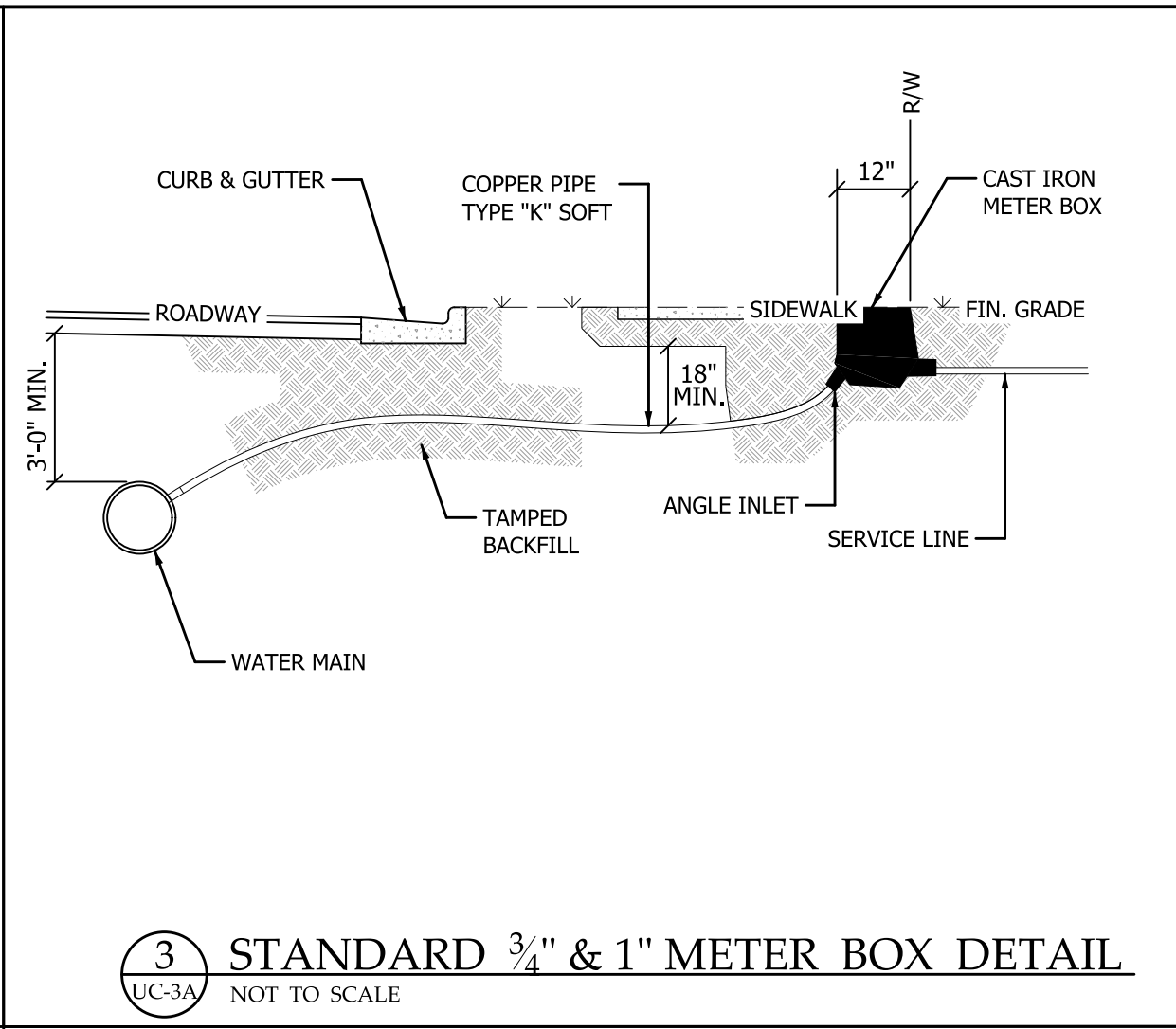
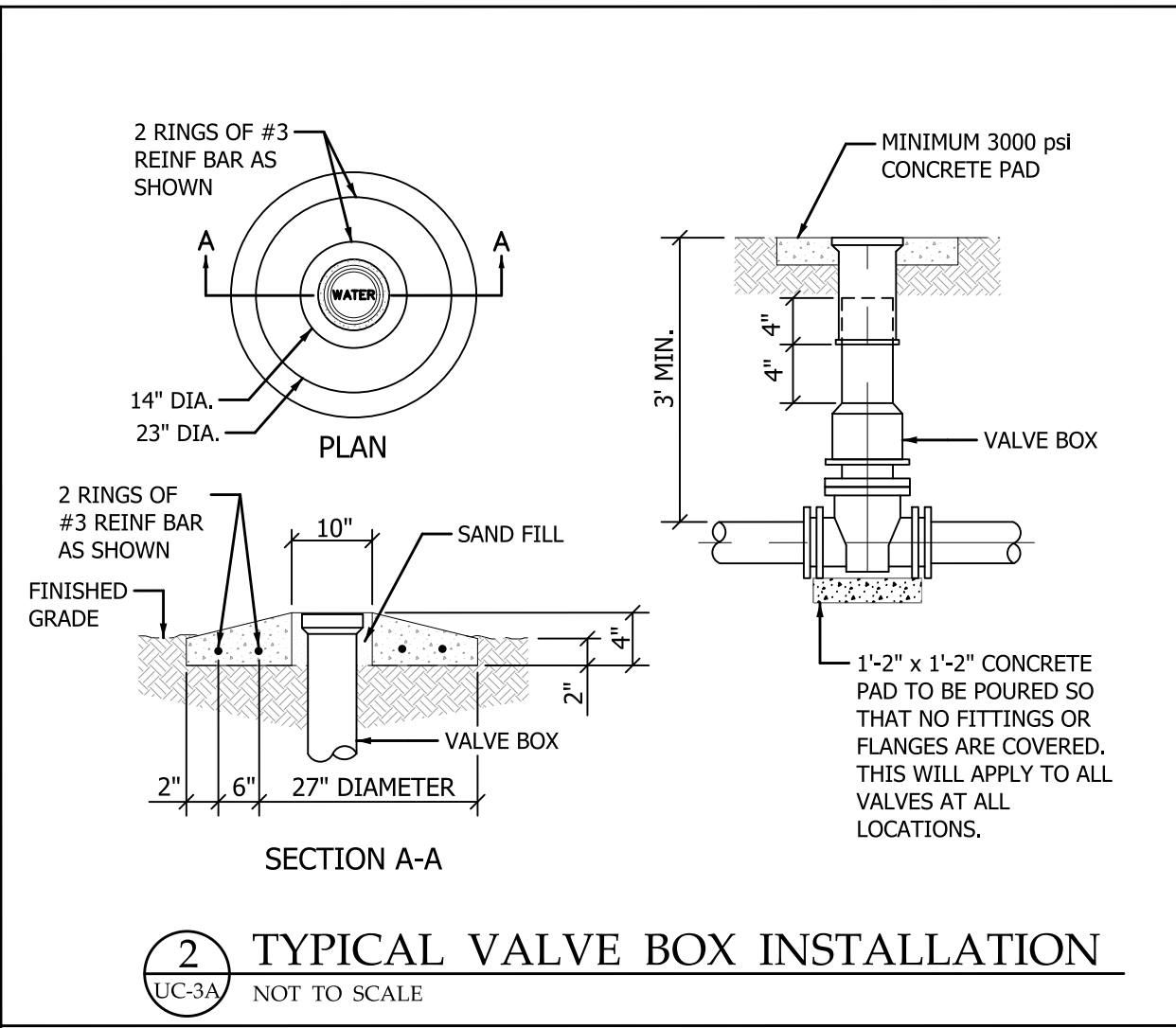
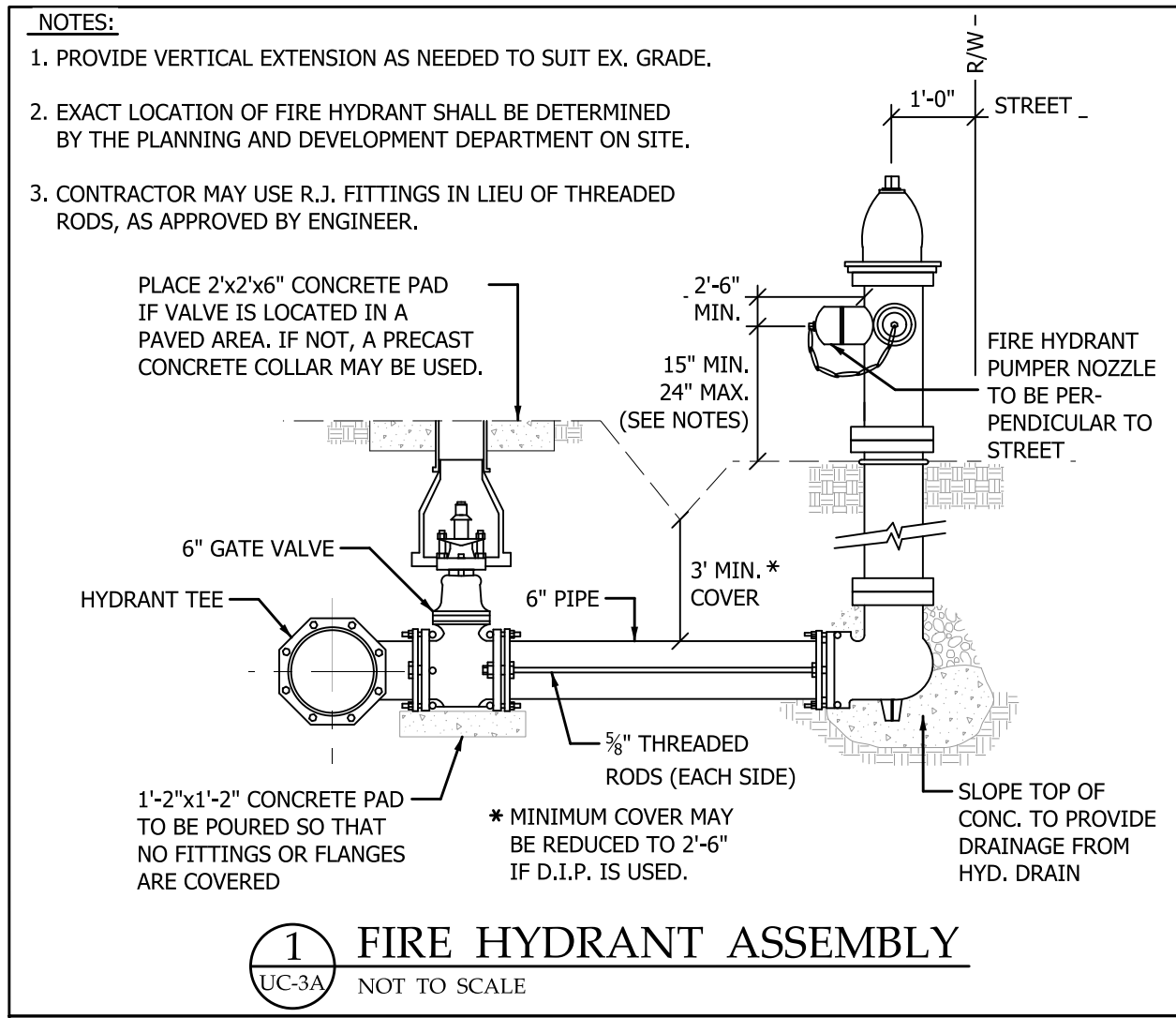
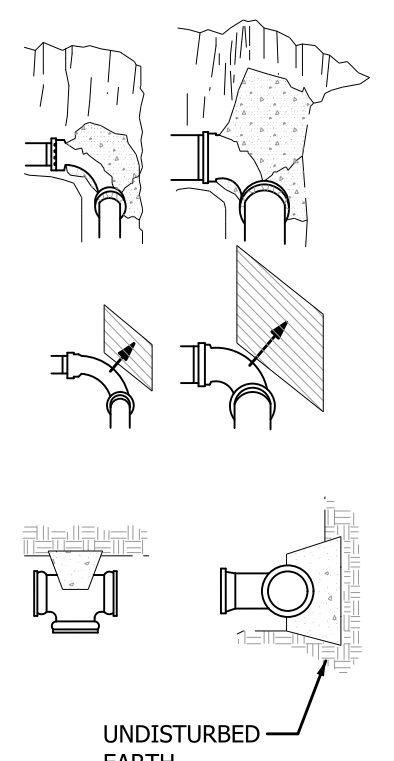
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

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UTILITY CONSTRUCTION PLANS ONLY

VERTICAL SCALE: 0 5' 10'
HORIZONTAL SCALE: 0 25' 50'

WATER LINE CONSTRUCTION SHOWN ON THIS SHEET

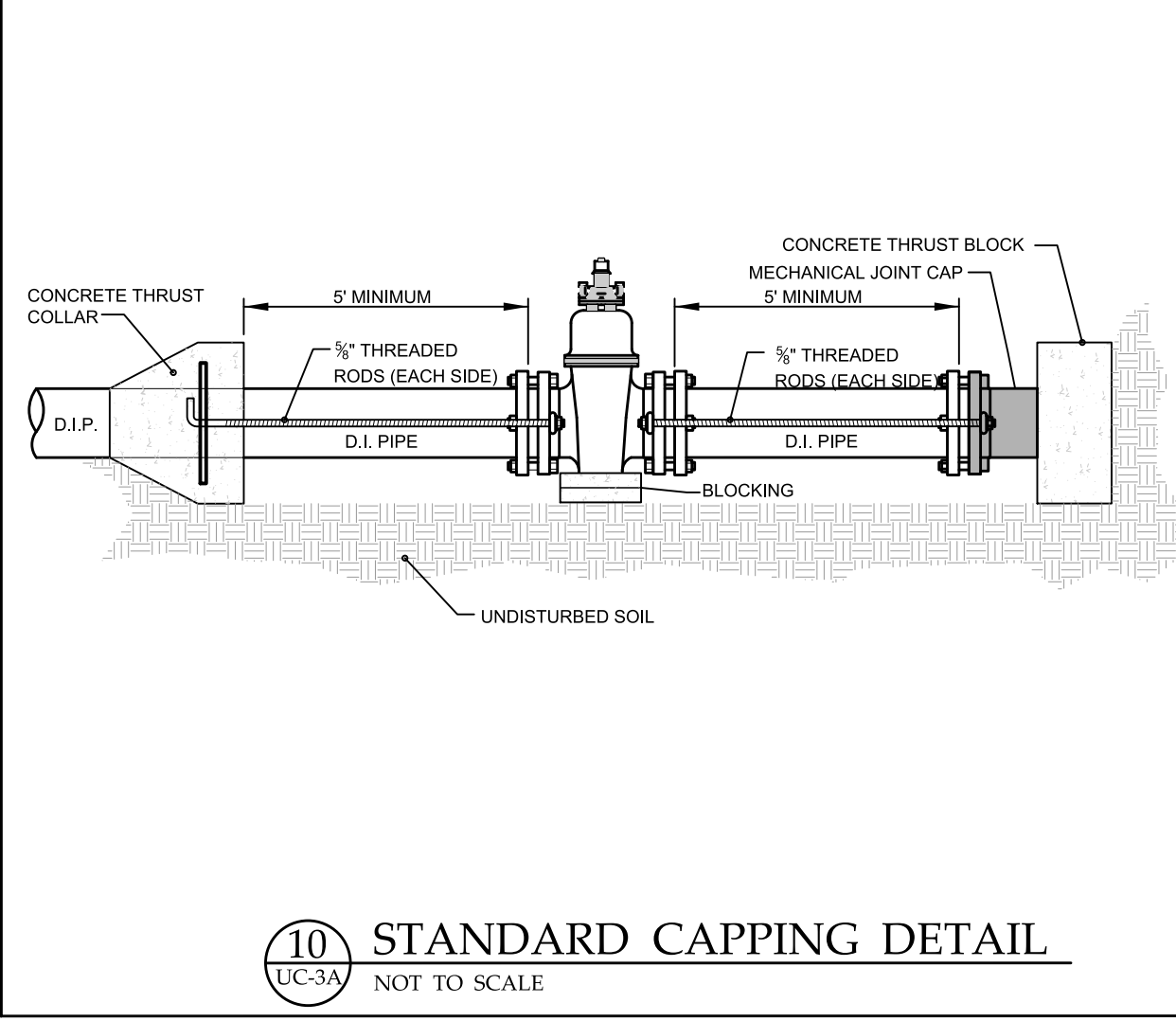
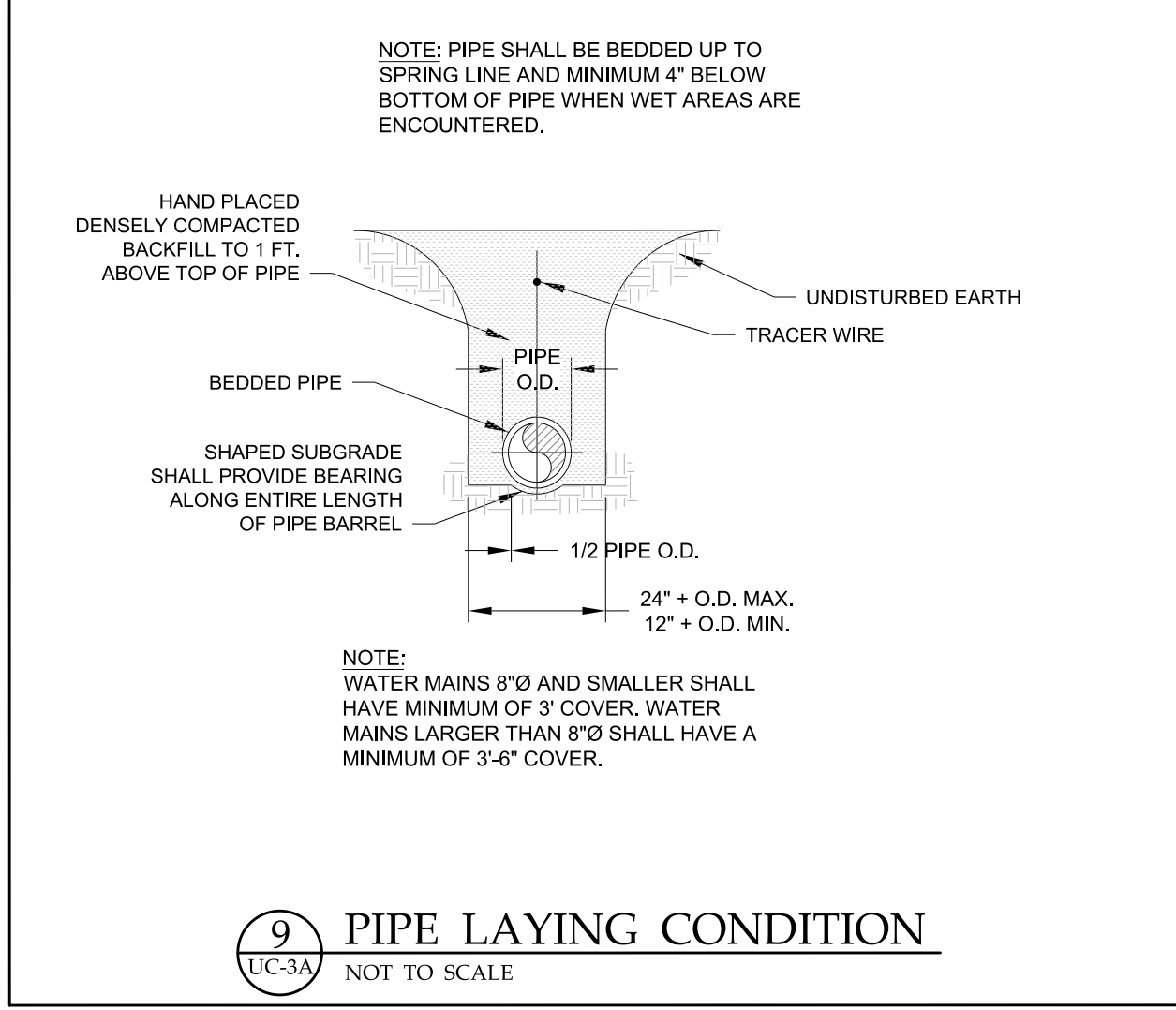
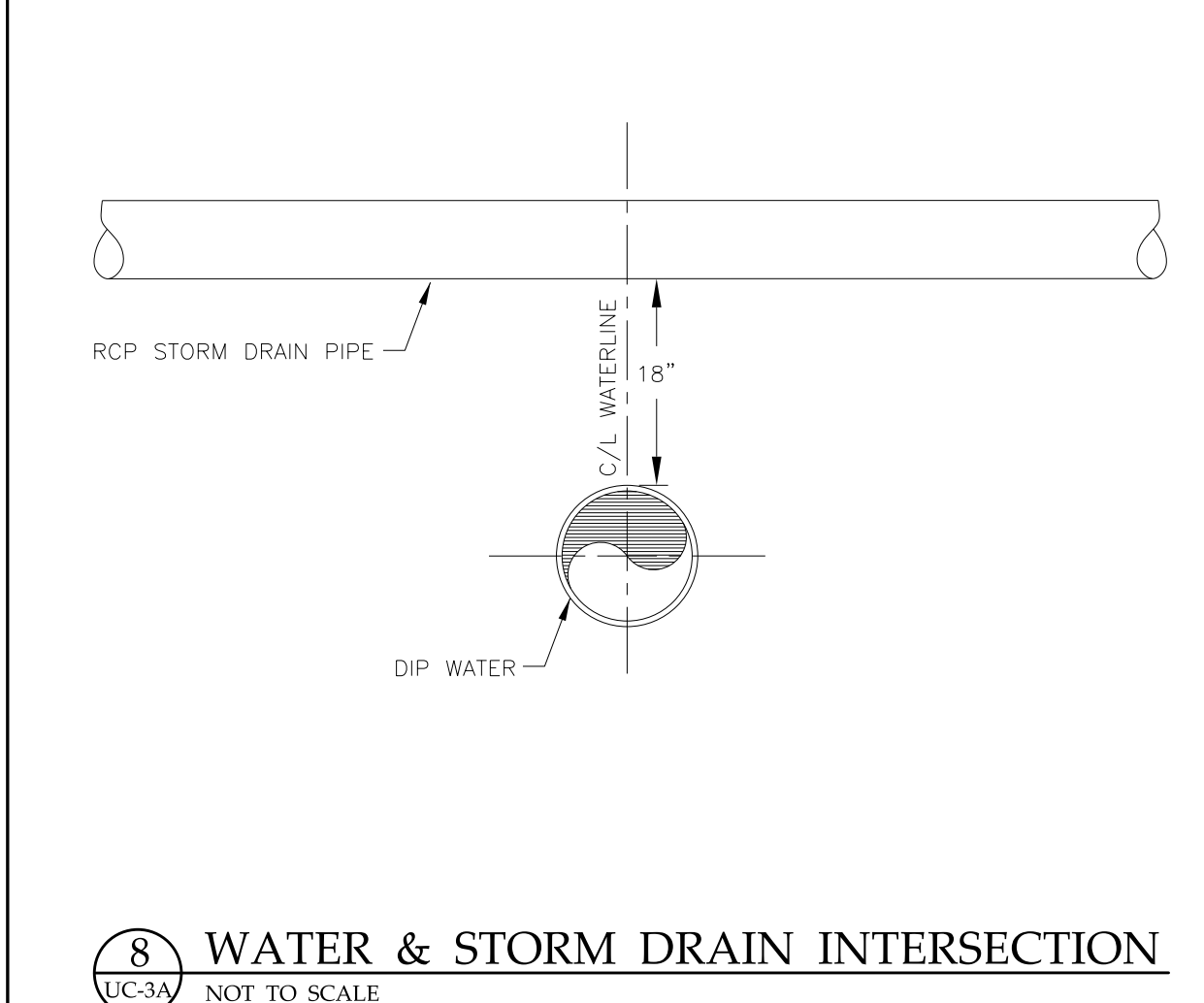
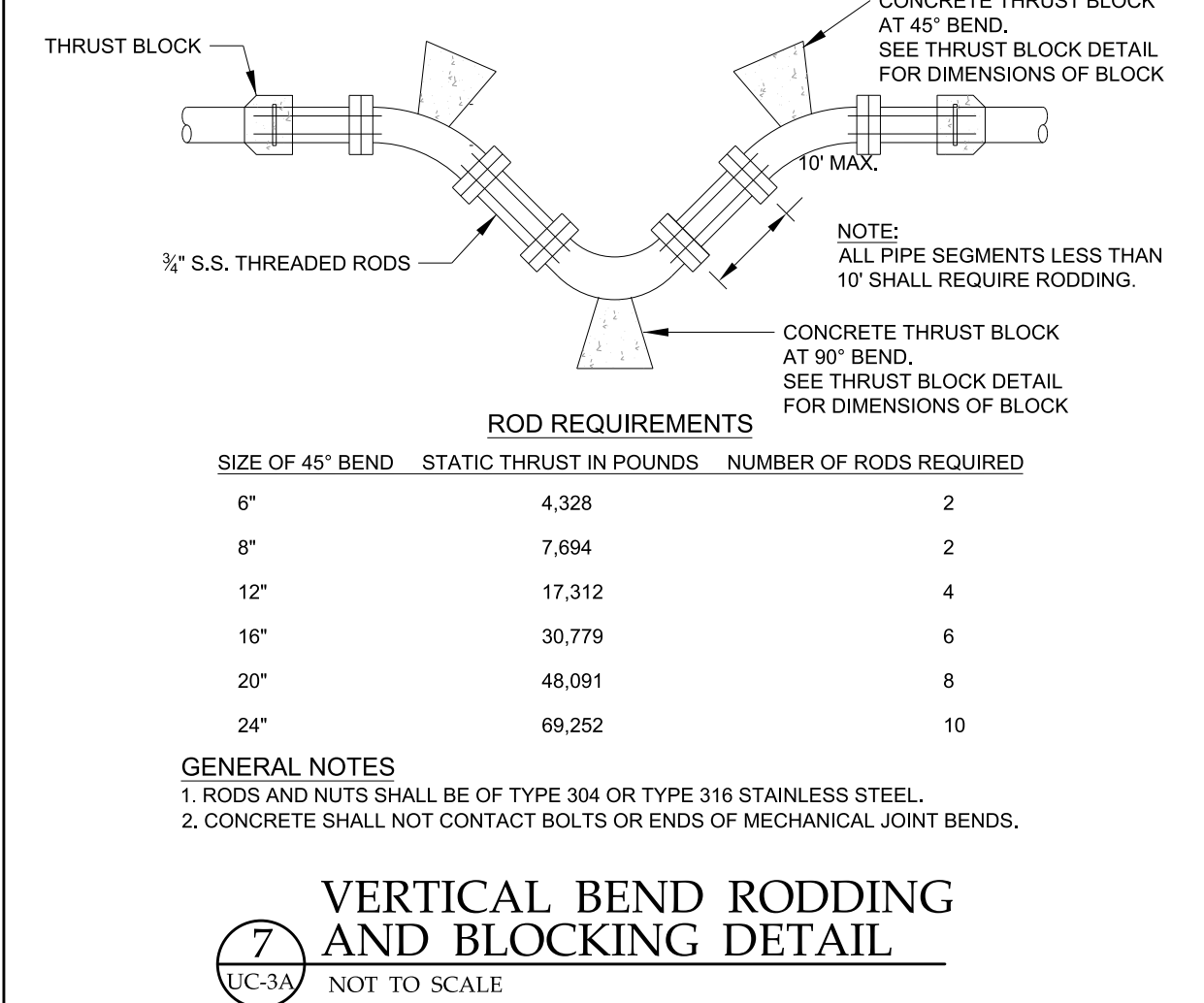
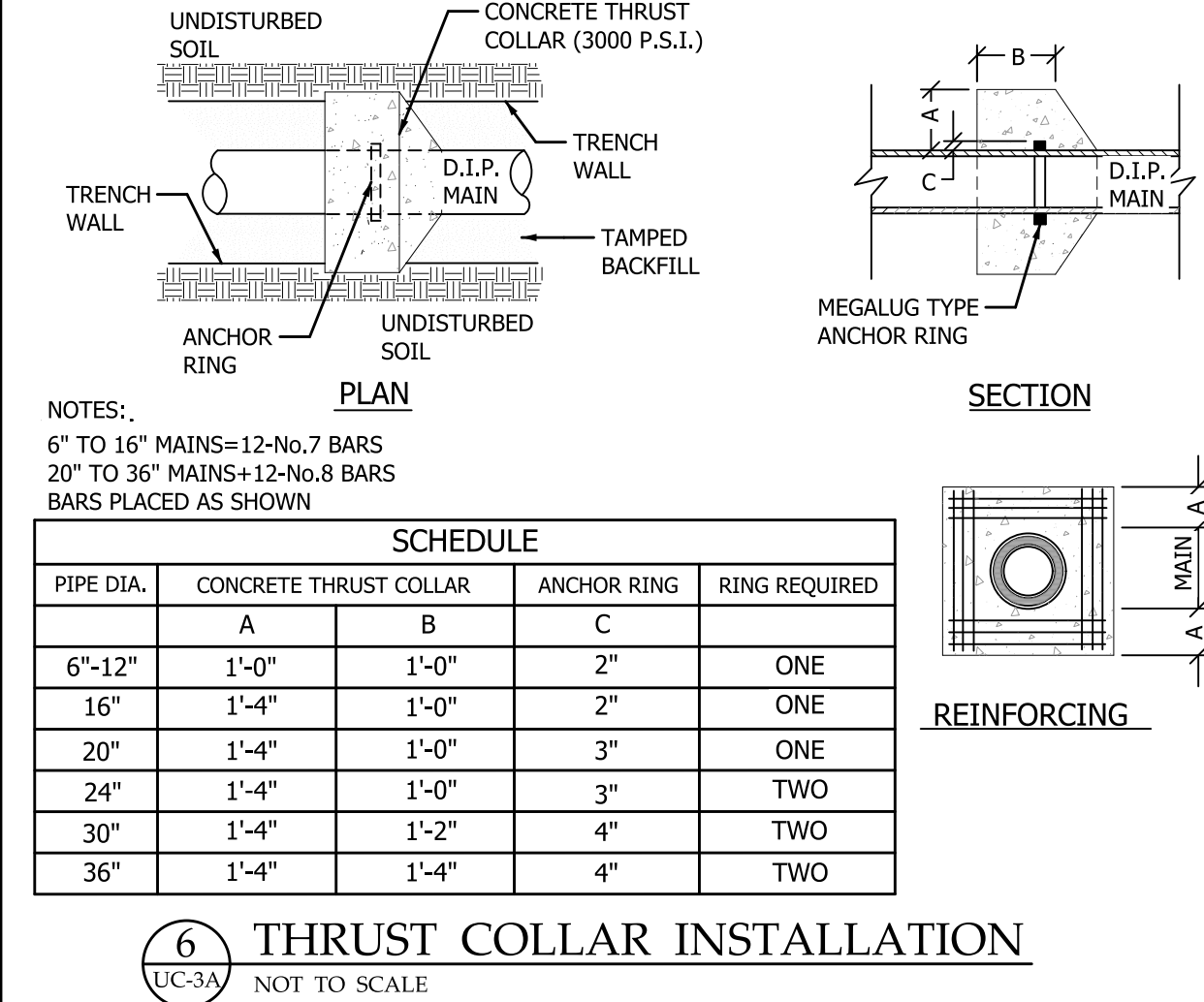
UTILITY CONSTRUCTION


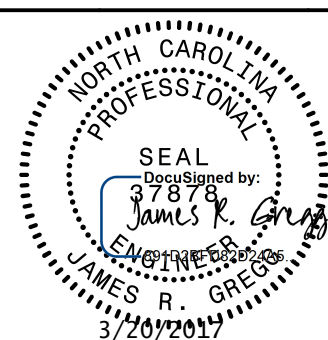



NOM. PIPE (I.D.)	MINIMUM CONCRETE BLOCKING (C.Y.)*				
	TEES & DEAD ENDS	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	.34	.34	.34	.34	.34
6	.34	.34	.34	.34	.34
8	.34	.50	.34	.34	.34
10	.67	.75	.50	.34	.34
12	.75	.67	1.0	.34	.34
14	1.0	1.5	.75	.50	.34
16	1.34	2.0	1.0	.50	.34
18	1.67	2.34	1.34	.67	.34
20	2.0	3.0	1.67	.75	.50
24	3.0	4.34	2.34	1.34	.67

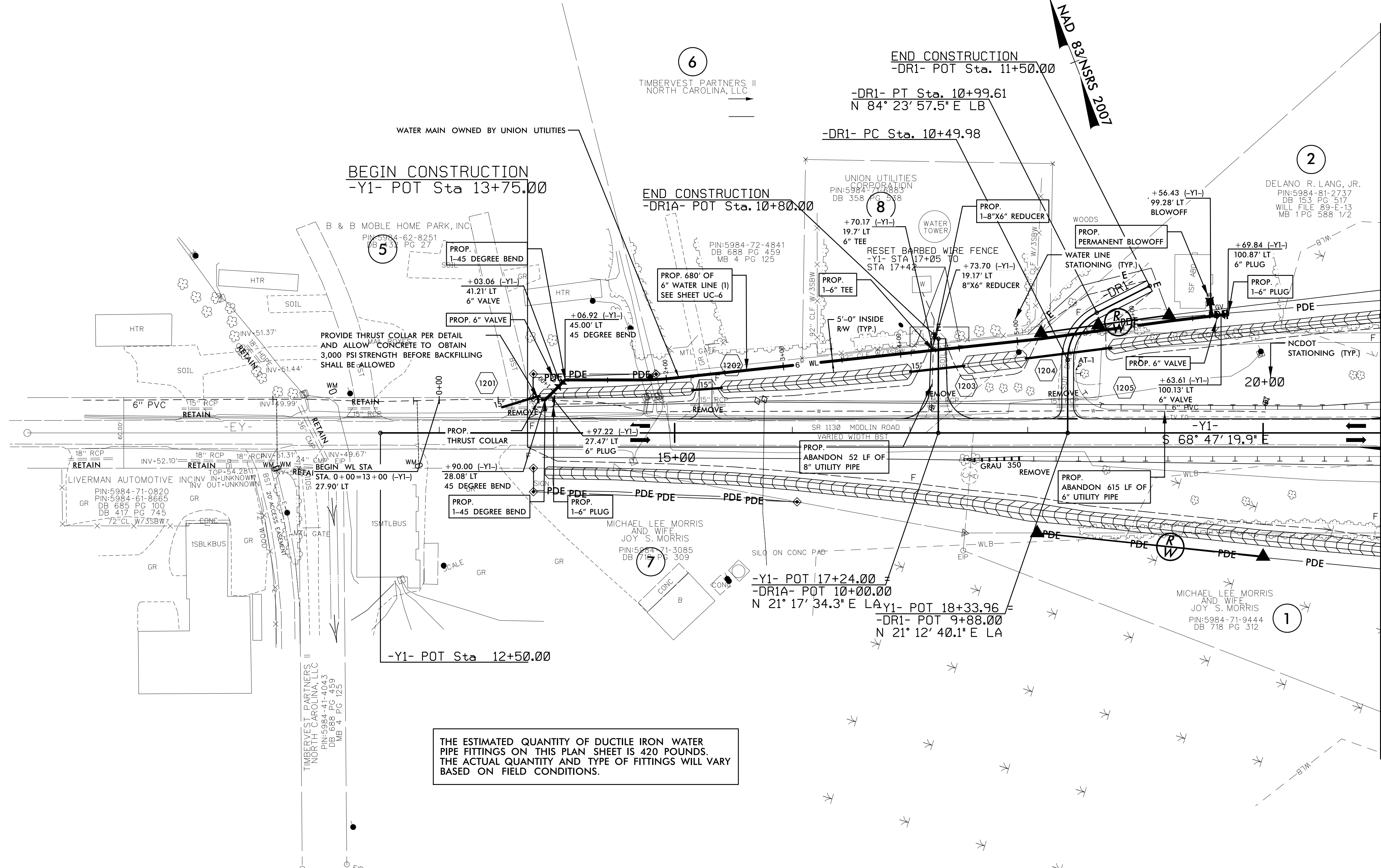
*CONCRETE SHALL BE 3000 P.S.I. MIX.
NOTE: NO CONCRETE SHALL COVER BOLTS OR GLANDS.

5 STANDARD REACTION BLOCKING
UC-3A NOT TO SCALE



PREPARED IN THE OFFICE OF:  THE WOOTEN COMPANY <small>ENGINEERING PLANNING ARCHITECTURE</small> <small>120 North Spaulding Avenue Raleigh, NC 27603-1423</small> <small>919.878.0311 fax 919.878.0399</small> <small>License Number: F-4015</small>	PROJECT REFERENCE NO.	SHEET NO.
	R-5311A	UC-4
	DESIGNED BY: JRG	
	DRAWN BY: TK	
CHECKED BY: JRG		 SEAL James R. Gress PROFESSIONAL ENGINEER No. 37889 State of North Carolina 3/14/2014
APPROVED BY: JRG		
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
WATER LINE CONSTRUCTION SHOWN ON THIS SHEET		

UTILITY CONSTRUCTION



THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 420 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

REVISIONS

MATCHLINE -Y1- STA 21+00

MICHAEL LEE MORRIS AND WIFE JOY S. MORRIS
 PIN: 5984-71-3085
 DB 718 PG 309

MICHAEL LEE MORRIS AND WIFE JOY S. MORRIS
 PIN: 5984-71-9444
 DB 718 PG 312

MICHAEL LEE MORRIS AND WIFE JOY S. MORRIS
 PIN: 5984-71-3085
 DB 718 PG 309

TIMBERVEST PARTNERS, II
 NORTH CAROLINA, LLC
 PIN: 5984-62-8251
 DB 333 PG 27

LIVERMAN AUTOMOTIVE INC
 INV IN-UNKNOWN
 INV OUT-UNKNOWN
 PIN: 5984-71-0820
 PIN: 5984-61-8665
 DB 685 PG 100
 DB 417 PG 745

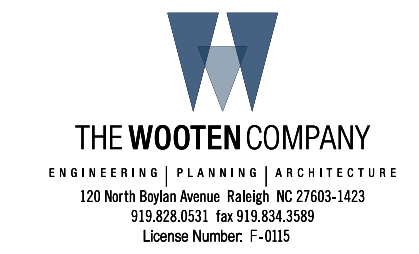
DELANO R. LANG, JR.
 PIN: 5984-81-2737
 DB 153 PG 517
 WILL FILE 89-E-13
 MB 1 PG 588 1/2

UNION UTILITIES CORPORATION
 DB 358 PG 383

PIN: 5984-72-4841
 DB 688 PG 459
 MB 4 PG 125

B & B MOBLE HOME PARK, INC
 PIN: 5984-62-8251
 DB 333 PG 27

PREPARED IN THE OFFICE OF:



PROJECT REFERENCE NO.

R-5311A

SHEET NO.

UC-5

DESIGNED BY: JRG

DRAWN BY: TK

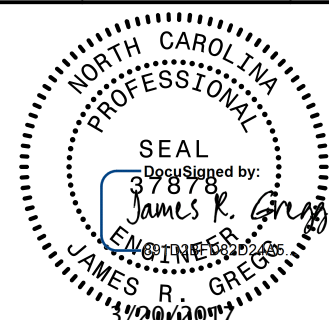
CHECKED BY: JRG

APPROVED BY: JRG

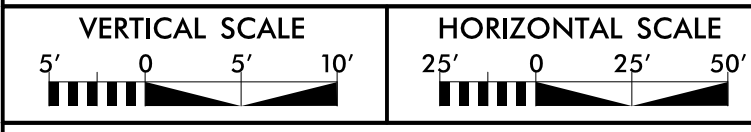
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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

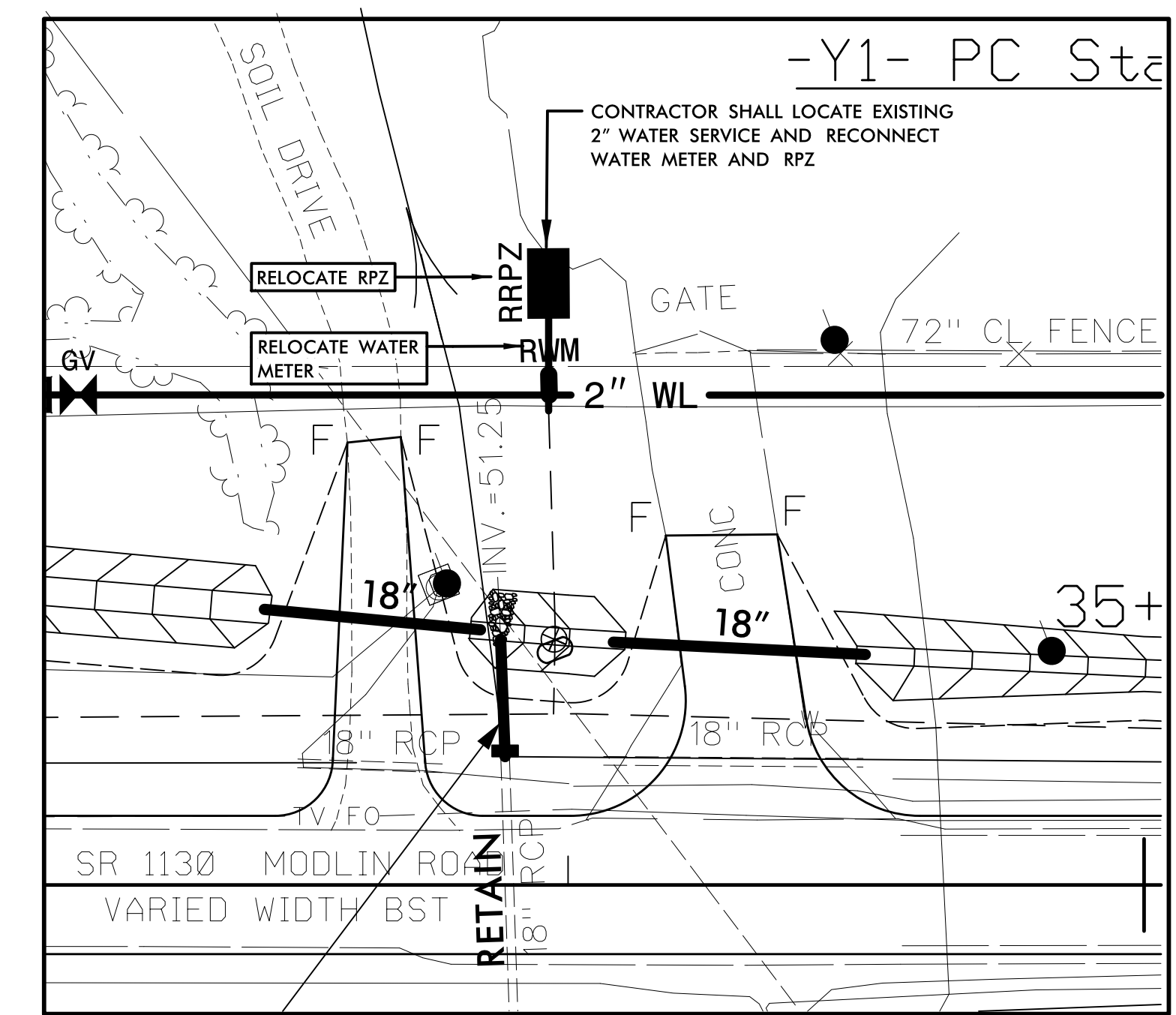
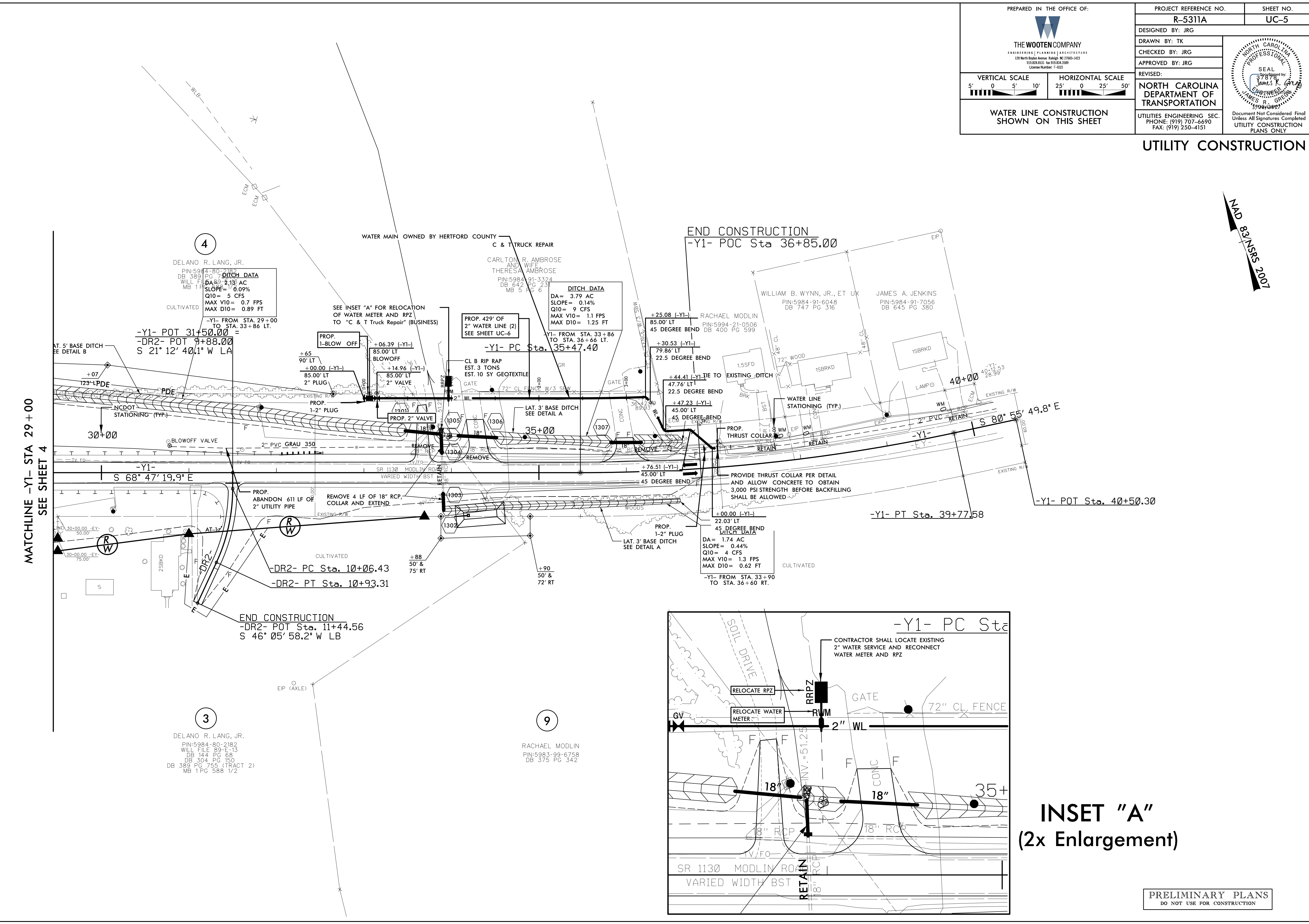
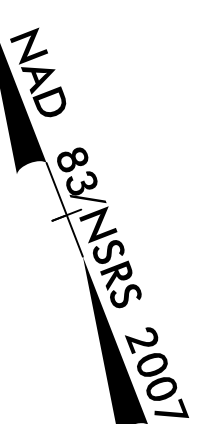


Document Not Considered Final Unless All Signatures Completed UTILITY CONSTRUCTION PLANS ONLY



WATER LINE CONSTRUCTION SHOWN ON THIS SHEET

UTILITY CONSTRUCTION




INSET "A" (2x Enlargement)

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

5/28/19

WATER LINES OWNED BY UNION UTILITIES
 PROFILE SHOWN IS BASED ON STATIONING ALONG
 PROPOSED WATER MAIN ALIGNMENT ALONG
 ROADWAY ALIGNMENT -Y1-
 (SEE SHEET UC-4)

PREPARED IN THE OFFICE OF:

THE WOOTEN COMPANY
 ENGINEERING | PLANNING | ARCHITECTURE
 120 North Siler Street Raleigh, NC 27603-1423
 919.838.0311 fax 919.838.1599
 License Number: F-0115

PROJECT REFERENCE NO. **R-5311A** SHEET NO. **UC-6**

DESIGNED BY: JRG
 DRAWN BY: TK
 CHECKED BY: JRG
 APPROVED BY: JRG

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

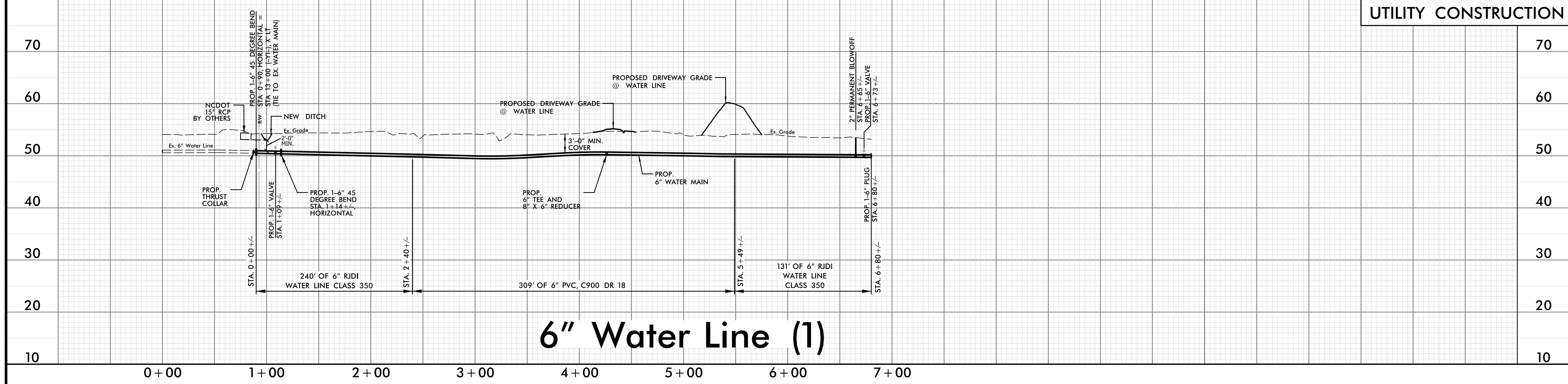
VERTICAL SCALE: 5' 0 5' 10'
 HORIZONTAL SCALE: 25' 0 25' 50'

WATER LINE CONSTRUCTION SHOWN ON THIS SHEET

SEAL
 97878
 JAMES R. GREENE
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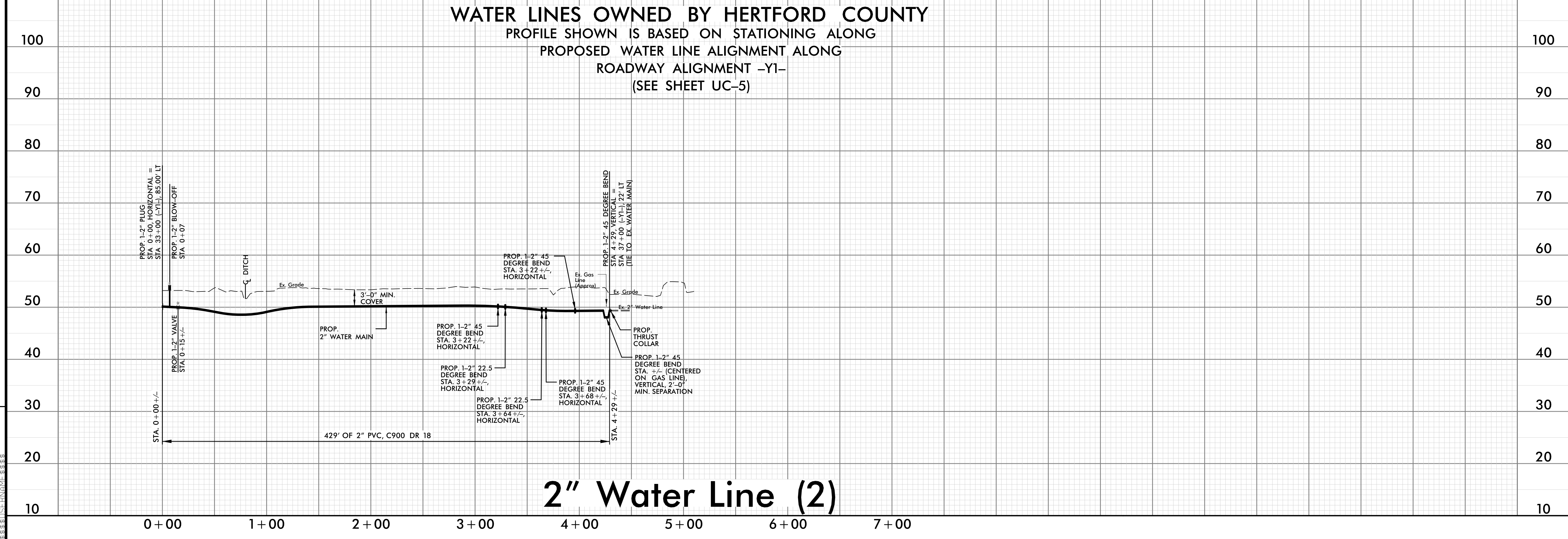
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 UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



6" Water Line (1)

WATER LINES OWNED BY HERTFORD COUNTY
 PROFILE SHOWN IS BASED ON STATIONING ALONG
 PROPOSED WATER LINE ALIGNMENT ALONG
 ROADWAY ALIGNMENT -Y1-
 (SEE SHEET UC-5)



2" Water Line (2)

REVISIONS

NO. 1
 DATE
 DESCRIPTION