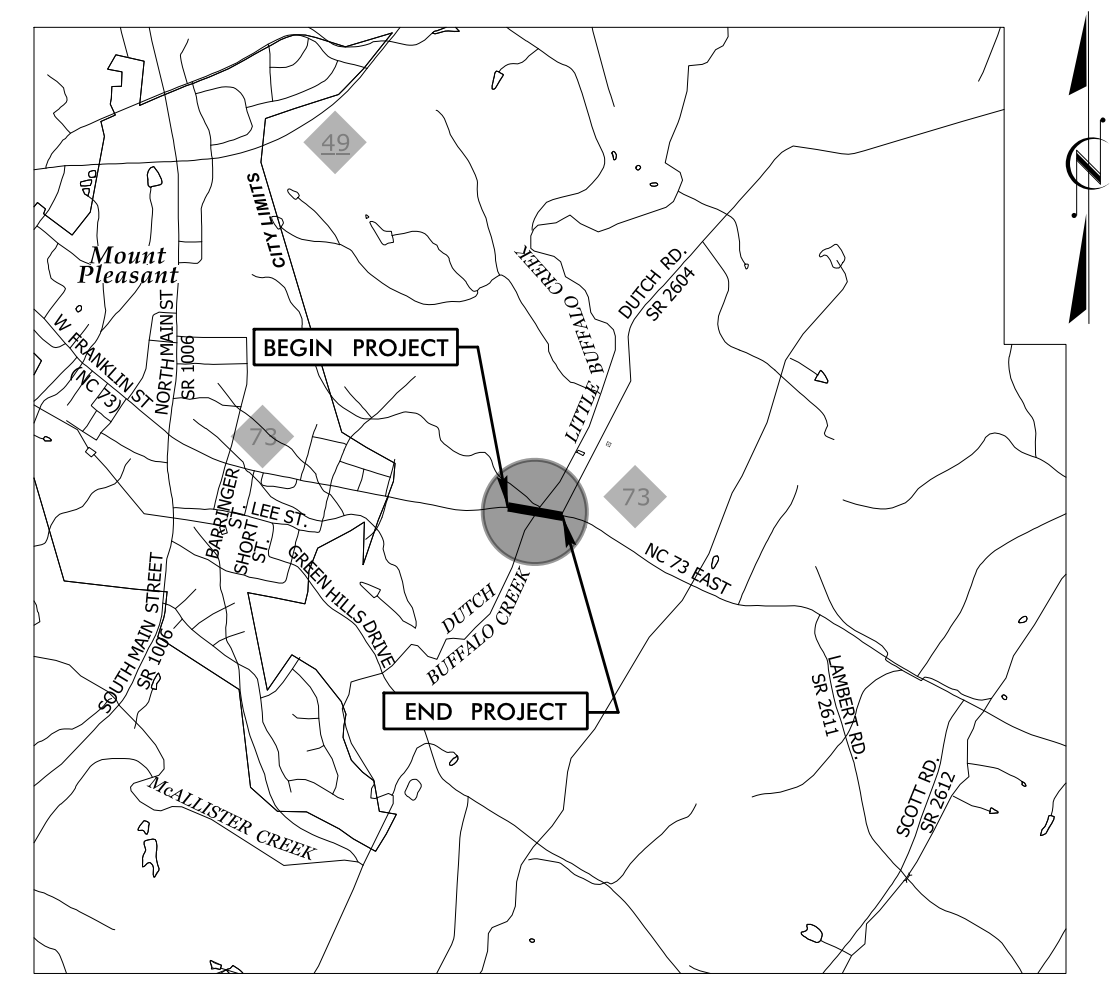


TIP PROJECT: B-5813

See Sheet UC-1 For Index of Sheets
See Sheet UC-2 For Standard Symbol Sheet

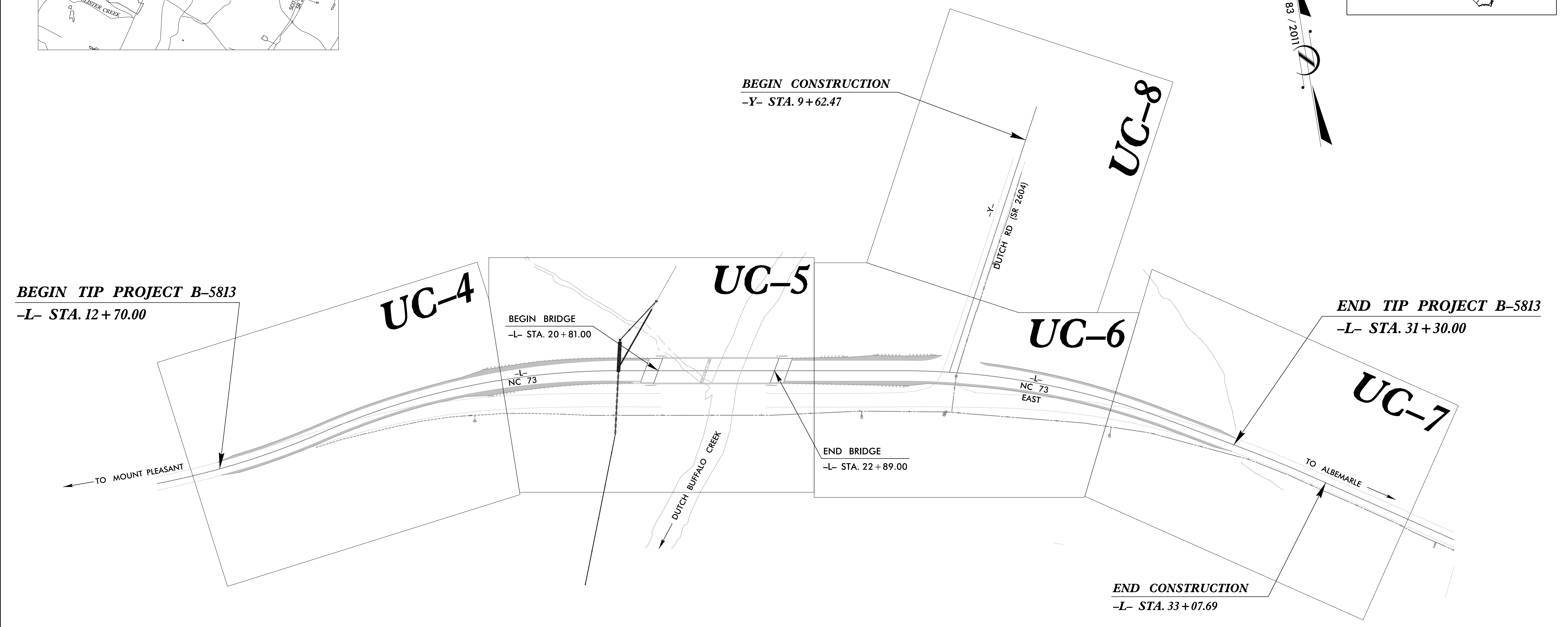
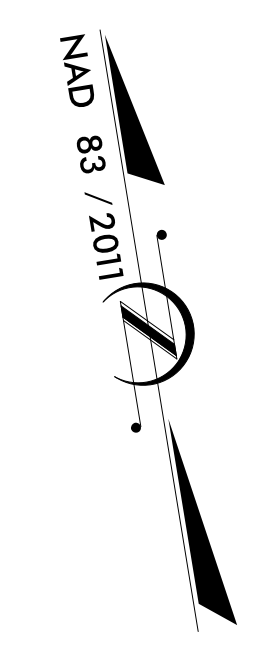
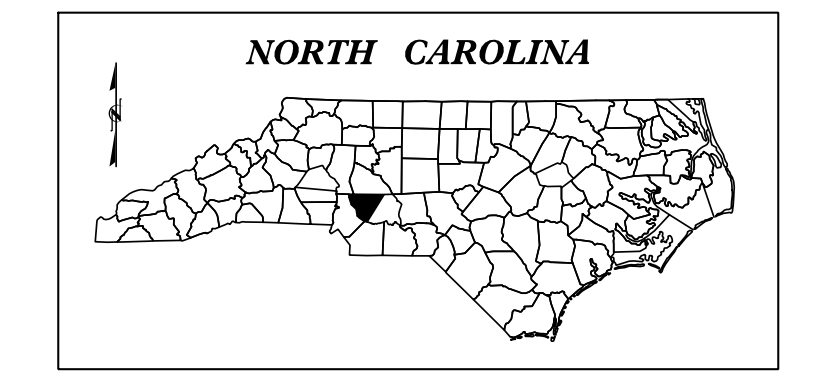


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

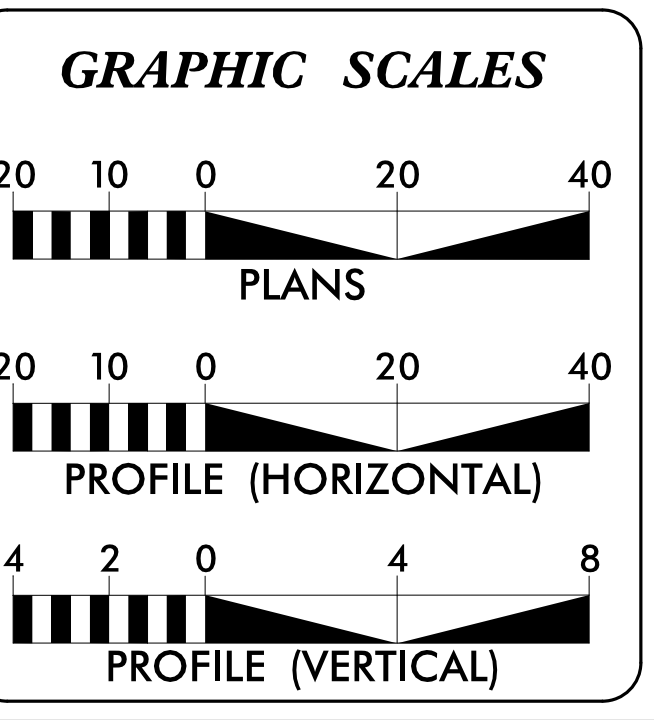
CABARRUS COUNTY

**LOCATION: BRIDGE #132 OVER DUTCH BUFFALO CREEK
ON NC 73**
TYPE OF WORK: WATER LINE AND SANITARY SEWER RELOCATION

T.I.P. NO.	SHEET NO.
B-5813	UC-1



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INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3C	DETAILS
UC-4 THRU UC-8	UTILITY CONSTRUCTION SHEETS
UC-9	PROFILE SHEET

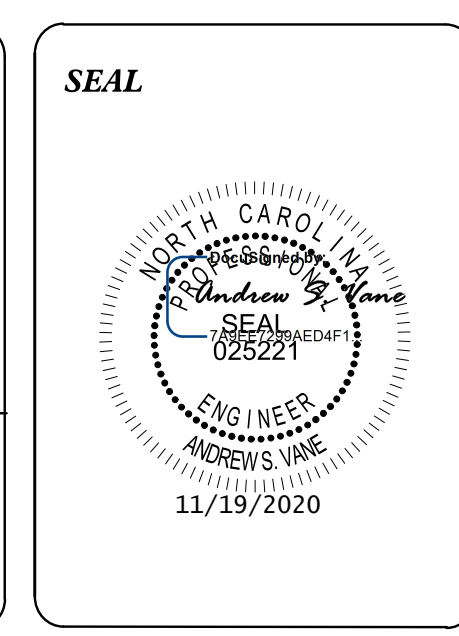
WATER AND SEWER OWNERS ON PROJECT

(A) WATER - TOWN OF MOUNT PLEASANT
(B) SANITARY SEWER - WATER AND SEWER AUTHORITY OF CABARRUS COUNTY

PREPARED IN THE OFFICE OF

STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991
(704) 372-1885 FAX: (704) 372-3393

JASON GRISCOM, PE CONSULTANT CONTACT #1
ANDREW VANE, PE CONSULTANT CONTACT #2
CONSULTANT CONTACT #3



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

MICHAEL BRIGHT UTILITIES REGIONAL ENGINEER
DONALD HAMPTON UTILITIES ENGINEER
AMY DUPREE YORK UTILITIES AREA COORDINATOR
STEVE TREXLER UTILITIES COORDINATOR

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

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 STV Engineers, Inc.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
B-5813	UC-2

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	12" WL
11¼ Degree Bend	+†
22½ Degree Bend	+X
45 Degree Bend	+X
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 MISCELLANEOUS 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	●	*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	A/G Gas
Power Manhole	⊙	*Underground Water Line	_____
Telephone Manhole	⊙	Aboveground Water Line	A/G Water
Sanitary Sewer Manhole	⊙	*Underground Gravity Sanitary Sewer Line	SS
Hand Hole for Cable	⊠	Aboveground Gravity Sanitary Sewer Line	A/G Sanitary Sewer
Power Transformer	⊠	*Underground SS Forced Main Line	_____
Telephone Pedestal	TEL PED	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)

UTILITY CONSTRUCTION

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PROJECT REFERENCE NO. B-5813	SHEET NO. UC-3
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

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 2018.

2. THE EXISTING UTILITIES BELONG TO THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY AND THE TOWN OF MOUNT PLEASANT.

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.

4. WATER MAINS OR SEWER LINES CROSSING UNDER STORM DRAIN PIPE SHALL HAVE 24" MIN VERTICAL CLEARANCE UNLESS SPECIFIED ON THE PLAN/PROFILE.

5. ALL SEWER MATERIALS, EQUIPMENT, LABOR, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY'S STANDARD SPECIFICATIONS.

6. PROVIDE APPROPRIATELY SIZED FULLY FUNCTIONAL REDUNDANT BYPASS PUMPS (I.E., PUMPS, SUCTION AND DISCHARGE PIPING) AND TEST PRIOR TO PUTTING IN TO OPERATION. COORDINATE WITH WSACC TO DETERMINE ANTICIPATED FLOW RATES.

7. PROVIDE AUTO-START SYSTEM, WITH HIGH-LEVEL ALARM AND TELEMETRY DIAL-OUT CAPABILITIES (TO NOTIFY CONTRACTOR OF ANY POTENTIAL PROBLEMS WITH THE PUMPS 24/7). CONTRACTOR MUST RESPOND TO ALARMS IMMEDIATELY.

8. CONTRACTOR IS RESPONSIBLE FOR ANY COSTS (CLEAN-UP, FINES, ADDITIONAL EQUIPMENT RENTAL, ETC.) AS ASSOCIATED WITH ANY OPERATIONAL PROBLEMS AND/OR SPILLS WITH THE BYPASS PUMPING OPERATION.

9. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT AND WSACC IN THE EVENT A SURCHARGE OCCURS THAT RESULTS IN AN OVERFLOW OF SEWAGE.

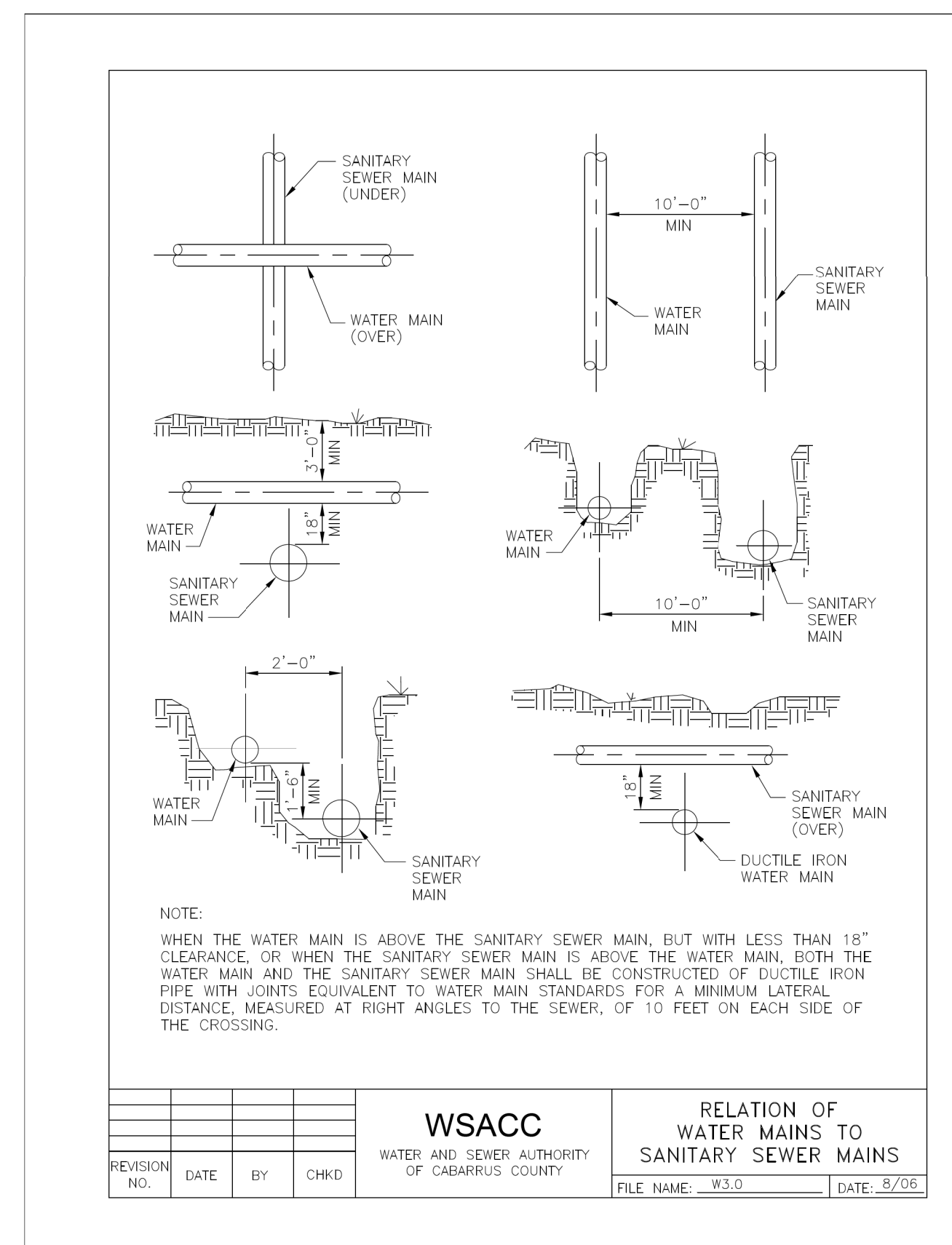
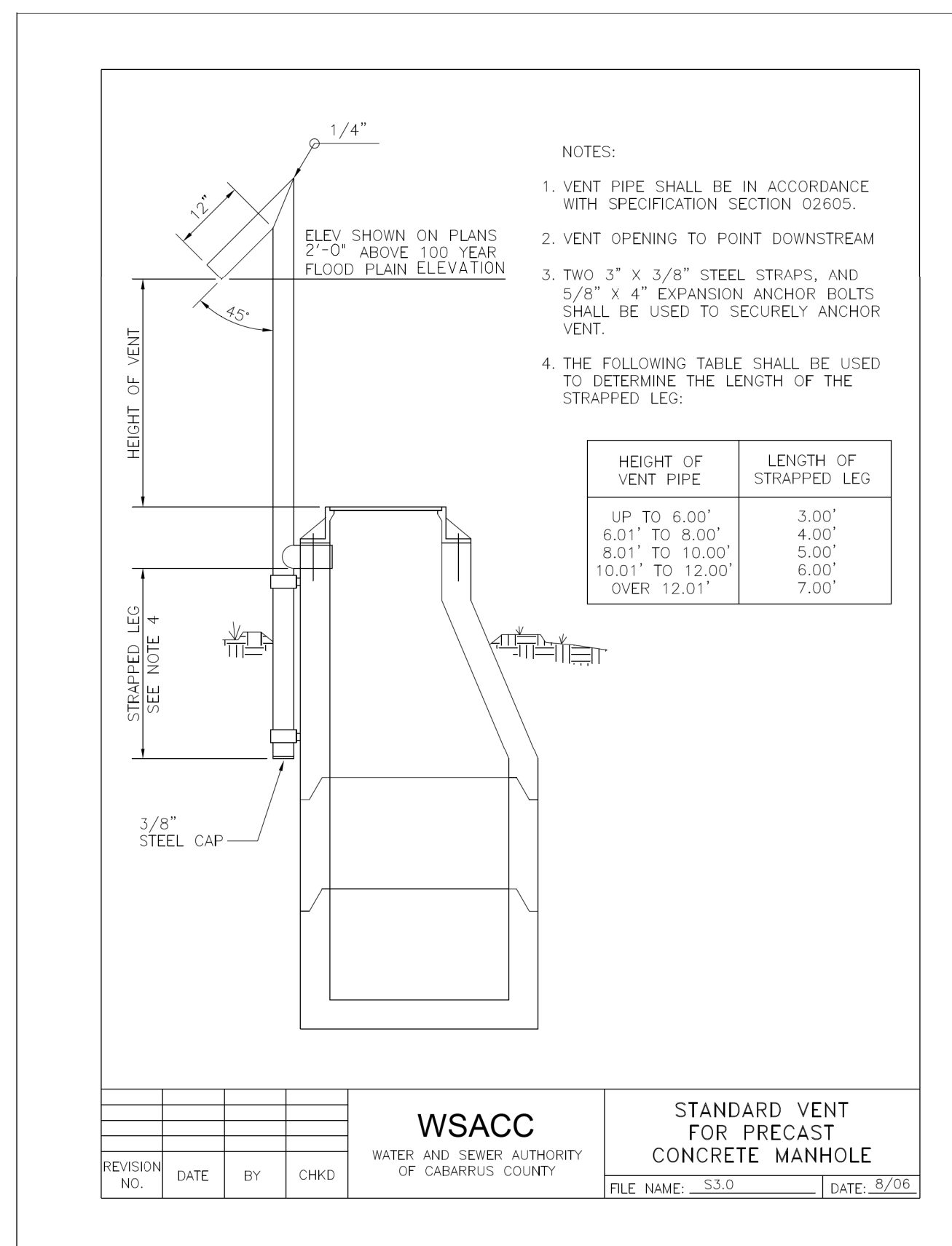
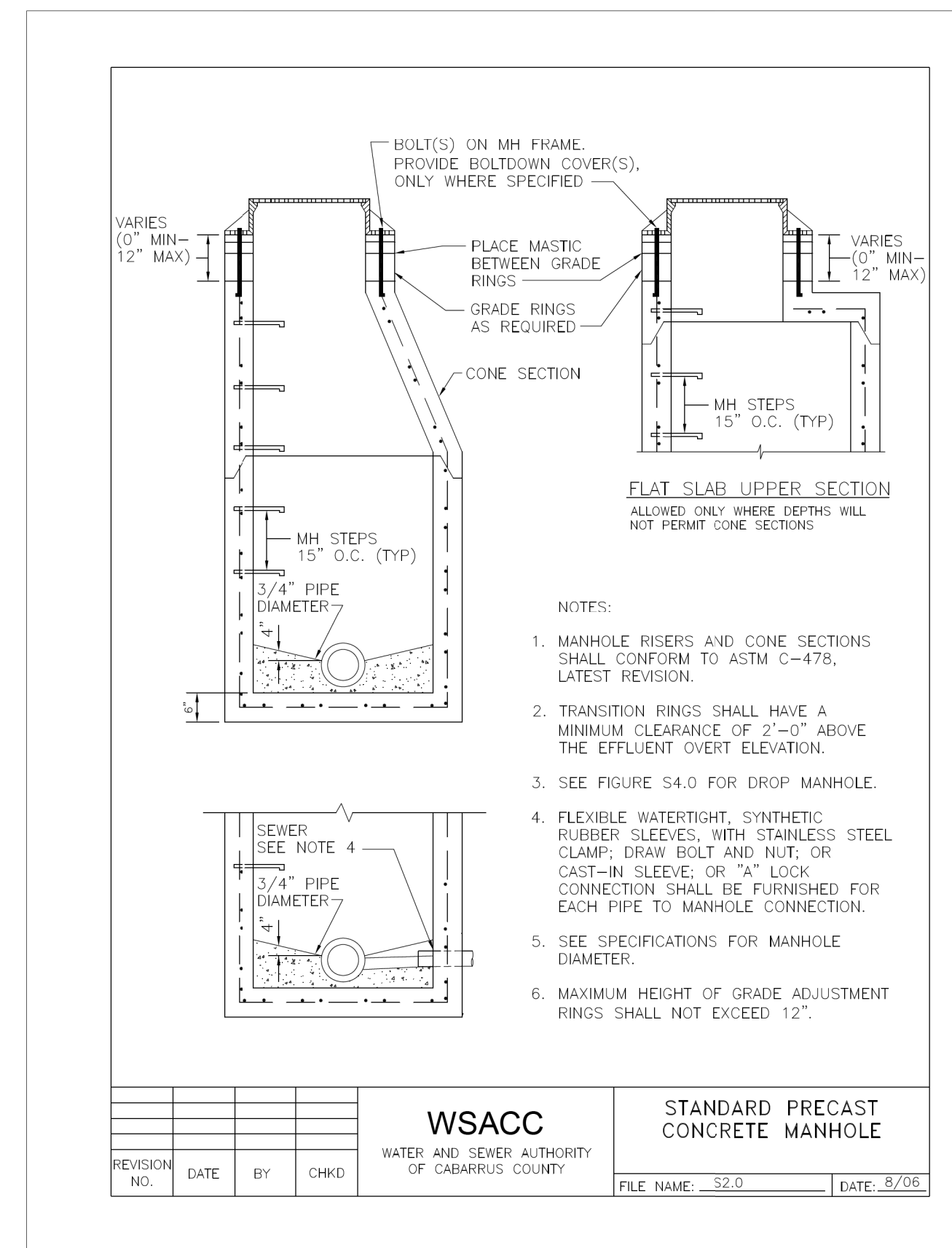
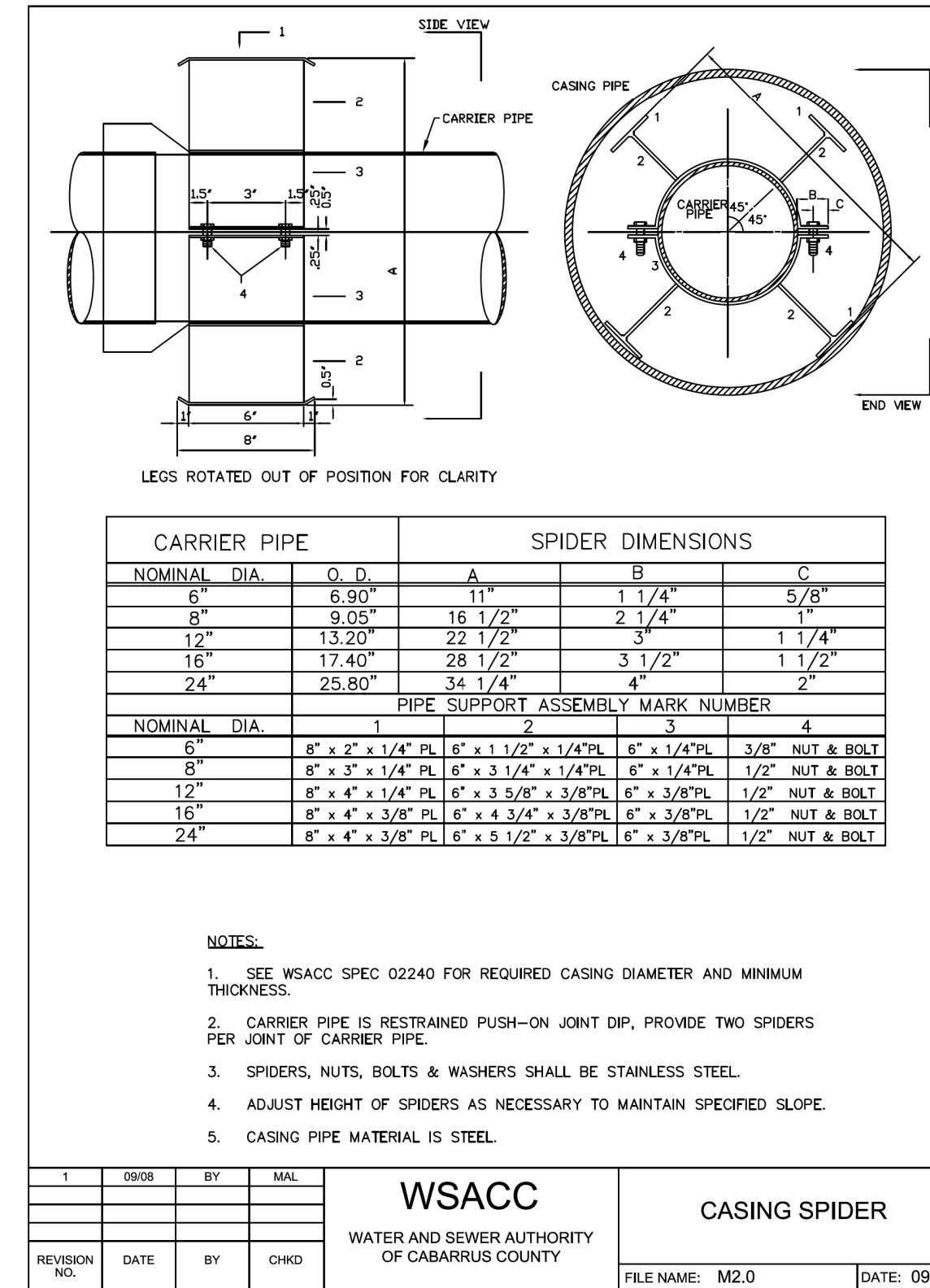
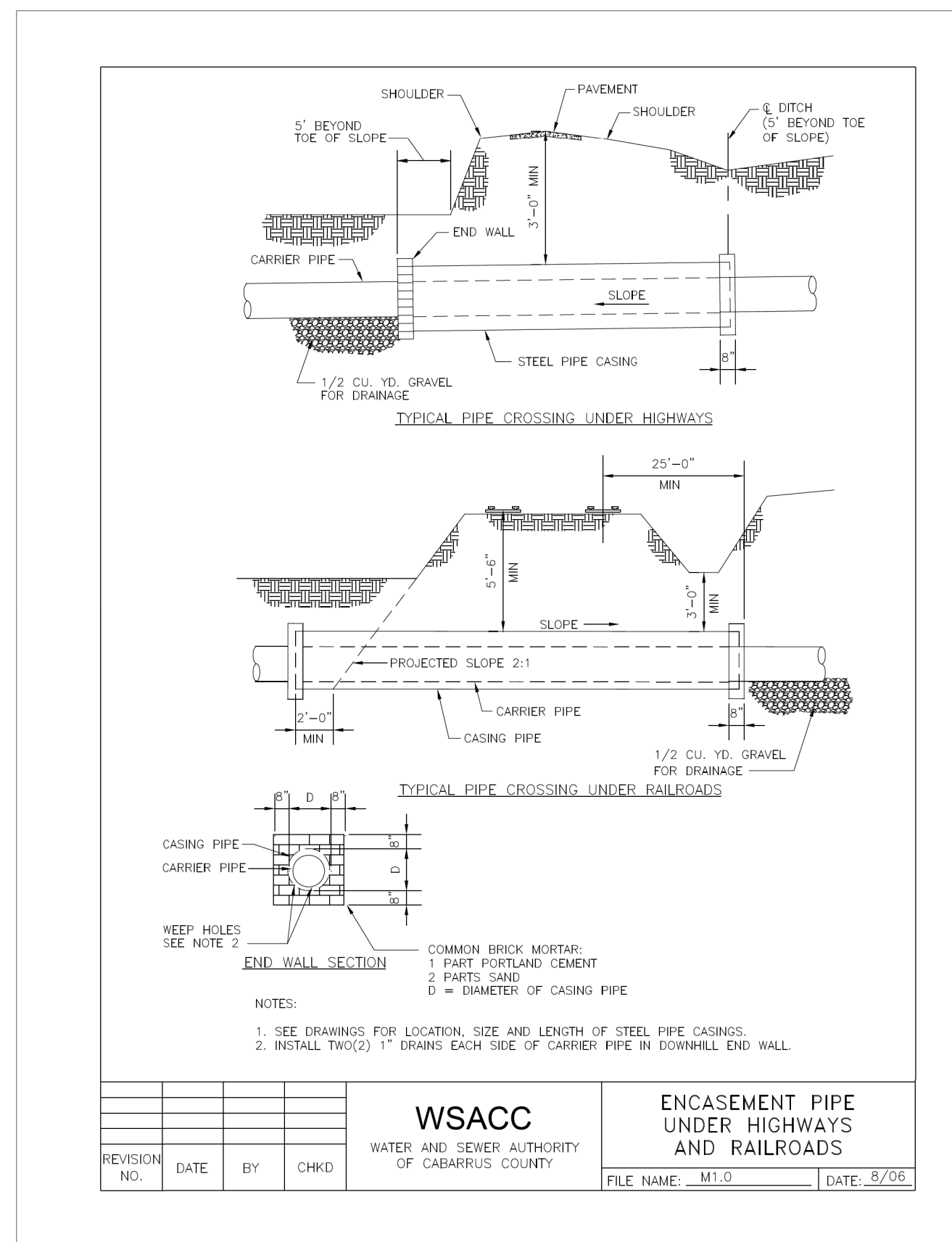
PROJECT SPECIFIC NOTES:


1. SEE DRAWING UC-3C FOR AERIAL SEWER SUPPORT DETAILS.

2. PROVIDE TEMPORARY COFFERDAM OR SHEETING AS NECESSARY TO INSTALL AERIAL SEWER PIPE AND AERIAL SEWER SUPPORTS.

3. ENGINEER SHALL INSPECT ALL MATERIALS ONSITE PRIOR TO INSTALLATION. DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

PROJECT TYPICAL DETAILS





STV 100 Years

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 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

PROJECT REFERENCE NO.
B-5813

SHEET NO.
UC-3B

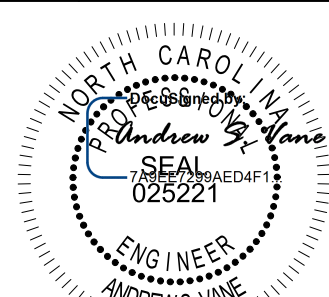
DESIGNED BY: **VHM**

DRAWN BY: **VHM**

CHECKED BY: **ASV**

APPROVED BY: **XMD**

REVISED:



ANDREW G. VANE
 ENGINEER
 11/19/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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

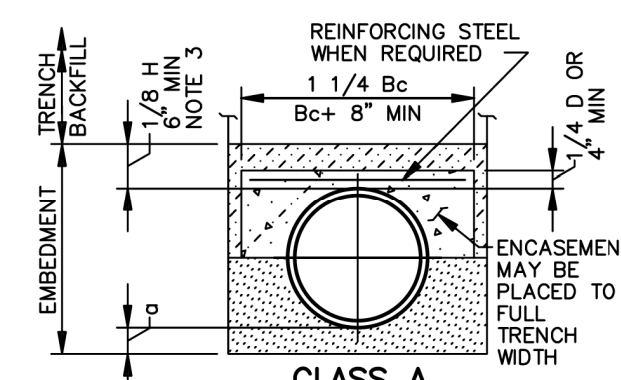
UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

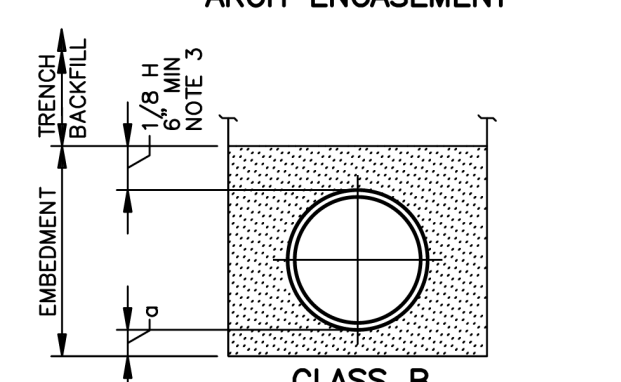
TABLE OF EMBEDMENT DEPTHS BELOW PIPE			
D	a	a	a
	MIN SOIL	MIN ROCK	
27" & SMALLER	6"	6"	
30" TO 60"	6"	9"	
66" & LARGER	6"	12"	

NOTES:

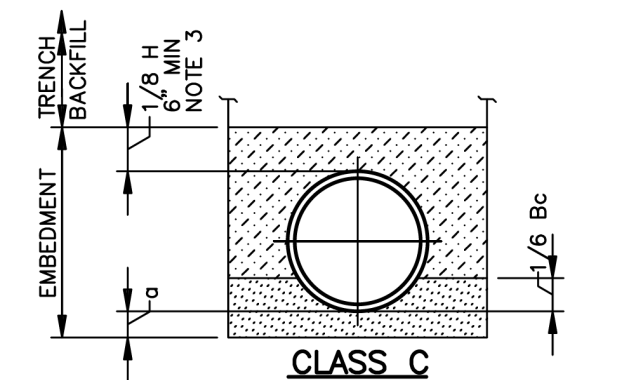
- GRANULAR EMBEDMENT MATERIAL SHALL BE CRUSHED ROCK, PEA GRAVEL COARSE AGGREGATE SIZE NUMBER 57. EMBEDMENT MATERIAL SHALL BE PLACED IN LAYERS NOT MORE THAN 6" DEEP AND COMPACTED AS SPECIFIED.
- HAND PLACED EMBEDMENT SHALL BE COMPACTED FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES.
- EMBEDMENT ABOVE 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.



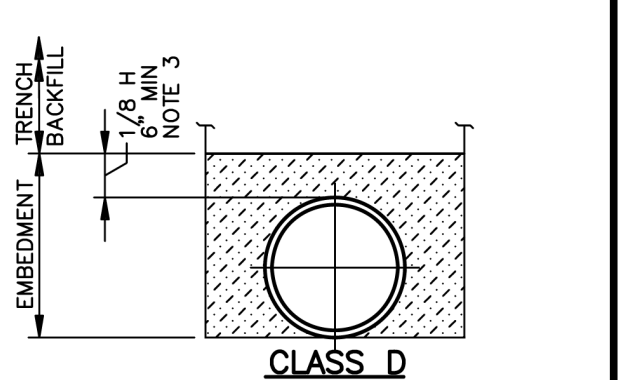
CLASS A
ARCH ENCASEMENT



CLASS B



CLASS C



CLASS D

LEGEND

Bc: OUTSIDE DIAMETER OF PIPE COVER ABOVE TOP OF PIPE

D: NOMINAL PIPE SIZE

a: EMBEDMENT BELOW PIPE (SEE TABLE)

HAND PLACED EMBEDMENT

GRANULAR EMBEDMENT

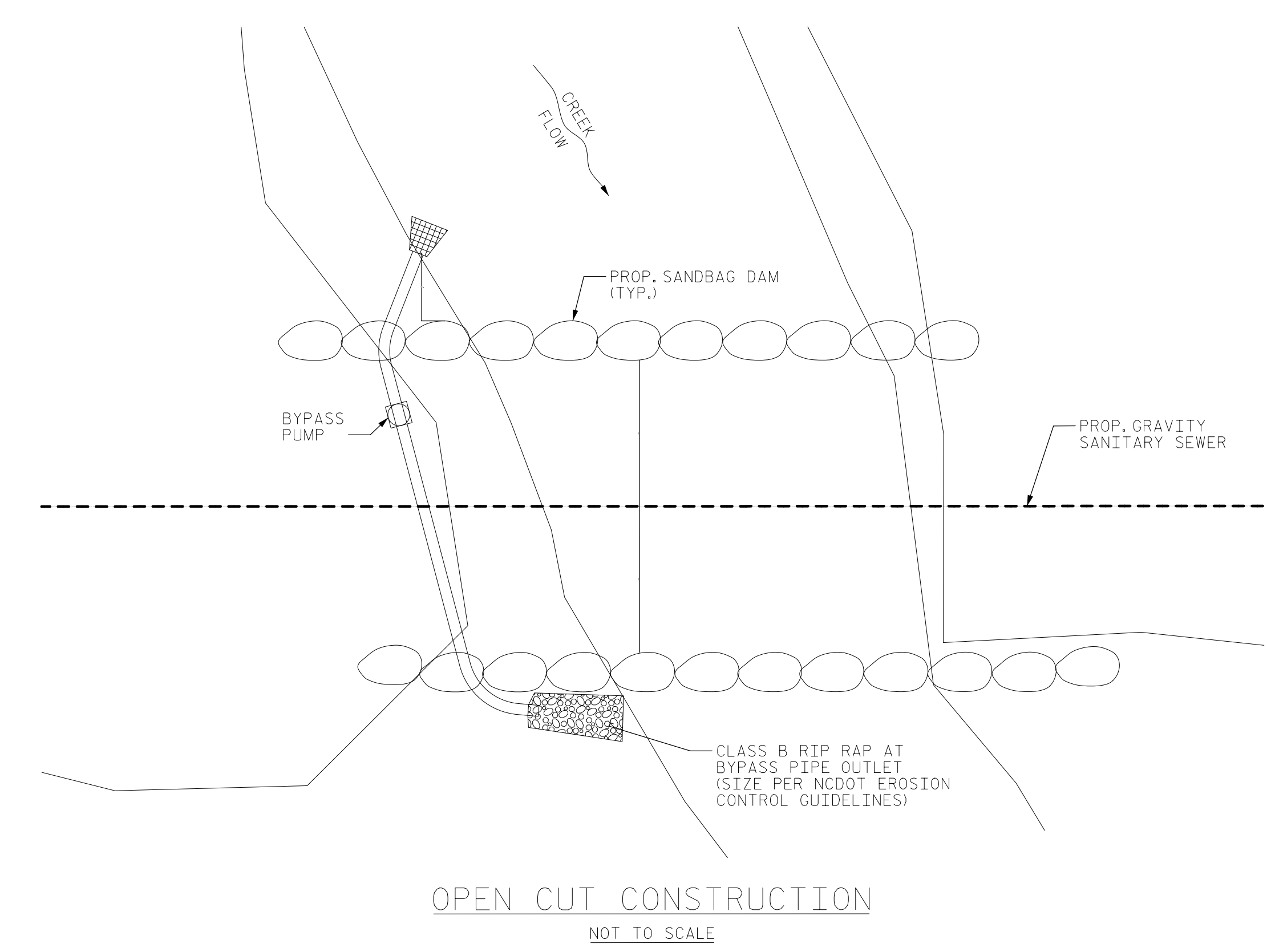
CONCRETE

WSACC

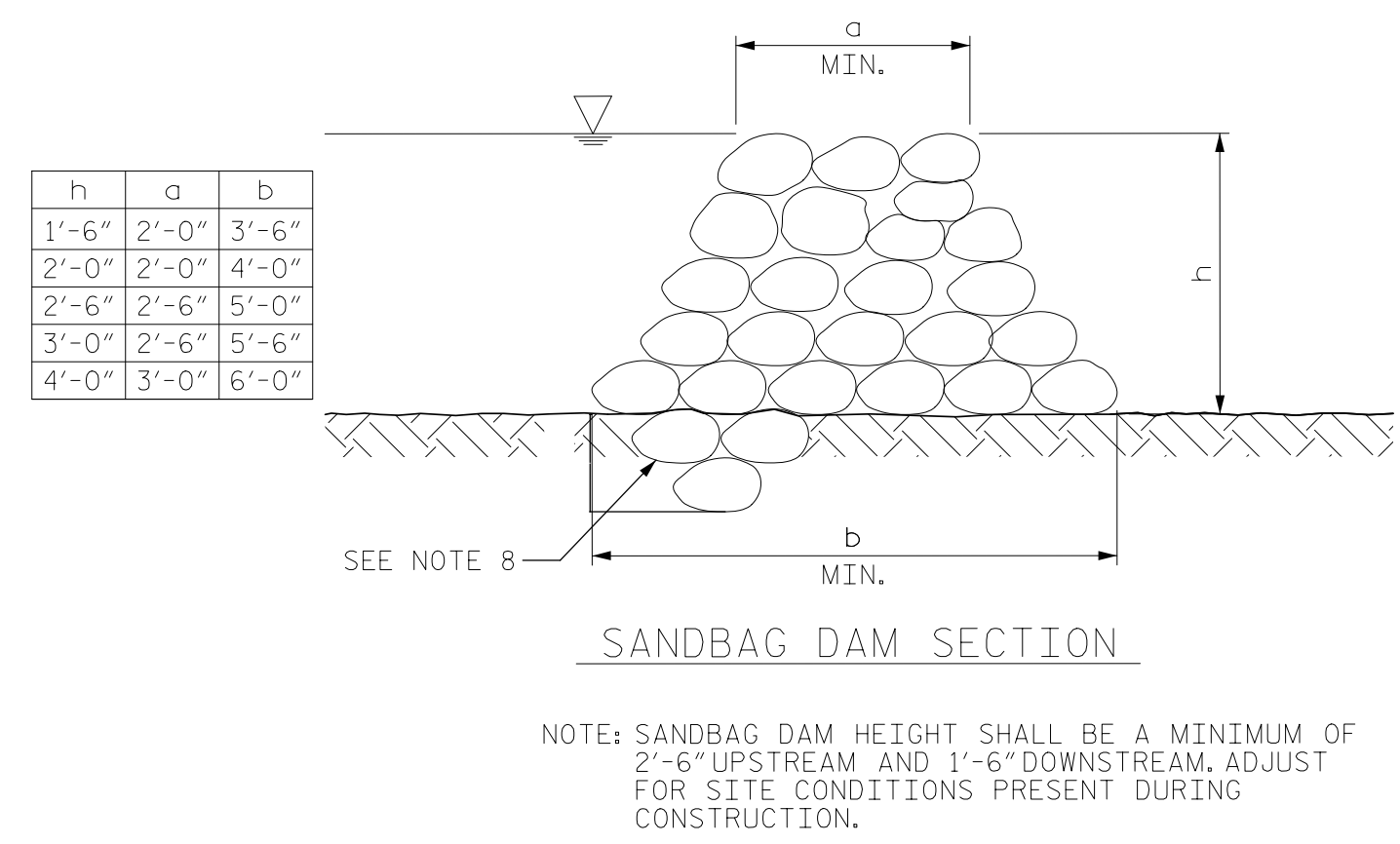
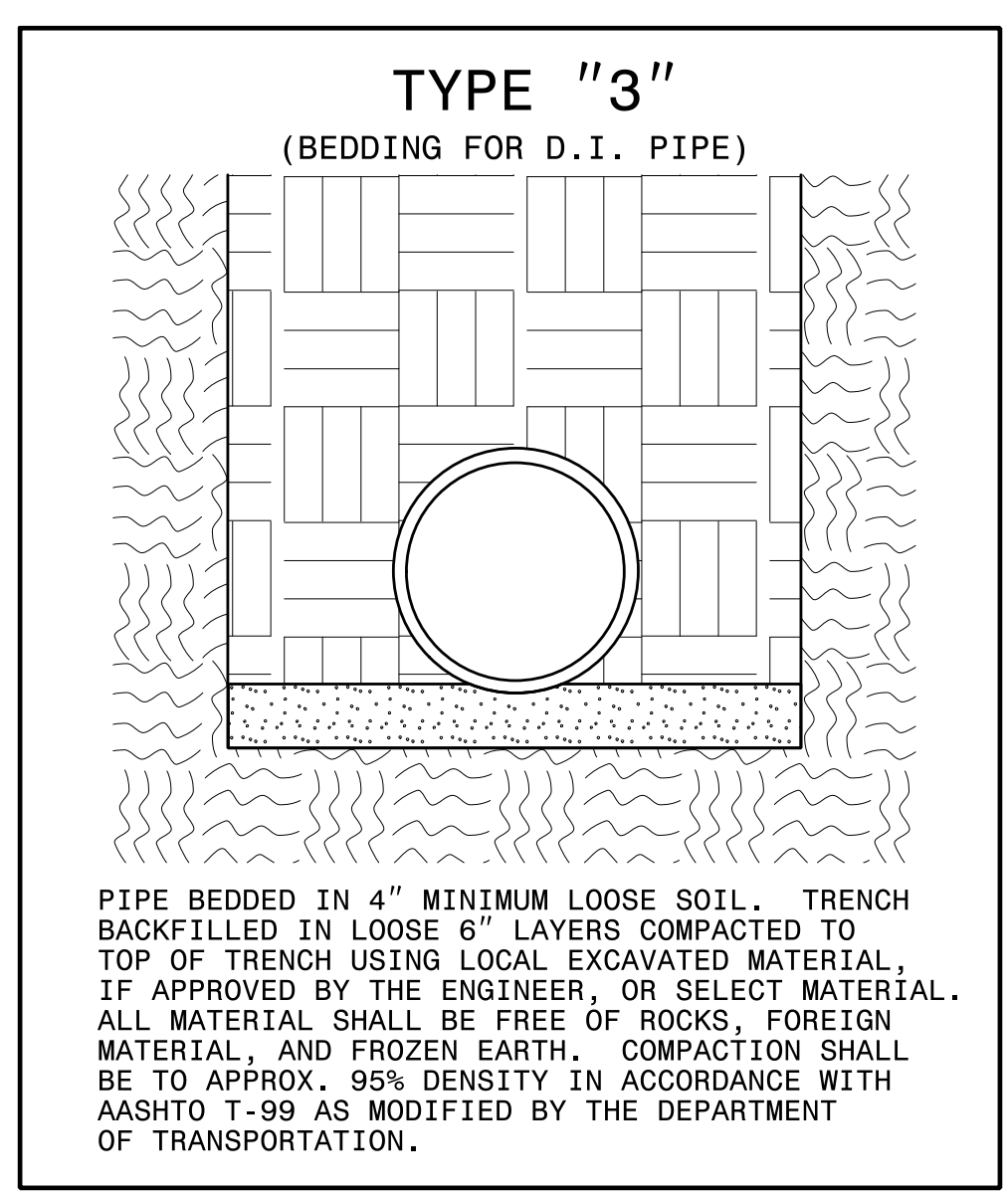
WATER AND SEWER AUTHORITY
OF CABARRUS COUNTY

EMBEDMENTS FOR MAINS

FILE NAME: WS_1.0 DATE: 8/06



- NOTES:**
- BASE FLOW OF STREAM WILL BE PUMPED AROUND WORK AREA AND RELEASED BACK INTO EXISTING STREAM BELOW THE WORK AREA ONTO CLASS B RIP RAP PAD. BYPASS PUMP SHALL UTILIZE A FLOATING INTAKE.
 - PUMP AROUND SYSTEM SHALL BE SUFFICIENT SIZE TO CARRY BASE STREAM FLOW.
 - SANDBAG MATERIAL: SANDBAG SHALL BE WOVEN POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE FABRIC, MINIMUM UNIT WEIGHT FOUR OUNCES PER SQUARE YARD, Mullen BURST STRENGTH EXCEEDING 300 PSI IN CONFORMANCE WITH THE REQUIREMENTS IN ASTM DESIGNATION D3786, AND ULTRAVIOLET STABILITY EXCEEDING 70% IN CONFORMANCE WITH THE REQUIREMENTS IN ASTM DESIGNATION D4355. USE OF BURLAP IS NOT ACCEPTABLE.
 - SAND FOR SANDBAGS SHALL BE A MINIMUM 110LB/CU. FT MATERIAL.
 - THE CONTRACTOR SHALL TAKE WHATEVER PRECAUTIONS NECESSARY TO PROTECT THE EXISTING WATERLINE FROM LEAKS OR DAMAGE DURING THE EXCAVATION AND CONSTRUCTION OF THE PROPOSED WATERLINE.
 - IT IS THE CONTRACTORS RESPONSIBILITY TO FOLLOW ALL OSHA AND STATE SAFETY REQUIREMENTS PERTAINING TO THIS EXCAVATION.
 - ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE DEPARTMENT.
 - FOR NON-ROCK CREEK BOTTOMS, KEY SANDBAGS ON UPSTREAM SIDE 1' INTO SOIL.
 - PERFORM CROSSING DURING ANTICIPATED DRY WEATHER ONLY. INSTALL PROPOSED UTILITY IN A DRY TRENCH.

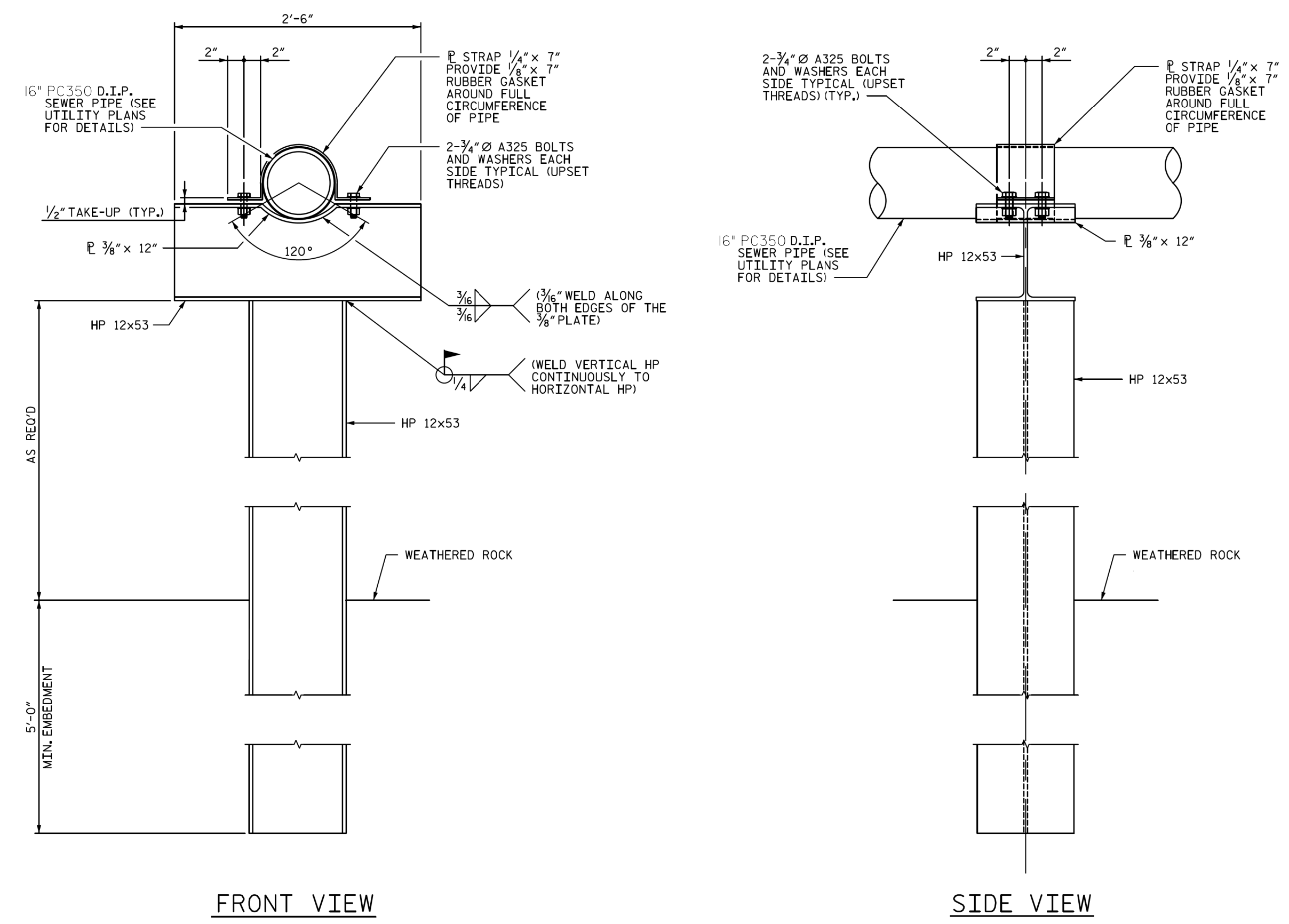


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STV Engineers, Inc.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

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PROJECT REFERENCE NO. B-5813	SHEET NO. UC-3C
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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UTILITY CONSTRUCTION



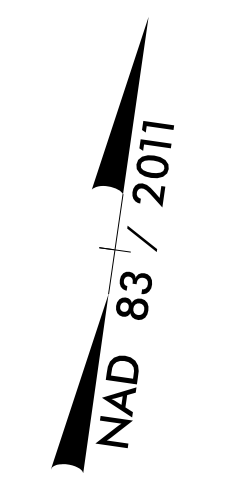
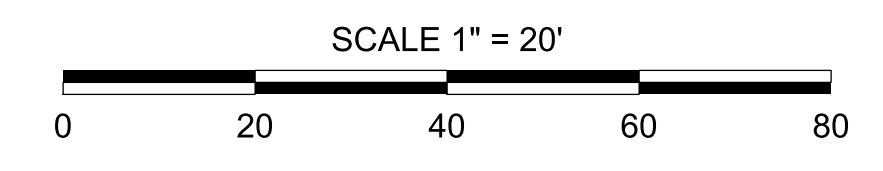
FRONT VIEW

SIDE VIEW

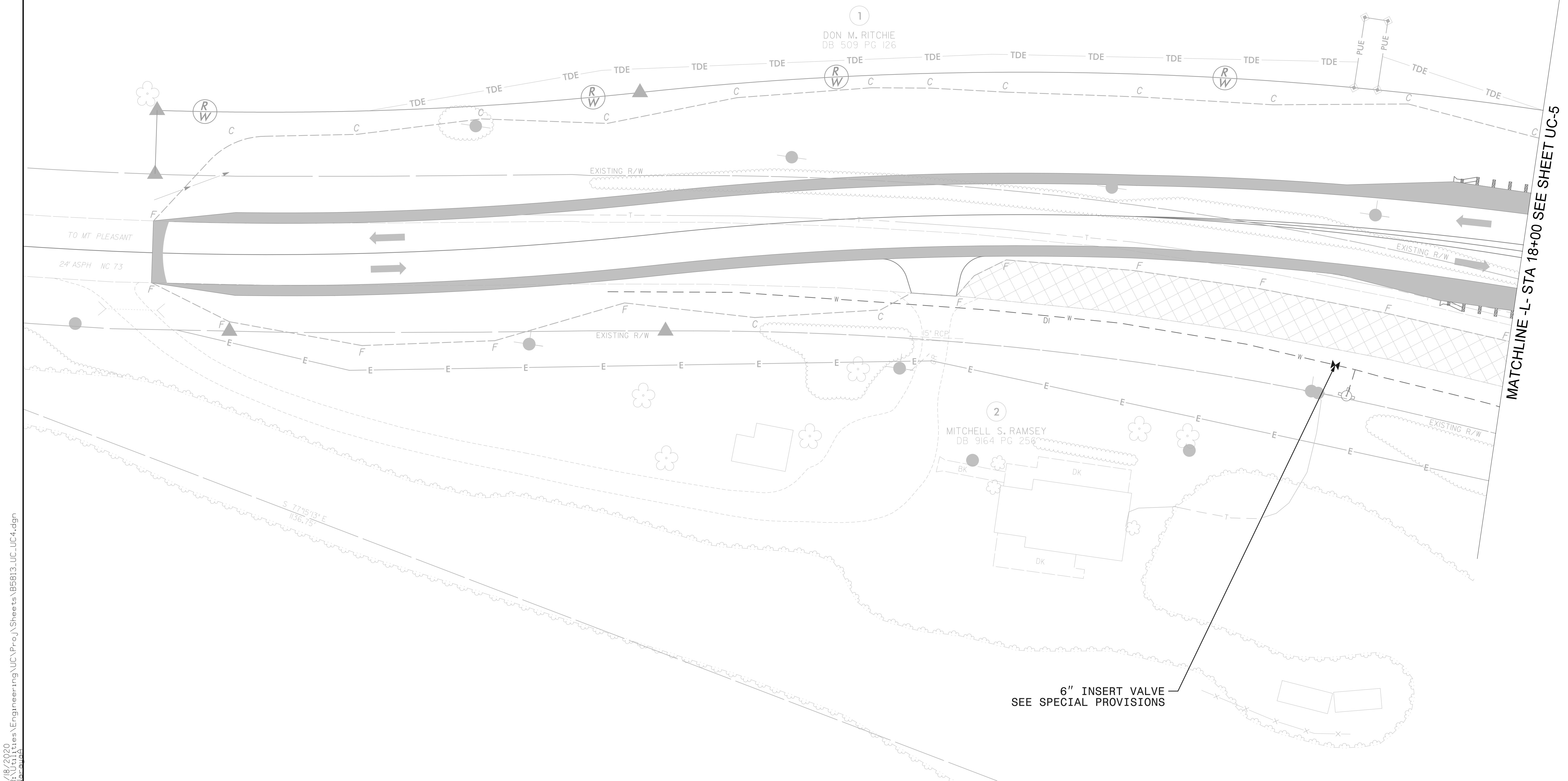
AERIAL SEWER SUPPORT

- NOTES:**
- FOR AERIAL SEWER SUPPORT LOCATIONS, SEE SHEET UC-9.
 - STEEL H-PILES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A992 GRADE 50.
 - ALL PILE LOCATIONS SHALL BE STAKED IN THE FIELD.
 - ALL WELDS SHALL BE IN ACCORDANCE WITH THE CURRENT AWS AND BE PERFORMED BY A CERTIFIED WELDER.
 - ALL STEEL MEMBERS AND STRAPS SHALL BE POWER TOOL CLEANED TO A MIN. OF SSPC-SP3 AND HOT-DIP GALVANIZED PER ASTM A123.
 - BOLTS AND WASHERS WILL BE HOT-DIP GALVANIZED PER ASTM A153. ALL WELDS SHALL BE GROUND AND COATED WITH 2 COATS OF A COLD APPLIED GALVANIZING PAINT.
 - BOLTS SHALL BE ASTM A325 WITH CORRESPONDING NUTS AND WASHERS.
 - ALL WELDS SHALL BE GROUND AND COATED WITH 2 COATS OF A COLD APPLIED GALVANIZING PAINT.
 - HOLES IN THE HP MEMBER FOR THE BOLTS AND POST-INSTALLED ANCHORS SHALL BE SIZED 1/16" LARGER THAN THE DIAMETER OF THE ITEM GOING THROUGH THE ITEM.
 - THE CONTRACTOR SHALL VERIFY THE SEWER PIPE ELEVATION AND ADJUST AERIAL SEWER SUPPORT ELEVATION AS NECESSARY TO MATCH SEWER PIPE ELEVATION.
- FOUNDATION NOTES:**
- DRILLED-IN PILES ARE REQUIRED FOR THE AERIAL SEWER SUPPORTS.
 - EXCAVATE HOLES AT PILE LOCATIONS WITH A MINIMUM OF 5 FEET INTO WEATHERED ROCK.
 - FILL THE BOTTOM 5 FT OF THE HOLE WITH CONCRETE AND THE REST OF THE HOLE WITH CLASS II OR CLASS III SELECT MATERIAL THAT MEETS SECTION 1016 OF THE STANDARD SPECIFICATIONS.
 - FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
 - CONCRETE SHALL BE CLASS A CONCRETE PER THE NCDOT STANDARD SPECIFICATION FOR ROADS AND STRUCTURES.

8/17/99



PROJECT REFERENCE NO.	SHEET NO.
B-5813	UC-4
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 11/19/2020	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION	
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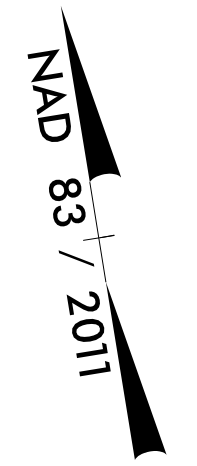
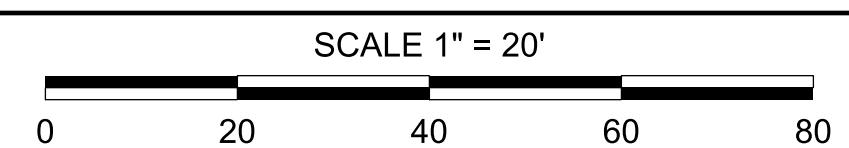
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MATCHLINE -L- STA 18+00 SEE SHEET UC-5

8/17/99

SEQUENCE OF CONSTRUCTION:

1. INSTALL TEMPORARY BYPASS PUMPING AROUND PROJECT.
2. REMOVE EXISTING DOWNSTREAM MANHOLE.
3. INSTALL NEW CASING BY WELDING TO EXISTING CASING.
4. INSTALL PROPOSED GRAVITY SEWER AND CASING NORTHWARD TO MANHOLE #1.
5. INSTALL REMAINDER OF PROPOSED GRAVITY SEWER TO MANHOLE #2.
6. TEST NEW PIPE AND MANHOLES.
7. ACTIVATE NEW SEWER.

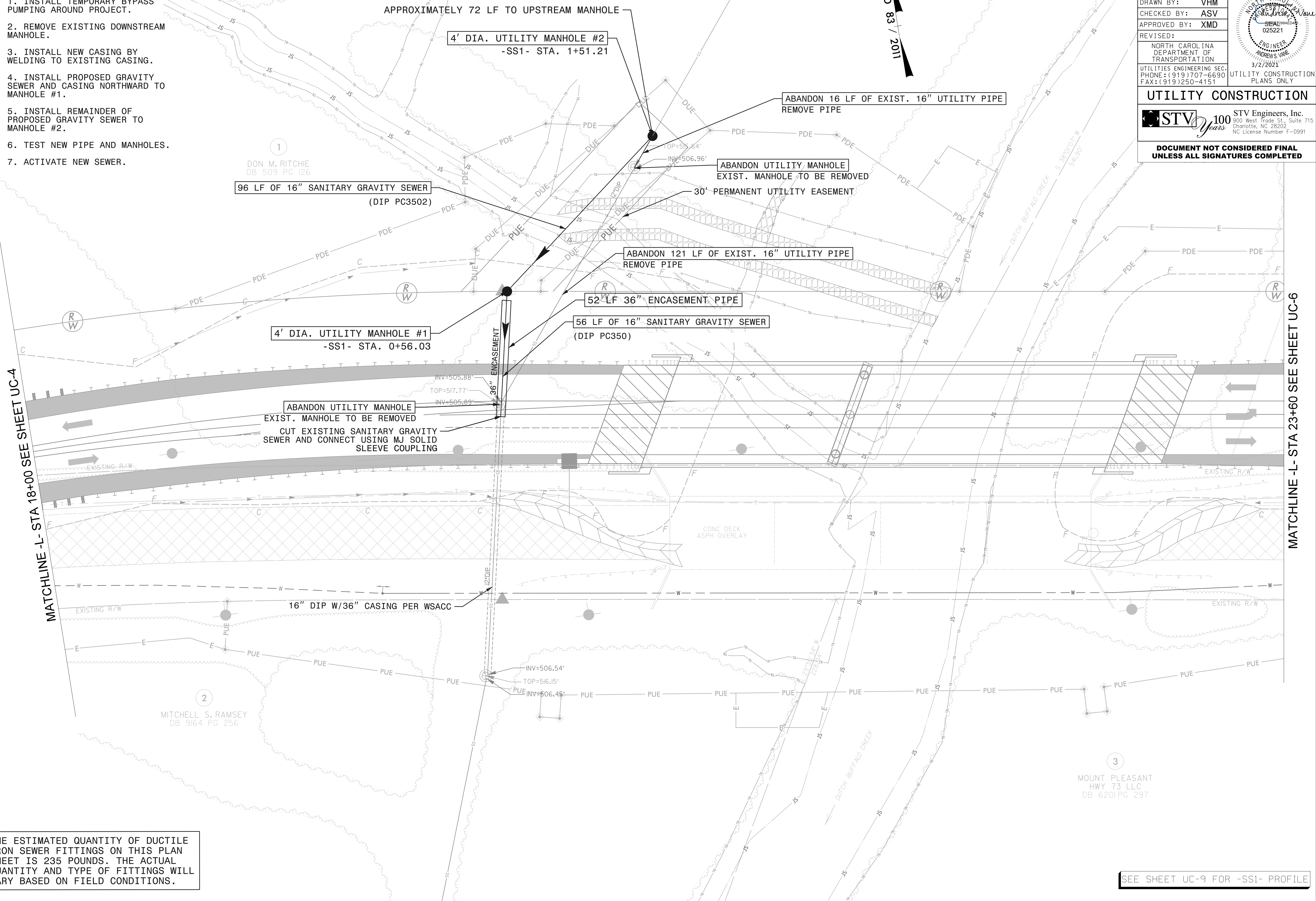


PROJECT REFERENCE NO.	SHEET NO.
B-5813	UC-5
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DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
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THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER FITTINGS ON THIS PLAN SHEET IS 235 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

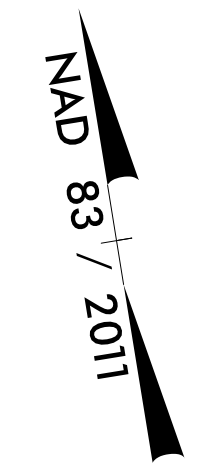
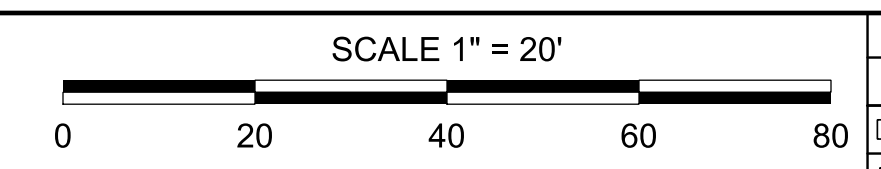
SEE SHEET UC-9 FOR -SS1- PROFILE

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 8/17/99

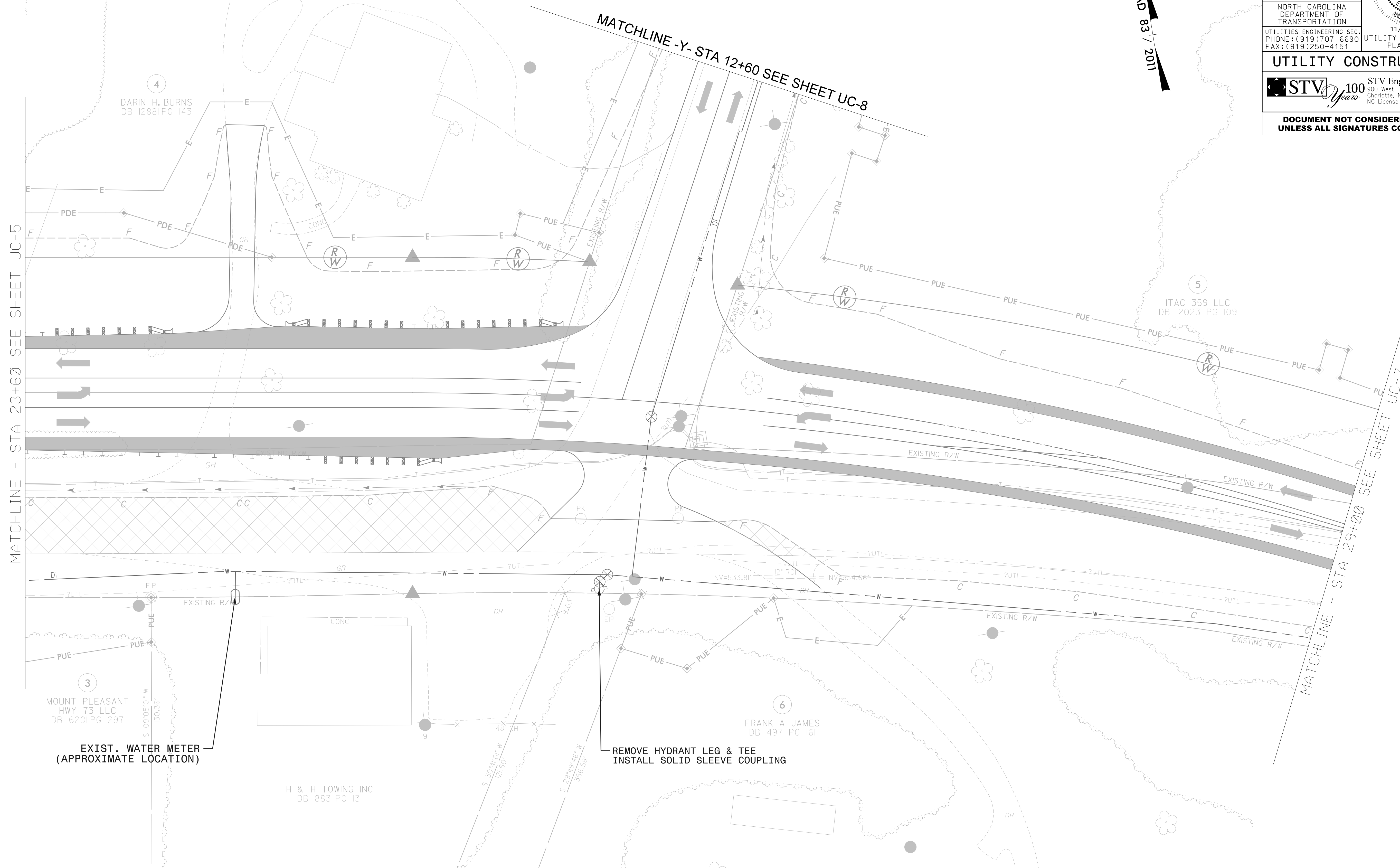
MATCHLINE -L- STA 18+00 SEE SHEET UC-4

MATCHLINE -L- STA 23+60 SEE SHEET UC-6

8/17/99



PROJECT REFERENCE NO. B-5813	SHEET NO. UC-6
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

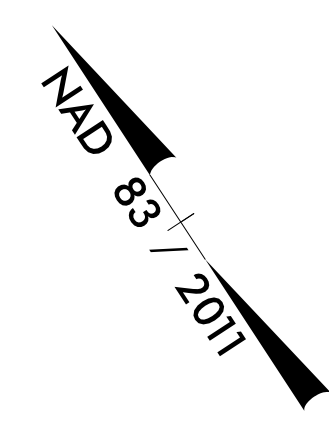
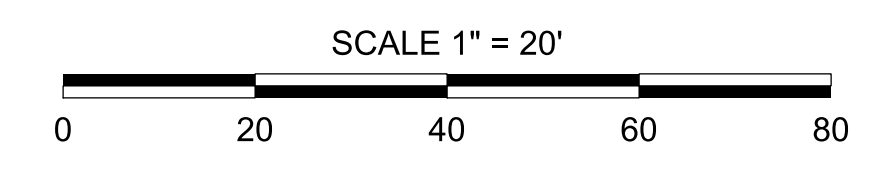


THE ESTIMATED QUANTITY OF DUCTILE IRON WATER FITTINGS ON THIS PLAN SHEET IS 65 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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 8/17/2020 11:41:13 AM

8/17/99

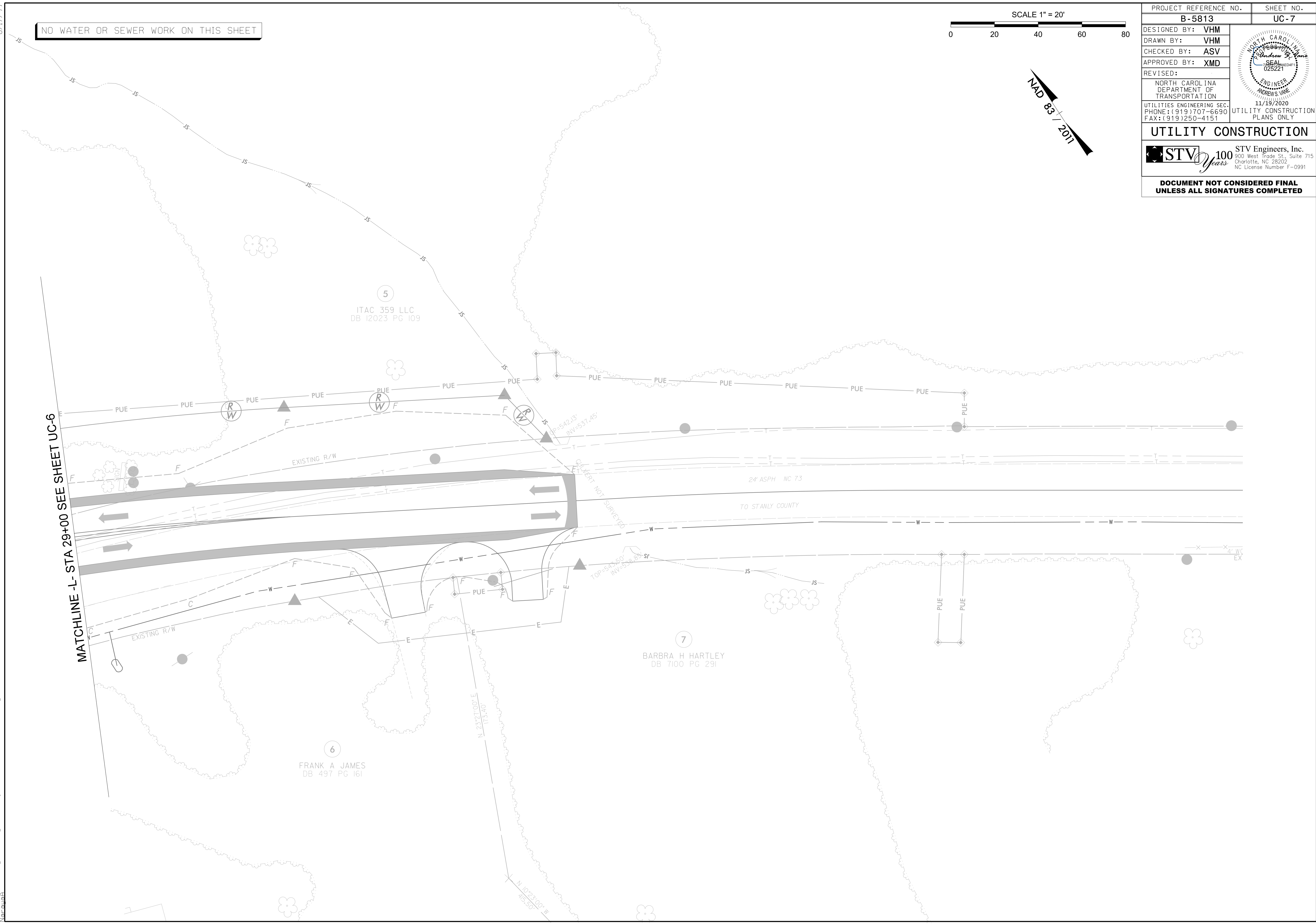
NO WATER OR SEWER WORK ON THIS SHEET



PROJECT REFERENCE NO. B-5813	SHEET NO. UC-7
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 11/19/2020 UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION UTILITY CONSTRUCTION PLANS ONLY	
STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
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MATCHLINE -L- STA 29+00 SEE SHEET UC-6

I:\18_2020\Projects\Engineering\UC\Proc\Sheets\B5813_UC_UC7.dgn



5
ITAC 359 LLC
DB 12023 PG 109

6
FRANK A JAMES
DB 497 PG 161

7
BARBRA H HARTLEY
DB 7100 PG 291

24' ASPH NC 73
TO STANLY COUNTY

CULVERT NOT SURVEYED

N 23°27'00" E 113.40'
N 10°23'00" W 95.50'

TOP=543.80
INV=538.85

P=542.13'
INV=537.45'

EXISTING R/W

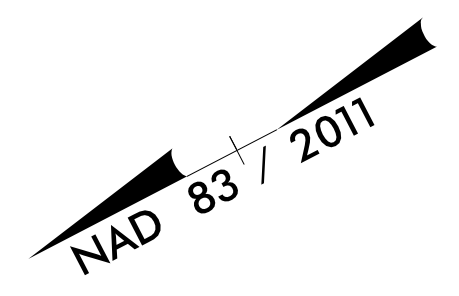
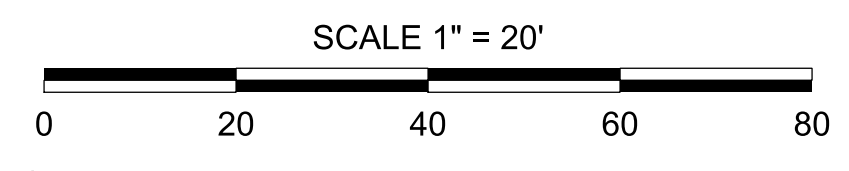
EXISTING R/W

EXISTING R/W

4" WC
EX

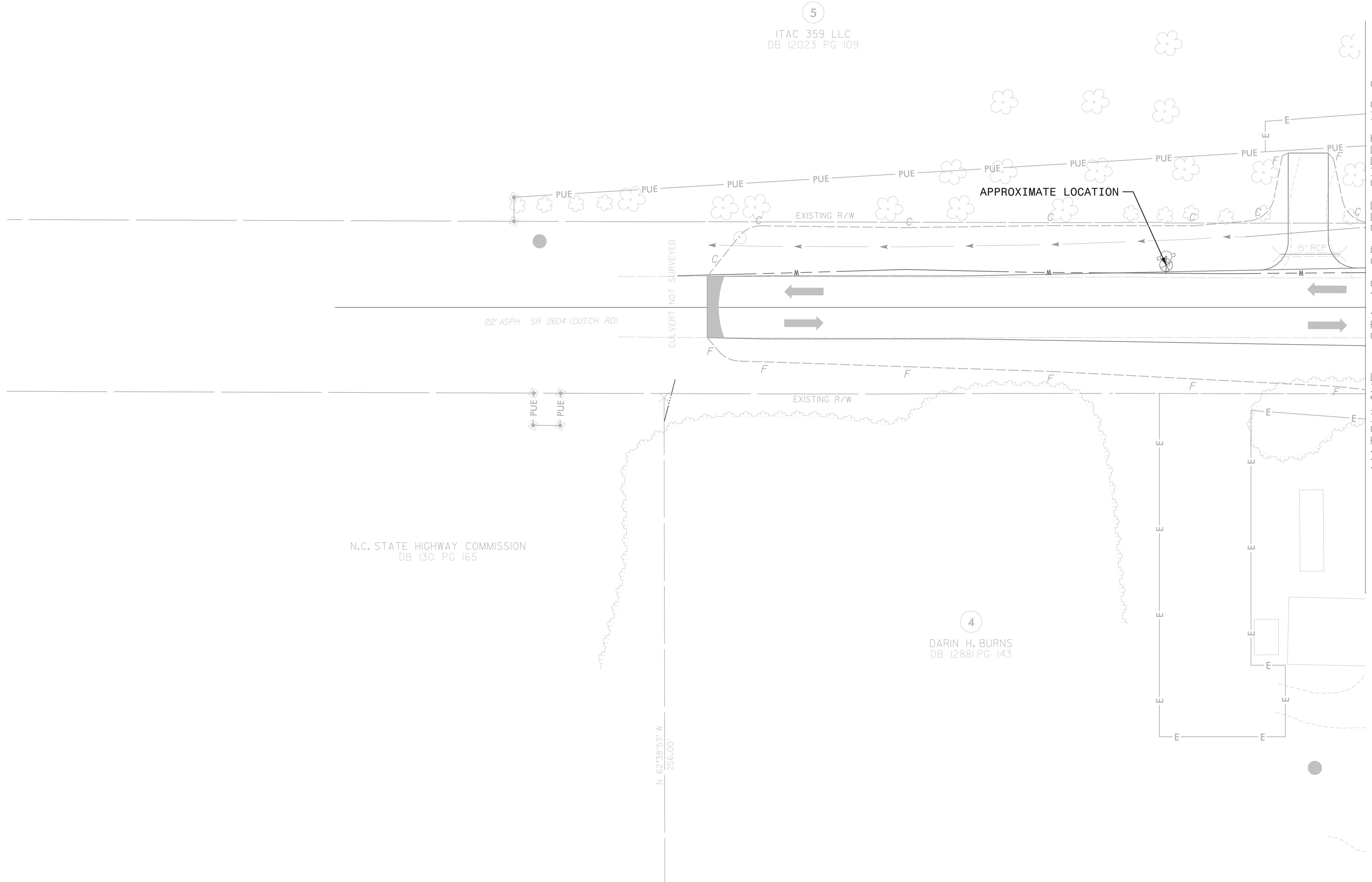
8/17/99

NO WATER OR SEWER WORK ON THIS SHEET



PROJECT REFERENCE NO. B-5813	SHEET NO. UC-8
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 11/19/2020	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION	
STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I:\18_2020\Projects\Engineering\UC\Proc\Sheets\B5813_UC_UC8.dgn

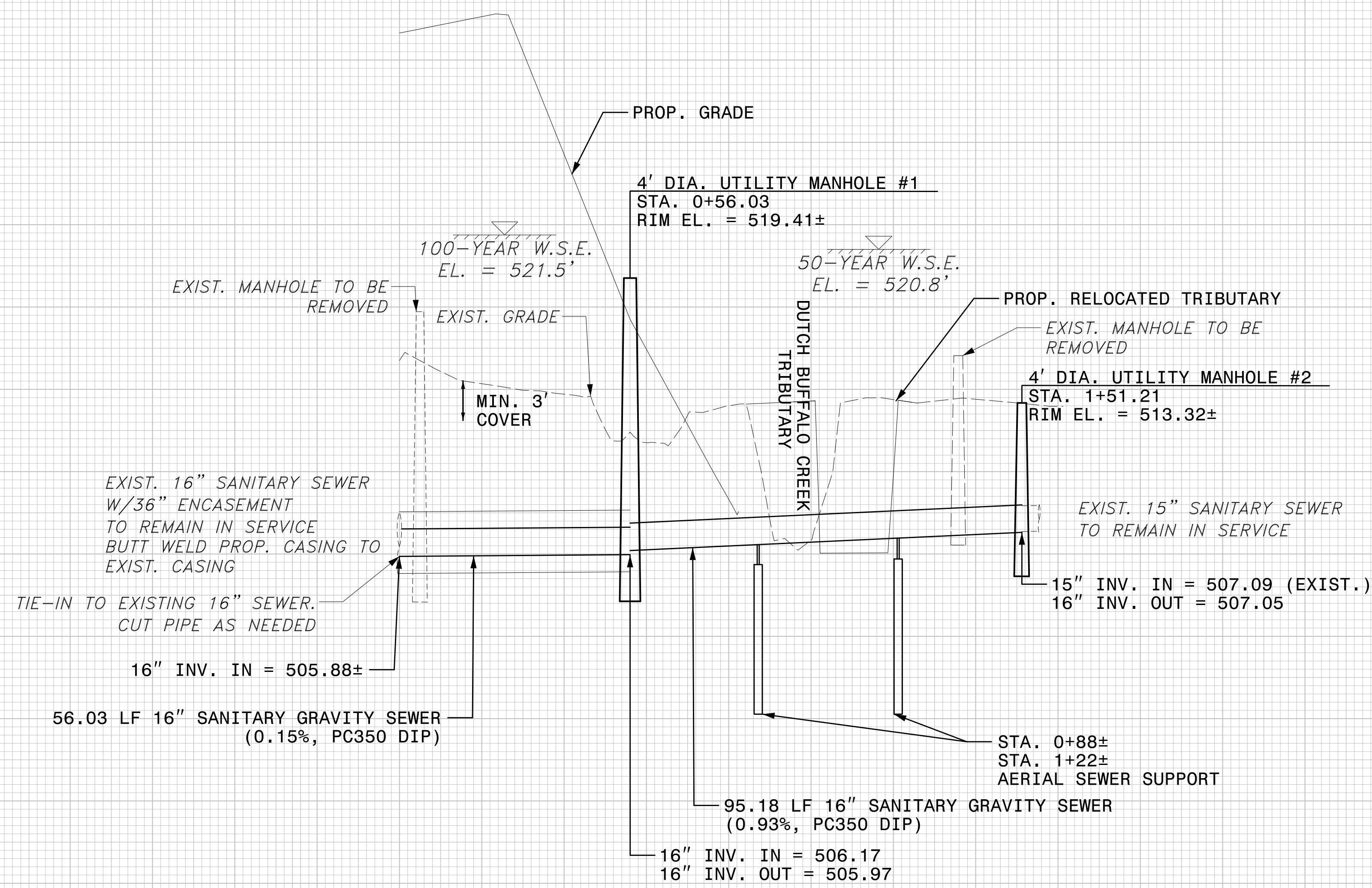


5/14/99
11/18/2020
K:\Utilities\Engineering\UC\Proj\Sheets\B5813_UC_prof1.dwg
Narouah

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SCALE: 1" = 20' HORIZONTAL
1" = 4' VERTICAL

**PROP. SANITARY SEWER -SS1-
DUTCH BUFFALO CREEK**



- NOTES:**
1. ANY EXPOSED SANITARY SEWER JOINTS SHALL BE MECH-LOK TYPE AS MANUFACTURED BY U.S. PIPE OR APPROVED EQUAL.
 2. MANHOLE FRAMES AND COVERS TO BE WATER-TIGHT, BOLT-DOWN TYPE AS APPROVED BY WSACC.

PROJECT REFERENCE NO. B-5813	SHEET NO. UC-9
DESIGNED BY: VHM	
DRAWN BY: VHM	
CHECKED BY: ASV	
APPROVED BY: XMD	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SEE SHEET UC-5 FOR SEWER PLAN

0+00 1+00 2+00

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526
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