

TIP PROJECT: U-3459

CONTRACT: C203127

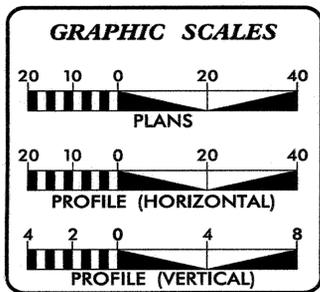
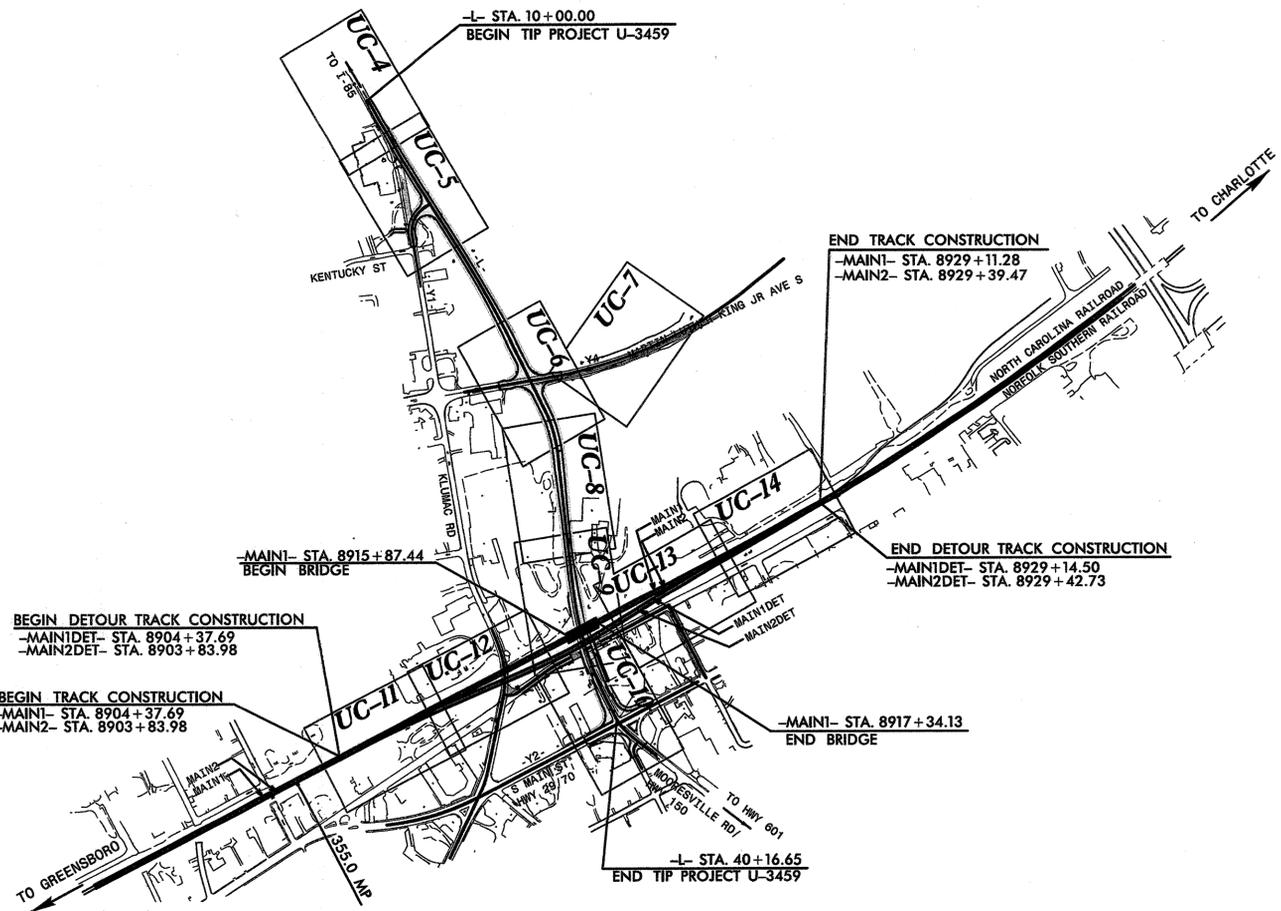
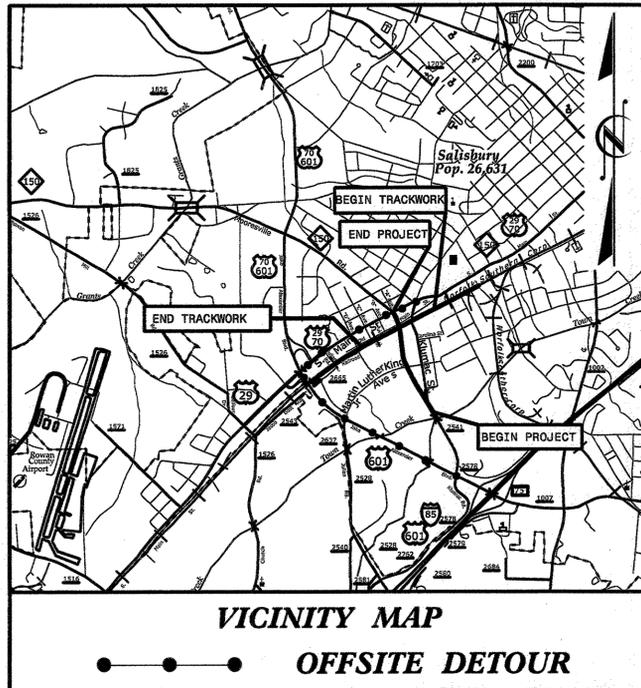
T.I.P. NO.	SHEET NO.
U-3459	UC-1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS**  
**ROWAN COUNTY**

**LOCATION: SALISBURY - SR 2541 (KLUMAC ROAD) AT THE NORTH CAROLINA RAILROAD**

**TYPE OF WORK: UTILITY CONSTRUCTION**



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	SHEET SYMBOLS
UC-3 THRU UC-3B	DETAIL SHEETS
UC-4 THRU UC-14	UTILITY CONSTRUCTION PLAN SHEETS
UC-15 THRU UC-19	PROFILE SHEETS

**WATER AND SEWER OWNERS ON PROJECT**

(1) WATER — SALISBURY-ROWAN UTILITIES  
 (2) SANITARY SEWER — SALISBURY-ROWAN UTILITIES



<b>PLANS PREPARED BY:</b> TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319-8850 CORP. LICENSE NO.: C-0275	<b>PLANS PREPARED FOR:</b> NCDOT RAIL DIVISION SANDRA A. STEPNEY, PE SENIOR PROJECT ENGINEER
2012 STANDARD SPECIFICATIONS	JIMMY L. TERRY, PE PROJECT ENGINEER ANDREW COCHRANE, EI DESIGN ENGINEER

\$\$\$\$\$SYTIME\$\$\$\$\$  
 \$\$\$DGN\$\$\$\$\$  
 \$\$\$USERNAME\$\$\$\$\$

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# UTILITIES PLAN SHEET SYMBOLS

DCV 0302DEL\_P12 5/14/99

## 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	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	PFH
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	PBEP
Relocate RPZ Backflow Preventer	RRPZ
Relocate DCV Backflow Preventer	RBEP

## 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	TEL PED
Utility Line by Others (Type as Shown)	—————
Trenchless Installation	—————
Encasement by Open Cut	—————
Encasement	—————

Thrust Block	⊥
Air Release Valve	AR
Utility Vault	UV
Concrete Pier	CP
Steel Pier	SP
Plan Note	—————
Pay Item Note	—————

NOTE

PAY ITEM

## EXISTING UTILITIES SYMBOLS

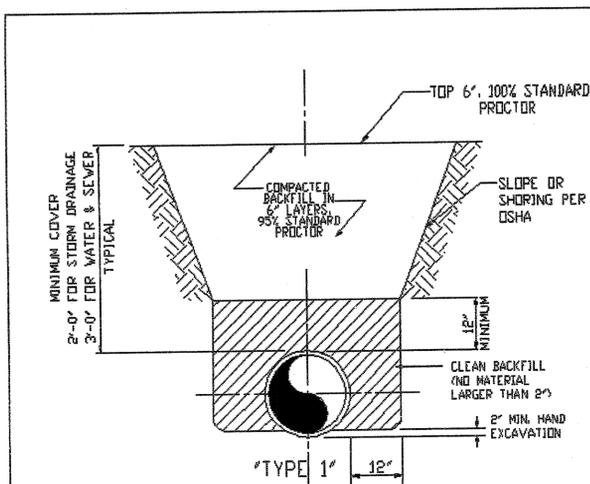
Power Pole	•
Telephone Pole	•
Joint Use Pole	•
Utility Pole	•
Utility Pole with Base	□
H-Frame Pole	•—•
Power Transmission Line Tower	⊗
Water Manhole	⊙
Power Manhole	⊙
Telephone Manhole	⊙
Sanitary Sewer Manhole	⊙
Hand Hole for Cable	⊕
Power Transformer	⊗
Telephone Pedestal	⊕
CATV Pedestal	⊕
Gas Valve	◇
Gas Meter	◇
Located Miscellaneous Utility Object	⊙
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

*Underground Power Line	—————
*Underground Telephone Cable	—————
*Underground Telephone Conduit	—————
*Underground Fiber Optics Telephone Cable	—————
*Underground TV Cable	—————
*Underground Fiber Optics TV Cable	—————
*Underground Gas Pipeline	—————
Aboveground Gas Pipeline	————— A/G Gas
*Underground Water Line	—————
Aboveground Water Line	————— A/G Water
*Underground Gravity Sanitary Sewer Line	—————
Aboveground Gravity Sanitary Sewer Line	————— A/G Sanitary Sewer
*Underground SS Forced Main Line	—————
Underground Unknown Utility Line	—————
SUE Test Hole	⊕
Water Meter	⊙
Water Valve	⊙
Fire Hydrant	⊕
Sanitary Sewer Cleanout	⊙

\*For Existing Utilities  
 Utility Line Drawn from Record (Type as Shown) \_\_\_\_\_  
 Designated Utility Line (Type as Shown) \_\_\_\_\_

SYNOPSIS OF CHANGES

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-3
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
 <b>TGS ENGINEERS</b> 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319-8850 CORP. LICENSE NO. C-0275	



**TYPE 1**

TOP 6" 100% STANDARD PROCTOR

MINIMUM COVER 2'-0" FOR STORM DRAINAGE 3'-0" FOR WATER & SEWER TYPICAL

CONPACTED BACKFILL IN 6" LAYERS 95% STANDARD PROCTOR

SLOPE OR SHORING PER OSHA

CLEAN BACKFILL (NO MATERIAL LARGER THAN 2")

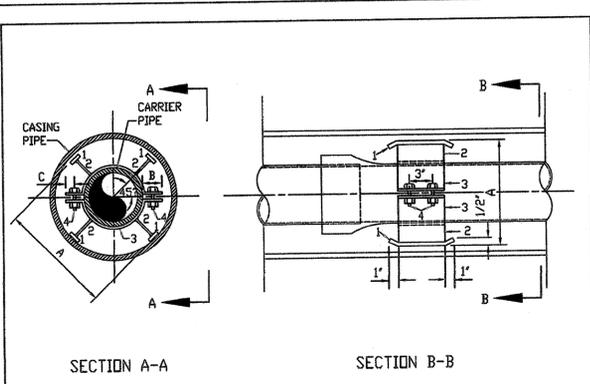
2" MIN. HAND EXCAVATION

12" MINIMUM

NOTES:

- FOR USE WITH ALL DIP, RCP AND VCP UNLESS CONDITIONS OF POOR OR SATURATED SOIL OR ROCK ARE PRESENT.
- HAND EXCAVATE TO CONFORM TO PIPE BARREL.
- EXCAVATE AT PIPE BELLS SO BELL DOES NOT SUPPORT PIPE.
- TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. SUPPORT OR SHORE WHEN TRENCH IS MORE THAN 5' DEEP AND 8' LONG. BEGIN SIDE SLOPE, IF USED, APPROX. 18" ABOVE TOP OF PIPE.
- BACKFILL OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER THE PIPE IS LAID. COMPACTION REQUIREMENTS SHALL BE ATTAINED BY THE USE OF MECHANICAL TAMPS ONLY. EACH AND EVERY LAYER OF BACKFILL SHALL BE PLACED LOOSE IN 6" LAYERS AND THOROUGHLY COMPACTED INTO PLACE.
- UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER THE PIPE HAS BEEN PLACED.
- ALL MATERIAL SHALL HAVE AN IN PLACE DENSITY OF 100% TO A DEPTH 6" BELOW THE FINISHED GRADE OF BACKFILL MATERIAL, AND 95% AT GREATER THAN 6" BELOW GRADE.

CITY OF SALISBURY, N.C.	STANDARD DETAIL	DATE: JANUARY 1, 1991
PIPELINE INSTALLATION		NOT TO SCALE
TYPE 1 BEDDING		STANDARD P-1



SECTION A-A

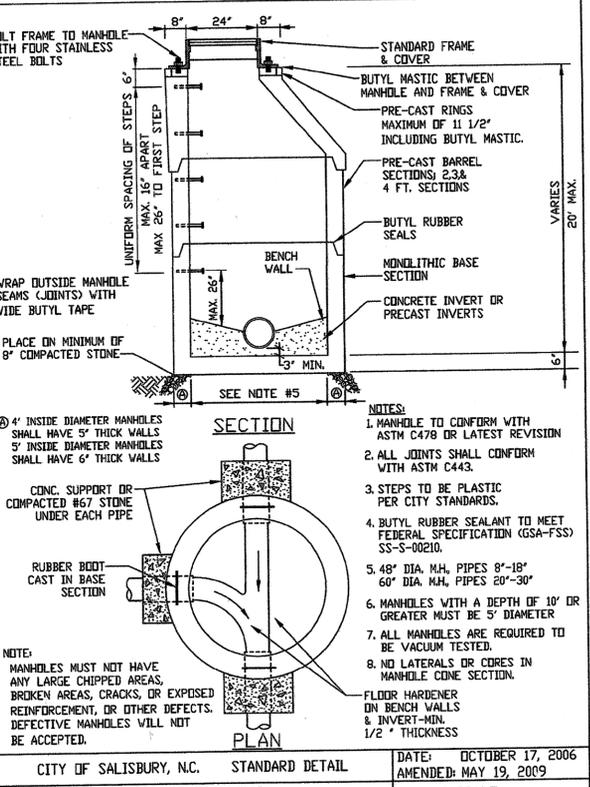
SECTION B-B

CARRIER PIPE	CASING PIPE		PIPE SUPPORT ASSEMBLY MARK NUMBERS			DIMENSIONS					
	ID	OD	HWY	R/R	1	2	3	4	A	B	C
4"	4.63"	12.75"	0.188"	0.250"	8" x 2" x 1/4"	8" x 1 1/2" x 1/4"	6" x 1/4"	3/8"	10.90"	1 3/4"	3/4"
6"	6.50"	12.75"	0.188"	0.250"	8" x 2" x 1/4"	8" x 1 1/2" x 1/4"	6" x 1/4"	3/8"	10.90"	1 3/4"	3/4"
8"	9.05"	16.00"	0.250"	0.281"	8" x 2" x 1/4"	8" x 2" x 1/4"	6" x 1/4"	3/8"	14.05"	1 3/4"	3/4"
10"	11.10"	18.00"	0.250"	0.312"	8" x 2" x 1/4"	8" x 2" x 1/4"	6" x 1/4"	3/8"	16.10"	1 3/4"	3/4"
12"	13.20"	20.00"	0.250"	0.344"	8" x 2" x 1/4"	8" x 2 3/4" x 1/4"	6" x 1/4"	3/8"	17.70"	1 3/4"	3/4"
14"	15.20"	24.00"	0.250"	0.375"	8" x 3" x 3/8"	8" x 2 3/4" x 3/8"	6" x 1/4"	3/8"	21.80"	2 1/4"	1 1/4"
16"	17.40"	30.00"	0.312"	0.469"	8" x 3" x 3/8"	8" x 1 1/4" x 3/8"	6" x 3/8"	1/2"	27.40"	3"	1 3/8"
18"	19.50"	30.00"	0.312"	0.469"	8" x 3" x 3/8"	8" x 1 1/4" x 3/8"	6" x 3/8"	1/2"	27.40"	3"	1 3/8"
20"	21.60"	30.00"	0.312"	0.469"	8" x 3" x 3/8"	8" x 1 1/4" x 3/8"	6" x 3/8"	1/2"	27.40"	3"	1 3/8"
24"	25.80"	36.00"	0.375"	0.500"	8" x 4" x 3/8"	8" x 2 3/4" x 1/2"	6" x 1/2"	1/2"	33.65"	3"	1 3/8"
30"	32.00"	42.00"	0.469"	0.500"	12" x 4" x 3/8"	12" x 2 1/2" x 1/2"	10" x 1/2"	3/4"	38.75"	3"	1 3/8"
36"	38.30"	48.00"	0.500"	0.500"	12" x 4" x 3/8"	12" x 2 1/2" x 1/2"	10" x 1/2"	3/4"	45.05"	3"	1 3/8"

CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: JANUARY 1, 1991

PIPELINE INSTALLATION NOT TO SCALE

PIPE SUPPORT ASSEMBLY STANDARD P-6



SECTION

PLAN

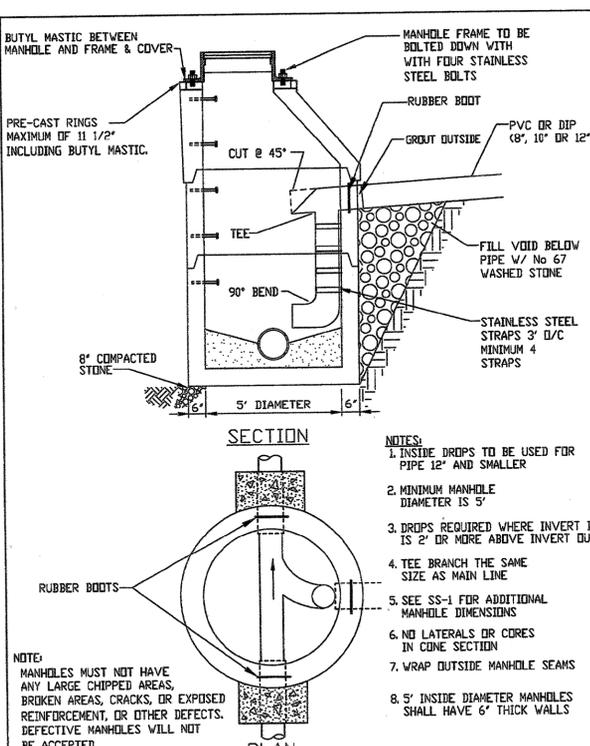
NOTES:

- MANHOLE TO CONFORM WITH ASTM C478 OR LATEST REVISION
- ALL JOINTS SHALL CONFORM WITH ASTM C443.
- STEPS TO BE PLASTIC PER CITY STANDARDS.
- BUTYL RUBBER SEALANT TO MEET FEDERAL SPECIFICATION (GSA-FSS) SS-5-00210.
- 48" DIA. MH. PIPES 8"-18" 60" DIA. MH. PIPES 20"-30"
- MANHOLES WITH A DEPTH OF 10' OR GREATER MUST BE 5' DIAMETER
- ALL MANHOLES ARE REQUIRED TO BE VACUUM TESTED.
- NO LATERALS OR CORES IN MANHOLE CONE SECTION.
- FLOOR HARDENER ON BENCH WALLS & INVERT-MIN. 1/2" THICKNESS

CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 17, 2006 AMENDED: MAY 19, 2009

SEWER SYSTEMS NOT TO SCALE

PRECAST MANHOLE STANDARD SS-1



SECTION

PLAN

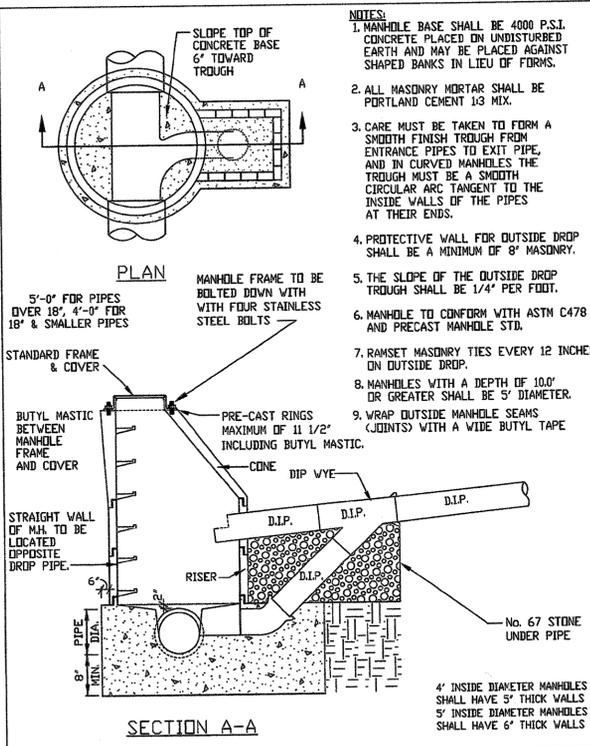
NOTES:

- INSIDE DROPS TO BE USED FOR PIPE 12" AND SMALLER
- MINIMUM MANHOLE DIAMETER IS 5'
- DROPS REQUIRED WHERE INVERT IS 2' OR MORE ABOVE INVERT OUT
- TEE BRANCH THE SAME SIZE AS MAIN LINE
- SEE SS-1 FOR ADDITIONAL MANHOLE DIMENSIONS
- NO LATERALS OR CORES IN CONE SECTION
- WRAP OUTSIDE MANHOLE SEAMS
- 5" INSIDE DIAMETER MANHOLES SHALL HAVE 6" THICK WALLS

CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 17, 2006 AMENDED: MAY 19, 2009

SEWER SYSTEMS NOT TO SCALE

PRECAST M.H. WITH INSIDE DROP STANDARD SS-2



SECTION A-A

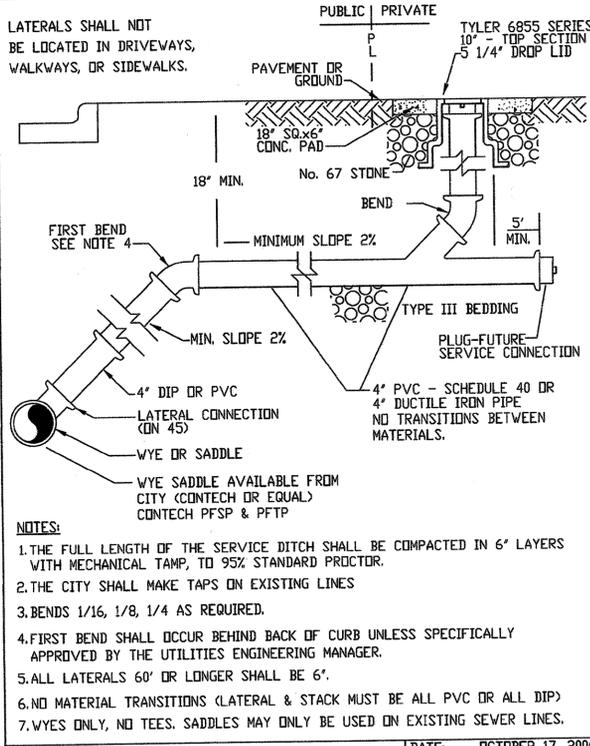
NOTES:

- MANHOLE BASE SHALL BE 4000 P.S.I. CONCRETE PLACED ON UNDISTURBED EARTH AND MAY BE PLACED AGAINST SHAPED BANKS IN LIEU OF FORMS.
- ALL MASONRY MORTAR SHALL BE PORTLAND CEMENT 1:3 MIX.
- CARE MUST BE TAKEN TO FORM A SMOOTH FINISH TROUGH FROM ENTRANCE PIPES TO EXIT PIPE, AND IN CURVED MANHOLES THE TROUGH MUST BE A SMOOTH CIRCULAR ARC TANGENT TO THE INSIDE WALLS OF THE PIPES AT THEIR ENDS.
- PROTECTIVE WALL FOR OUTSIDE DROP SHALL BE A MINIMUM OF 8" MASONRY.
- THE SLOPE OF THE OUTSIDE DROP TROUGH SHALL BE 1/4" PER FOOT.
- MANHOLE TO CONFORM WITH ASTM C478 AND PRECAST MANHOLE STD.
- RAMSET MASONRY TIES EVERY 12 INCHES ON OUTSIDE DROP.
- MANHOLES WITH A DEPTH OF 10.0' OR GREATER SHALL BE 5' DIAMETER.
- WRAP OUTSIDE MANHOLE SEAMS (JOINTS) WITH A WIDE BUTYL TAPE
- 4" INSIDE DIAMETER MANHOLES SHALL HAVE 5" THICK WALLS 5" INSIDE DIAMETER MANHOLES SHALL HAVE 6" THICK WALLS

CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 17, 2006 AMENDED: MAY 19, 2009

SEWER SYSTEMS NEW CONSTRUCTION NOT TO SCALE

PRECAST M.H. W/ OUTSIDE DROP STANDARD SS-3



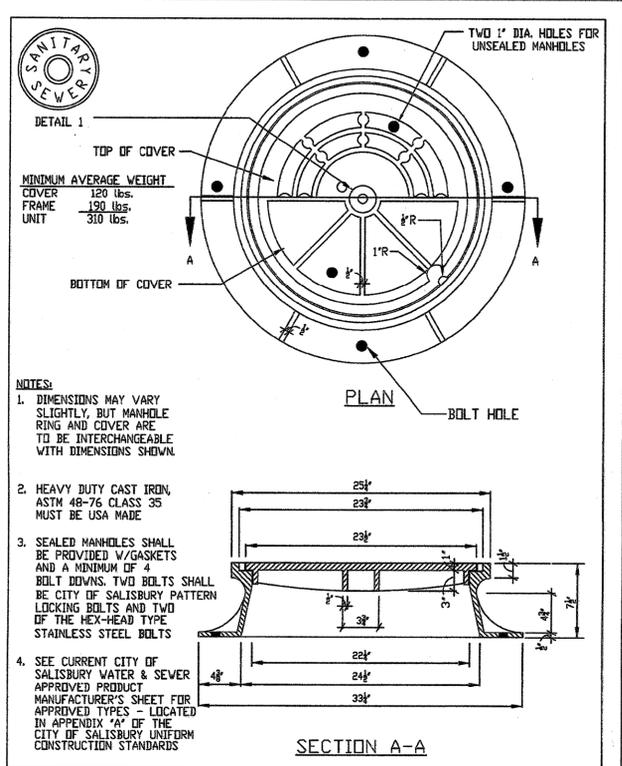
NOTES:

- THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LAYERS WITH MECHANICAL TAMP, TO 95% STANDARD PROCTOR.
- THE CITY SHALL MAKE TAPS ON EXISTING LINES
- BENDS 1/16, 1/8, 1/4 AS REQUIRED.
- FIRST BEND SHALL OCCUR BEHIND BACK OF CURB UNLESS SPECIFICALLY APPROVED BY THE UTILITIES ENGINEERING MANAGER.
- ALL LATERALS 60" OR LONGER SHALL BE 6'.
- NO MATERIAL TRANSITIONS (LATERAL & STACK MUST BE ALL PVC OR ALL DIP)
- WYES ONLY, NO TEES. SADDLES MAY ONLY BE USED ON EXISTING SEWER LINES.

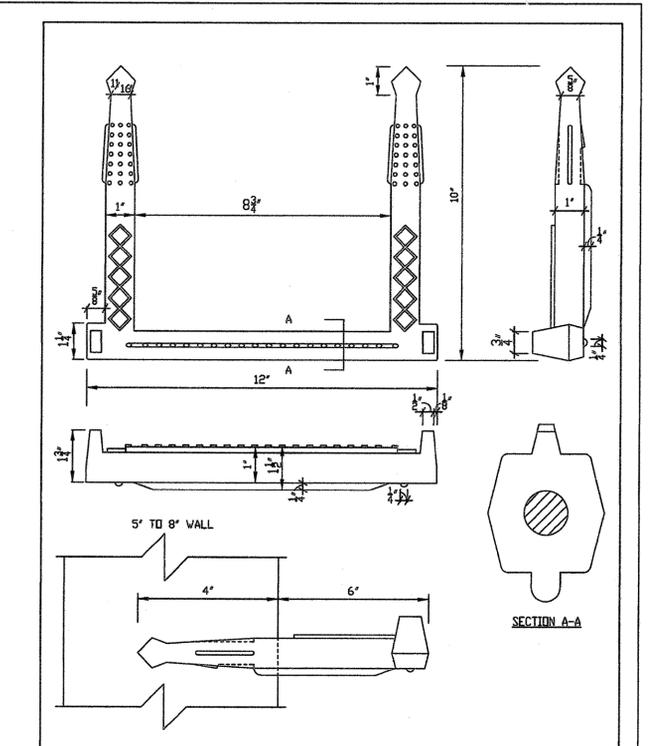
CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 17, 2006 AMENDED: MAY 19, 2009

SEWER SYSTEMS NOT TO SCALE

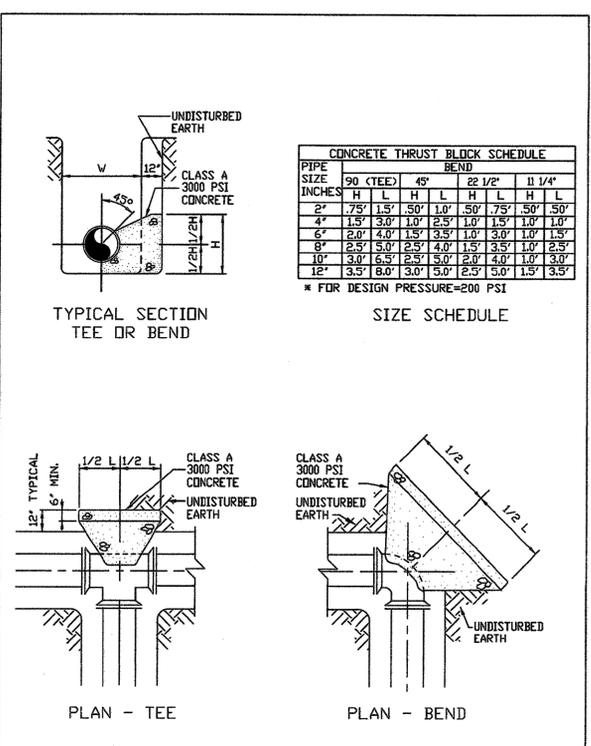
TAP & STUB-OUT STANDARD SS-5



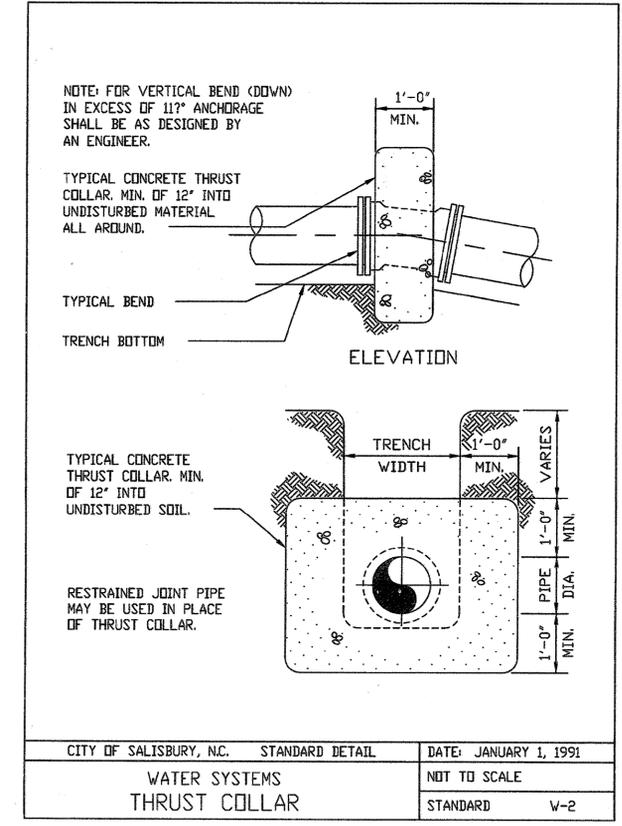
CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 17, 2006  
 SEWER SYSTEMS MANHOLE COVER  
 NOT TO SCALE  
 STANDARD SS-6



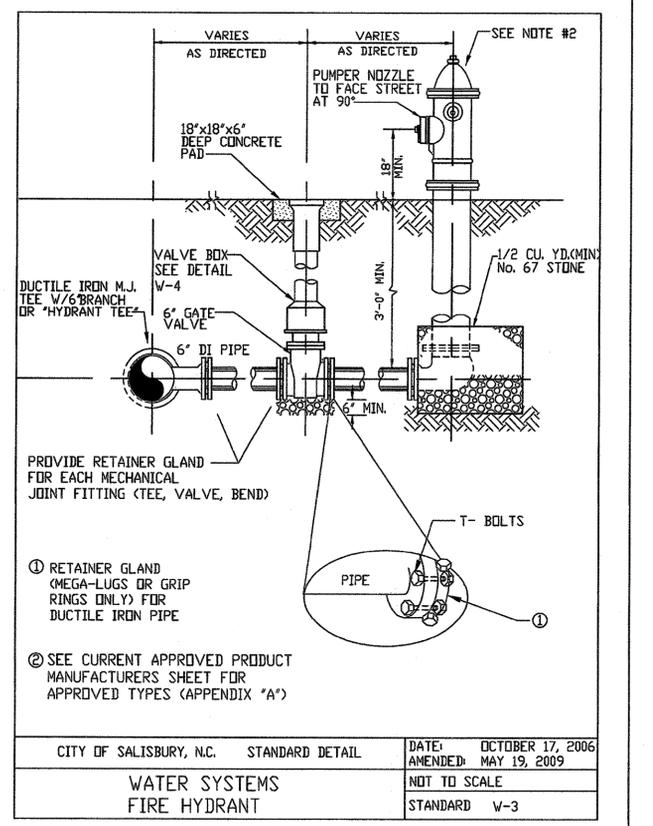
CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: JANUARY 1, 1991  
 SEWER SYSTEMS PLASTIC MANHOLE STEP  
 NOT TO SCALE  
 STANDARD SS-7



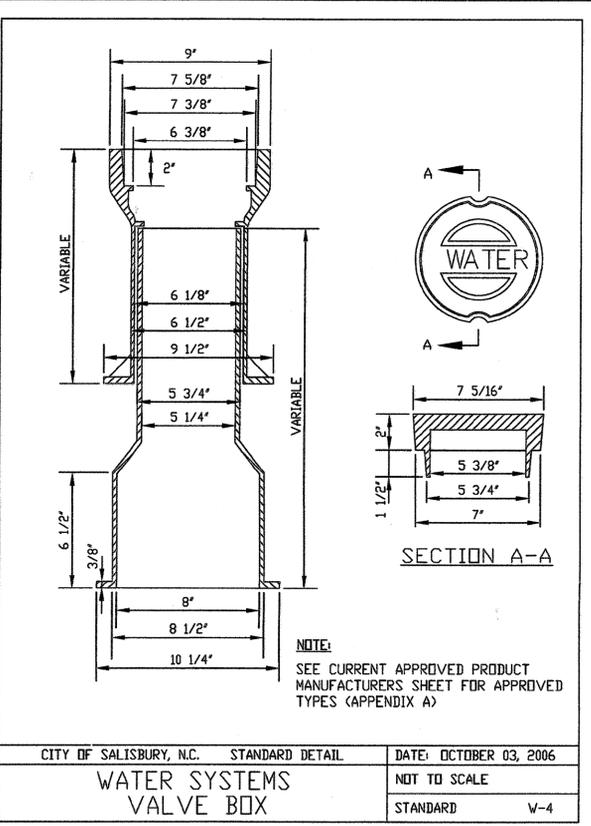
CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: JANUARY 1, 1991  
 WATER SYSTEMS THRUST BLOCKING  
 NOT TO SCALE  
 STANDARD W-1



CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: JANUARY 1, 1991  
 WATER SYSTEMS THRUST COLLAR  
 NOT TO SCALE  
 STANDARD W-2



CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 17, 2006 AMENDED: MAY 19, 2009  
 WATER SYSTEMS FIRE HYDRANT  
 NOT TO SCALE  
 STANDARD W-3



CITY OF SALISBURY, N.C. STANDARD DETAIL DATE: OCTOBER 03, 2006  
 WATER SYSTEMS VALVE BOX  
 NOT TO SCALE  
 STANDARD W-4

PROJECT REFERENCE NO. U-3459 SHEET NO. UC-3A

DESIGNED BY:

DRAWN BY:

CHECKED BY:

APPROVED BY:

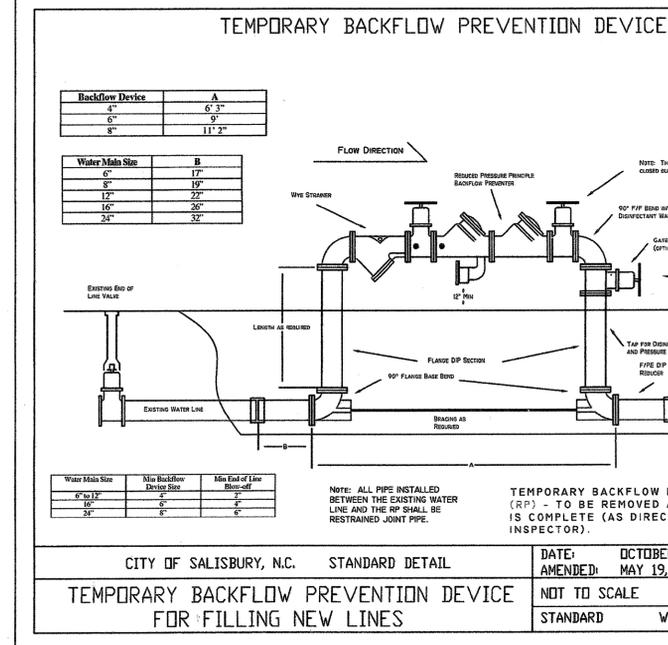
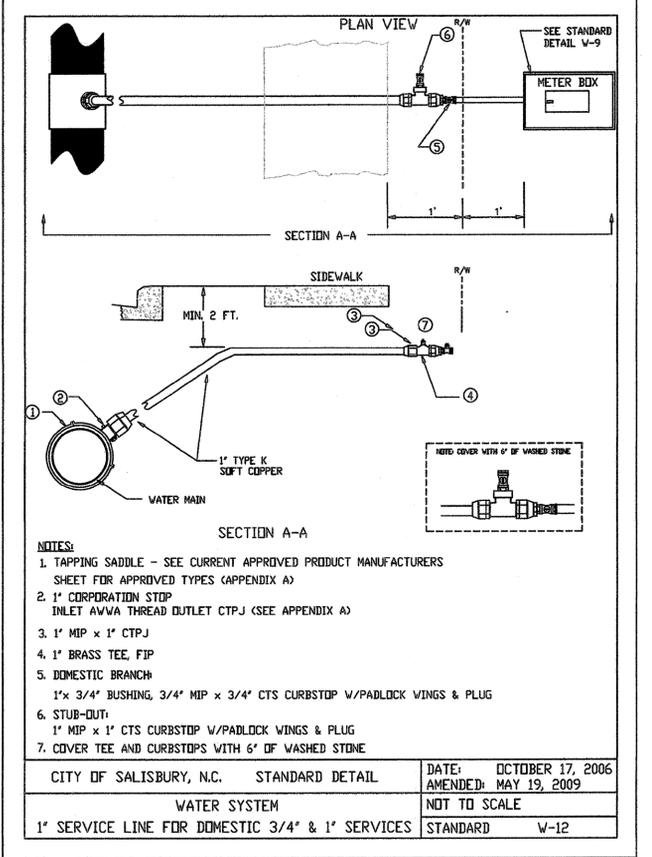
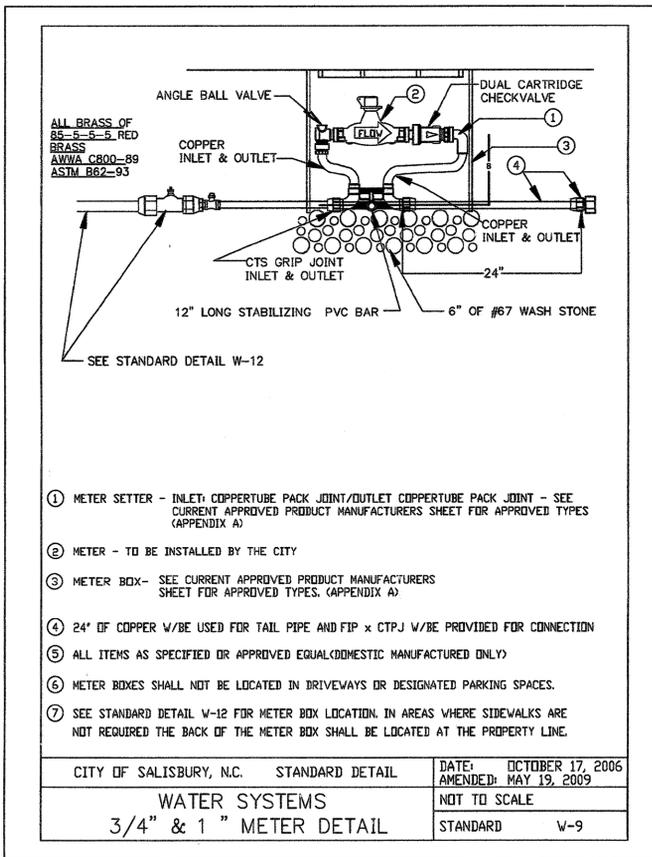
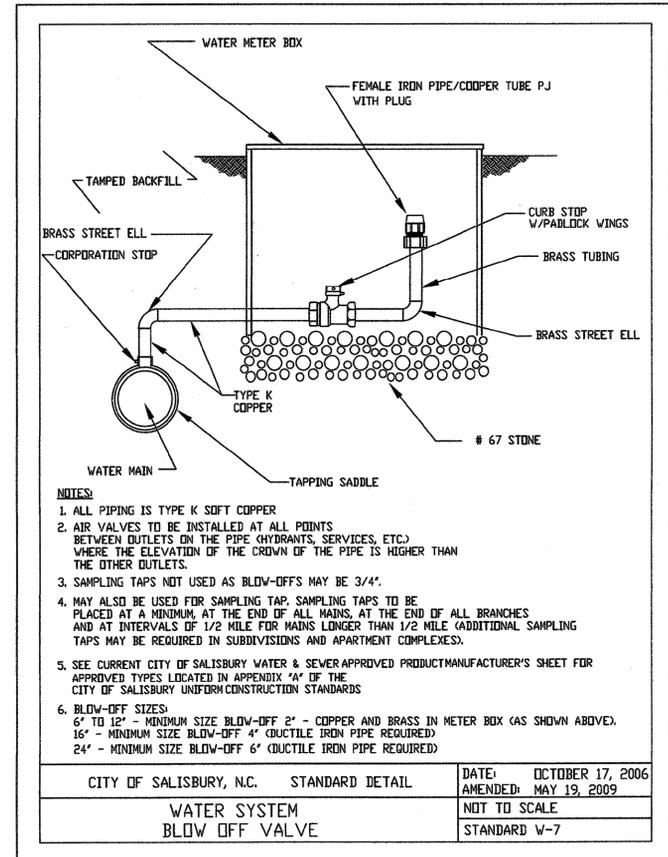
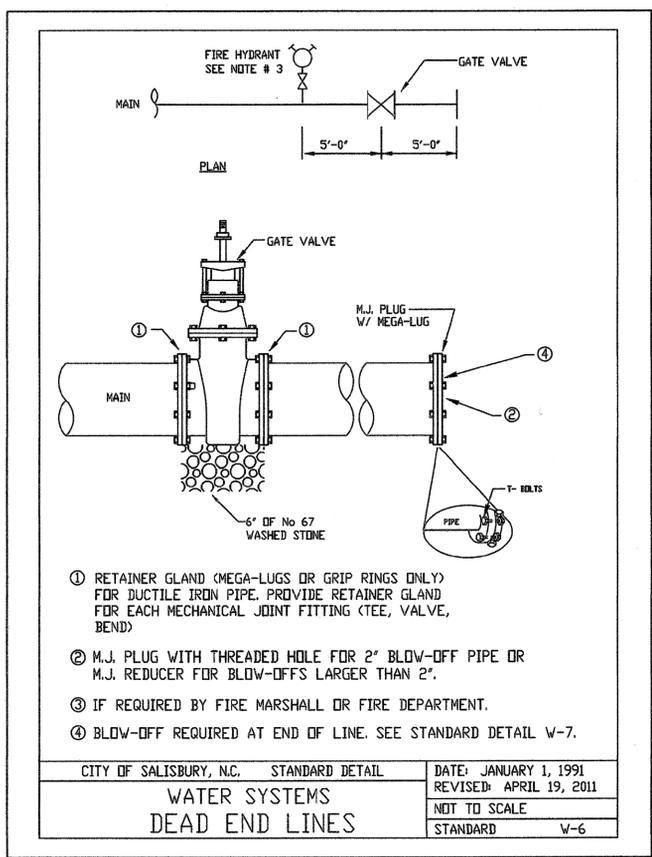
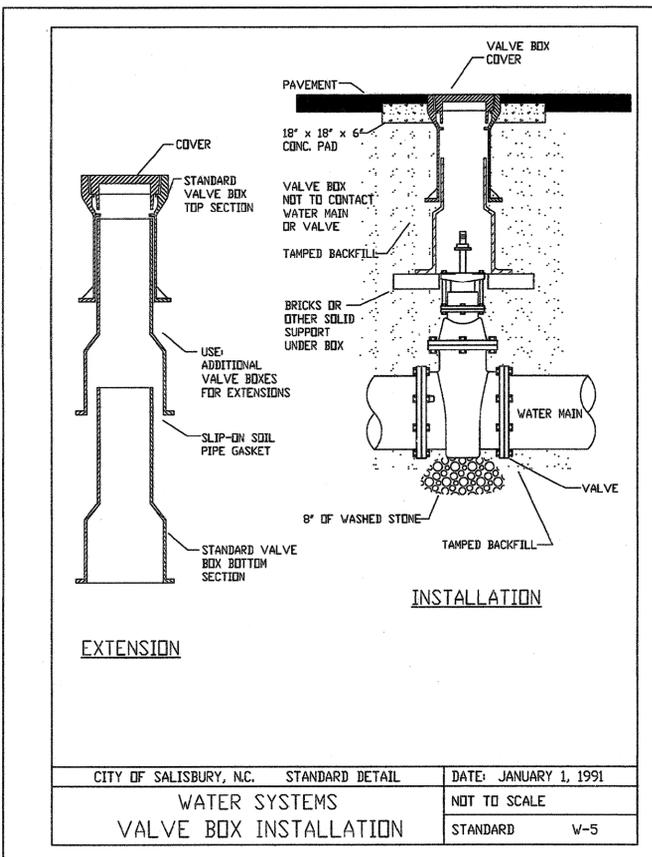
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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

TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-3B
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
 <b>TGS ENGINEERS</b> 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275	



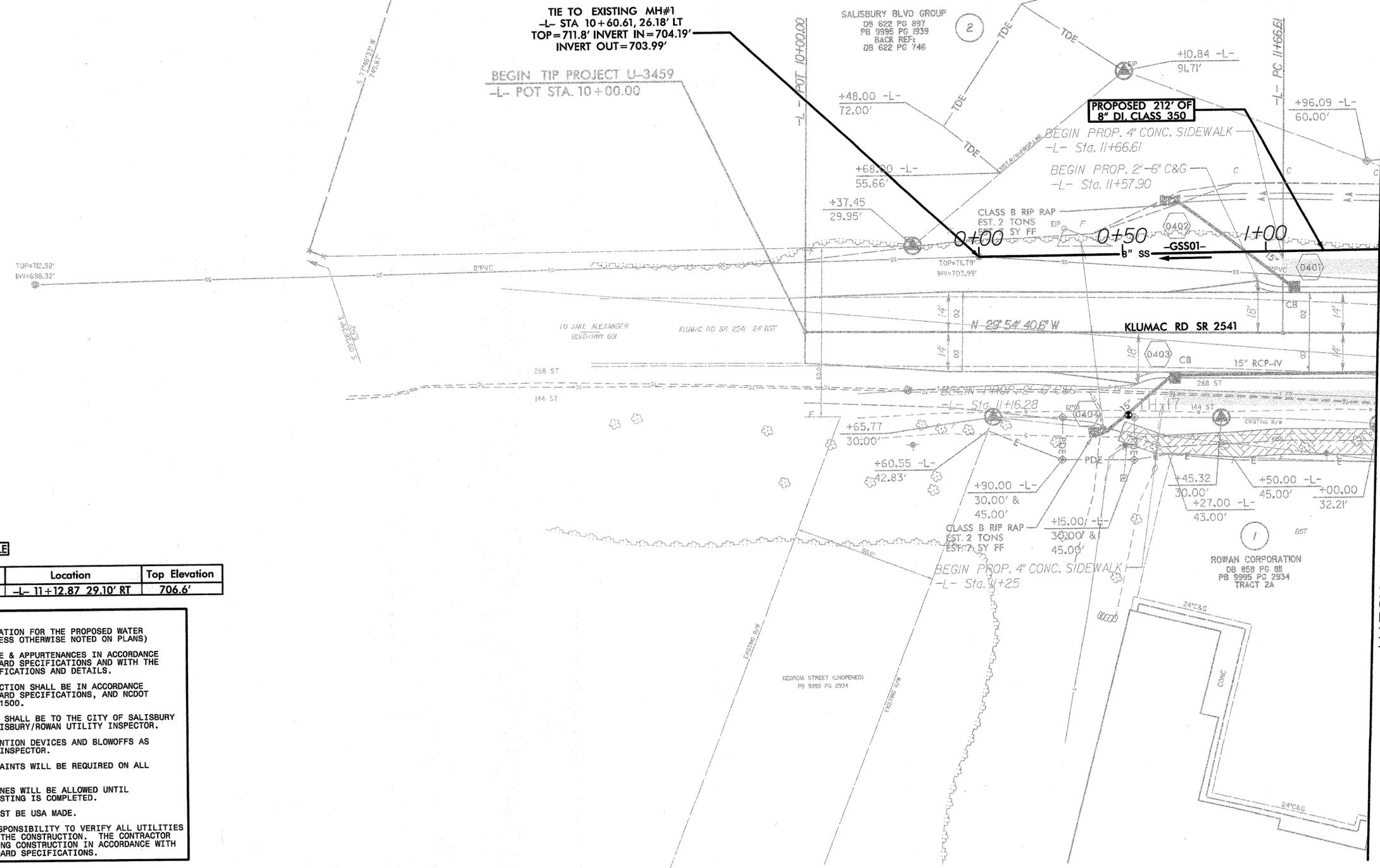
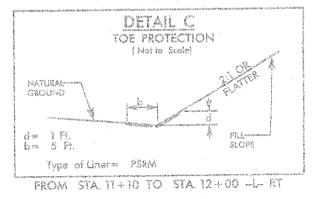
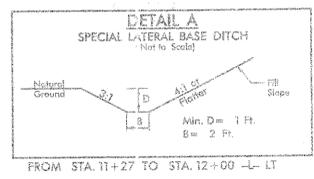


TGS ENGINEERS  
975 WALNUT STREET  
SUITE 141  
CARY, NC 27511  
PH (919) 319 8850  
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-4/CONST.4
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

0302DEL\_P12



SEE UC-16 FOR -GSS01- PROFILE

Test Hole	Size and Material	Location	Top Elevation
TH-17	12" DI	-L- 11+12.87 29.10' RT	706.6'

**NOTES:**

USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)

PROVIDE THRUST RESTRAINT FOR PIPE & APPURTENANCES IN ACCORDANCE WITH SECTION 1505-3 OF THE STANDARD SPECIFICATIONS AND WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS AND DETAILS.

ALL WATER AND SEWER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS, AND NCDOT STANDARD SPECIFICATIONS SECTION 1500.

ALL WATER AND SEWER LINE TESTING SHALL BE TO THE CITY OF SALISBURY STANDARDS AND WITNESSED BY A SALISBURY/ROWAN UTILITY INSPECTOR.

INSTALL TEMPORARY BACKFLOW PREVENTION DEVICES AND BLOWOFFS AS DIRECTED BY THE SALISBURY/ROWAN INSPECTOR.

MEGALUGS OR GRIPRING JOINT RESTRAINTS WILL BE REQUIRED ON ALL WATER LINE BENDS.

NO TIE INS OF WATER AND SEWER LINES WILL BE ALLOWED UNTIL CONSTRUCTION AND ALL REQUIRED TESTING IS COMPLETED.

ALL MATERIALS FOR CONSTRUCTION MUST BE USA MADE.

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES AND THEIR LOCATIONS AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL UTILITIES DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 105-8 OF THE NCDOT STANDARD SPECIFICATIONS.

MATCH SHEET UC-5 STA. -L- 12+00.00

DATE PLOTTED: 02/24/11 10:41 AM

**TGS ENGINEERS**  
 975 WALNUT STREET  
 SUITE 141  
 CARY, NC 27511  
 PH (919) 319 8850  
 CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-5/CONST.5
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

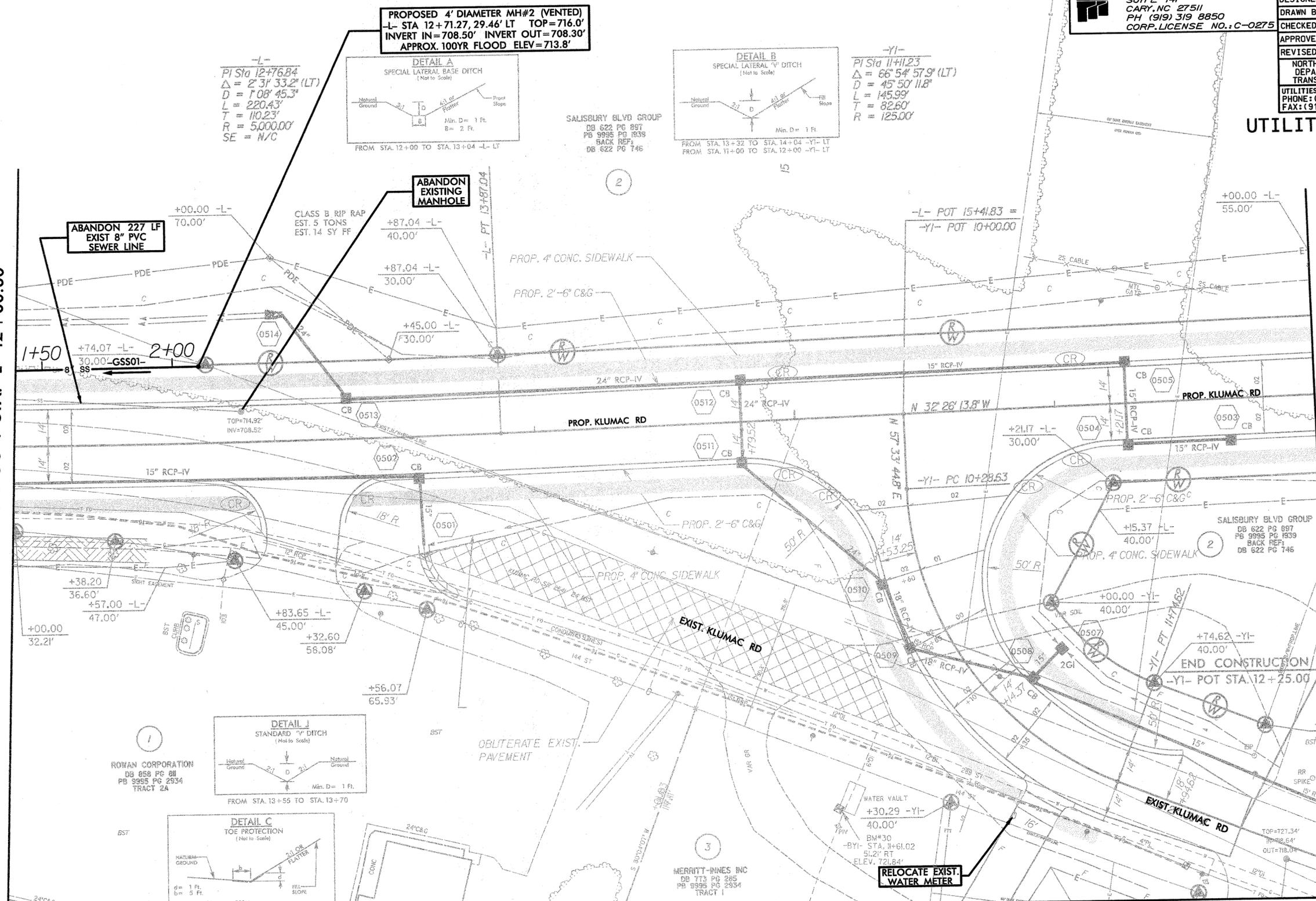
**UTILITY CONSTRUCTION**



0302DEL\_P12

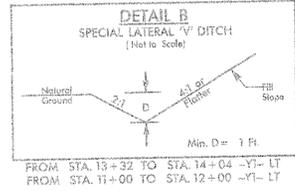
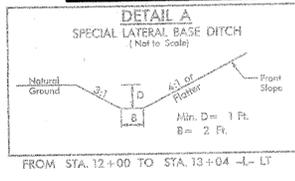
MATCH SHEET UC-4 STA. -L- 12 + 00.00

MATCH STA -L- 17 + 00.00



**PROPOSED 4" DIAMETER MH#2 (VENTED)**  
 -L- STA 12+71.27, 29.46' LT TOP=716.0'  
 INVERT IN=708.50' INVERT OUT=708.30'  
 APPROX. 100YR FLOOD ELEV=713.8'

-L-  
 PI Sta 12+76.84  
 $\Delta = 2' 31' 33.2''$  (LT)  
 $D = 1' 08' 45.3''$   
 $L = 220.43'$   
 $T = 110.23'$   
 $R = 5,000.00'$   
 $SE = N/C$



-YI-  
 PI Sta 11+11.23  
 $\Delta = 66' 54' 57.9''$  (LT)  
 $D = 45' 50' 11.8''$   
 $L = 145.99'$   
 $T = 82.60'$   
 $R = 125.00'$

**ABANDON 227 LF EXIST 8" PVC SEWER LINE**

**ABANDON EXISTING MANHOLE**

**RELOCATE EXIST. WATER METER**

ROWAN CORPORATION  
 DB 658 PG 88  
 PB 9955 PG 2534  
 TRACT 2A

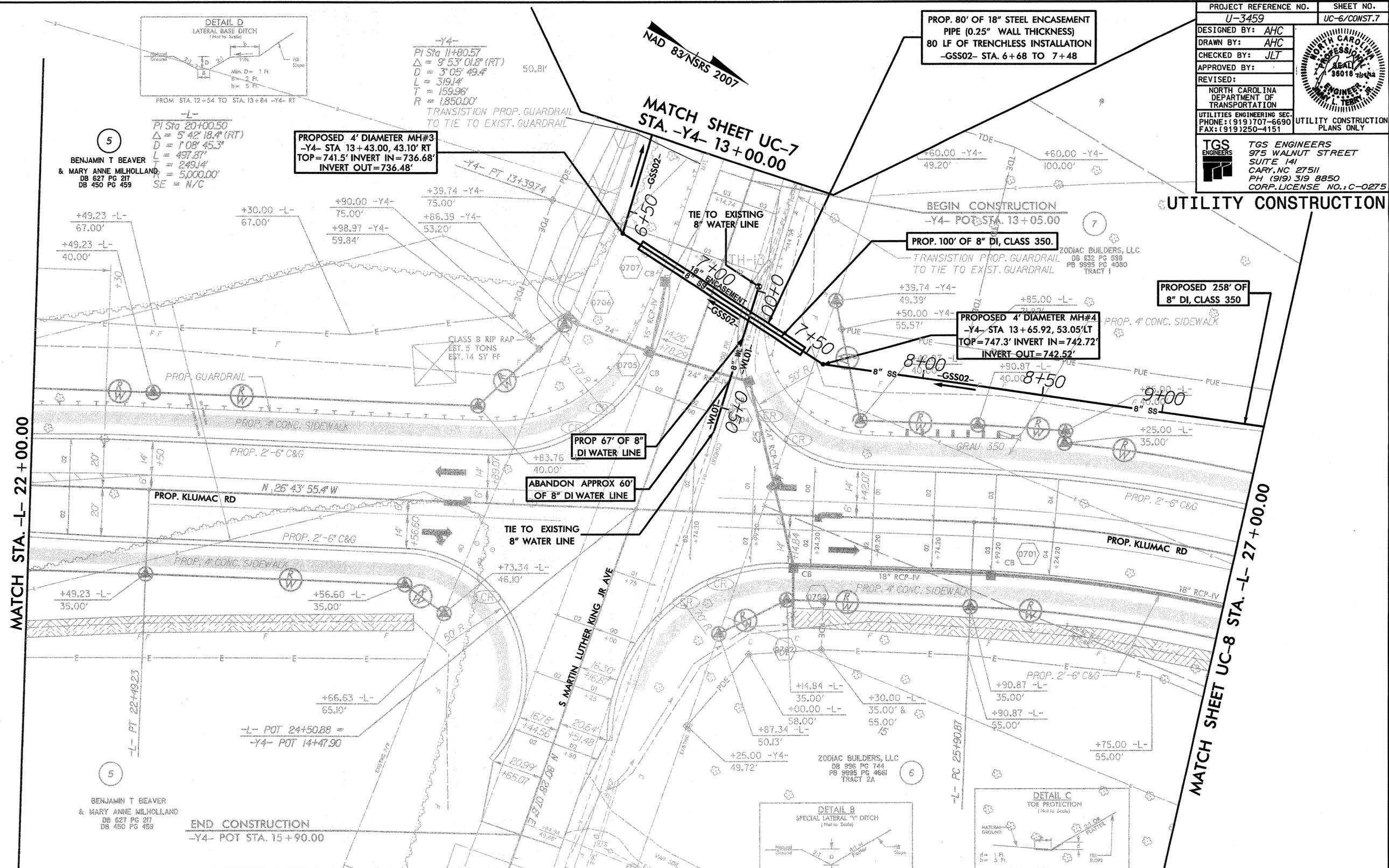
HERRITT-INNES INC  
 DB 113 PG 285  
 PB 9995 PG 2534  
 TRACT 1

**NOTES:**  
 USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)  
 PROVIDE THRUST RESTRAINT FOR PIPE & APPURTENANCES IN ACCORDANCE WITH SECTION 1505-3 OF THE STANDARD SPECIFICATIONS AND WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS AND DETAILS.  
 ALL WATER AND SEWER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS, AND NCDOT STANDARD SPECIFICATIONS SECTION 1500.  
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 ALL MATERIALS FOR CONSTRUCTION MUST BE USA MADE.  
 NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES AND THEIR LOCATIONS AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL UTILITIES DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 105-8 OF THE NCDOT STANDARD SPECIFICATIONS.

SEE UC-16 FOR -GSS01- PROFILE

C:\STIME\DESIGN\PROJECTS\0302DEL\_P12\0302DEL\_P12.DWG  
 12/15/07 10:00 AM  
 J.L. TERRY

PROJECT REFERENCE NO.	U-3459	SHEET NO.	UC-6/CONST.7
DESIGNED BY:	AHC		
DRAWN BY:	AHC		
CHECKED BY:	JLT		
APPROVED BY:			
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275		UTILITY CONSTRUCTION PLANS ONLY	



**NOTES:**

USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)

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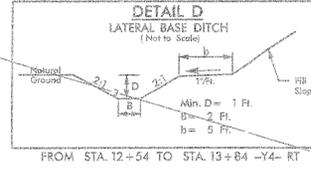
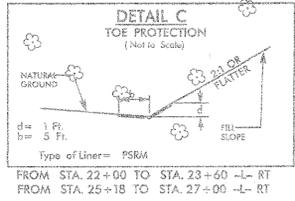
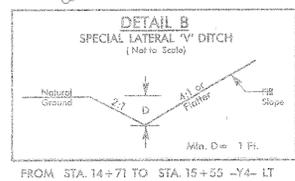
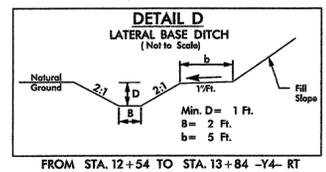
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SEE UC-15 FOR -WLO1- PROFILE  
SEE UC-16,17,&18 FOR -GSS02- PROFILE

Test Hole	Size and Material	Location	Top Elevation
TH-13	8" DI	-L- 24+97.89 93.27' RT	745.28'



MATCH SHEET UC-6  
STA. -14- 13+00.00-6

5  
BENJAMIN T BEAVER  
& MARY ANNE MILHOLLAND  
DB 627 PG 217  
DB 450 PG 459

ENKAY  
PROPERTIES, LLC  
DB 931 PG 278

16  
GOODSLAND, LLC  
DB 1015 PG 806  
PB 9995 PG 5132

PROP 82' OF 18" STEEL ENCASEMENT  
PIPE (0.25" WALL THICKNESS)  
-GSS02- STA. 5+23 TO 6+05

PROPOSED 302' OF  
8" DI, CLASS 350

PROPOSED 5' DIAMETER MH#2  
-L- STA 25+15.60, 404.95' LT  
TOP=746.0' INVERT IN=735.29'  
INVERT OUT=735.09'

PROPOSED 358' OF  
8" DI, CLASS 350

TIE TO EXISTING MH#1  
-L- STA 25+36, 762.37' LT  
TOP=744.3' INVERT IN=733.67'  
INVERT OUT=733.47'  
CORE FOR NEW 8" DI SEWER LINE

**NOTES:**  
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SEE UC-16,17,&18 FOR -GSS02- PROFILE

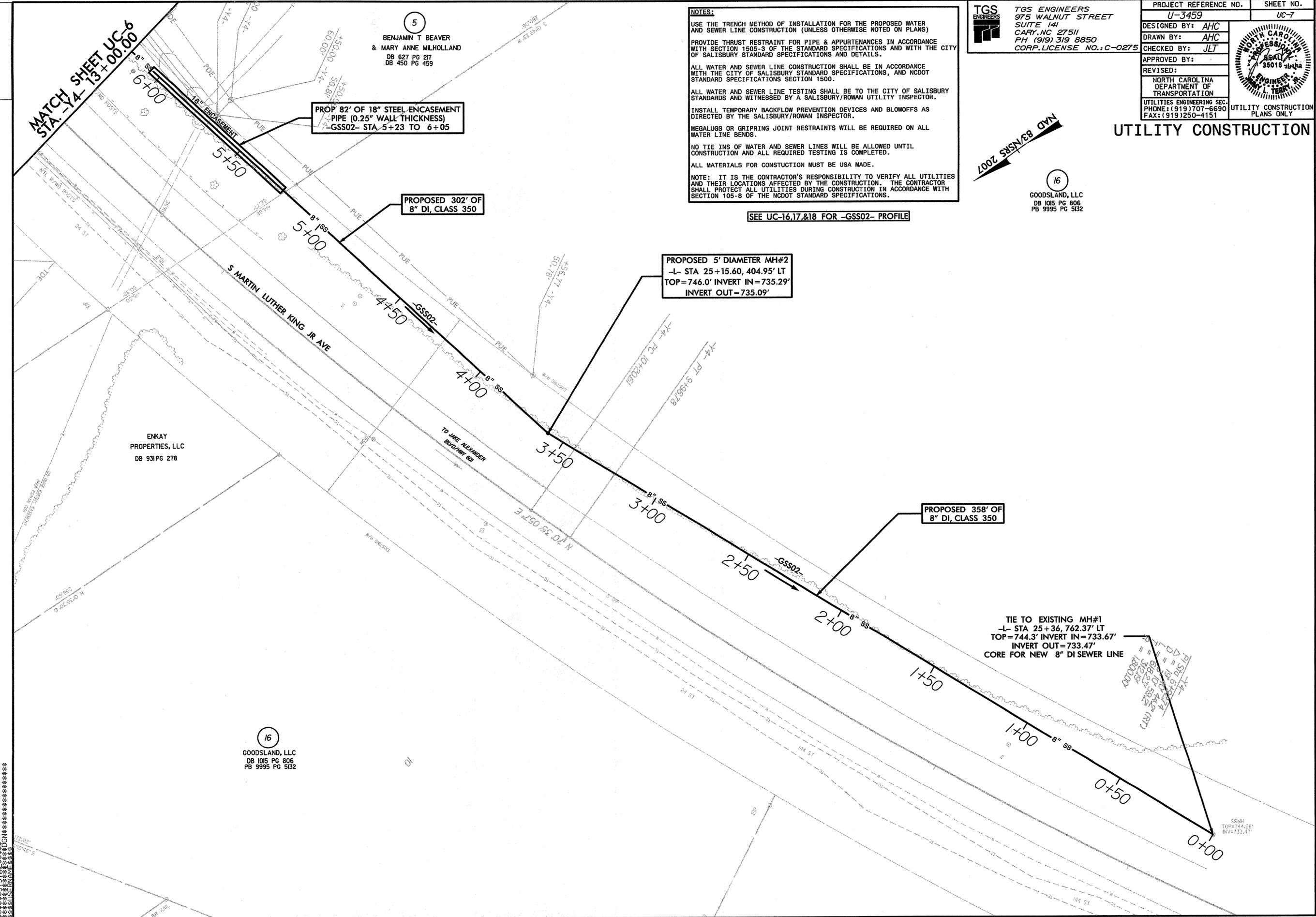
TGS ENGINEERS  
975 WALNUT STREET  
SUITE 141  
CARY, NC 27511  
PH (919) 319 8850  
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-7
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



16  
GOODSLAND, LLC  
DB 1015 PG 806  
PB 9995 PG 5132



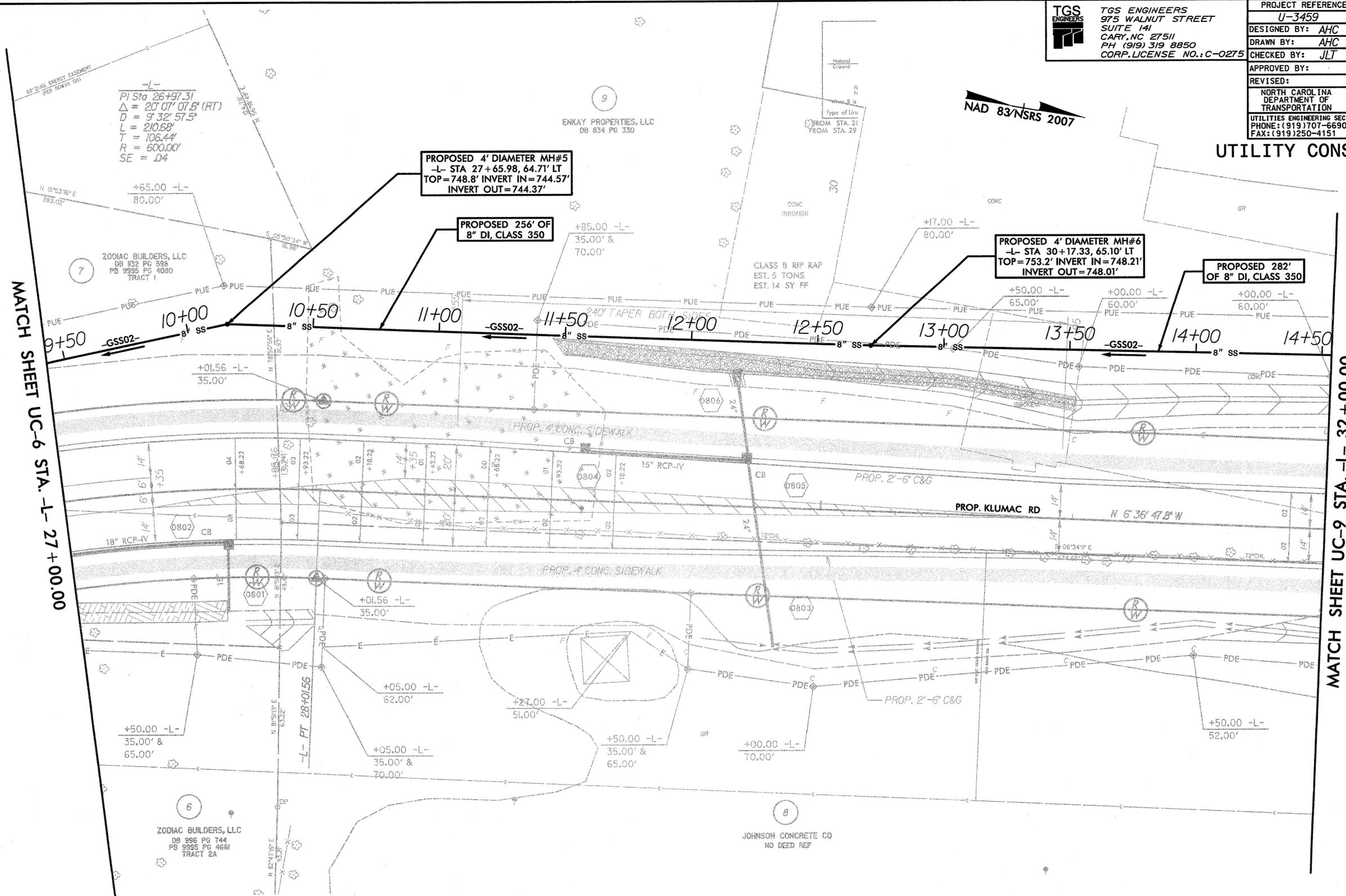


TGS ENGINEERS  
975 WALNUT STREET  
SUITE 141  
CARY, NC 27511  
PH (919) 319 8850  
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	U-3459	SHEET NO.	UC-8/CONST.8
DESIGNED BY:	AHC		
DRAWN BY:	AHC		
CHECKED BY:	JLT		
APPROVED BY:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
REVISED:		UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

NAD 83/NSRS 2007



MATCH SHEET UC-6 STA. -L- 27+00.00

MATCH SHEET UC-9 STA. -L- 32+00.00

**NOTES:**

USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)

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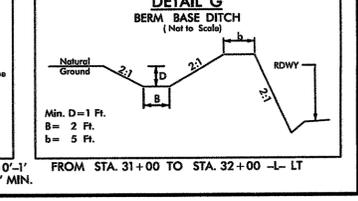
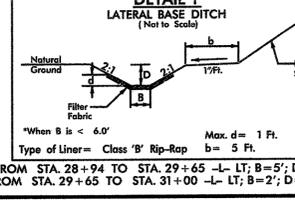
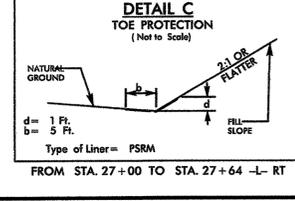
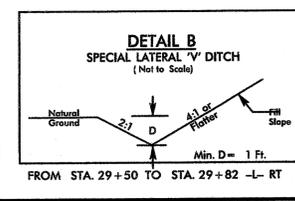
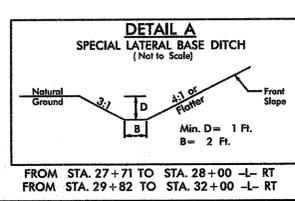
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SEE UC-16,17,&18 FOR -GSS02- PROFILE



0302DEL\_P12

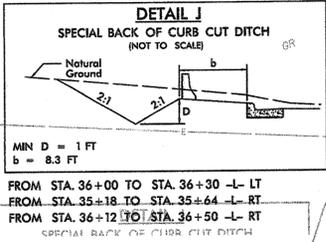
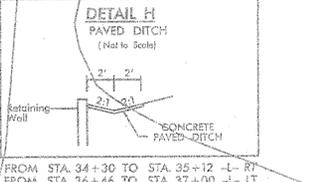
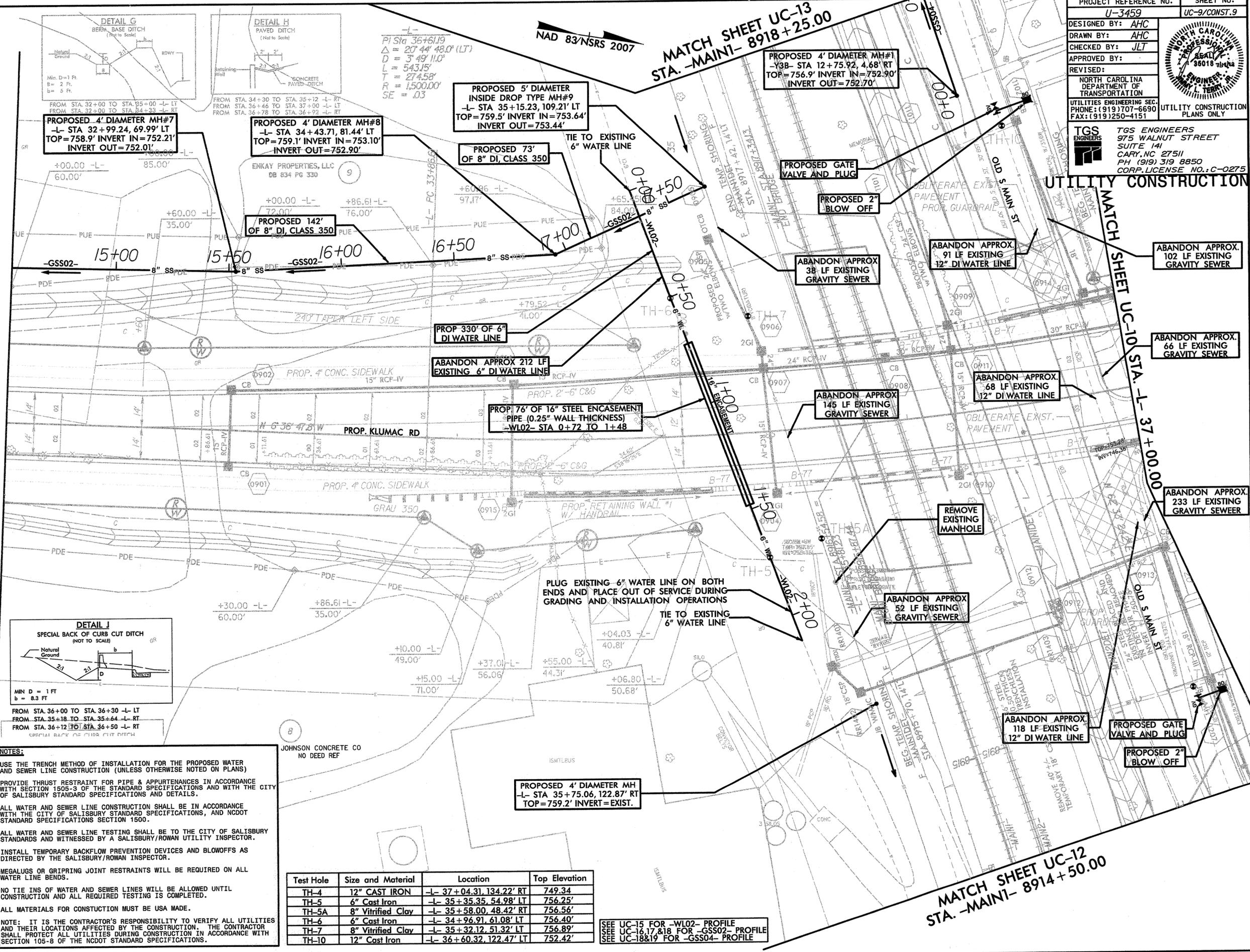
PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-9/CONST.9
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO. C-0275	

MATCH SHEET UC-8 STA. -L- 32+00.00

MATCH SHEET UC-13 STA. -MAIN- 8918+25.00

MATCH SHEET UC-10 STA. -L- 37+00.00

MATCH SHEET UC-12 STA. -MAIN- 8914+50.00



**NOTES:**

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Test Hole	Size and Material	Location	Top Elevation
TH-4	12" CAST IRON	-L- 37+04.31, 134.22' RT	749.34
TH-5	6" Cast Iron	-L- 35+35.35, 54.98' LT	756.25'
TH-5A	8" Vitrified Clay	-L- 35+58.00, 48.42' RT	756.56'
TH-6	6" Cast Iron	-L- 34+96.91, 61.08' LT	756.40'
TH-7	8" Vitrified Clay	-L- 35+32.12, 51.32' LT	756.89'
TH-10	12" Cast Iron	-L- 36+60.32, 122.47' LT	752.42'

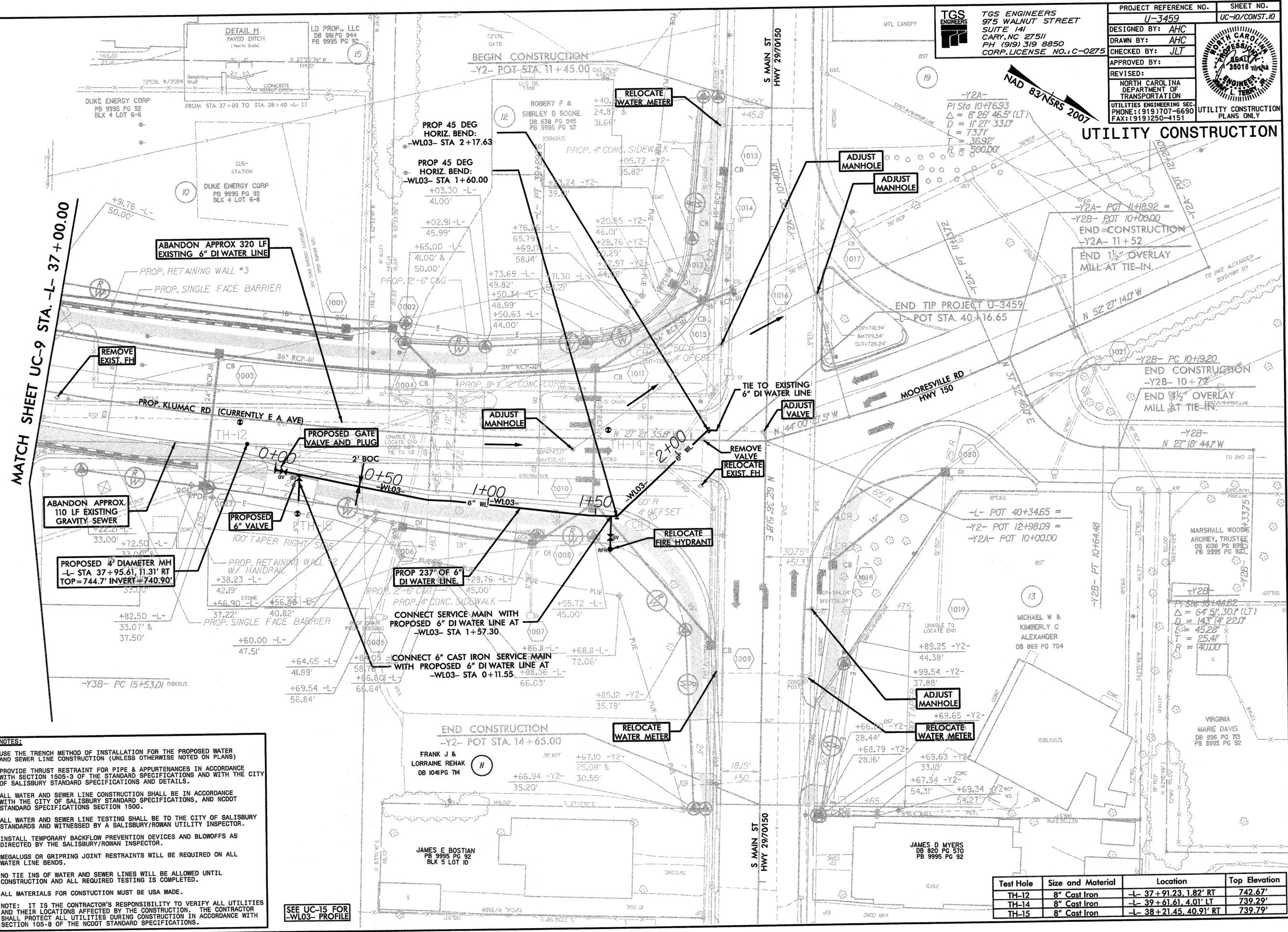
SEE UC-15 FOR -WLO2- PROFILE  
 SEE UC-16,17,18 FOR -GSS02- PROFILE  
 SEE UC-18&19 FOR -GSS04- PROFILE

0302DEL\_P12

**TGS ENGINEERS**  
 975 WALNUT STREET  
 SUITE 141  
 CARY, NC 27511  
 PH (919) 319 8850  
 CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-10/CONST.10
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 717-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY	

**UTILITY CONSTRUCTION**



**NOTES:**

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SEE UC-15 FOR WL03 PROFILE

Test Hole	Size and Material	Location	Top Elevation
TH-12	8" Cast Iron	-L- 37+91.23, 1.82' RT	742.67'
TH-14	8" Cast Iron	-L- 39+61.61, 4.01' LT	739.29'
TH-15	8" Cast Iron	-L- 38+21.45, 40.91' RT	739.79'

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 CARY, NC 27511  
 PH (919) 319 8850  
 CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UC-11/CONST.TK11
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

**FOR CURVE DATA  
 SEE SHEET TK-2A**

**UTILITY CONSTRUCTION**

Test Hole	Size and Material	Location	Top Elevation
TH-0	6" Cast Iron	-L- 37+31.72 878.80' RT	755.97'

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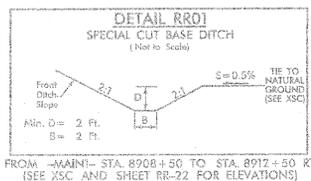
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GAULDEN MONUMENTS, INC  
 DB 634 PG 673

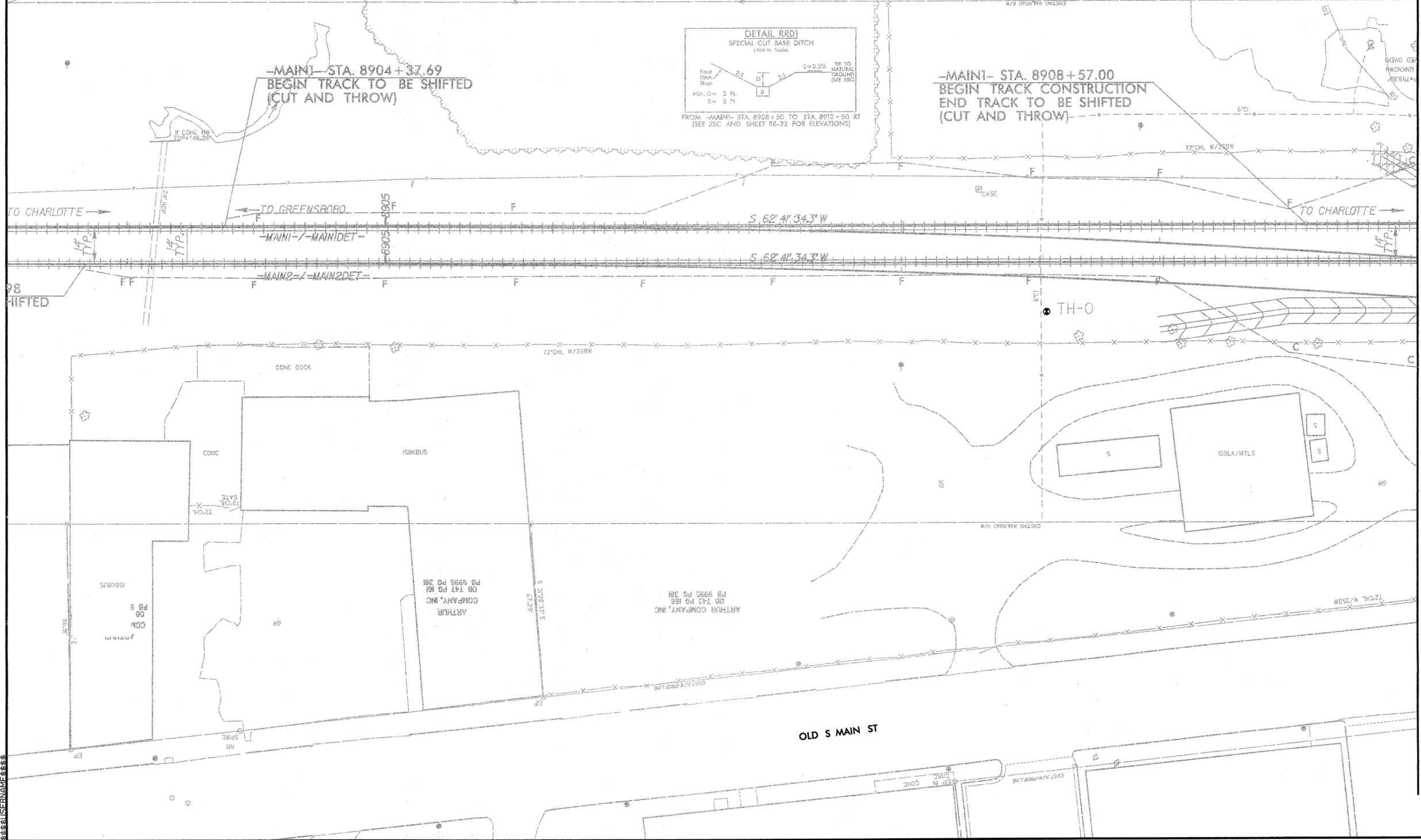
ROMAN COUNTY &  
 CITY OF SALISBURY  
 DB 867 PG 443

HOLMES IRON & METAL, INC  
 DB 780 PG 544



-MAIN1- STA. 8904+37.69  
 BEGIN TRACK TO BE SHIFTED  
 (CUT AND THROW)

-MAIN1- STA. 8908+57.00  
 BEGIN TRACK CONSTRUCTION  
 END TRACK TO BE SHIFTED  
 (CUT AND THROW)



MATCH SHEET UC-12 -MAIN1- STA. 8909 + 00.00

0302DEL\_P12

\*\*\*\*\*  
 CONSTRUCTION  
 \*\*\*\*\*

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-12/CONST.TK12
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

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Test Hole	Size and Material	Location	Top Elevation
TH-16	12" Cast Iron	-L- 37+30.06 336.65' RT	752.54'
TH-16A	2" Steel	-L- 37+31.30 336.42' RT	753.24'

SEE UC-16 FOR -WL04- PROFILE

**TGS ENGINEERS**  
 975 WALNUT STREET  
 SUITE 141  
 CARY, NC 27511  
 PH (919) 319 8850  
 CORP. LICENSE NO.: C-0275

UTILITY CONSTRUCTION

MATCH SHEET UC-11 -MAIN1- STA. 8909 + 00.00

MATCH SHEET UC-9 STA. -MAIN1- 8914 + 50.00

-MAIN2- STA. 8910+56.00  
BEGIN TRACK CONSTRUCTION  
END TRACK TO BE SHIFTED  
(CUT AND THROW)

SURVEYORS UNABLE TO LOCATE EXACT  
PLACEMENT OF SEWER LINE IN THE FIELD.  
CONTRACTOR IS RESPONSIBLE FOR  
RESOLVING ANY CONFLICT. RELOCATIONS WILL  
BE PAID UNDER SECTION 1520-4 PER NCDOT  
STANDARD SPECIFICATIONS.

SURVEYORS UNABLE TO LOCATE  
EXACT PLACEMENT OF WATER  
LINE IN THE FIELD. CONTRACTOR  
IS RESPONSIBLE FOR RESOLVING  
ANY CONFLICT. RELOCATIONS  
WILL BE PAID UNDER SECTION  
1510-4 PER NCDOT STANDARD  
SPECIFICATIONS.

SURVEYORS UNABLE TO LOCATE EXACT PLACEMENT  
OF ENCASEMENT IN THE FIELD. CONTRACTOR IS  
TO ENSURE ENCASEMENT EXTENDS BEYOND DETOUR  
CONSTRUCTION LIMITS. ADDITIONAL ENCASEMENT  
WILL BE PAID UNDER SECTION 1540-4 PER  
NCDOT STANDARD SPECIFICATIONS.

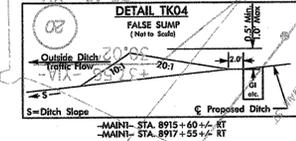
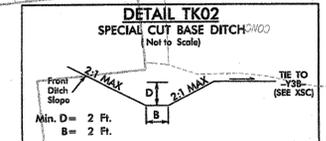
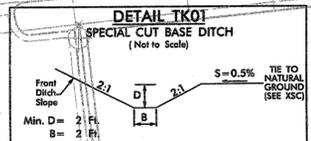
PROP 112' OF 12" DI WATER LINE

ABANDON APPROX 100 LF OF  
12" CAST IRON WATER LINE

USE EXIST. VALVE  
TO SHUT OFF LEG

TIE TO EXISTING 12"  
CAST IRON WATER LINE

TIE TO EXISTING 12"  
CAST IRON WATER LINE



FROM -MAIN1- STA. 8908+50 TO STA. 8912+50 RT  
(SEE XSC AND SHEET TK-21 FOR ELEVATIONS)

FROM -MAIN1- STA. 8913+00 TO STA. 8915+00 RT  
(SEE XSC AND SHEET TK-21 AND TK-22 FOR ELEVATIONS)

-MAIN1- STA. 8915+60+/- RT  
-MAIN1- STA. 8917+55+/- RT

SYSTEMS DOWN FOR MAINTENANCE

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-13/CONST.TK14
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

**TGS ENGINEERS**  
 975 WALNUT STREET  
 SUITE 141  
 CARY, NC 27511  
 PH (919) 319 8850  
 CORP. LICENSE NO.: C-0275

SEE UC-18&19 FOR -GSS04- PROFILE

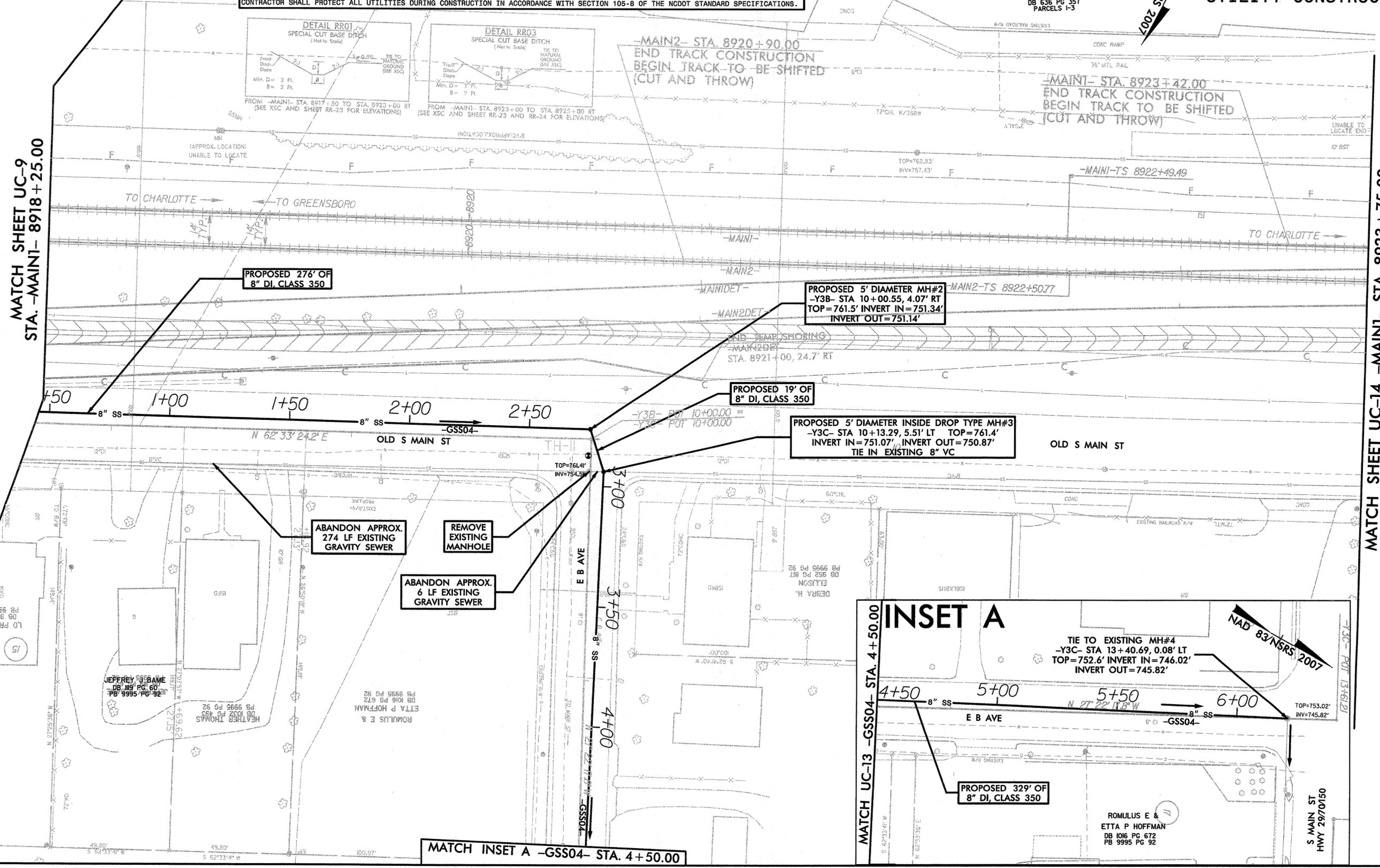
Test Hole	Size and Material	Location	Top Elevation
TH-11	12" Cast Iron	-L- 35+83.29 409.37'LT	758.52'

THERMOID, INC  
 DB 636 PG 357  
 PARCELS 1-3

### UTILITY CONSTRUCTION

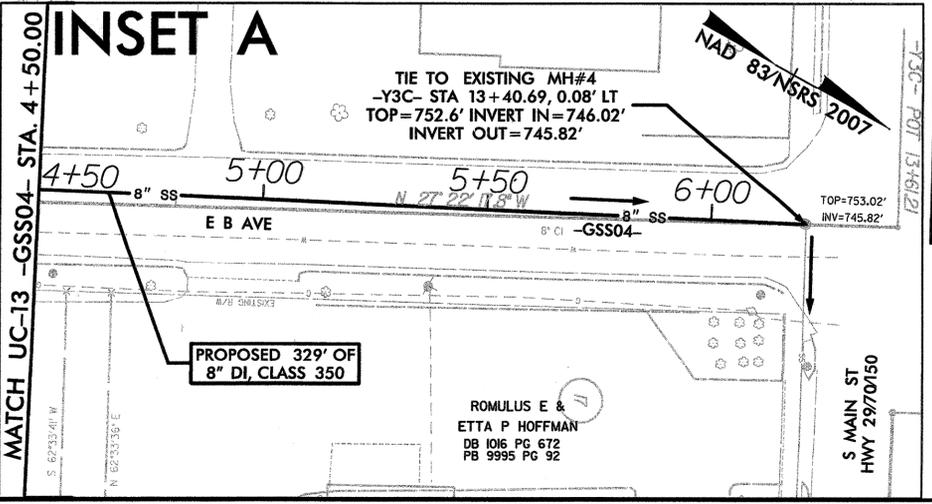
**NOTES:**  
 USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)  
 PROVIDE THRUST RESTRAINT FOR PIPE & APPURTENANCES IN ACCORDANCE WITH SECTION 1505-3 OF THE STANDARD SPECIFICATIONS AND WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS AND DETAILS.  
 ALL WATER AND SEWER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS, AND NCDOT STANDARD SPECIFICATIONS SECTION 1500.  
 ALL WATER AND SEWER LINE TESTING SHALL BE TO THE CITY OF SALISBURY STANDARDS AND WITNESSED BY A SALISBURY/ROWAN UTILITY INSPECTOR.  
 INSTALL TEMPORARY BACKFLOW PREVENTION DEVICES AND BLOWOFFS AS DIRECTED BY THE SALISBURY/ROWAN INSPECTOR.  
 MEGALUGS OR GRIPPING JOINT RESTRAINTS WILL BE REQUIRED ON ALL WATER LINE BENDS.  
 NO TIE INS OF WATER AND SEWER LINES WILL BE ALLOWED UNTIL CONSTRUCTION AND ALL REQUIRED TESTING IS COMPLETED.  
 ALL MATERIALS FOR CONSTRUCTION MUST BE USA MADE.  
 NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES AND THEIR LOCATIONS AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL UTILITIES DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 105-8 OF THE NCDOT STANDARD SPECIFICATIONS.

ENKAY PROPERTIES, LLC  
 DB 834 PG 350



MATCH SHEET UC-9  
 STA. -MAIN1- 8918 + 25.00

MATCH SHEET UC-14 -MAIN1- STA. 8923 + 75.00



MATCH INSET A -GSS04- STA. 4+50.00

0302DEL\_P12

FOR CURVE DATA SEE SHEET TK-2A

PROJECT REFERENCE NO.	U-3459	SHEET NO.	UC-14/CONST.TK15
DESIGNED BY:	AHC		
DRAWN BY:	AHC		
CHECKED BY:	JLT		
APPROVED BY:			
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
		UTILITY CONSTRUCTION PLANS ONLY	

**NOTES:**

USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)

PROVIDE THRUST RESTRAINT FOR PIPE & APPURTENANCES IN ACCORDANCE WITH SECTION 1505-3 OF THE STANDARD SPECIFICATIONS AND WITH THE CITY OF SALISBURY STANDARD SPECIFICATIONS AND DETAILS.

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MEGALUGS OR GRIPRING JOINT RESTRAINTS WILL BE REQUIRED ON ALL WATER LINE BENDS.

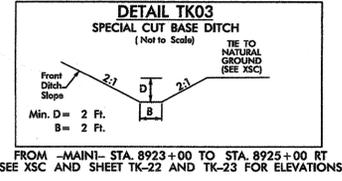
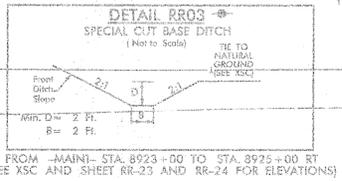
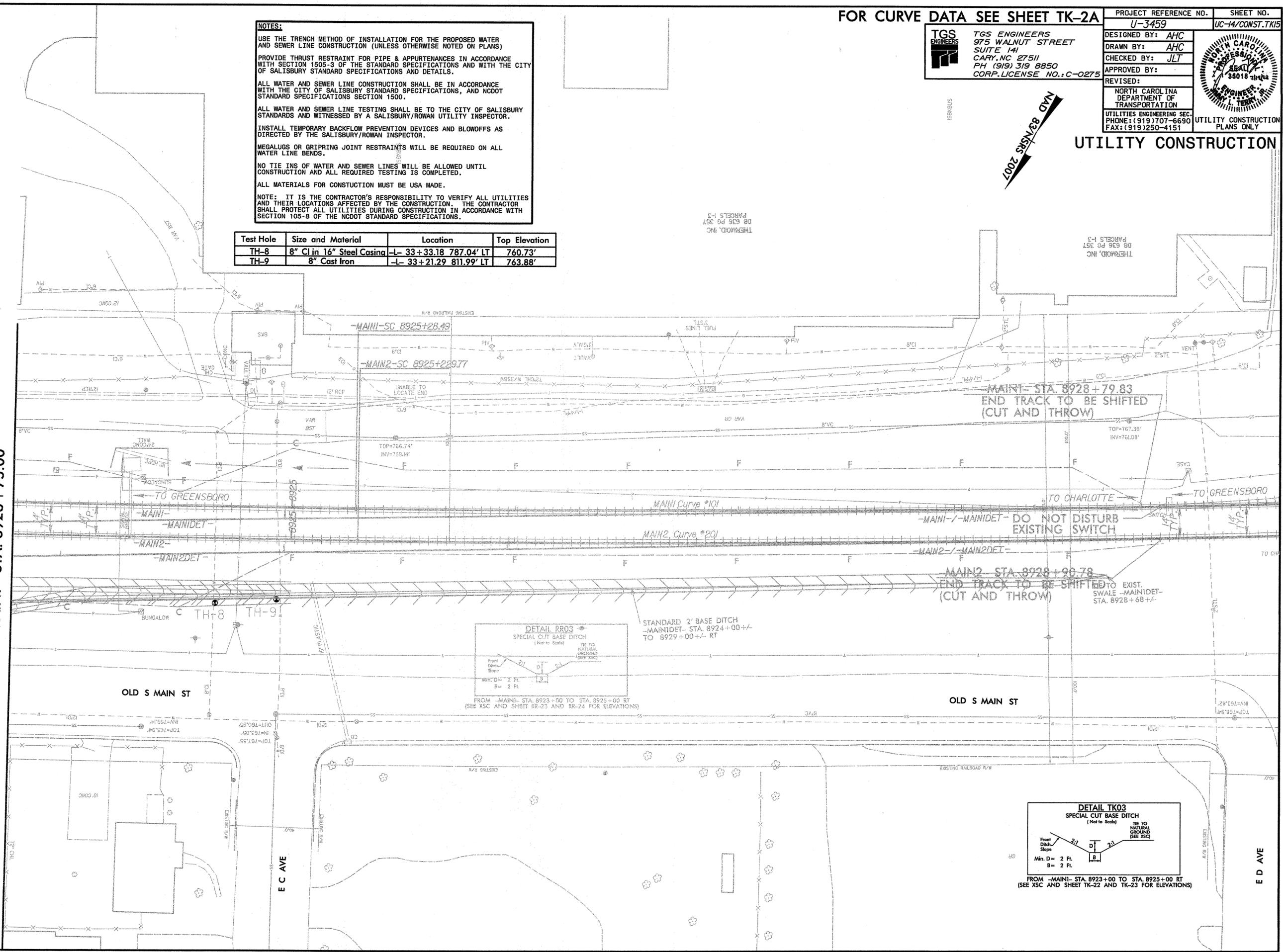
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ALL MATERIALS FOR CONSTRUCTION MUST BE USA MADE.

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES AND THEIR LOCATIONS AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL UTILITIES DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 105-8 OF THE NCDOT STANDARD SPECIFICATIONS.

Test Hole	Size and Material	Location	Top Elevation
TH-8	8" Cl in 16" Steel Casing	-L- 33+33.18 787.04' LT	760.73'
TH-9	8" Cast Iron	-L- 33+21.29 811.99' LT	763.88'

MATCH SHEET UC-13 -MAIN1- STA. 8923 + 75.00

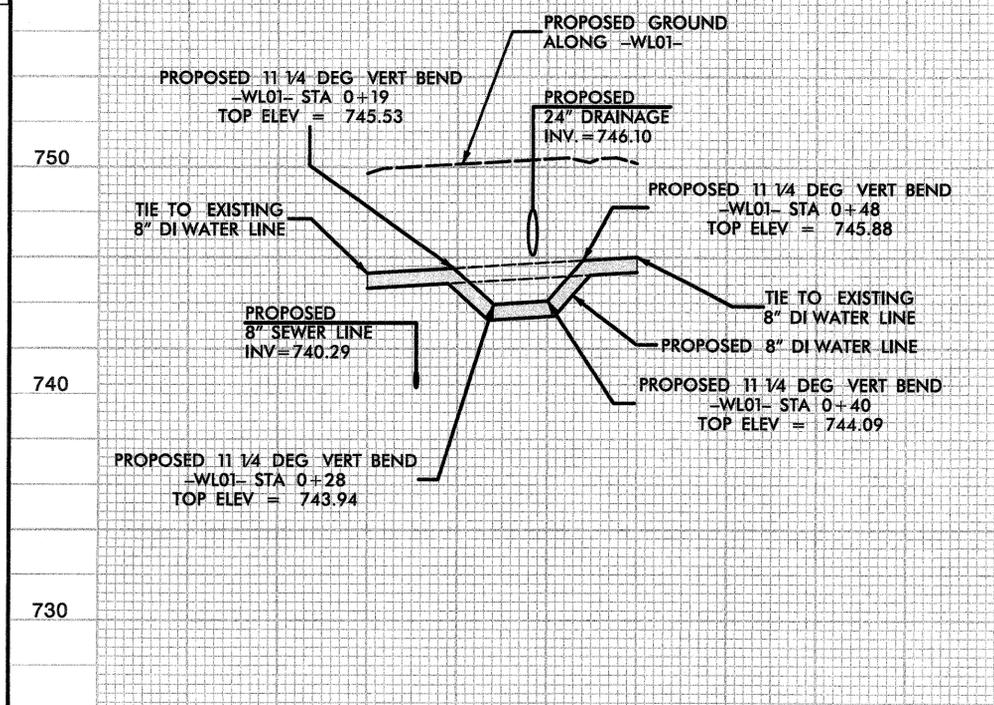


SYSTEMS ENGINEERING

0302DEL\_P12

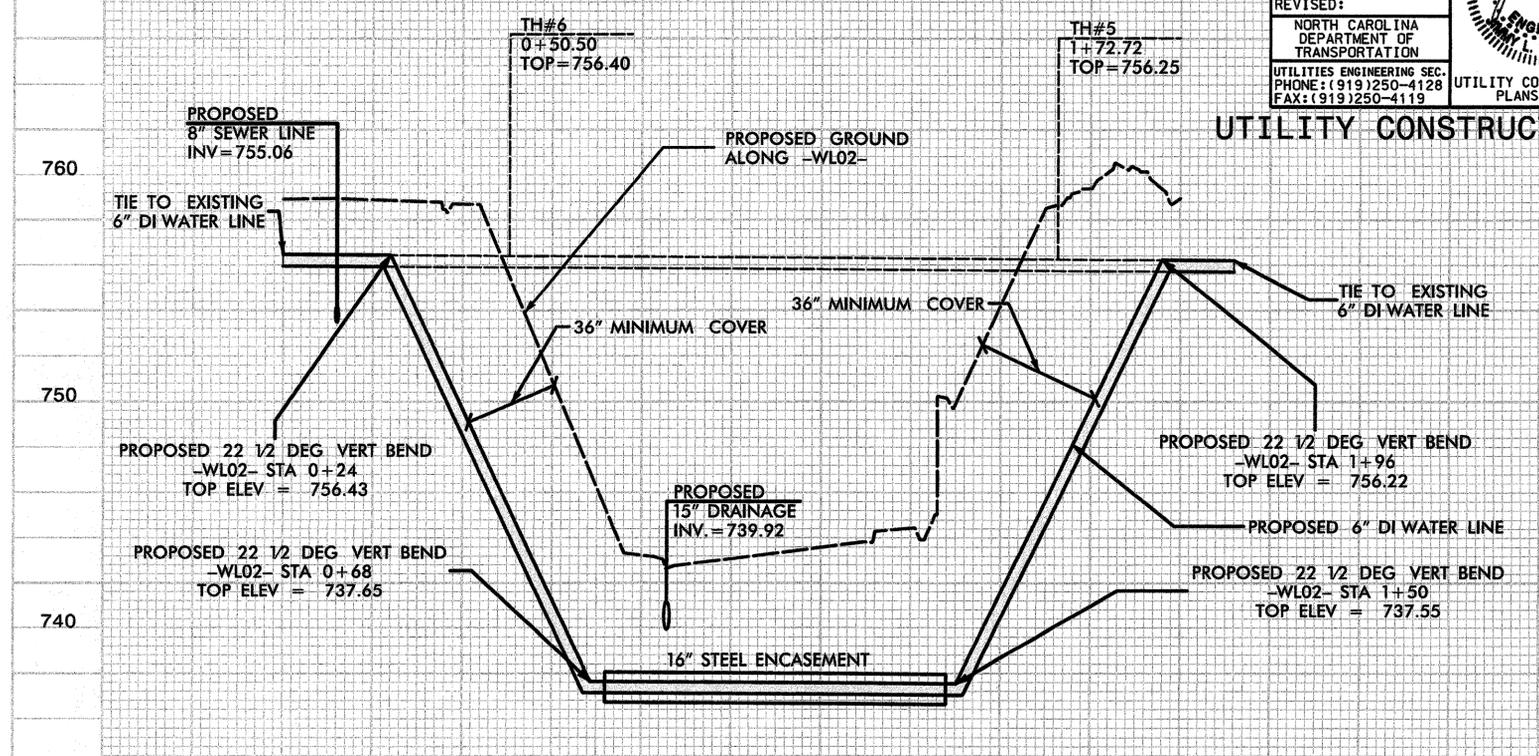
# WL01

SEE UC-6 FOR -WL01- PLAN



# WL02

SEE UC-9 FOR -WL02- PLAN



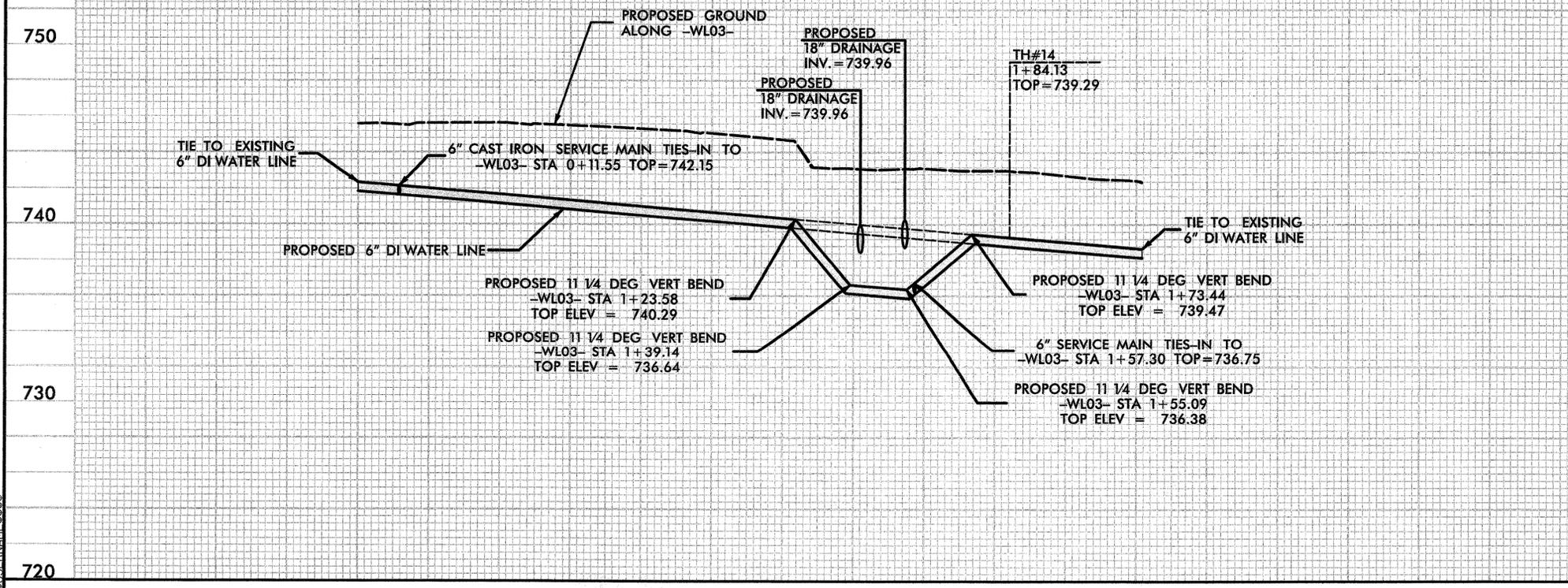
## UTILITY CONSTRUCTION

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-15
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

760 0+20 0+40 0+60 0+80 1+00 1+20 1+40 1+60 1+80 2+00

# WL03

SEE UC-10 FOR -WL03- PLAN



**NOTES:**

USE THE TRENCH METHOD OF INSTALLATION FOR THE PROPOSED WATER AND SEWER LINE CONSTRUCTION (UNLESS OTHERWISE NOTED ON PLANS)

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ALL MATERIALS FOR CONSTRUCTION MUST BE USA MADE.

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES AND THEIR LOCATIONS AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL UTILITIES DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 105-8 OF THE NCDOT STANDARD SPECIFICATIONS.

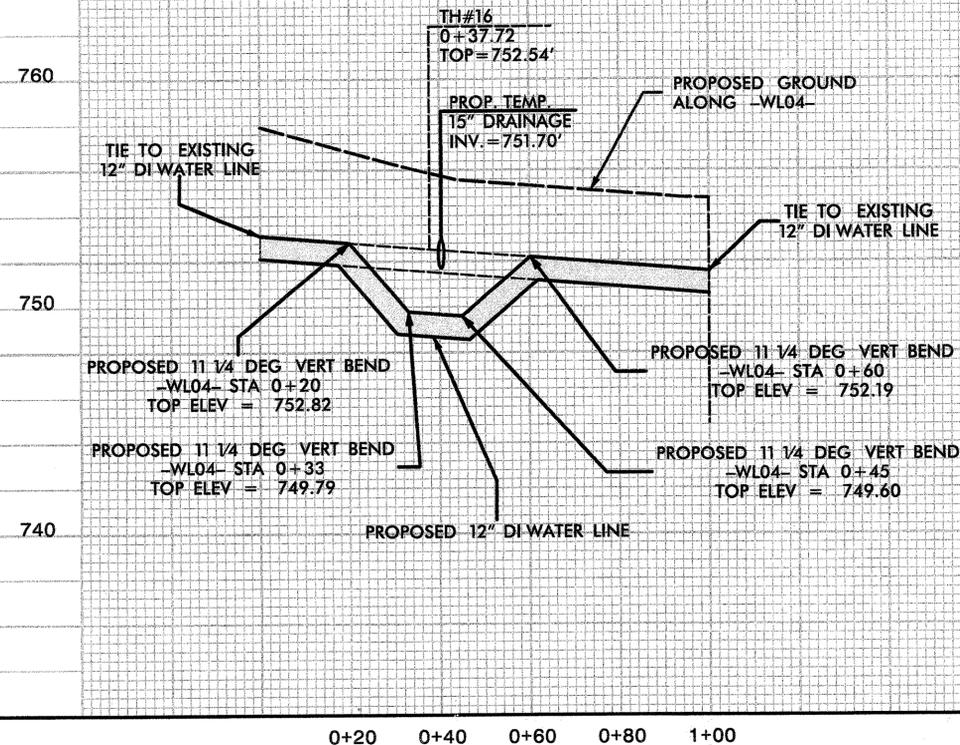
720 0+20 0+40 0+60 0+80 1+00 1+20 1+40 1+60 1+80 2+00 2+20

SYSTEMS ENGINEERING

0302DEL\_P12

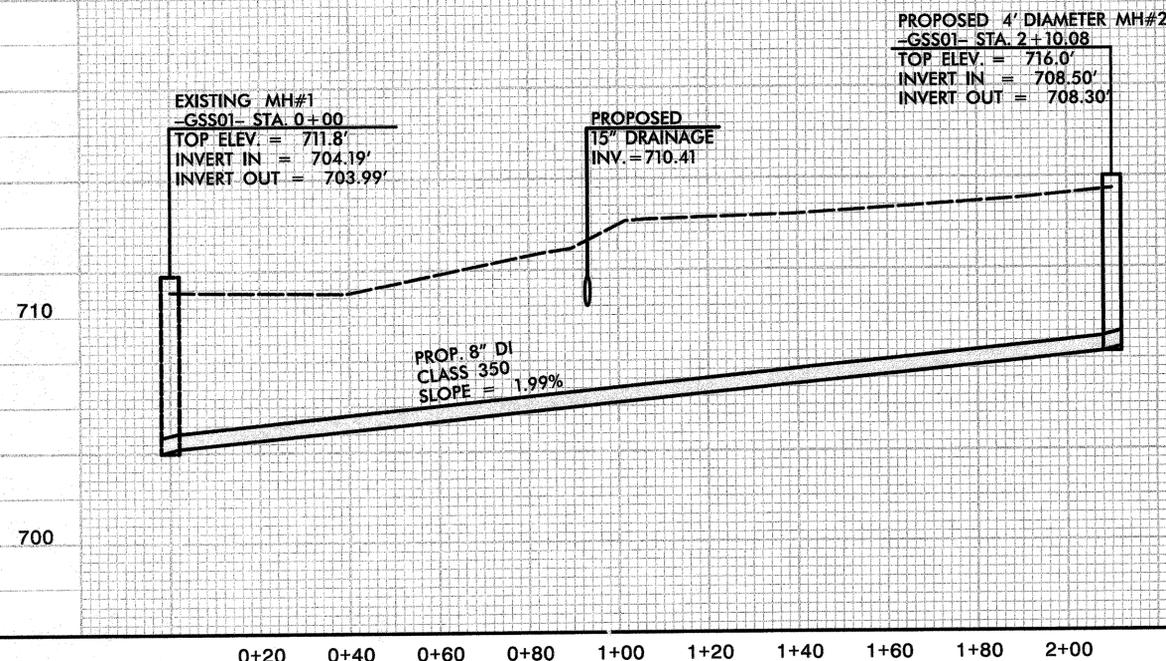
# WL04

SEE UC-12 FOR -WL04- PLAN



# GSS01

SEE UC-4&5 FOR -GSS01- PLAN



PROJECT REFERENCE NO. U-3459	SHEET NO. UC-16
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

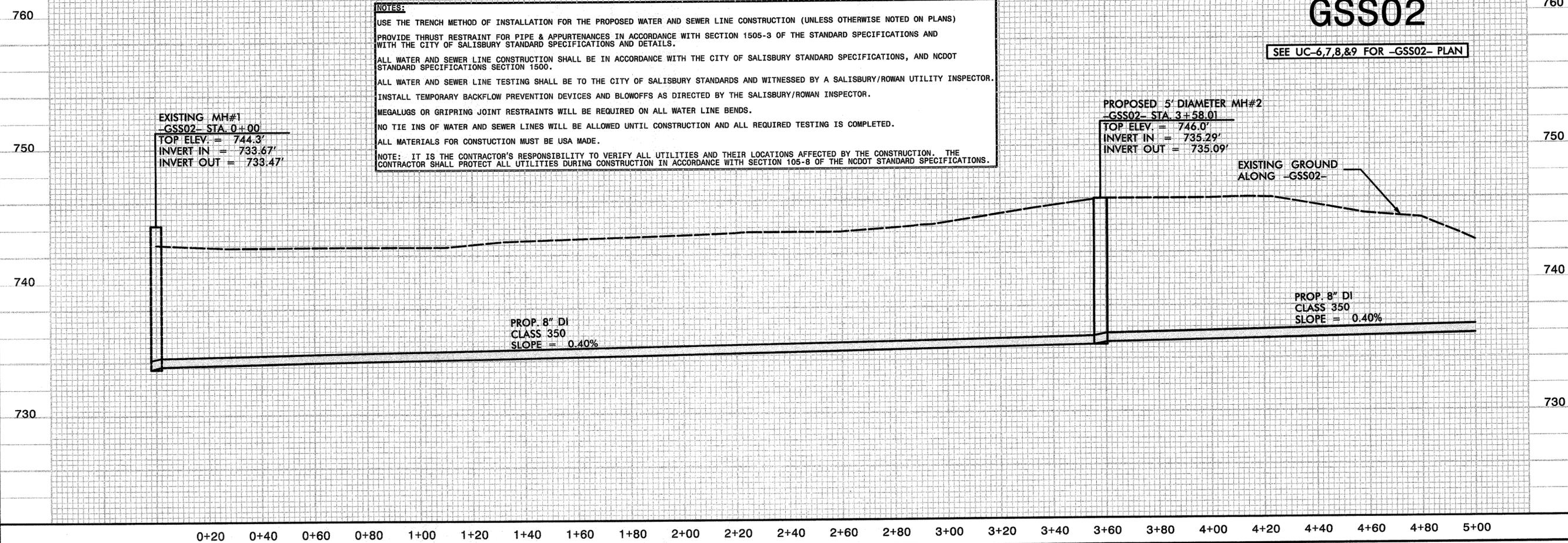
## UTILITY CONSTRUCTION

### NOTES:

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# GSS02

SEE UC-6,7,8,&9 FOR -GSS02- PLAN



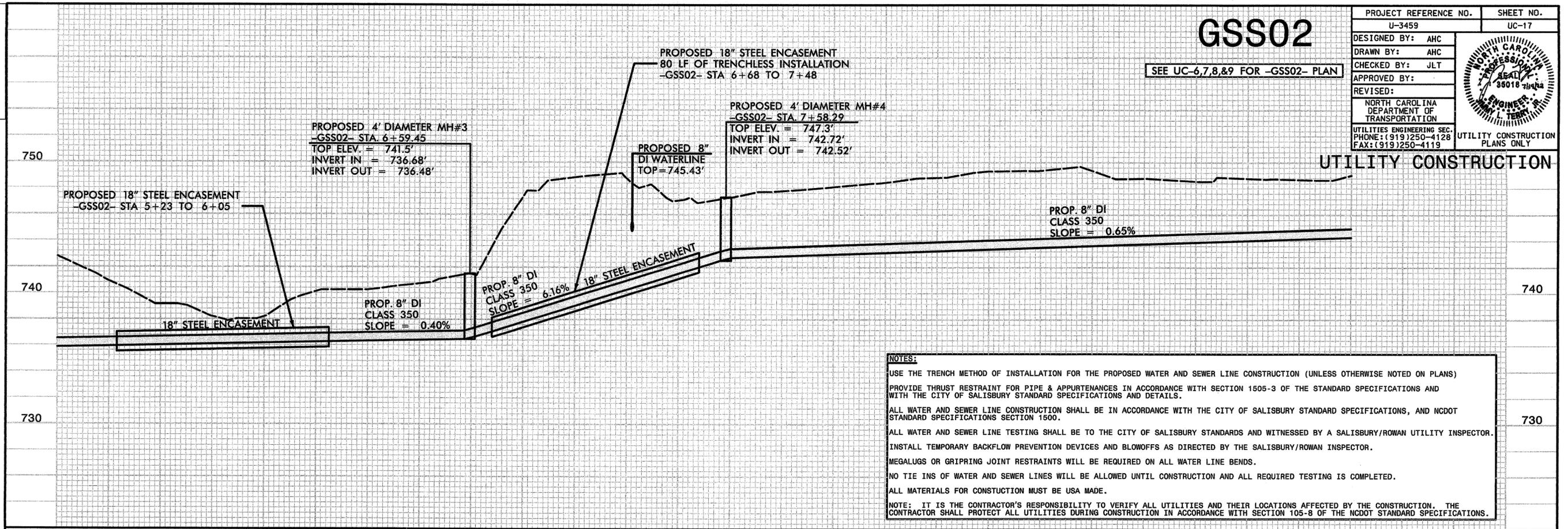
SYSTEMS ENGINEERING

0302DEL\_P12

# GSS02

SEE UC-6,7,8,&9 FOR -GSS02- PLAN

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-17
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	

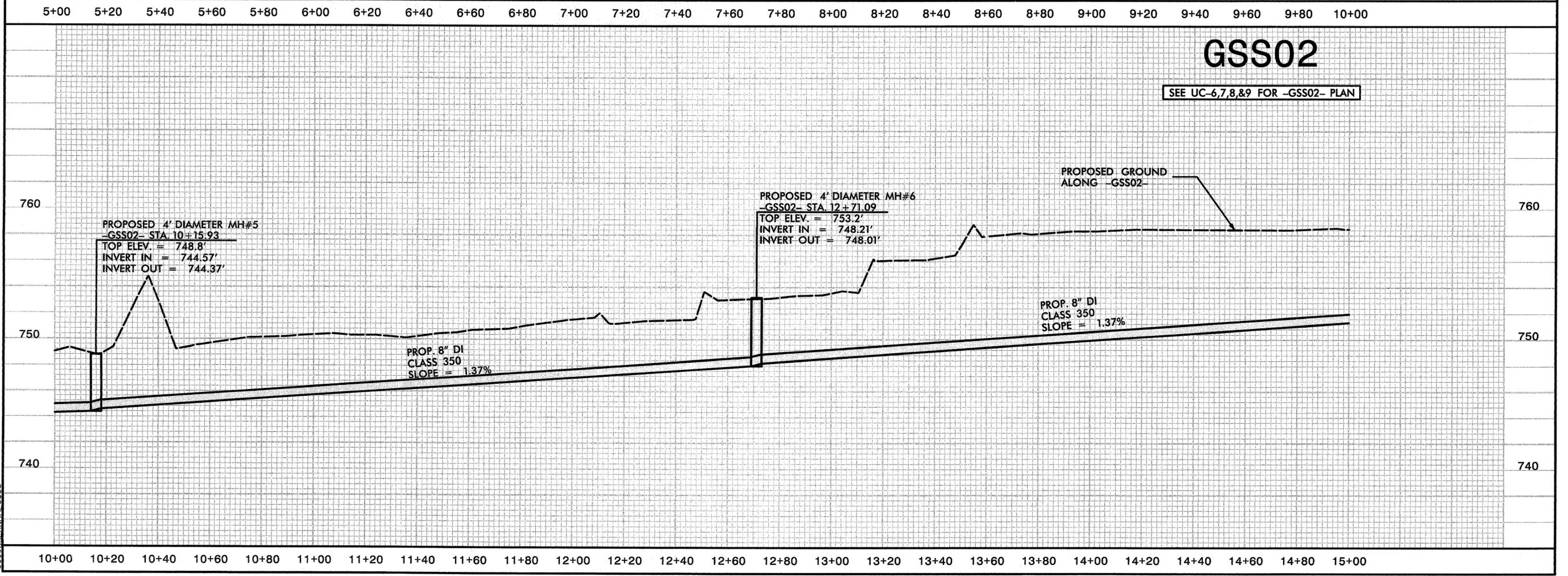


**NOTES:**

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# GSS02

SEE UC-6,7,8,&9 FOR -GSS02- PLAN



SYSTEMS ENGINEERING  
 CONSULTANTS  
 INC.

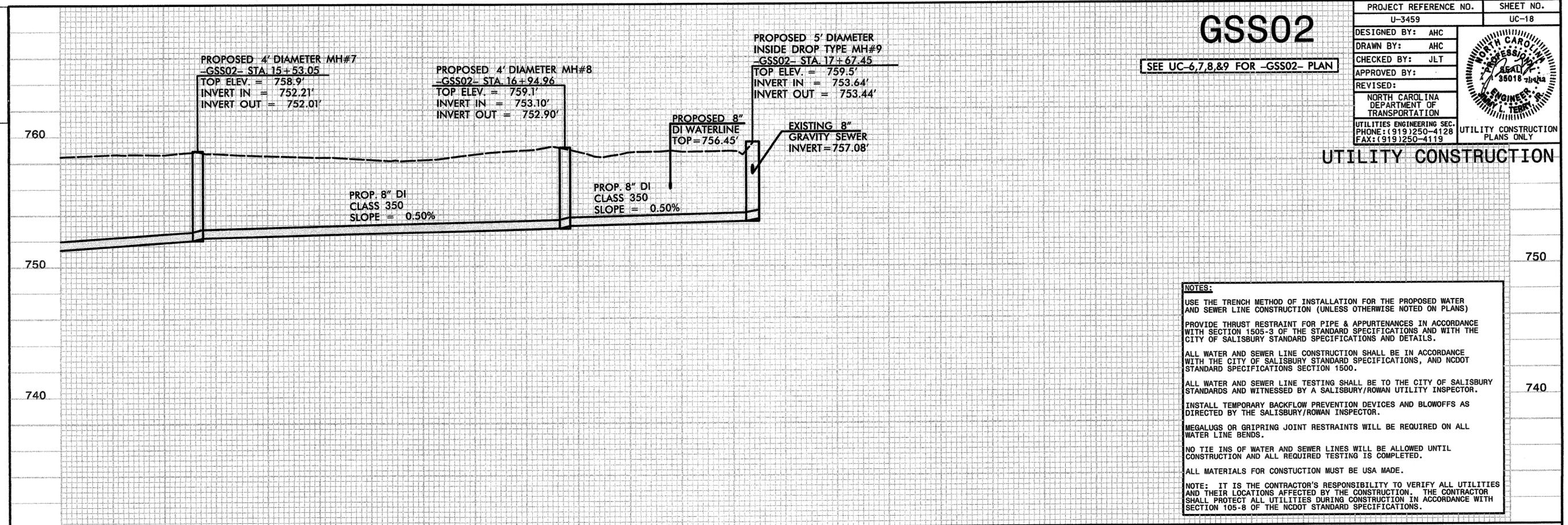
030ZDEL\_P12

# GSS02

SEE UC-6,7,8,&9 FOR -GSS02- PLAN

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-18
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

## UTILITY CONSTRUCTION



**NOTES:**

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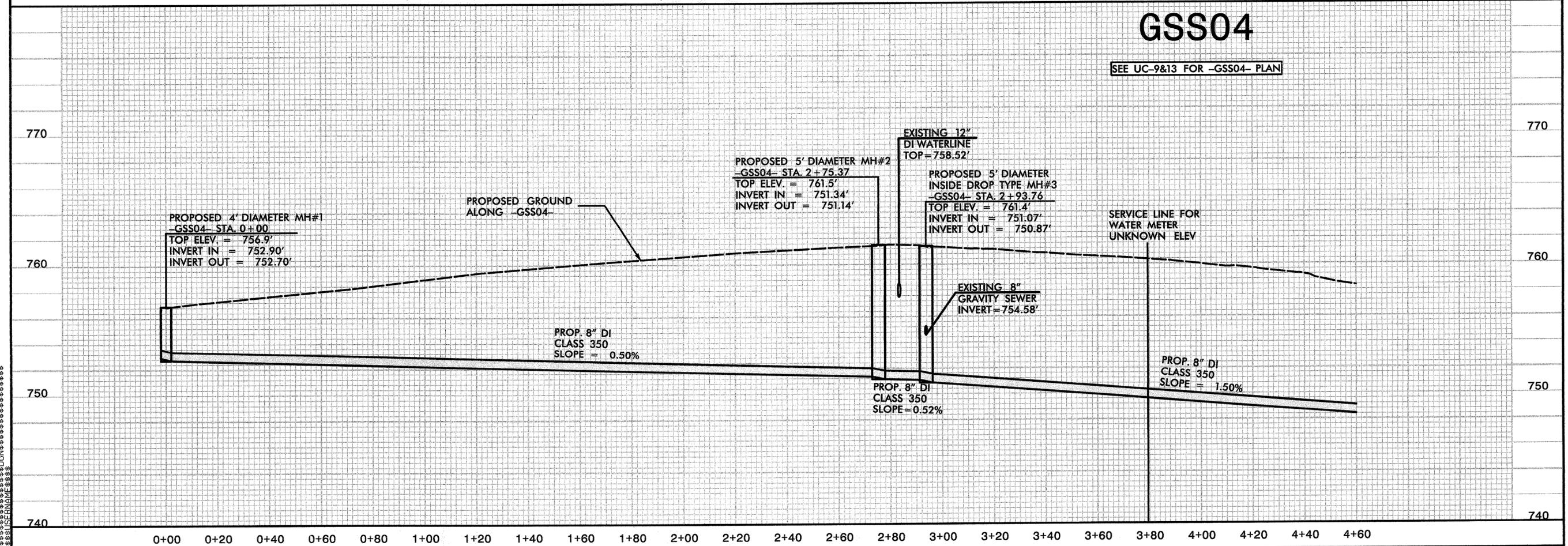
ALL MATERIALS FOR CONSTRUCTION MUST BE USA MADE.

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15+00 15+20 15+40 15+60 15+80 16+00 16+20 16+40 16+60 16+80 17+00 17+20 17+40 17+60

# GSS04

SEE UC-9&13 FOR -GSS04- PLAN



0+00 0+20 0+40 0+60 0+80 1+00 1+20 1+40 1+60 1+80 2+00 2+20 2+40 2+60 2+80 3+00 3+20 3+40 3+60 3+80 4+00 4+20 4+40 4+60

SYTIME

PLAN

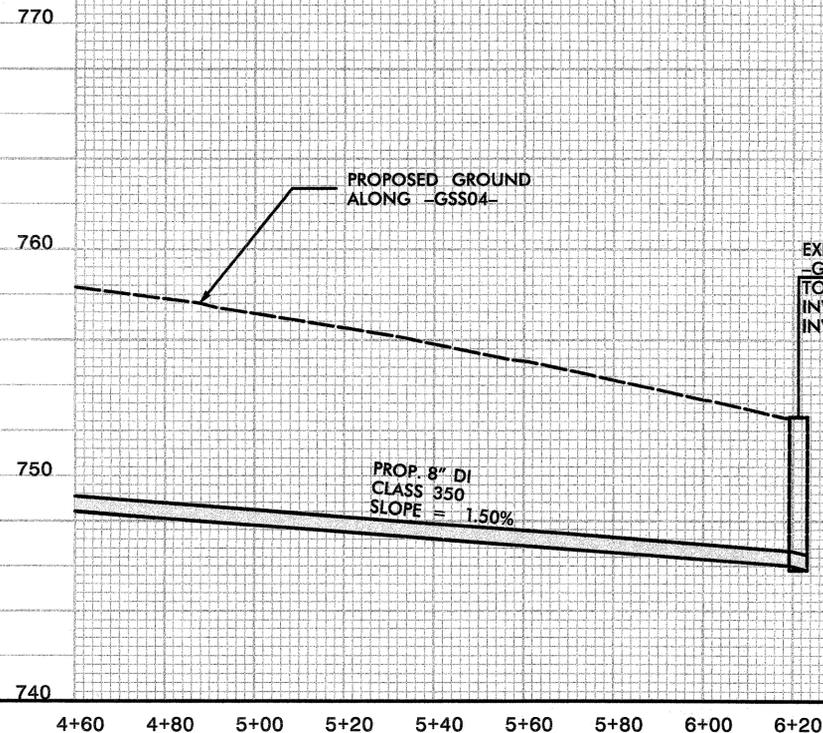
0302DEL\_P12

# GSS04

SEE UC-9&13 FOR GSS04 PLAN

PROJECT REFERENCE NO. U-3459	SHEET NO. UC-19
DESIGNED BY: AHC	
DRAWN BY: AHC	
CHECKED BY: JLT	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

## UTILITY CONSTRUCTION



EXISTING MH#4  
 -GSS04- STA. 6+21.21  
 TOP ELEV. = 752.6'  
 INVERT IN = 746.02'  
 INVERT OUT = 745.82'

PROP. 8" DI  
 CLASS 350  
 SLOPE = 1.50%

**NOTES:**

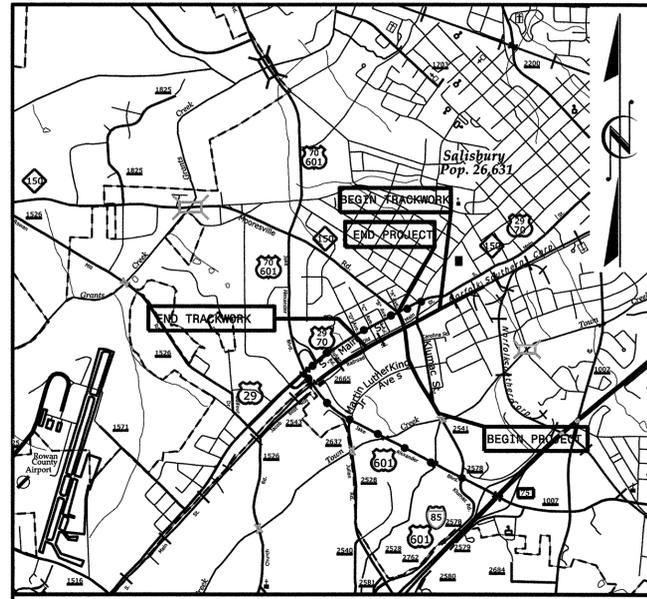
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\*\*\*\*\*  
 SYSTEMS  
 \*\*\*\*\*

0302DEL\_P12

TIP PROJECT: U-3459

CONTRACT:



VICINITY MAP

OFFSITE DETOUR

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

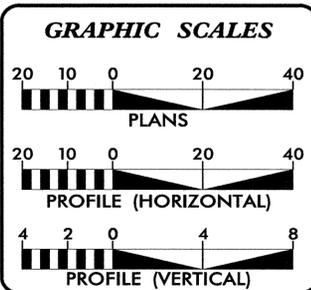
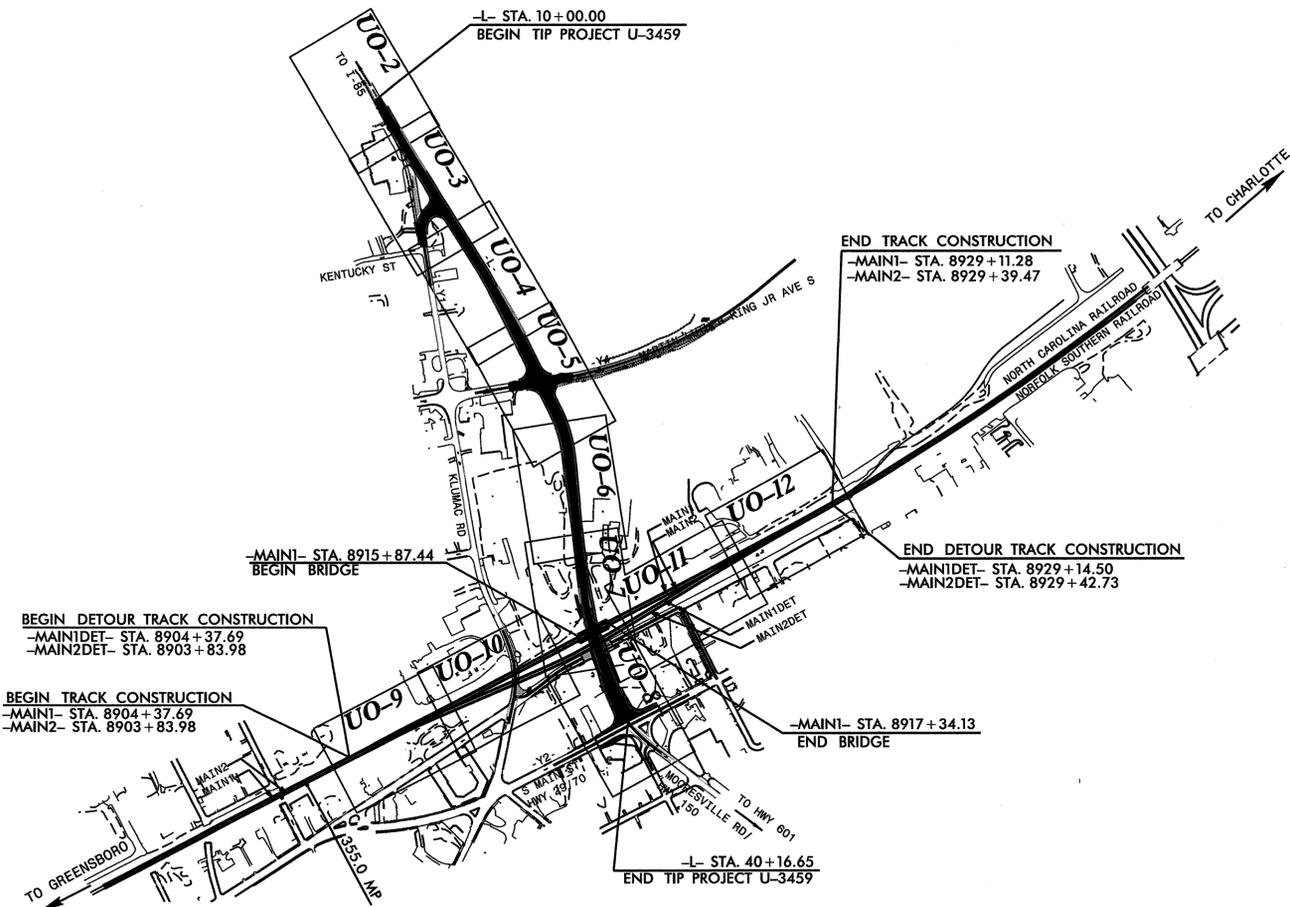


T.I.P. NO.	SHEET NO.
U-3459	UO-1

**UTILITIES BY OTHERS PLANS**  
**ROWAN COUNTY**

LOCATION: PROPOSED SR 2541 (KLUMAC ROAD) GRADE SEPARATION  
WITH THE NORTH CAROLINA RAILROAD/NORFOLK  
SOUTHERN CORPORATION

TYPE OF WORK: UTILITIES BY OTHERS



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-12	UTILITIES BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
(1) POWER - DUKE ENERGY
(2) TELEPHONE - AT&T and WINDSTREAM
(3) CABLE TV - TIME WARNER CABLE
(4) FIBER OPTIC - FIBRANT (CITY OF SALISBURY)
(5) NATURAL GAS - PIEDMONT NATURAL GAS

PLANS PREPARED BY:	PLANS PREPARED FOR:
 DAVIS-MARTIN-POWELL 6415 OLD PLANK ROAD HIGH POINT, NC 27265 PHONE: (336) 886-4821 FAX: (336) 886-4458 CORP. LICENSE NO.: F-0245	NCDOT RAIL DIVISION SANDRA A. STEPNEY, PE SENIOR PROJECT ENGINEER
2012 STANDARD SPECIFICATIONS	

\$\$\$\$\$SYTIME\$\$\$\$\$  
 \$\$\$DDGN\$\$\$\$\$  
 \$\$\$USERNAME\$\$\$\$\$

UTILITIES BY OTHERS

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

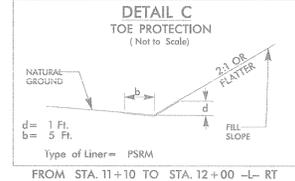
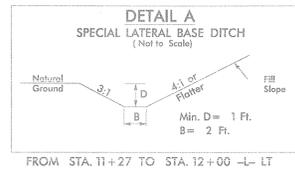
LEGEND

- PROPOSED JOINT-USE UTILITY POLE
- PROPOSED POWER POLE
- PROPOSED TELEPHONE POLE

NOTE: UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.



-L-  
 PI Sta 12+76.84  
 $\Delta = 2^{\circ} 31' 33.2''$  (LT)  
 $D = 1^{\circ} 08' 45.3''$   
 $L = 220.43'$   
 $T = 110.23'$   
 $R = 5,000.00'$   
 $SE = N/C$



BEGIN TIP PROJECT U-3459  
 -L- POT STA. 10+00.00

TOP=712.92'  
 INV=698.32'

SALISBURY BLVD GROUP  
 DB 622 PG 897  
 PB 9995 PG 1939  
 BACK REF:  
 DB 622 PG 746

BEGIN PROP. 4" CONC. SIDEWALK  
 -L- Sta. 11+66.61

BEGIN PROP. 2'-6" C&G  
 -L- Sta. 11+57.90

CLASS B RIP RAP  
 EST. 2 TONS  
 EST. 7 SY FF

TOP=717.79'  
 INV=703.99'

TO JAKE ALEXANDER  
 BLVD/HWY 601

KLUMAC RD SR 2541 24' BST

N 29° 54' 40.6" W

288 ST  
 144 ST

BEGIN PROP. 2'-6" C&G  
 -L- Sta. 11+16.28

(TO REMAIN)

(TO REMAIN)

(TO REMAIN)

CLASS B RIP RAP  
 EST. 2 TONS  
 EST. 7 SY FF

BEGIN PROP. 4" CONC. SIDEWALK  
 -L- Sta. 11+25

ROWAN CORPORATION  
 DB 858 PG 811  
 PB 9995 PG 2934  
 TRACT 2A

GEORGIA STREET (UNOPENED)  
 PB 9995 PG 2934

MATCH SHEET UO-3 STA. -L- 12+00.00

CONSTRUCTION CONDITIONS

### UTILITIES BY OTHERS

NOTE:  
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

#### LEGEND

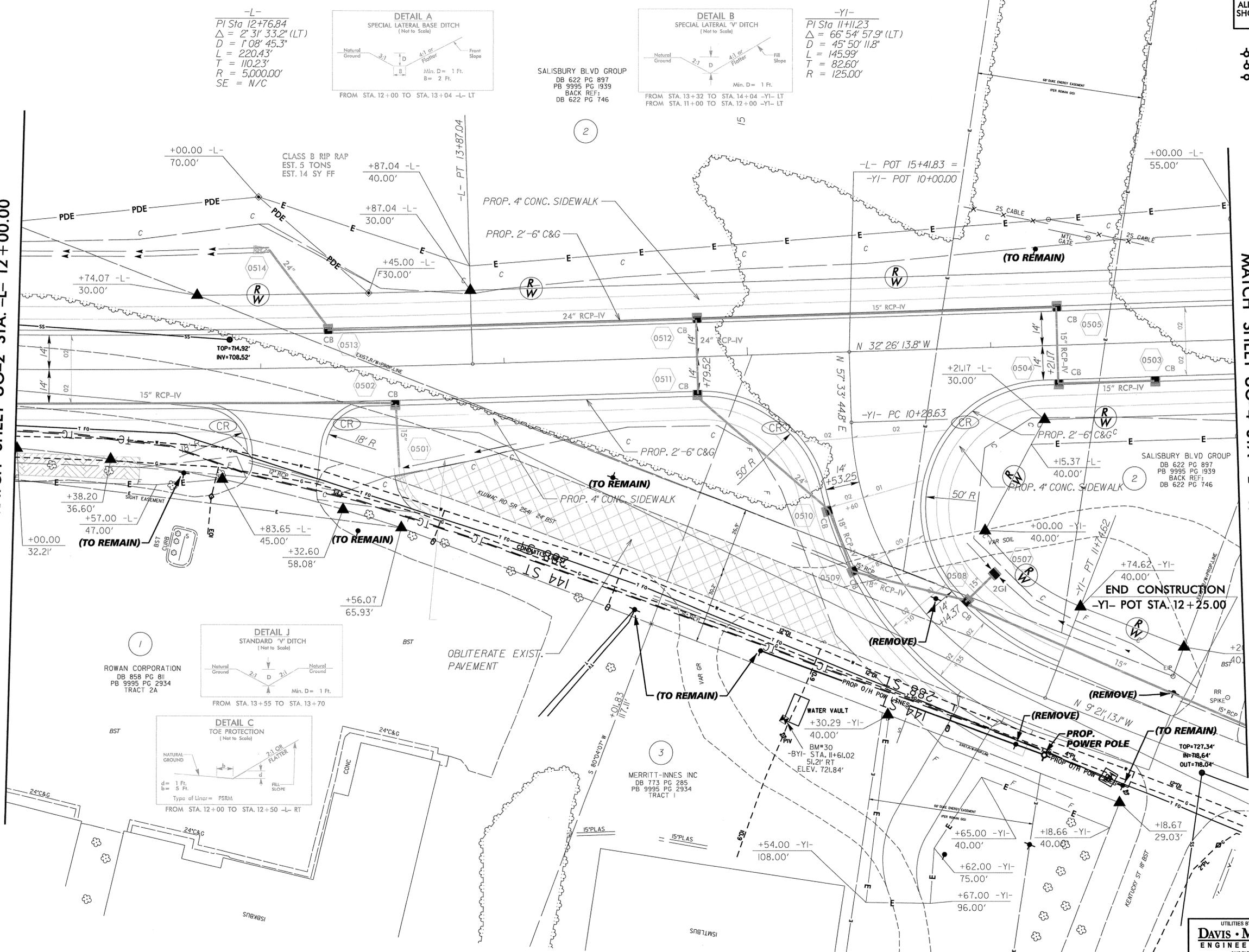
- ⊕ PROPOSED JOINT-USE UTILITY POLE
- ⊙ PROPOSED POWER POLE
- ⊖ PROPOSED TELEPHONE POLE



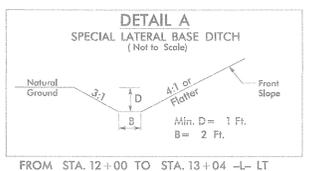
NOTE:  
UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.

MATCH SHEET UO-2 STA. -L- 12+00.00

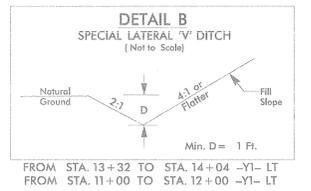
MATCH SHEET UO-4 STA. -L- 17+00.00



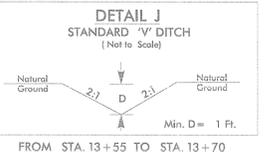
-L-  
PI Sta 12+76.84  
Δ = 2' 31" 33.2" (LT)  
D = 1' 08" 45.3"  
L = 220.43'  
T = 110.23'  
R = 5,000.00'  
SE = N/C



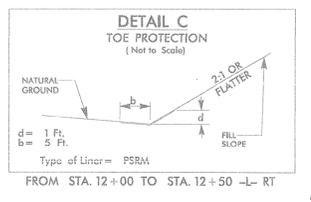
SALISBURY BLVD GROUP  
DB 622 PG 897  
PB 9995 PG 1939  
BACK REF:  
DB 622 PG 746



-YI-  
PI Sta 11+11.23  
Δ = 66' 54" 57.9" (LT)  
D = 45' 50" 11.8"  
L = 145.99'  
T = 82.60'  
R = 125.00'



ROWAN CORPORATION  
DB 858 PG 811  
PB 9995 PG 2934  
TRACT 2A



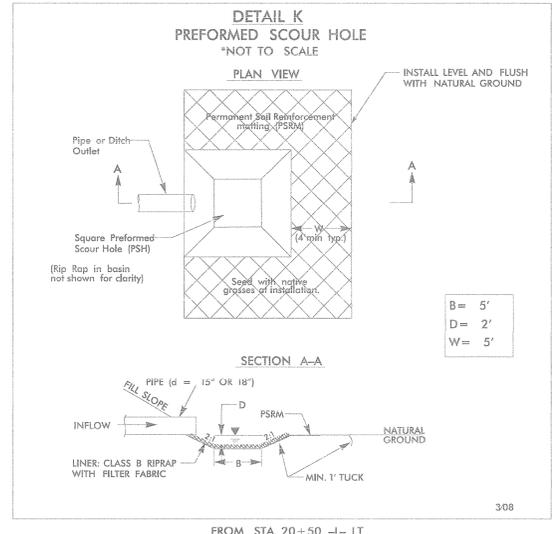
UTILITIES BY OTHERS

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

LEGEND

- PROPOSED JOINT-USE UTILITY POLE
- PROPOSED POWER POLE
- PROPOSED TELEPHONE POLE

NOTE: UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.



-L-

PI Sta 20+00.50

$\Delta = 5' 42" 18.4" (RT)$

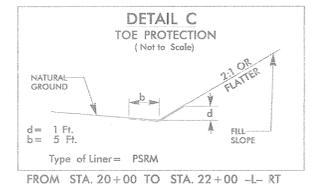
$D = 1' 08" 45.3"$

$L = 497.87'$

$T = 249.14'$

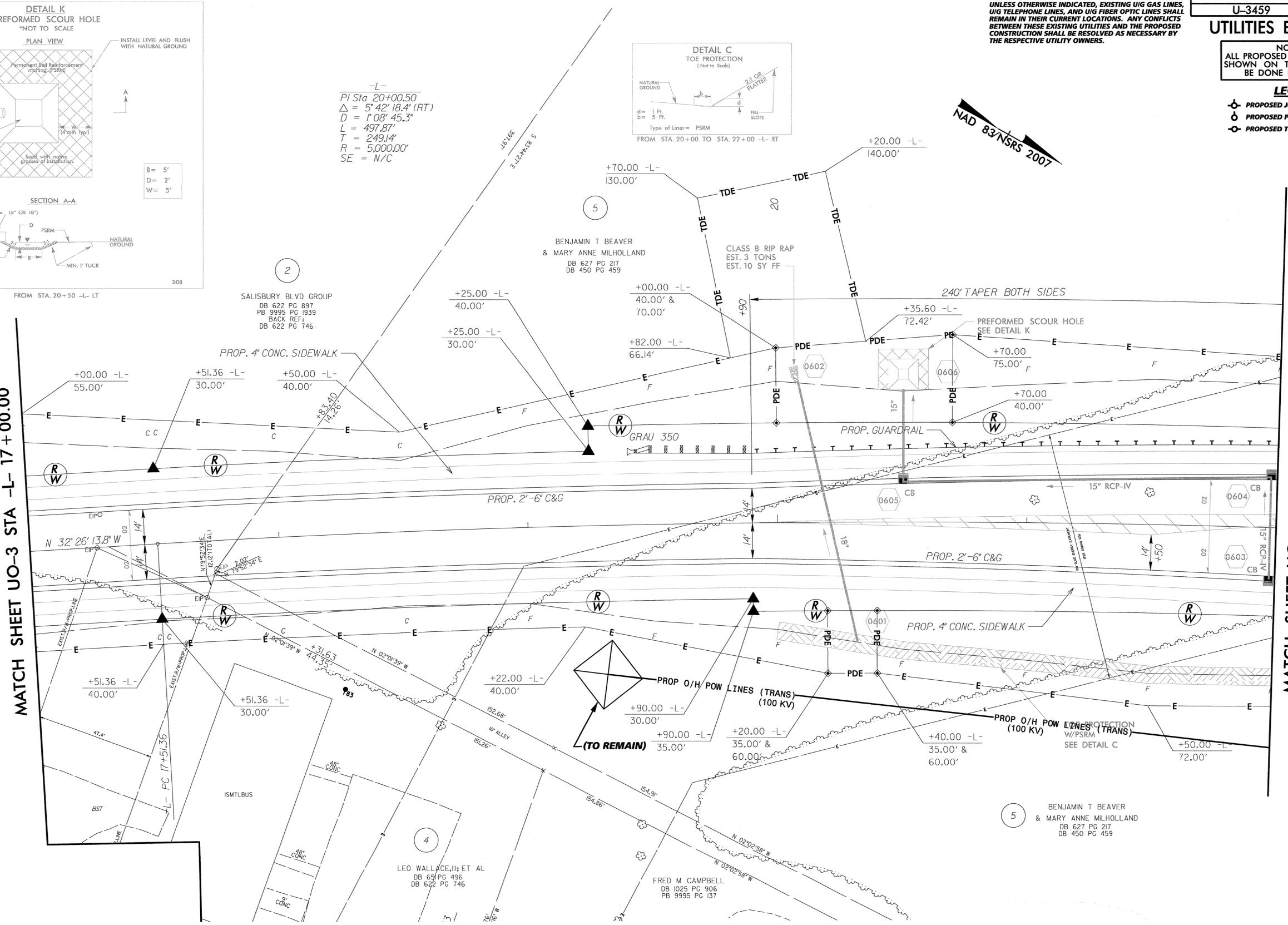
$R = 5,000.00'$

SE = N/C



MATCH SHEET UO-3 STA -L- 17+00.00

MATCH SHEET UO-5 STA -L- 22+00.00



SECTION CUTS TO BE SHOWN AT THE BOTTOM OF THE SHEET



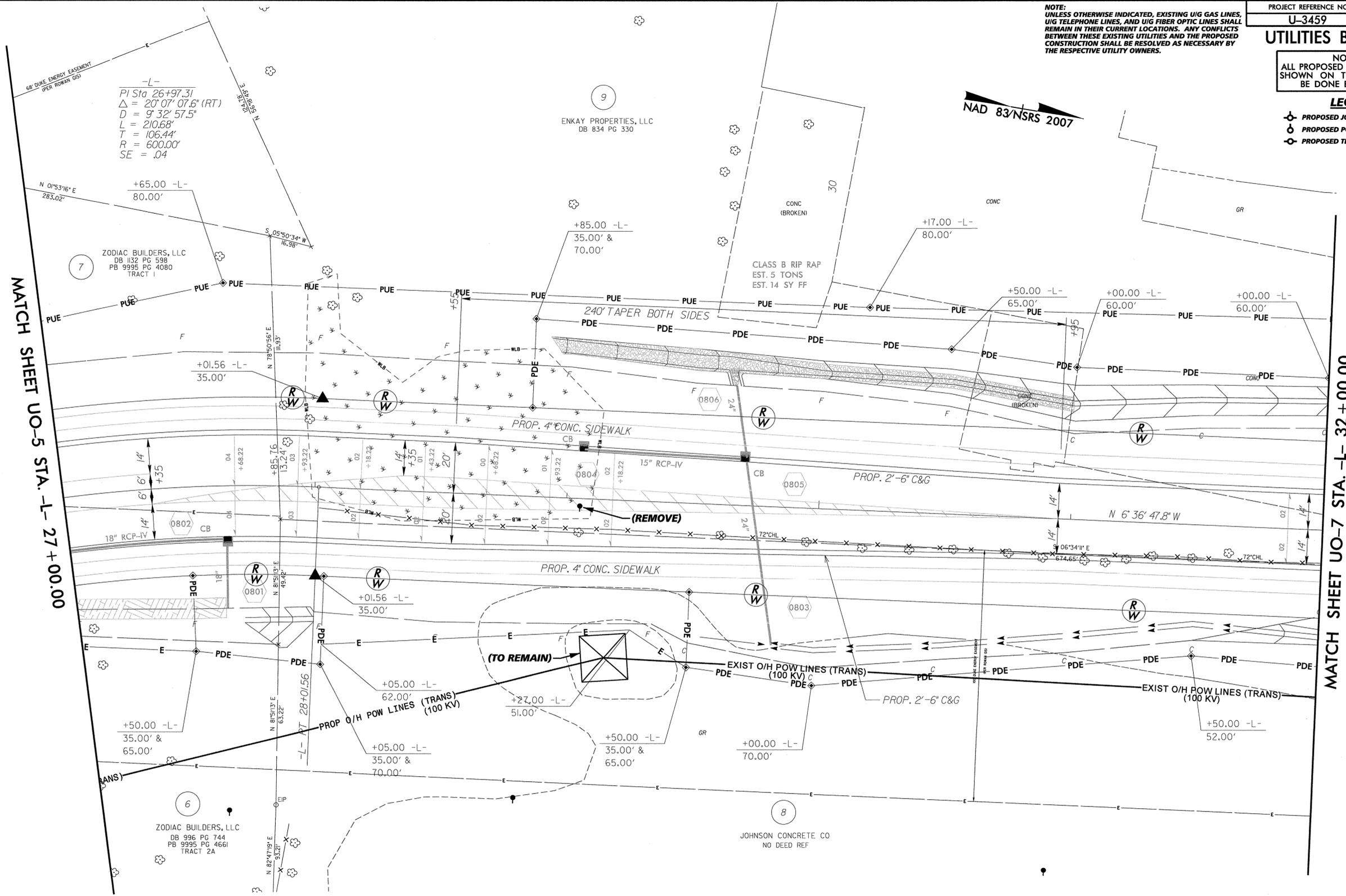
NOTE: UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.

UTILITIES BY OTHERS

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

LEGEND

- PROPOSED JOINT-USE UTILITY POLE
- PROPOSED POWER POLE
- PROPOSED TELEPHONE POLE

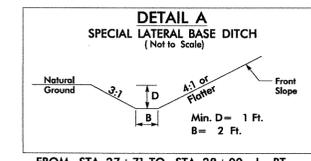


MATCH SHEET UO-5 STA. -L- 27+00.00

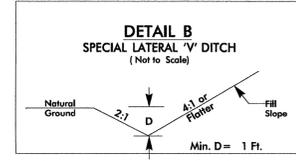
MATCH SHEET UO-7 STA. -L- 32+00.00

NAD 83/NSRS 2007

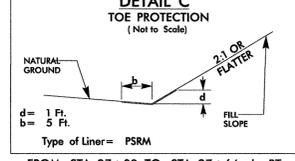
REVISIONS



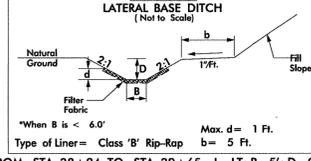
FROM STA. 27+71 TO STA. 28+00 -L- RT  
FROM STA. 29+82 TO STA. 32+00 -L- RT



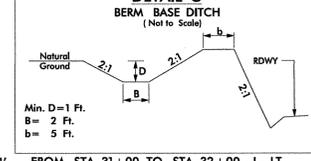
FROM STA. 29+50 TO STA. 29+82 -L- RT



FROM STA. 27+00 TO STA. 27+64 -L- RT



FROM STA. 28+94 TO STA. 29+65 -L- LT; B=5'; D=0'-1'  
FROM STA. 29+65 TO STA. 31+00 -L- LT; B=2'; D=1' MIN.

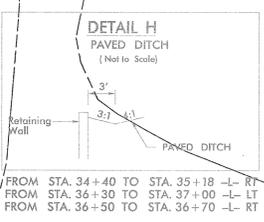
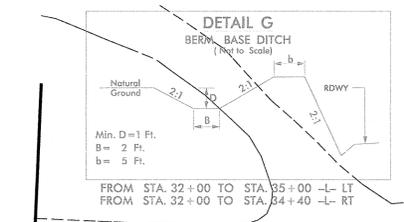
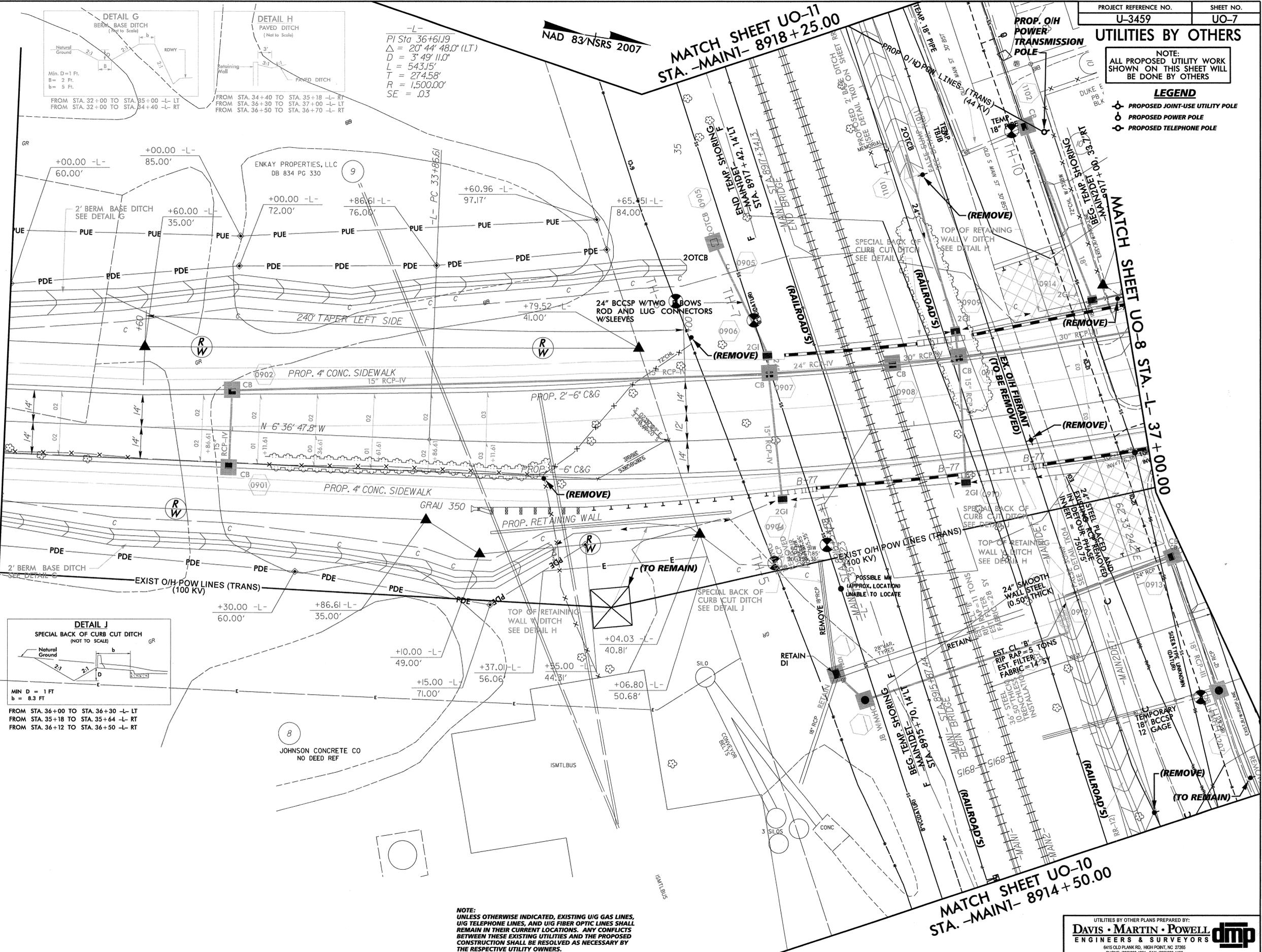


FROM STA. 31+00 TO STA. 32+00 -L- LT

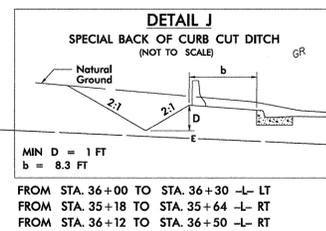
0302DEL\_PT2

REVISIONS

MATCH SHEET UO-6 STA. -L- 32+00.00



-L-  
 PI Sta 36+61.9  
 $\Delta = 20^\circ 44' 48.0''$  (LT)  
 $D = 3^\circ 49' 11.0''$   
 $L = 543.5'$   
 $R = 274.58'$   
 $SE = .03$



FROM STA. 36+00 TO STA. 36+30 -L- LT  
 FROM STA. 35+18 TO STA. 35+64 -L- RT  
 FROM STA. 36+12 TO STA. 36+50 -L- RT

NOTE:  
 UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.

MATCH SHEET UO-11  
 STA. -MAIN1- 8918+25.00

MATCH SHEET UO-10  
 STA. -MAIN1- 8914+50.00

PROJECT REFERENCE NO. U-3459  
 SHEET NO. UO-7

UTILITIES BY OTHERS

NOTE:  
 ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

LEGEND  
 ○ PROPOSED JOINT-USE UTILITY POLE  
 ○ PROPOSED POWER POLE  
 ○ PROPOSED TELEPHONE POLE

UTILITIES BY OTHER PLANS PREPARED BY:  
**DAVIS · MARTIN · POWELL**  
 ENGINEERS & SURVEYORS  
 6415 OLD PLANK RD., HIGH POINT, NC 27285  
 PHONE: (336) 886-4621 FAX: (336) 886-4438  
 WWW.DMP-INC.COM LICENSE: F-6245

UTILITIES BY OTHERS

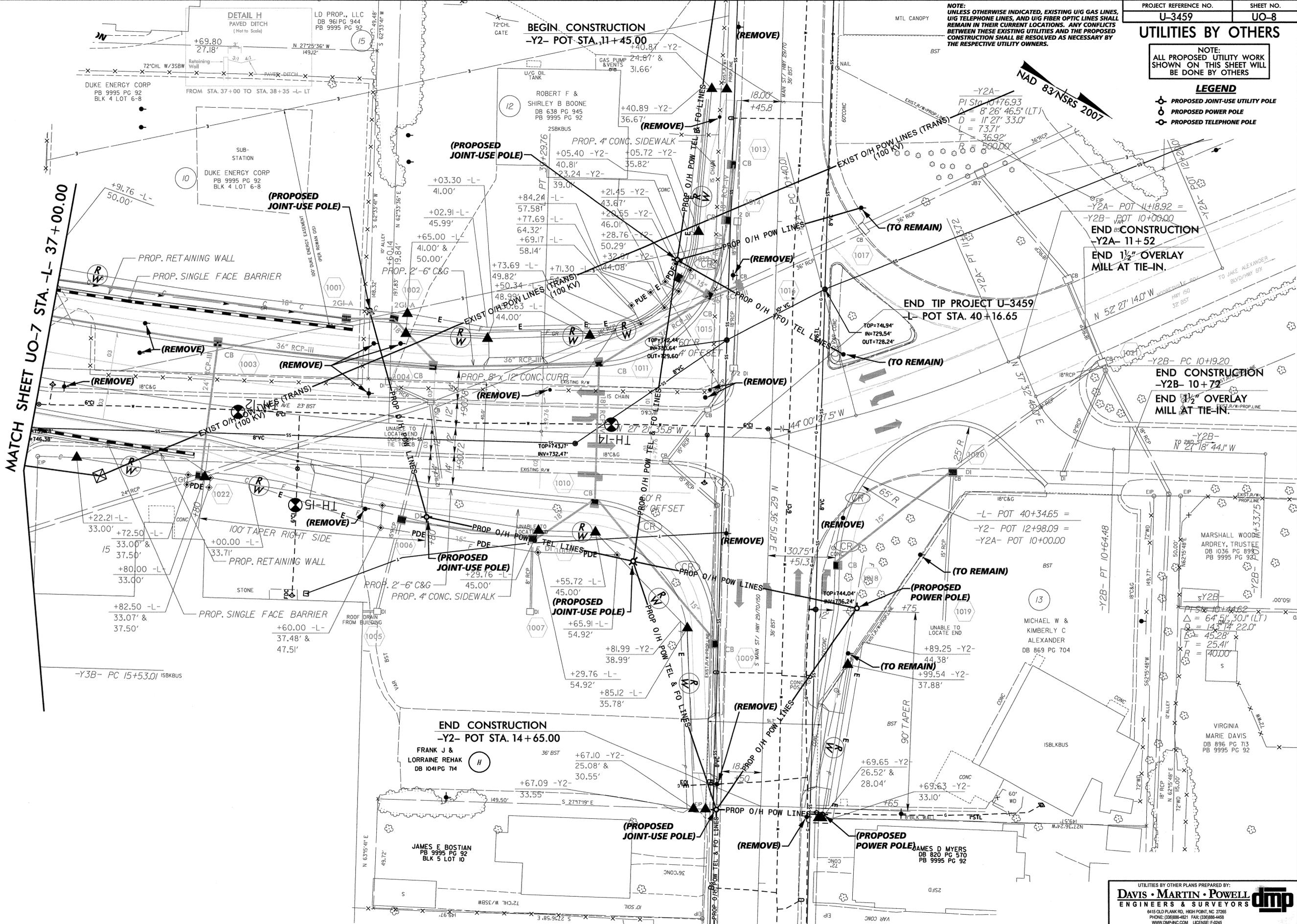
NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

LEGEND

- PROPOSED JOINT-USE UTILITY POLE
- PROPOSED POWER POLE
- PROPOSED TELEPHONE POLE

NOTE: UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.

MATCH SHEET UO-7 STA. -L- 37+00.00



0302DEL\_PT2

PROJECT REFERENCE NO. U-3459 SHEET NO. UO-9

UTILITIES BY OTHERS

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

LEGEND

- PROPOSED JOINT-USE UTILITY POLE
- PROPOSED POWER POLE
- PROPOSED TELEPHONE POLE

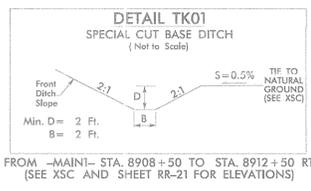
NOTE: UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.

MAD 83-ASRS 2007

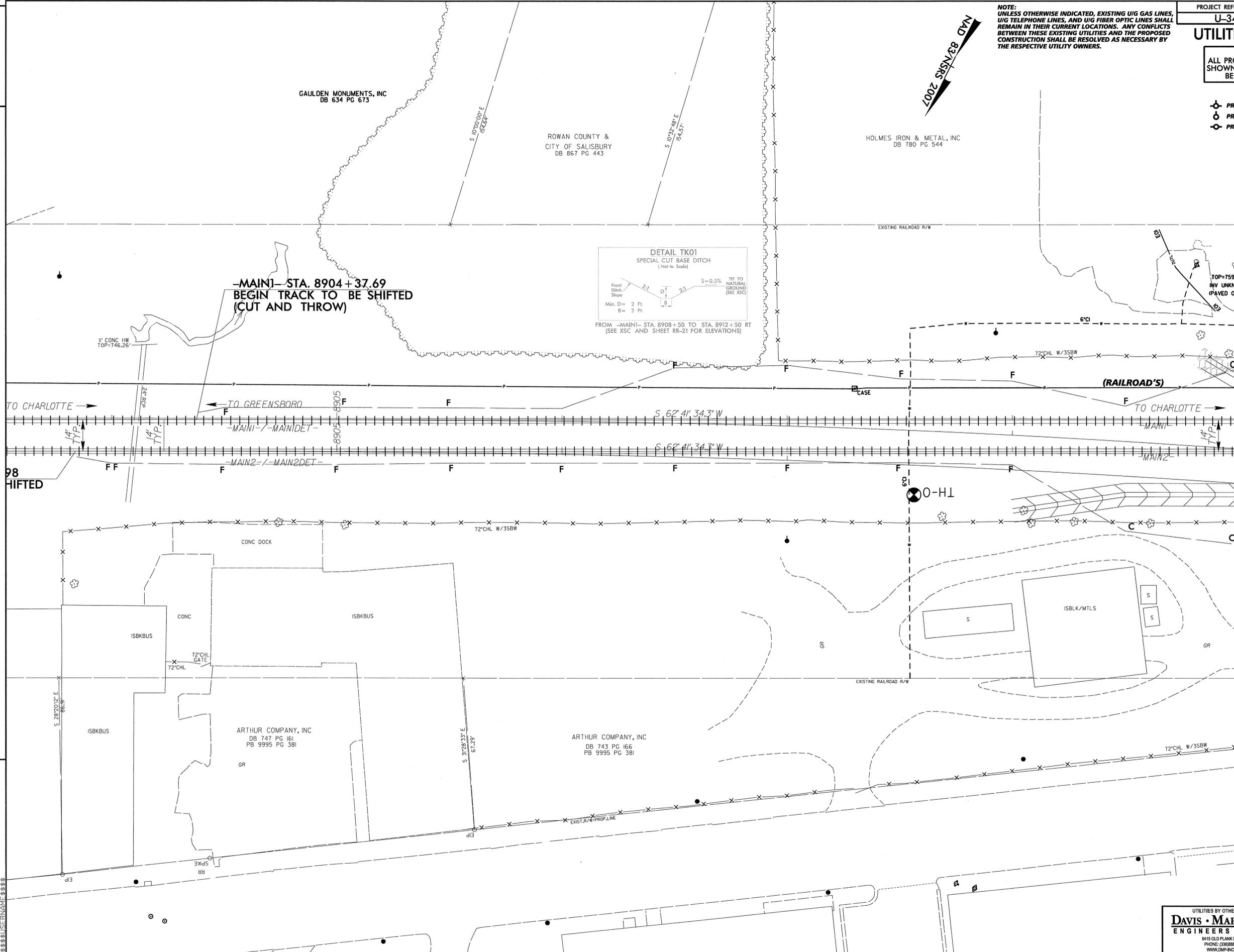
GAULDEN MONUMENTS, INC  
DB 634 PG 673

ROWAN COUNTY &  
CITY OF SALISBURY  
DB 867 PG 443

HOLMES IRON & METAL, INC  
DB 780 PG 544



-MAIN1- STA. 8904+37.69  
BEGIN TRACK TO BE SHIFTED  
(CUT AND THROW)



REVISIONS

98  
SHIFTED

MATCH SHEET UO-10 -MAIN1- STA. 8909 + 00.00

SECTION 1  
SECTION 2  
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SECTION 100

**UTILITIES BY OTHERS**

NOTE:  
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

**LEGEND**

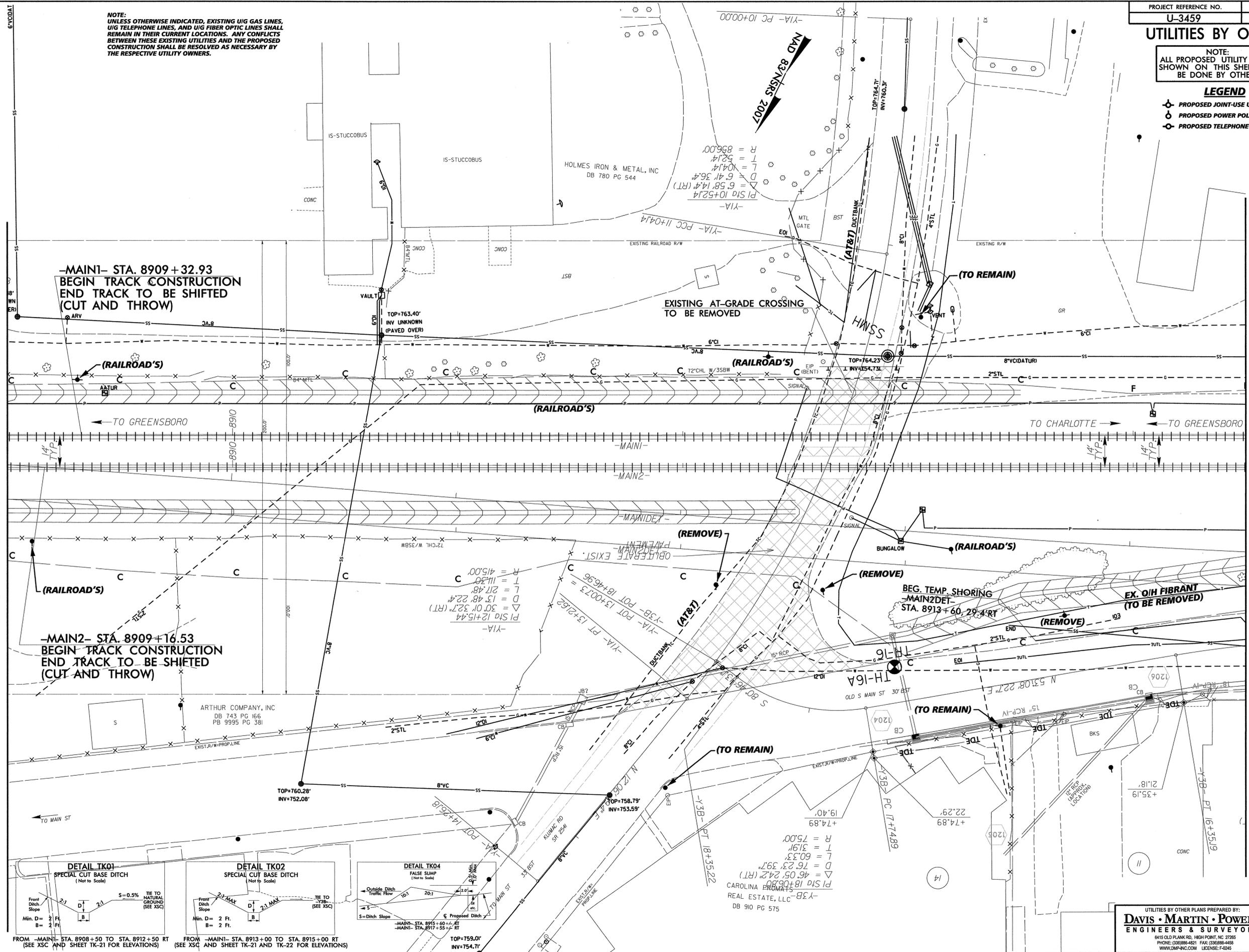
- PROPOSED JOINT-USE UTILITY POLE
- PROPOSED POWER POLE
- PROPOSED TELEPHONE POLE

NOTE:  
UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES, U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY THE RESPECTIVE UTILITY OWNERS.

0302DEL\_PT12

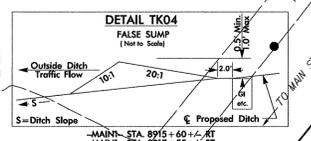
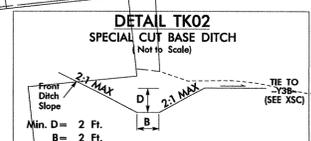
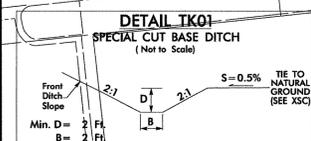
MATCH SHEET UO-9 -MAIN1- STA. 8909 + 00.00

MATCH SHEET UO-7 STA. -MAIN1- 8914 + 50.00



-MAIN1- STA. 8909 + 32.93  
BEGIN TRACK CONSTRUCTION  
END TRACK TO BE SHIFTED  
(CUT AND THROW)

-MAIN2- STA. 8909 + 16.53  
BEGIN TRACK CONSTRUCTION  
END TRACK TO BE SHIFTED  
(CUT AND THROW)



FROM -MAIN1- STA. 8908 + 50 TO STA. 8912 + 50 RT (SEE XSC AND SHEET TK-21 FOR ELEVATIONS)  
FROM -MAIN1- STA. 8913 + 00 TO STA. 8915 + 00 RT (SEE XSC AND SHEET TK-21 AND TK-22 FOR ELEVATIONS)

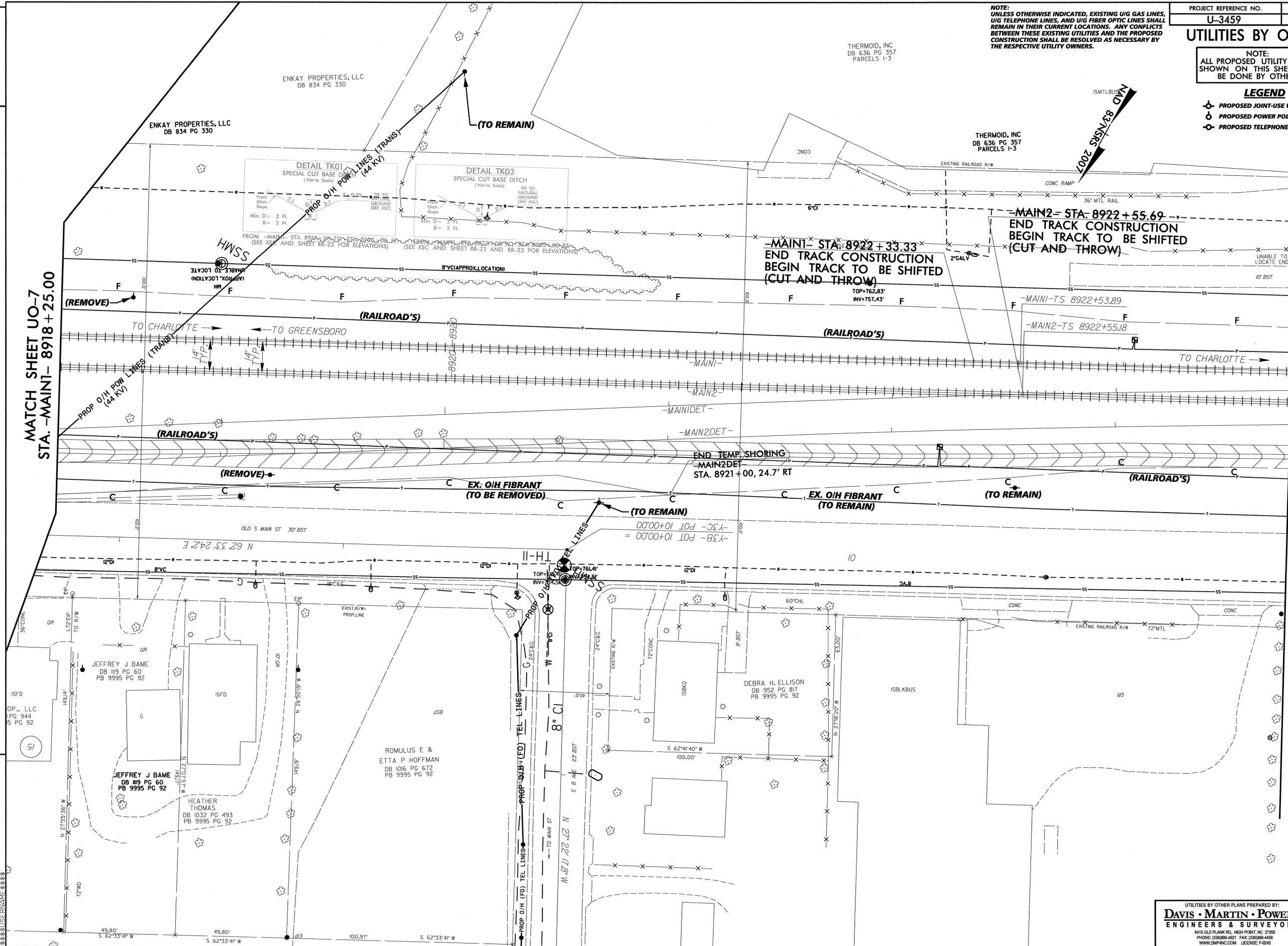
CAROLINA PROMATTS  
REAL ESTATE, LLC  
DB 910 PG 575

0302DEL\_P12

REVISIONS

MATCH SHEET UO-7  
STA. -MAIN1- 8918 + 25.00

MATCH SHEET UO-12 -MAIN1- STA. 8923 + 75.00



NOTE:  
UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES,  
U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL  
REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS  
BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED  
CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY  
THE RESPECTIVE UTILITY OWNERS.

PROJECT REFERENCE NO.	SHEET NO.
U-3459	UO-11

**UTILITIES BY OTHERS**

NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS

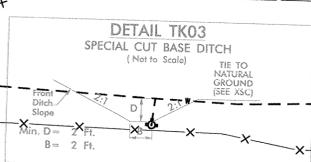
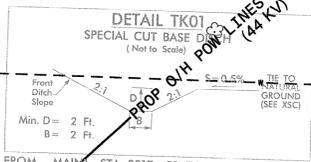
**LEGEND**

- ⊕ PROPOSED JOINT-USE UTILITY POLE
- ⊙ PROPOSED POWER POLE
- ⊖ PROPOSED TELEPHONE POLE

THERMOID, INC  
DB 636 PG 357  
PARCELS 1-3

ENKAY PROPERTIES, LLC  
DB 834 PG 330

ENKAY PROPERTIES, LLC  
DB 834 PG 330



-MAIN1- STA. 8922 + 33.33  
END TRACK CONSTRUCTION  
BEGIN TRACK TO BE SHIFTED  
(CUT AND THROW)

-MAIN2- STA. 8922 + 55.69  
END TRACK CONSTRUCTION  
BEGIN TRACK TO BE SHIFTED  
(CUT AND THROW)

END TEMP. SHORING  
-MAIN2DET-  
STA. 8921 + 00, 24.7' RT

TO CHARLOTTE

TO CHARLOTTE

FROM -MAIN1- STA. 8918 + 25.00 TO STA. 8920 + 00.00 (SEE XSC AND SHEET RR-22 FOR ELEVATIONS)

FROM -MAIN2- STA. 8922 + 00.00 TO STA. 8924 + 00.00 (SEE XSC AND SHEET RR-22 AND RR-23 FOR ELEVATIONS)

EXISTING RAILROAD R/W

EXIST. R/W - PROP. LINE

36\"/>

OP., LLC  
PG 944  
5 PG 92

JEFFREY J BAME  
DB 119 PG 60  
PB 9995 PG 92

HEATHER THOMAS  
DB 1032 PG 493  
PB 9995 PG 92

ROMULUS E &  
ETTA P HOFFMAN  
DB 1016 PG 672  
PB 9995 PG 92

DEBRA H. ELLISON  
DB 952 PG 817  
PB 9995 PG 92

0302DEL\_P12

NOTE:  
UNLESS OTHERWISE INDICATED, EXISTING U/G GAS LINES,  
U/G TELEPHONE LINES, AND U/G FIBER OPTIC LINES SHALL  
REMAIN IN THEIR CURRENT LOCATIONS. ANY CONFLICTS  
BETWEEN THESE EXISTING UTILITIES AND THE PROPOSED  
CONSTRUCTION SHALL BE RESOLVED AS NECESSARY BY  
THE RESPECTIVE UTILITY OWNERS.

PROJECT REFERENCE NO. U-3459 SHEET NO. UO-12

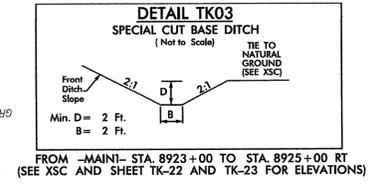
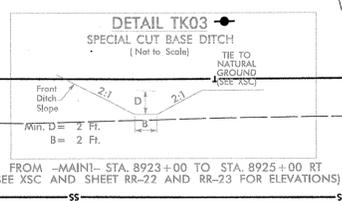
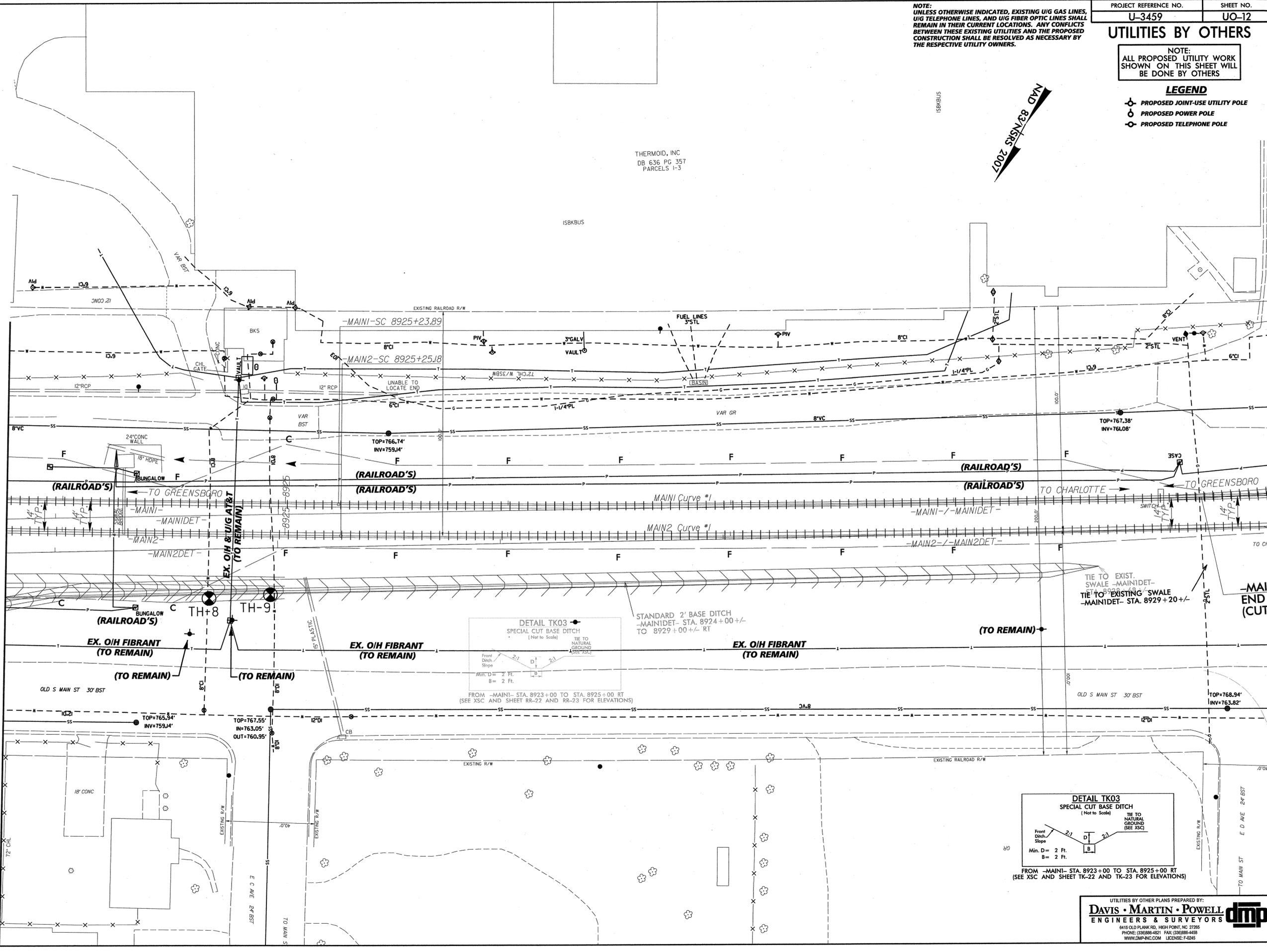
UTILITIES BY OTHERS

NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS

- LEGEND**
- PROPOSED JOINT-USE UTILITY POLE
  - PROPOSED POWER POLE
  - PROPOSED TELEPHONE POLE

REVISIONS

MATCH SHEET UO-11 -MAIN1- STA. 8923 + 75.00



UTILITIES BY OTHER PLANS PREPARED BY:  
**DAVIS · MARTIN · POWELL**  
ENGINEERS & SURVEYORS **dmp**

6415 OLD PLANK RD, HIGH POINT, NC 27865  
PHONE: (336)888-4821 FAX: (336)888-4488  
WWW.DMP-INC.COM LICENSE: F-2045