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09_08/99

TIP PROJECT: B-4598

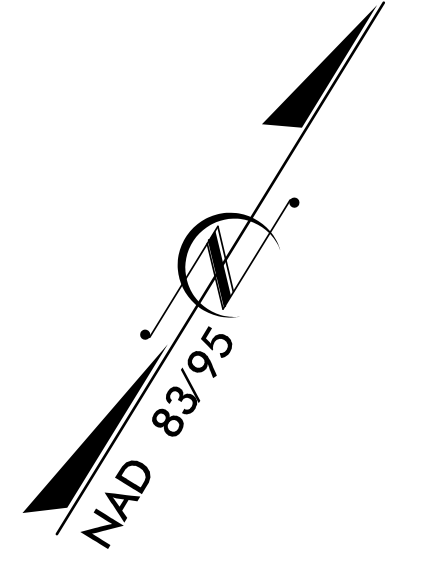
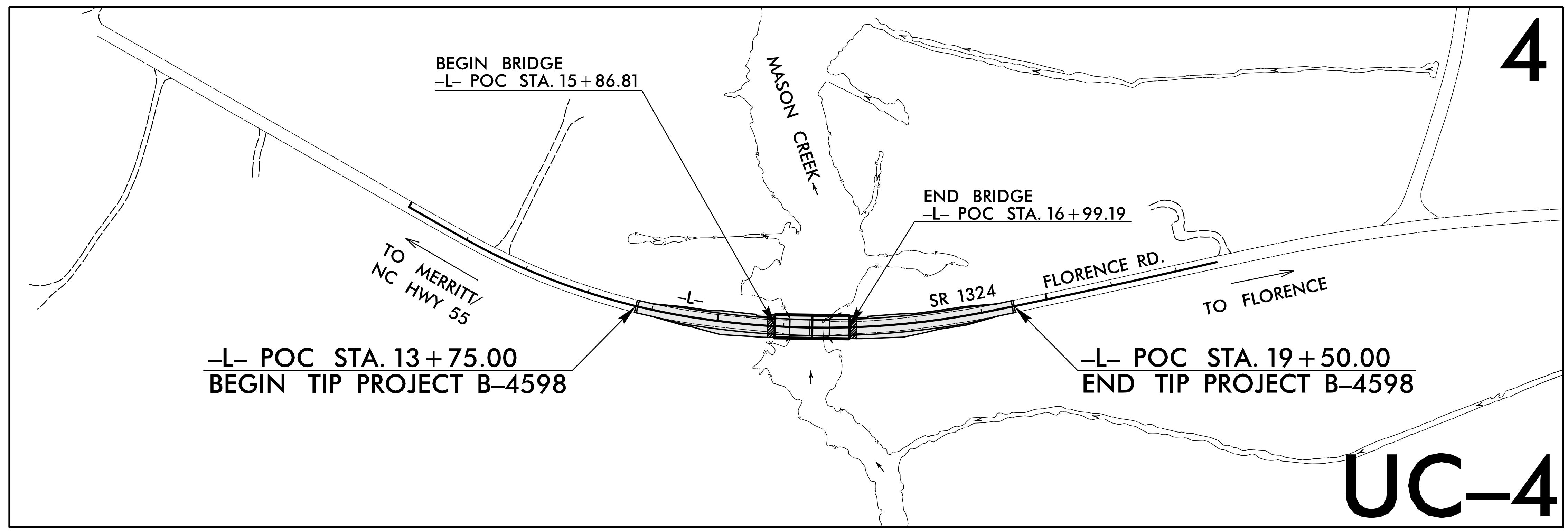
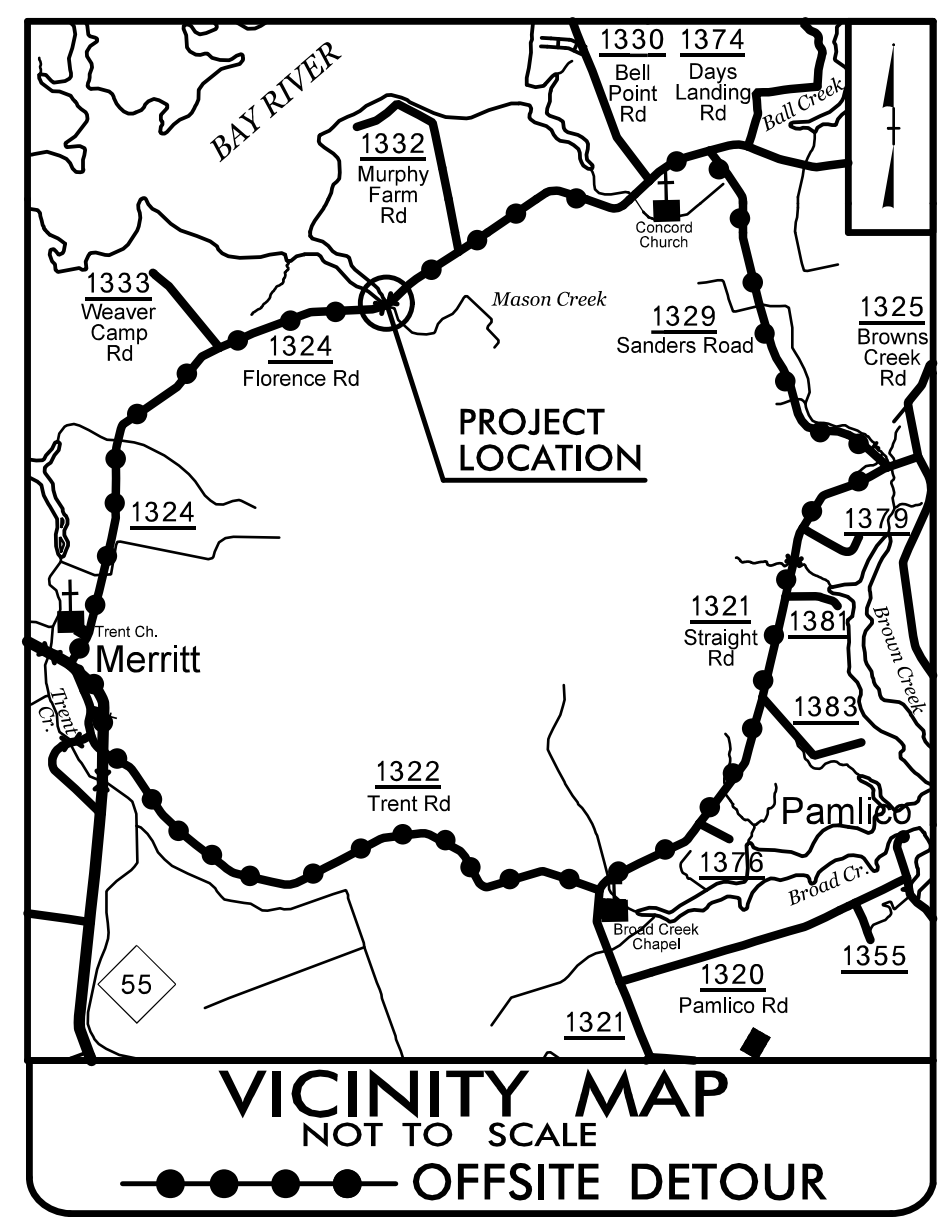
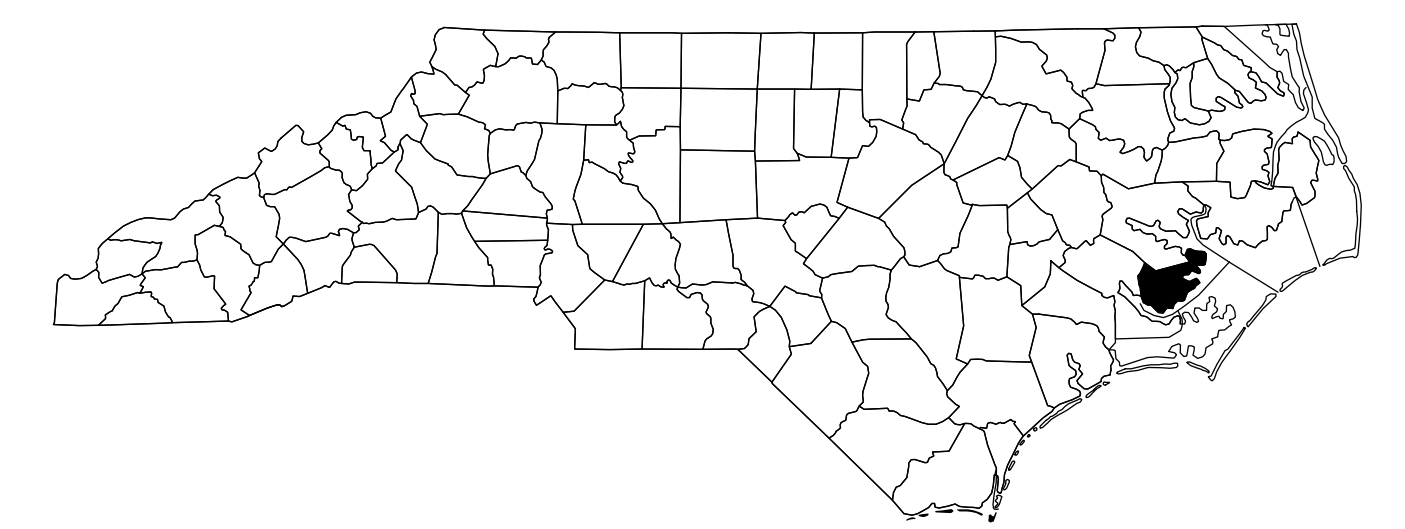
T.I.P. NO.	SHEET NO.
B-4598	UC-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

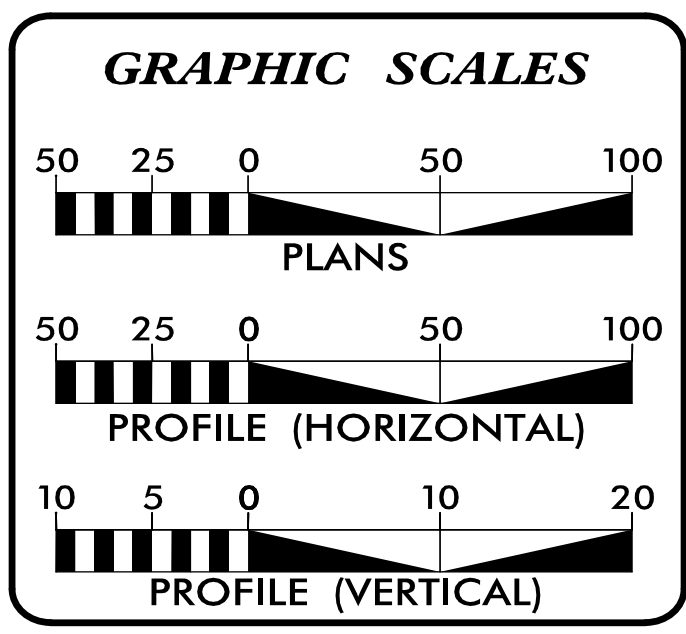
**UTILITY CONSTRUCTION PLANS
PAMLICO COUNTY**

LOCATION: REPLACE BRIDGE 16 OVER MASON CREEK ON SR 1324 (FLORENCE RD.)

TYPE OF WORK: WATERLINE RELOCATION



DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



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

WATER AND SEWER OWNERS ON PROJECT

(A) WATER: PAMLICO COUNTY WATER SYSTEM

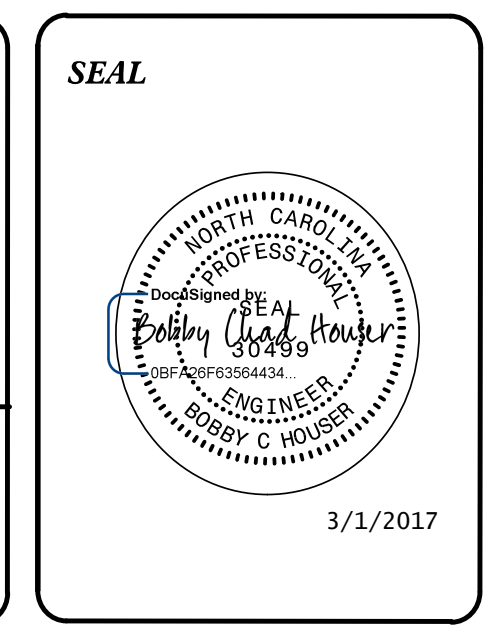
PREPARED IN THE OFFICE OF

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150

PH (704) 476-0003
CORP. LICENSE NO.: C-0275

CONSULTANT CONTACT #1
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CONSULTANT CONTACT #2
JIMMY TERRY, PE PROJECT MANAGER



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
NABIL HAMDAN UTILITIES ENGINEER
AMY DUPREE UTILITIES AREA COORDINATOR
DAYTON MARTIN UTILITIES COORDINATOR

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$ DGN \$\$\$\$\$\$ USERNAME \$\$\$\$\$\$

UTILITY DETAILS

PROJECT REFERENCE NO.	SHEET NO.
B-4598	UC-3A
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: BCH	
APPROVED BY: BH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

TABLE OF EMBEDMENT DEPTHS BELOW PIPE		
D	MIN SOIL	MIN ROCK
27" & SMALLER	6"	6"
30" TO 60"	6"	9"
66" & LARGER	6"	12"

NOTES:

- GRANULAR EMBEDMENT MATERIAL SHALL BE CRUSHED ROCK, PEA GRAVEL, COARSE AGGREGATE SIZE NUMBER 57. EMBEDMENT MATERIAL SHALL BE PLACED IN LAYERS NOT MORE THAN 6" DEEP AND COMPACTED AS SPECIFIED.
- HAND PLACED EMBEDMENT SHALL BE COMPACTED FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES.
- EMBEDMENT ABOVE THE TOP OF THE PIPE SHALL BE AN UNCOMPACTED LAYER FOR ALL INSTALLATIONS.
- REFER TO SPECIFICATIONS FOR GEOTECHNICAL FABRIC OR SPECIAL EMBEDMENT REQUIREMENTS FOR TRENCHES IN FINE SOILS EXTENDING BELOW GROUNDWATER LEVEL.
- TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE, SOIL CONDITIONS, OR PRESENCE OF SHEETING LEFT IN PLACE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

LEGEND

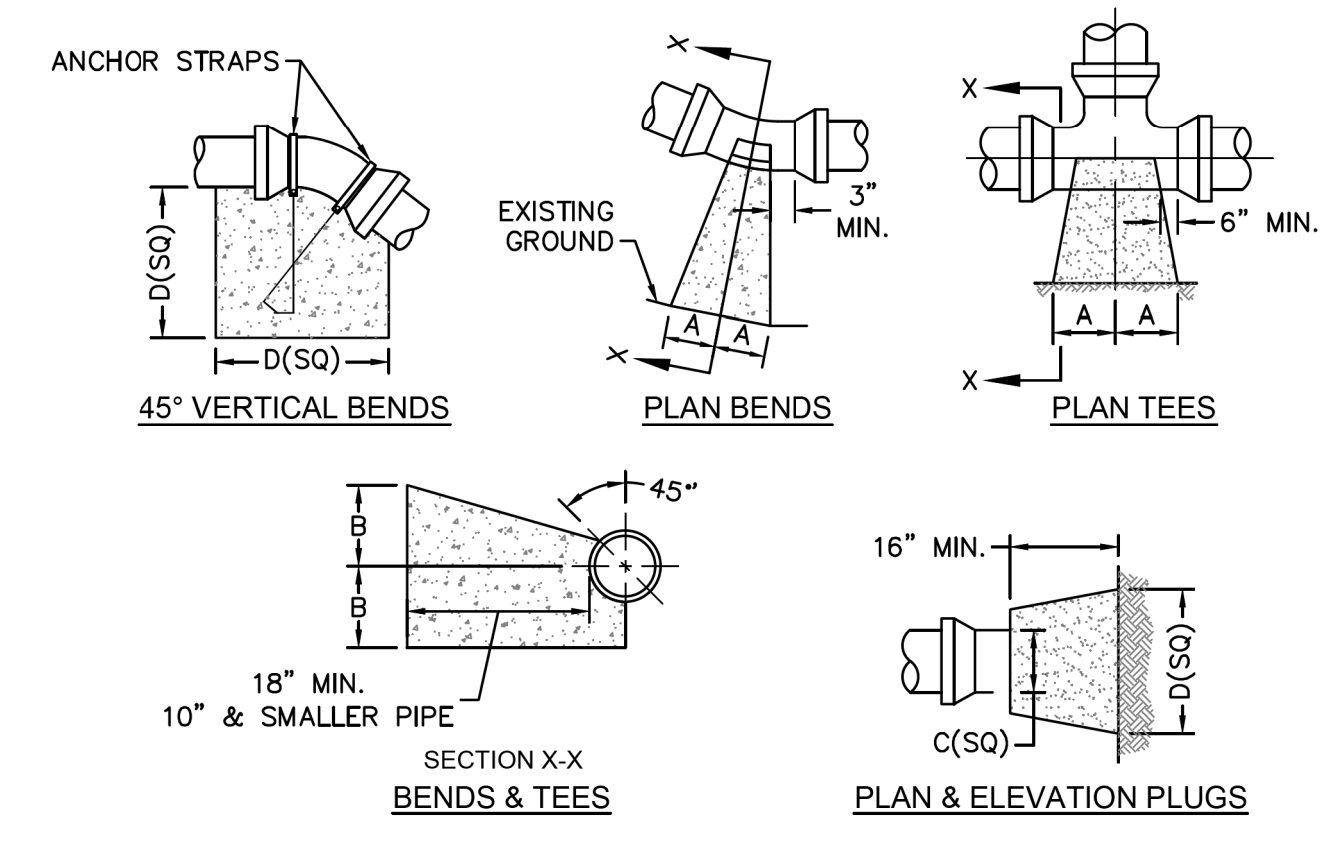
- Hand Placed Embedment
- Granular Embedment
- Concrete

REVISIONS

NO.	DATE	BY	CHKD

EMBEDMENTS FOR MAINS

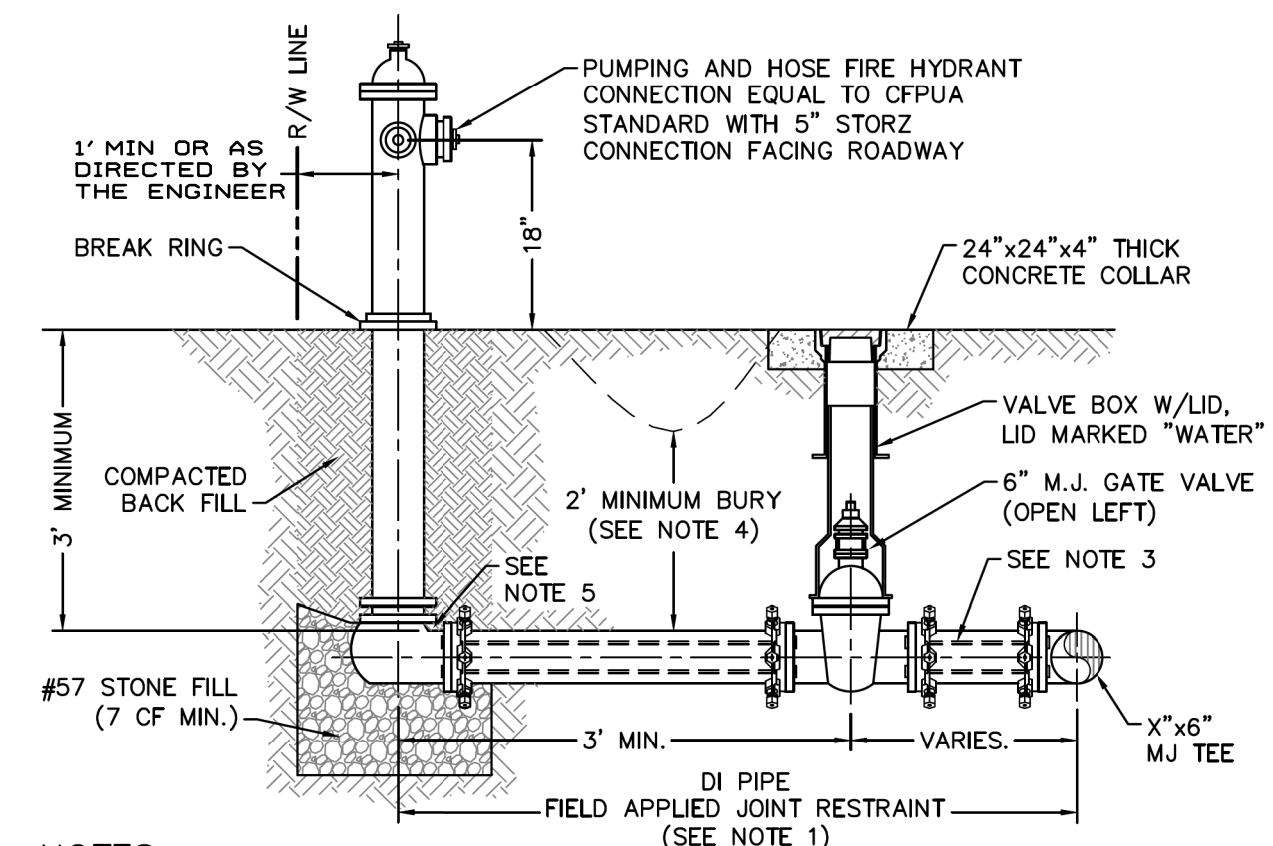
FILE NAME: WS 1.0 DATE: 8/06



SIZE	90 BENDS		45 BENDS		22-1/2 BENDS		TEES/PLUGS		45 VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	9"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

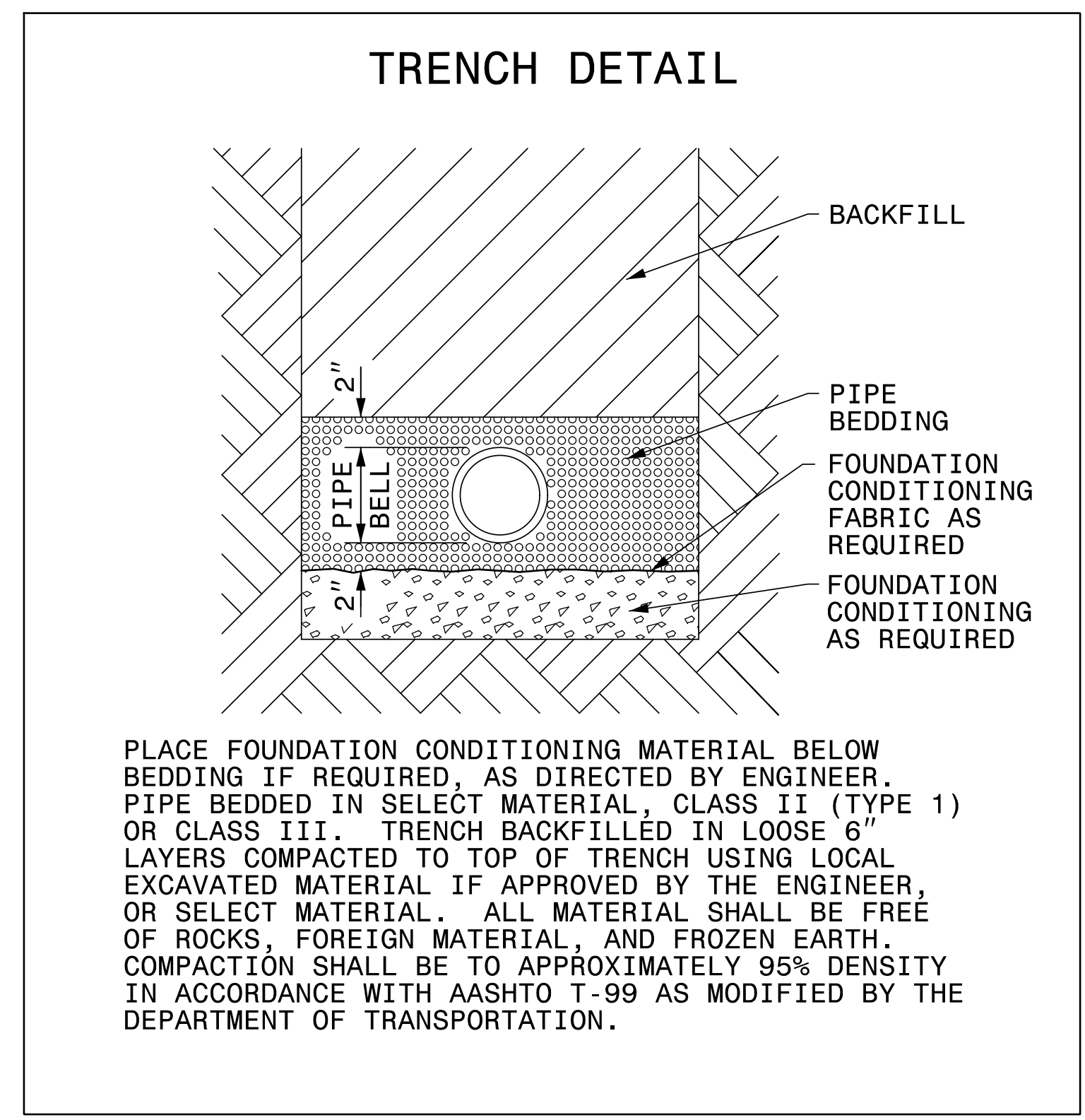
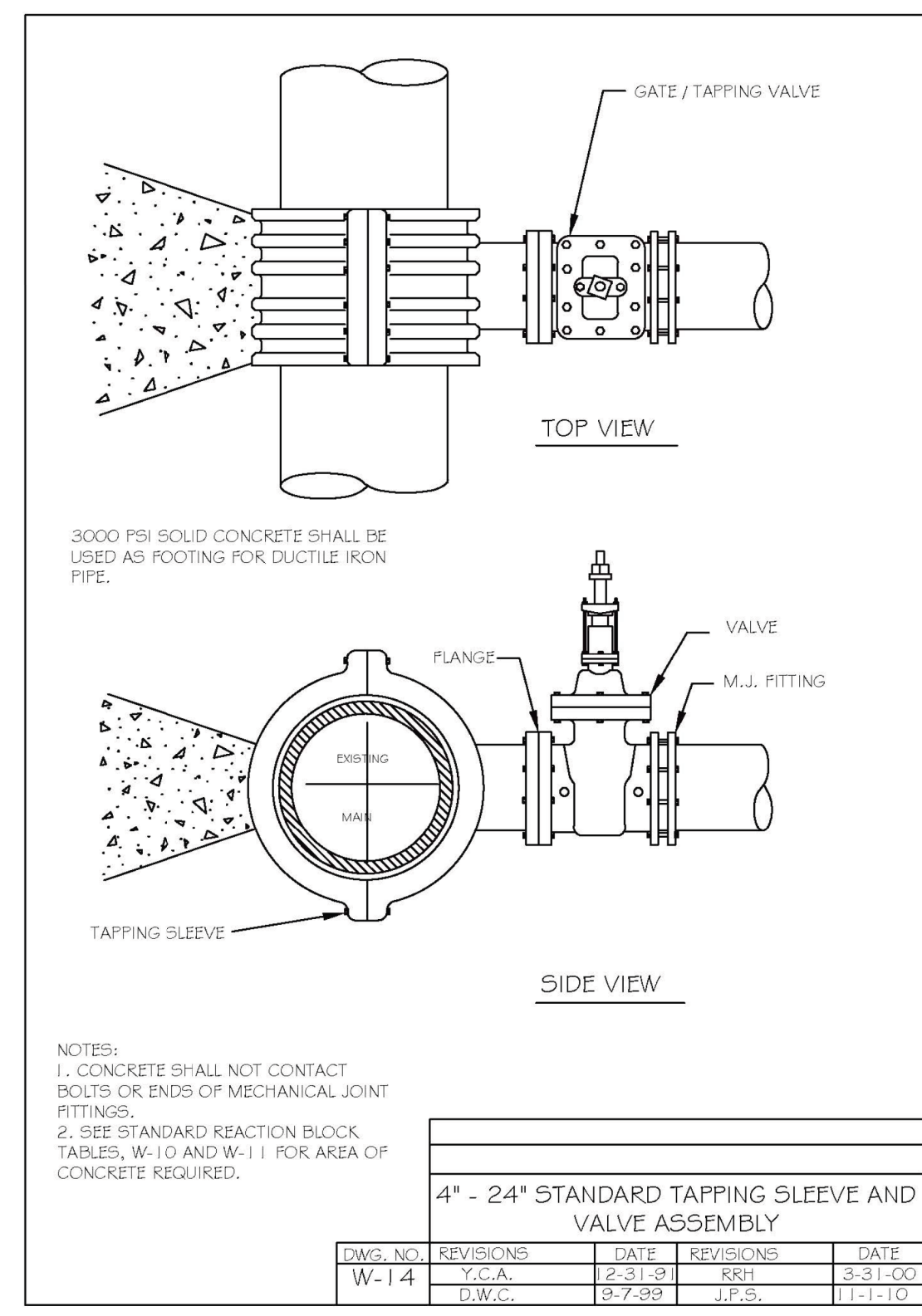
- NOTES:
- BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
 - ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
 - USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.

WD-4 THRUST BLOCK DETAIL
NOT TO SCALE



- NOTES:
- JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI PIPE AS MANUFACTURED BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
 - WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
 - CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH COR-BLUE MJ T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.
 - HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
 - WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

WD-10 FIRE HYDRANT ASSEMBLY
NOT TO SCALE

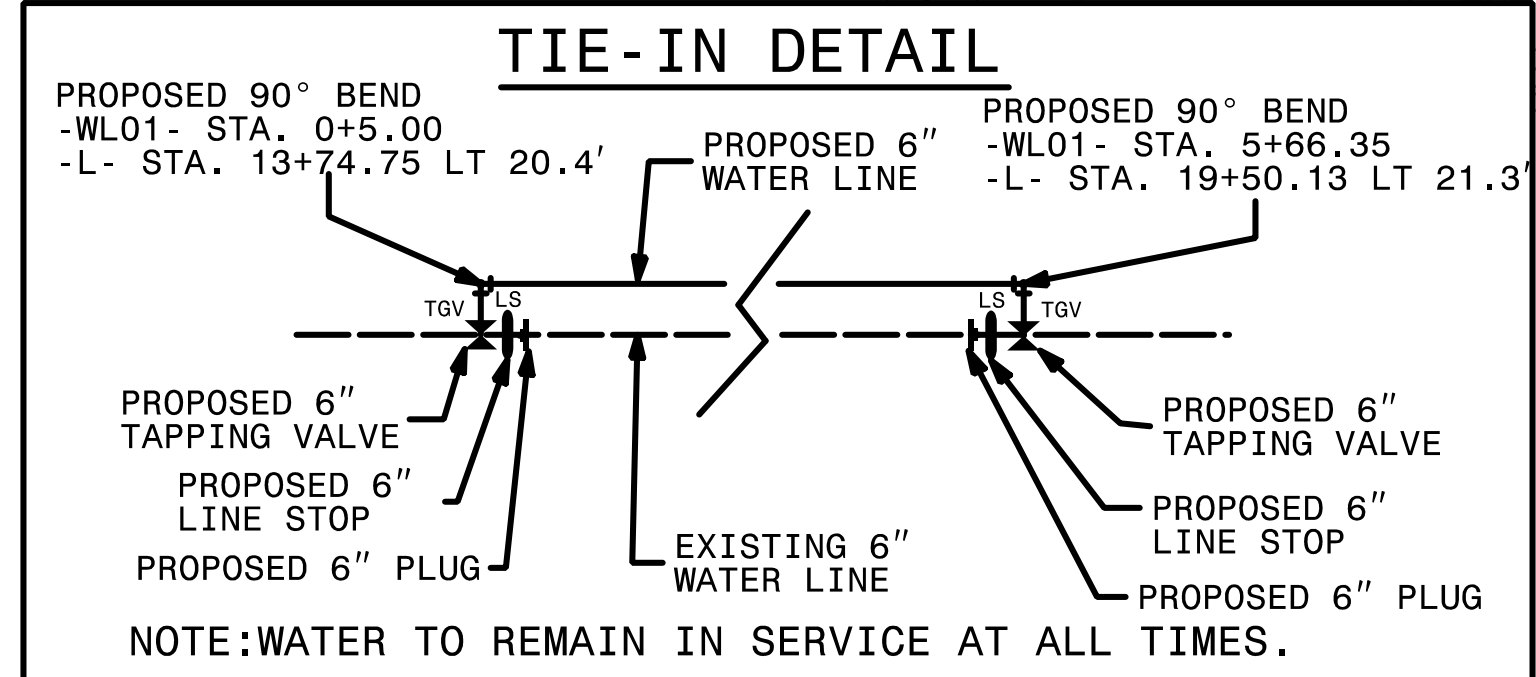
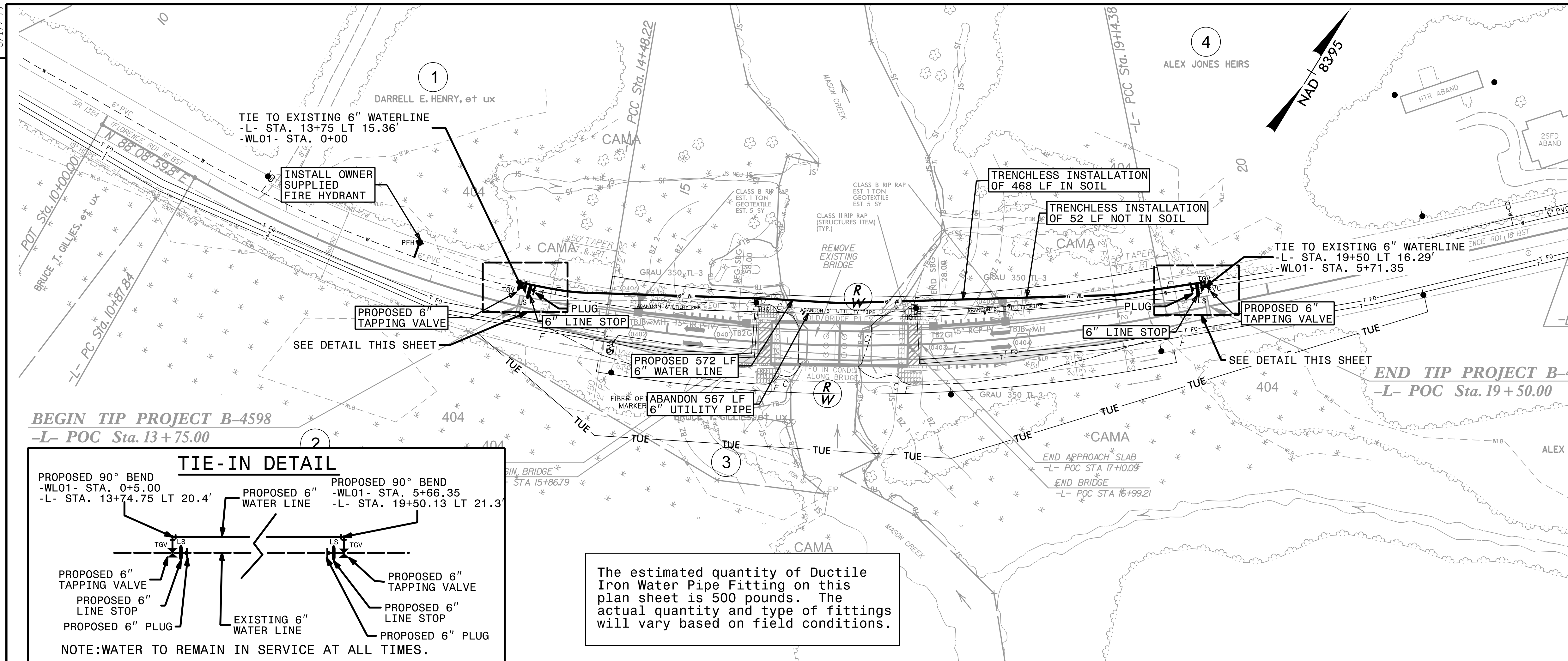


MAXIMUM TRENCH WIDTH AT TOP OF PIPE	
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28
6	30
8	32
10	34
12	36
14	38
16	40
18	42
20	44
24	48
30	54
36	60
42	66
48	72
54	78

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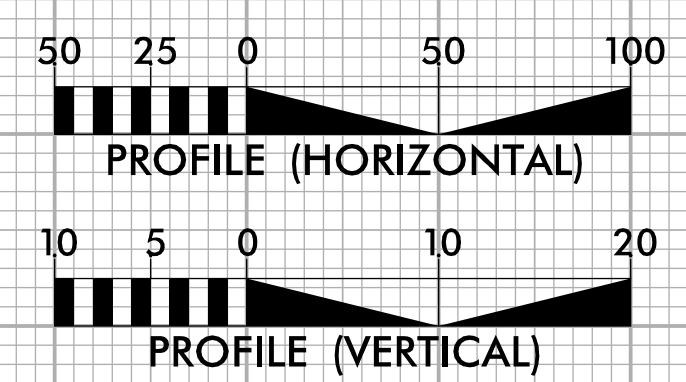
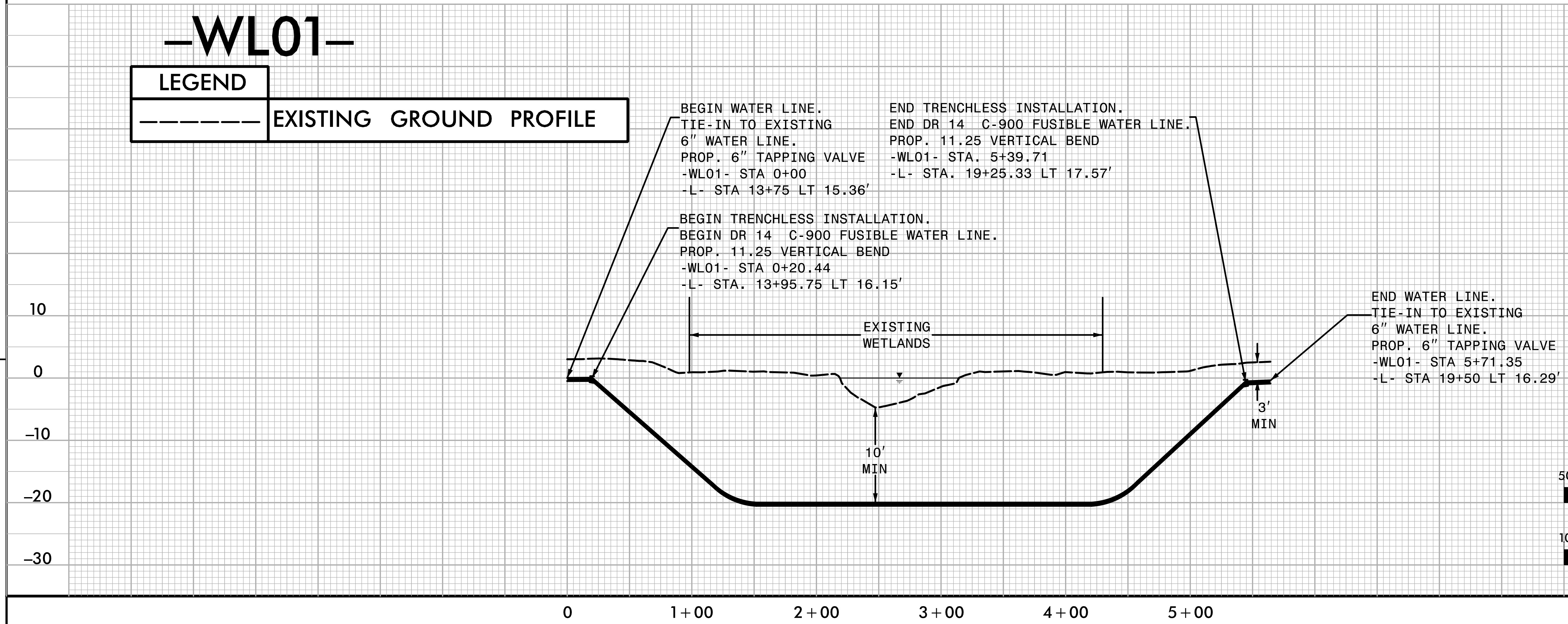
PROJECT REFERENCE NO. B-4598	SHEET NO. UC-4
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: BCH	
APPROVED BY: BH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY 3/1/2017 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-9003 CORP. LICENSE NO.: C-0275	

UTILITY CONSTRUCTION



The estimated quantity of Ductile Iron Water Pipe Fitting on this plan sheet is 500 pounds. The actual quantity and type of fittings will vary based on field conditions.

-WL01-



REVISIONS