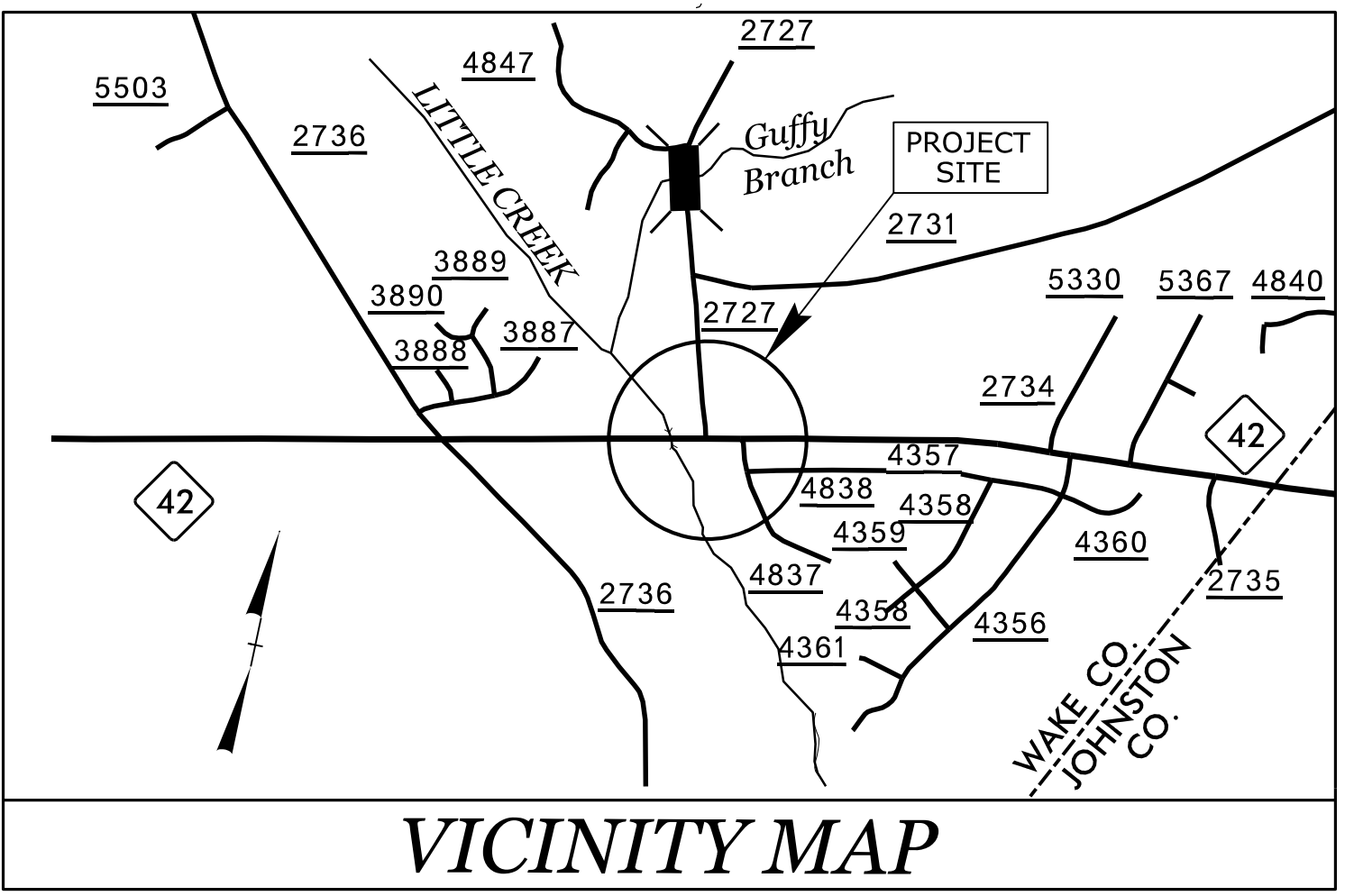


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TIP PROJECT: W-5601EY



VICINITY MAP

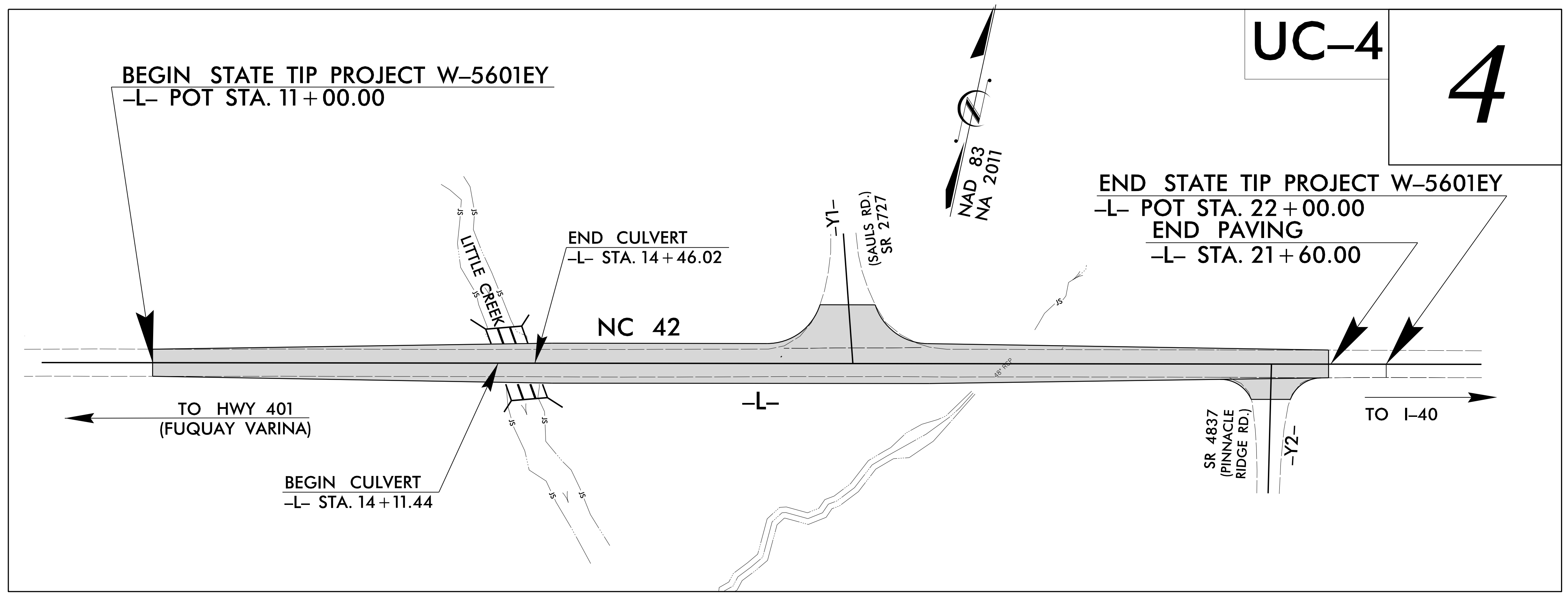
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
WAKE COUNTY

LOCATION: CONSTRUCT AN EASTBOUND LEFT TURN
LANE ON NC 42 AT THE SR 2727 (SAULS RD.)
INTERSECTION

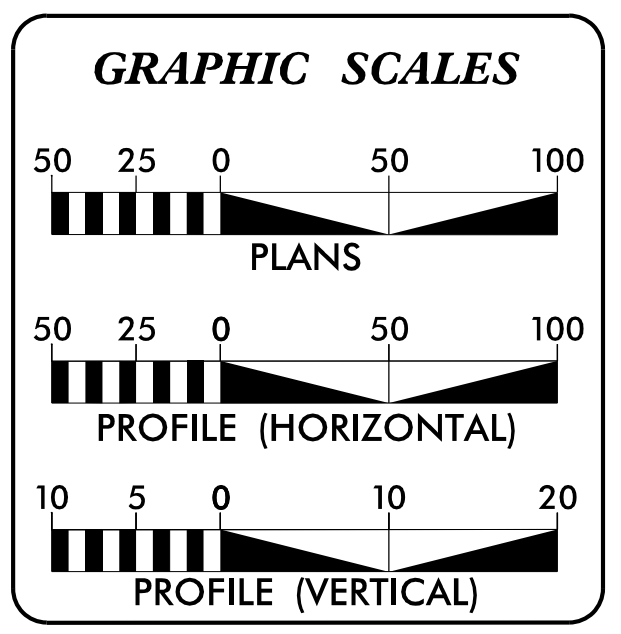
TYPE OF WORK: RELOCATION OF WATER LINE

T.I.P. NO.	SHEET NO.
W-5601EY	UC-1



UC-4
4

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



SHEET NO.:	DESCRIPTION:
UC-1	UC TITLE SHEET
UC-2	UTILITY SYMBOLOGY SHEET
UC-3	UC NOTES SHEET
UC-3A	UC DETAILS SHEET
UC-4	UC PLAN SHEET
UC-5	UC PROFILE

**WATER OWNER
ON PROJECT**

JOHNSTON COUNTY DEPARTMENT
OF PUBLIC UTILITIES
309 E. MARKET ST.
SMITHFIELD, NC 27577

PREPARED IN THE OFFICE OF

KCI
Engineers • Planners • Scientists • Construction Managers
4505 Falls of Neuse Road, Suite 400
Raleigh, NC 27609
Phone (919) 783-9234 • Fax (919) 783-9266
License No. C-764

DINKISSA KEREYU, P.E. PROJECT ENGINEER
MARCO MENENDEZ, P.E. PROJECT MANAGER
ANGELICA PURA PROJECT DESIGNER

SEAL

MARCO MENENDEZ, P.E.
Professional Engineer
No. 35322
1/23/2024

**DIVISION OF HIGHWAYS
DIVISION 5
PROJECT DELIVERY UNIT**
2612 N. DUKE STREET
DURHAM, NC 27704



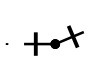

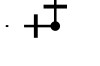



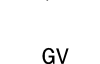


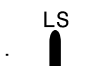

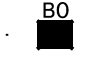










BEN UPSHAW, P.E. TEAM LEAD
S. REID DAVIDSON, P.E. DDC ENGINEER
DON PROPER DIVISION 5 UTILITIES ENGINEER
MONROE BROWN DIVISION 5 UTILITY COORDINATOR

07-FEB-2023 14:28 MA 2013 12/13/23 5:05 NCDOT W-5601EY Sewer_tsh_UC01.psh.dgn \$\$\$SERVNAME\$\$\$





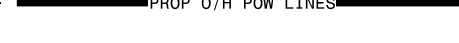
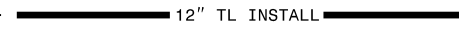
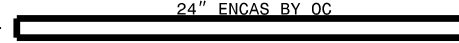
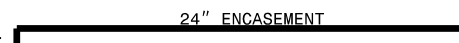
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS






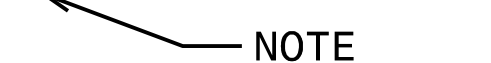

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS






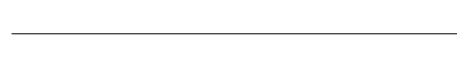

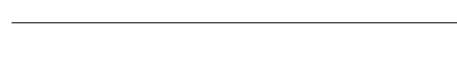


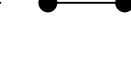








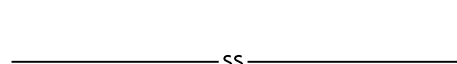





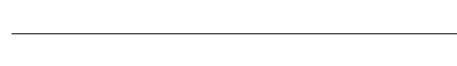











Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED 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

5/14/24

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 2024.
2. THE EXISTING UTILITIES BELONG TO JOHNSTON COUNTY DEPARTMENT OF PUBLIC UTILITIES.
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. 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.

PROJECT REFERENCE NO. W-5601EY	SHEET NO. UC-3
DESIGNED BY: <i>DK</i>	
DRAWN BY: <i>AP</i>	
CHECKED BY: <i>MM</i>	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
Engineers • Planners • Scientists • Construction Managers 4509 Falls of Neuse Road, Suite 400 Raleigh, NC 27609 Phone (919) 783-9214 • Fax (919) 783-9266 License No. C-764	

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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PROJECT REFERENCE NO.	SHEET NO.
W-560IEY	UC-3A
DESIGNED BY: DK	
DRAWN BY: AP	
CHECKED BY: MM	
APPROVED BY:	
REVISED:	1/23/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

JOHNSTON COUNTY DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAILS

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

VALVE AND VALVE BOX INSTALLATION
NOT TO SCALE

FOR USE IN PAVED AREAS | FOR USE IN UNPAVED AREAS

FINISHED GRADE IN PAVED AREA | FINISHED GRADE IN UNPAVED AREA

BASE COURSE | TAMPED BACKFILL | VALVE BOX | VALVE | WATER MAIN | TAMPED BACKFILL | BLOCKING

NOTES:
1. D.I.P. MAY BE USED FOR VALVE BOX EXTENSIONS.
2. VALVE BOX SHOULD NOT CONTACT WATER MAIN OR VALVE.
3. CONCRETE PROTECTOR RING SHALL BE USED IN ALL UNPAVED AREAS.
4. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.

Drawn By:	Name	Date		WATER STANDARD DETAIL Valve and Valve Box Installation	PAGE 13
Checked By:					
Approved By:					
Scale:					

FIRE HYDRANT ASSEMBLY
NOT TO SCALE

NOTE:
1. MIN. OF 4 CU. FT. STONE (MORE IF REQ'D).
2. CONC. THRUST BLOCK TO HAVE MIN. OF 6 SQ. FT. BEARING ON SOLID BANK (MORE IF REQ'D).
3. DRAIN HOLES AND FLANGES SHALL BE CLEAR OF CONC.
4. FIRE HYDRANT BARREL SHALL BE PLUMB.
5. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.

COAT HYDRANT BONNET AND NOZZLE CAPS W/ ALUMINUM REFLECTIVE FIRE HYDRANT PAINT (SILVER MODEL #1448)

#67 STONE FILL 6"±

FINISHED GRADE

PUMPING & HOSE CONNECTIONS EQUAL TO COUNTY STANDARD

BREAK RING TO BE SET WITHIN 2'-4" OF FINISHED GRADE

VALVE BOX

HYDRANT TEE

WATERLINE SIZE VARIES (SEE PLANS)

CONCRETE THRUST BLOCK

GATE VALVE VALVE SHALL BE PLACED ON THE WATER MAIN SIDE OF ROAD DITCH

CONCRETE THRUST BLOCK

#67 STONE FILL (4 C.F. MIN.)

HYDRANT LEG TO DIP

3/4" TYPE 304 S.S. THREADED RODS MIN. 2 EA. PER SEGMENT OR "Grab-Grip" RINGS OR ROMAC GRIP RINGS MAY BE USED AT JOINTS IN LIEU OF THREADED RODS

RAY ITEM FIRE HYDRANT ASSEMBLY INCLUDES ALL ITEMS EXCEPT MAIN LINE TEE

NOTES:
1. FIRE HYDRANTS INSTALLED ON EXISTING 6" WATER MAINS, MUST BE INSTALLED USING A 6"x6" TEE CUT INTO THE EXISTING WATER MAIN. FIRE HYDRANTS INSTALLED ON EXISTING WATER MAINS LARGER THAN 6", CAN BE INSTALLED USING A TAPPING SLEEVE AND VALVE ON THE EXISTING WATER MAIN.

Drawn By:	Name	Date		WATER STANDARD DETAIL Fire Hydrant Assembly	PAGE 4
Checked By:					
Approved By:					
Scale:					

THRUST COLLAR INSTALLATION
NOT TO SCALE

REINFORCING

SECTION

CONCRETE THRUST COLLAR (3,000 P.S.I.)

ANCHOR RING

D.I.P. MAIN

UNDISTURBED SOIL

TRENCH WALL

TAMPED BACKFILL

UNDISTURBED SOIL

NOTE:
#7 TO 16" MAINS = 12 AND 7 BARS
20" TO 36" MAINS = 12 AND 8 BARS
BARS PLACED AS SHOWN

SCHEDULE

PIPE DIAMETER	CONCRETE THRUST COLLAR	ANCHOR COLLAR	RINGS REQUIRED
8" TO 12"	12"	12"	2
16"	14"	14"	2
20"	14"	14"	2
24"	14"	14"	TWO
30"	14"	14"	TWO
36"	14"	14"	TWO

Drawn By:	Name	Date		WATER STANDARD DETAIL Thrust Collar Installation	PAGE 9
Checked By:					
Approved By:					
Scale:					

VERTICAL BEND RODDING AND BLOCKING DETAIL
NOT TO SCALE

THRUST COLLAR

CONCRETE THRUST BLOCK AT 45° BEND. SEE THRUST BLOCK DETAIL FOR DIMENSIONS OF BLOCK.

10" MAX.

NOTE:
ALL PIPE SEGMENTS LESS THAN 10' SHALL REQUIRE RODDING.

3/4" S.S. THREADED RODS

CONCRETE THRUST BLOCK AT 90° BEND. SEE THRUST BLOCK DETAIL FOR DIMENSIONS OF BLOCK.

ROD REQUIREMENTS

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	4
16"	30,779	6
20"	48,091	8
24"	69,252	10

GENERAL NOTES:
1. RODS AND NUTS SHALL BE OF TYPE 304 OR TYPE 316 STAINLESS STEEL.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

Drawn By:	Name	Date		WATER STANDARD DETAIL Critical Bend Rodding and Blocking Details	PAGE 7
Checked By:					
Approved By:					
Scale:					

OPEN-CUT PIPE TO FUSIBLE PVC OR HDD DIP TRANSITION ASSEMBLY
WS-4C

EXISTING GRADE

36" MIN.

BEND ANGLE TO BE DETERMINED PER ACTUAL FIELD CONDITIONS

PVC PIPE TO BE RESTRAINED TO MJ BEND

DIP MJ BEND

5.5" DIA.

2.5'

6" MIN.

2.5'

WRAP AROUND PIPE WITH #7 DEFORMED BARS

PE PVC TO BE RESTRAINED TO MJ BEND

FUSIBLE PVC OR HDD DIP

Drawn By:	Name	Date		WATER STANDARD DETAIL Critical Bend Rodding and Blocking Details	PAGE 7
Checked By:					
Approved By:					
Scale:					

VALVE MARKER DETAIL
NOT TO SCALE

NOTES:
1. VALVE MARKERS SHALL BE PLACED AT 5'±.
2. LETTERS "MV" SHALL FACE TOWARDS VALVE.
3. MARKER SHALL HAVE BRASS OR BRONZE EMBED ON TOP OR SIDE.
4. CONTRACTOR SHALL STAMP DISTANCE TO CENTER OF VALVE INTO EMBED.
5. SLOWOFF AGENCY SHALL INCLUDE 1 EA. MARKER W/ "SO" OR "MV" CAST.

5'±

10" ALL TYPES AND SIZES

0" EMBEDDED INTO SIDE

FINISHED GRADE

CAST IN CONC. & PAINTED BLACK

4 EA. #3 REBAR (1 EA. CORNER)

SQUARE MARKER WITH BEVELED CORNERS

Drawn By:	Name	Date		WATER STANDARD DETAIL Valve Marker	PAGE 15
Checked By:					
Approved By:					
Scale:					

PIPE LAYING CONDITION
NOT TO SCALE

NOTE: PIPE SHALL BE BEDDED UP TO SPRING LINE AND MINIMUM 4" BELOW BOTTOM OF PIPE WHEN WET AREAS ARE ENCOUNTERED.

HAND PLACED DENSELY COMPACTED BACKFILL TO 1 FT. ABOVE TOP OF PIPE

UNDISTURBED EARTH

ELECTRONIC MARKER BALLS AT 100' ON CENTER & AT BENDS. MARKER BALLS SHALL BE INSTALLED AT 1' TO 2' DEEP.

NOTE: MARKER BALLS SHALL BE INSTALLED CONCURRENTLY WITH PIPE. MARKER BALLS SHALL NOT BE INSTALLED AFTER TRENCH HAS BEEN COMPLETELY BACKFILLED.

24" ± O.D. MAX. 12" ± O.D. MIN.

NOTE: WATER MAINS 8" O.D. AND SMALLER SHALL HAVE MINIMUM OF 3" COVER. WATER MAINS LARGER THAN 8" O.D. SHALL HAVE A MINIMUM OF 3'-4" COVER.

Drawn By:	Name	Date		WATER STANDARD DETAIL Pipe Laying Condition	PAGE 17
Checked By:					
Approved By:					
Scale:					

THRUST BLOCK DETAIL
NOT TO SCALE

NOTES:
1. CONCRETE SHALL BE 3,000 P.S.I. MIN.
2. CONCRETE FOR THRUST BLOCKING SHALL BE KEPT FAIRLY DRY. THIS MAKING THE CONCRETE WEDGE SHAPE MORE EASILY FORMED WITH THE WEDGES PART (BLOCKING AREA) AGAINST UNDISTURBED SOIL.
3. NO CONCRETE SHALL COVER ANY BOLTS OR GLANDS.
4. ALL FITTING AND ACCESSORIES TO BE WRAPPED WITH 10 MIL POLYETHYLENE PRIOR TO POURING BLOCKING.
5. VOLUME OF THRUST BLOCKING SHALL BE AS SHOWN ON THE THRUST BLOCKING SCHEDULE.

PLAN BENDS

PLAN TEES

SECTION X-X BENDS & TEES

PLAN & ELEV. PLUGS

PIPE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE	PLUG
6"	12"	8"	8"	8"	8"	12"
8"	12"	8"	8"	8"	8"	12"
10"	12"	8"	8"	8"	8"	12"
12"	12"	8"	8"	8"	8"	12"
14"	12"	8"	8"	8"	8"	12"
16"	12"	8"	8"	8"	8"	12"
18"	12"	8"	8"	8"	8"	12"
20"	12"	8"	8"	8"	8"	12"
24"	12"	8"	8"	8"	8"	12"
30"	12"	8"	8"	8"	8"	12"
36"	12"	8"	8"	8"	8"	12"

Drawn By:	Name	Date		WATER STANDARD DETAIL Thrust Block	PAGE 8
Checked By:					
Approved By:					
Scale:					

STORM DRAIN PIPE CROSSING DETAIL
NOT TO SCALE

FINISHED GRADE

PROPOSED WATER MAIN

DIP

12" MIN. (24" MIN. IN NODOT ROW)

THRUST COLLAR

45° BEND

3/4" S.S. THREADED RODS

CONCRETE BLOCKING

10" D.I.P. OR HDPE FUSED PIPE

10" D.I.P. OR HDPE FUSED PIPE

THRUST COLLAR (TYP)

1 EA. JOINT OF DUCTILE IRON OR HDPE FUSED PIPE PIPE CENTERED UNDER STORM DRAIN. PIPE SHALL BE BEDDED BACKFILLED TO 6" ABOVE PIPE IN WASHED STONE.

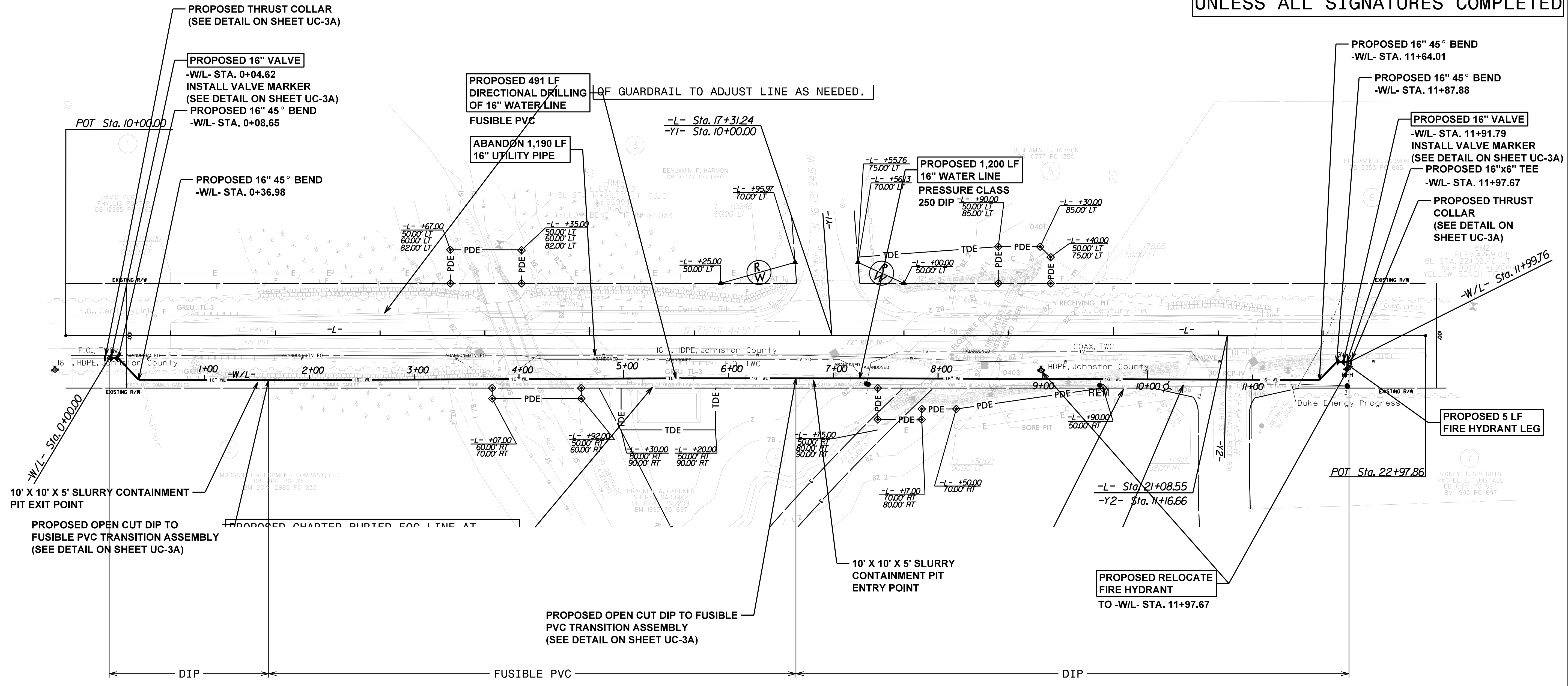
NOTES:
1. CULVERT CROSSINGS IN EXISTING NCDOT RIGHT-OF-WAY REQUIRE 24" MIN. SEPARATION FROM BOTTOM OF CULVERT TO TOP OF WATER MAIN.
2. IN LIEU OF RESTRAINT, (TIE) RODS, APPROVED RESTRAINT JOINT PIPE MAY BE USED.

Drawn By:	Name	Date		WATER STANDARD DETAIL Storm Pipe Crossing	PAGE 11
Checked By:					
Approved By:					
Scale:					

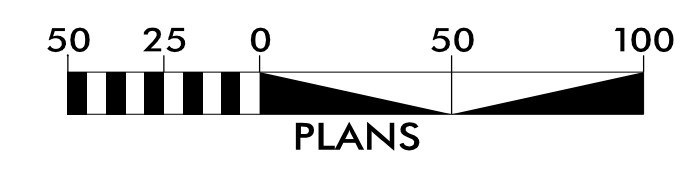
5/14/2023

PROJECT REFERENCE NO.	SHEET NO.
W-5601EY	UC-4
DESIGNED BY: DK	
DRAWN BY: AP	
CHECKED BY: MM	
APPROVED BY:	
REVISED:	1/23/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



- NOTES:**
1. ALL PROPOSED WATER MAIN SHALL BE PRESSURE CLASS 250 DIP (OPEN CUT) OR DR18 C900 FUSIBLE PVC (HDD).
 2. ALL PIPE JOINTS SHALL BE RESTRAINED.
 3. COORDINATES OF HDD PIPE ENTRY ARE APPROXIMATELY N2108784.6679, E669869.2216.
 4. COORDINATES OF HDD PIPE EXIT ARE APPROXIMATELY N2108363.8413, E669757.9039.
 5. CONNECT PROPOSED 16" DIP TO EXISTING 16" DIP AT BOTH ENDS OF PROPOSED PIPING.



- PROPOSED 2,590 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS
- PROPOSED 76 TONS OF FOUNDATION CONDITIONING MATERIAL
- PROPOSED 421 SY FOUNDATION CONDITIONING GEOTEXTILE

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5/14/99

NOTES:

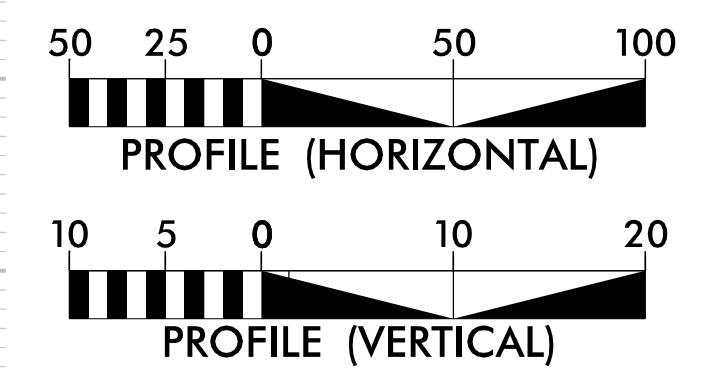
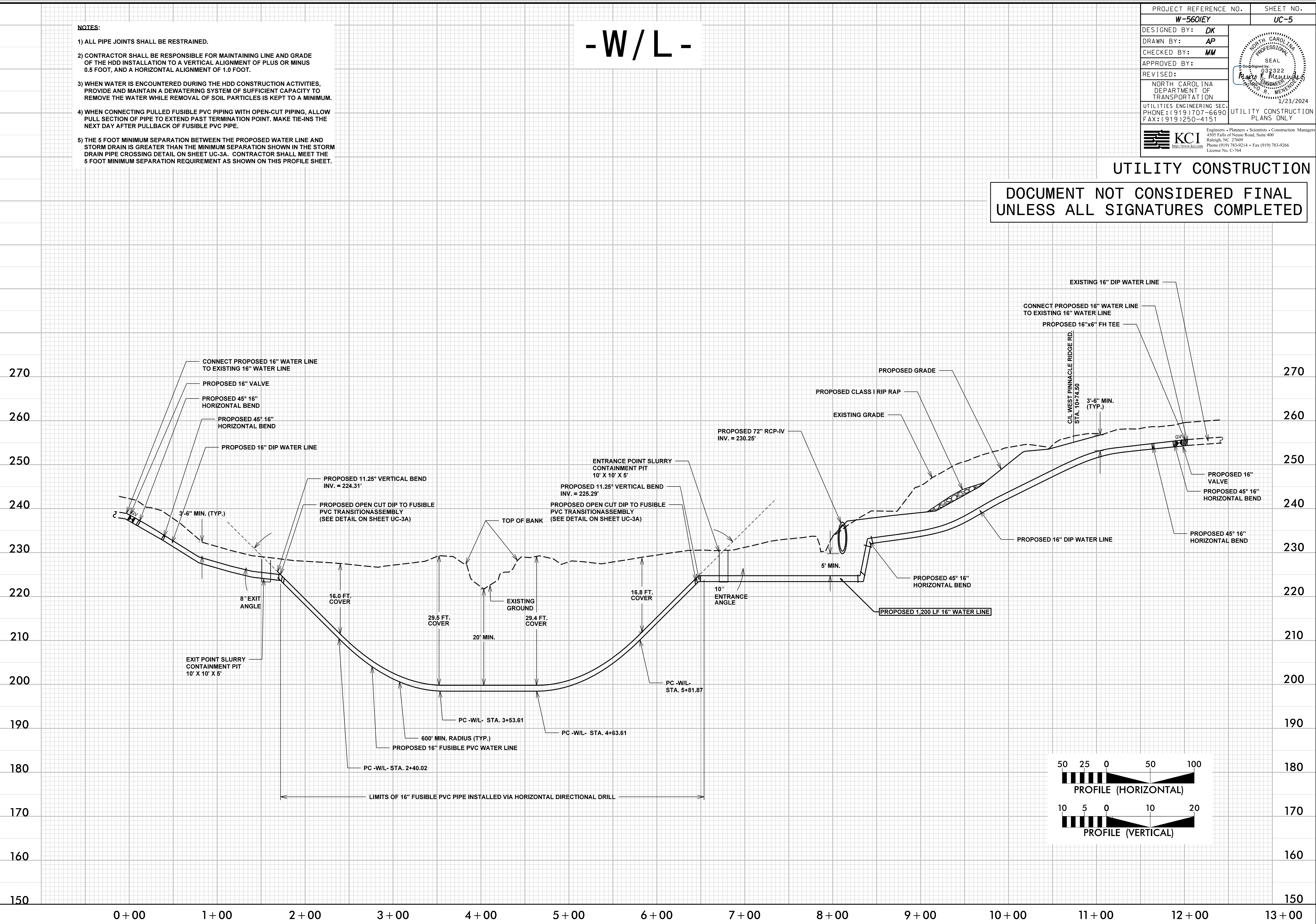
- 1) ALL PIPE JOINTS SHALL BE RESTRAINED.
- 2) CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING LINE AND GRADE OF THE HDD INSTALLATION TO A VERTICAL ALIGNMENT OF PLUS OR MINUS 0.5 FOOT, AND A HORIZONTAL ALIGNMENT OF 1.0 FOOT.
- 3) WHEN WATER IS ENCOUNTERED DURING THE HDD CONSTRUCTION ACTIVITIES, PROVIDE AND MAINTAIN A DEWATERING SYSTEM OF SUFFICIENT CAPACITY TO REMOVE THE WATER WHILE REMOVAL OF SOIL PARTICLES IS KEPT TO A MINIMUM.
- 4) WHEN CONNECTING PULLED FUSIBLE PVC PIPING WITH OPEN-CUT PIPING, ALLOW PULL SECTION OF PIPE TO EXTEND PAST TERMINATION POINT. MAKE TIE-INS THE NEXT DAY AFTER PULLBACK OF FUSIBLE PVC PIPE.
- 5) THE 5 FOOT MINIMUM SEPARATION BETWEEN THE PROPOSED WATER LINE AND STORM DRAIN IS GREATER THAN THE MINIMUM SEPARATION SHOWN IN THE STORM DRAIN PIPE CROSSING DETAIL ON SHEET UC-3A. CONTRACTOR SHALL MEET THE 5 FOOT MINIMUM SEPARATION REQUIREMENT AS SHOWN ON THIS PROFILE SHEET.

-W/L-

PROJECT REFERENCE NO. W-560IEY	SHEET NO. UC-5
DESIGNED BY: DK	
DRAWN BY: AP	
CHECKED BY: MM	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609 Phone (919) 783-9214 • Fax (919) 783-9266 License No. C-764	

UTILITY CONSTRUCTION

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07:55:00 2023 05 15 16:05 NCDOT W-560IEY Water Wastewater-W-560IEY_ut-sew_UC05.pfl.dgn