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5/14/09

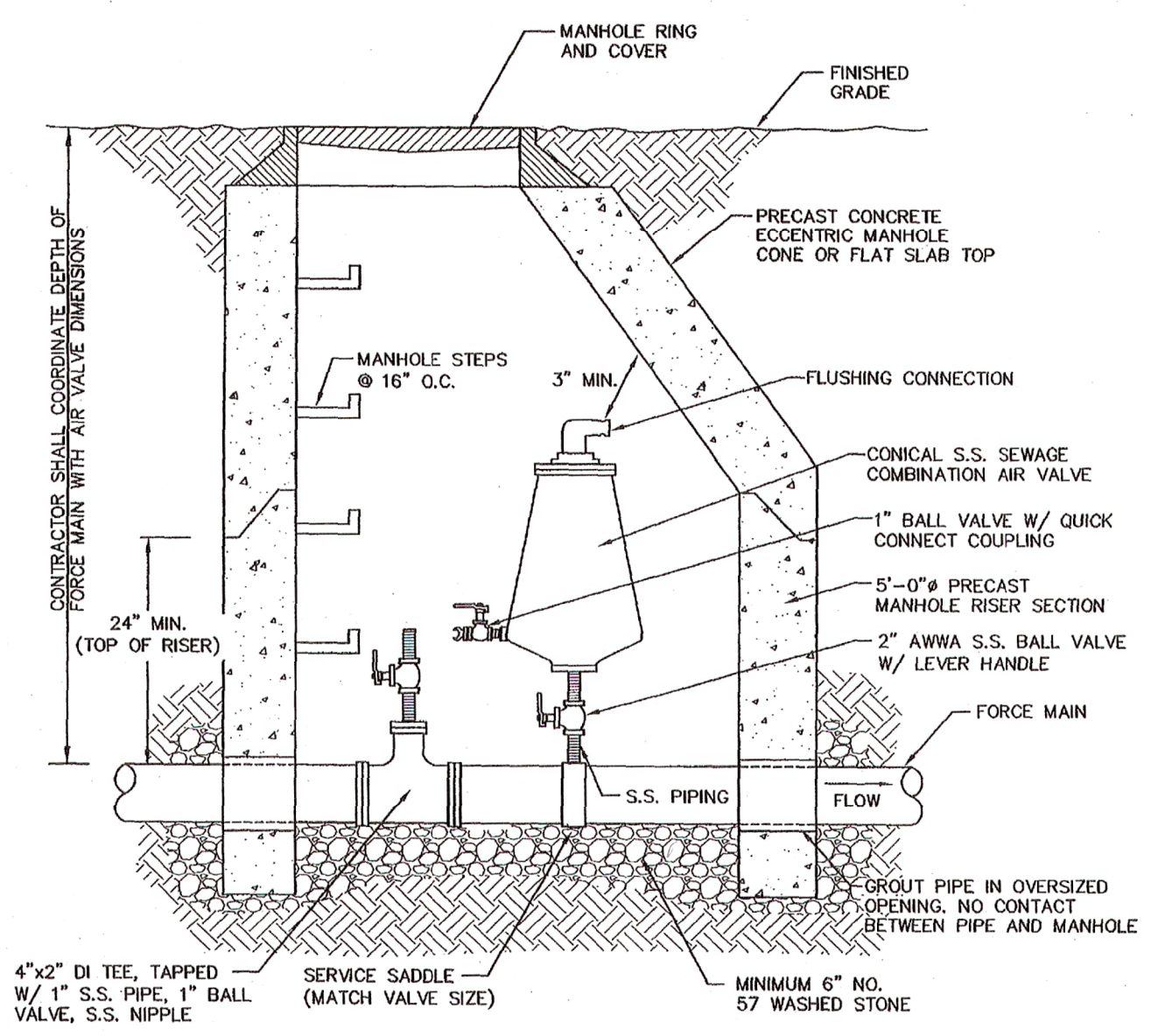
PROJECT DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-5742	UC-3C
DESIGNED BY: MSS	
DRAWN BY: MSS	
CHECKED BY: BMB	
APPROVED BY: HTW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

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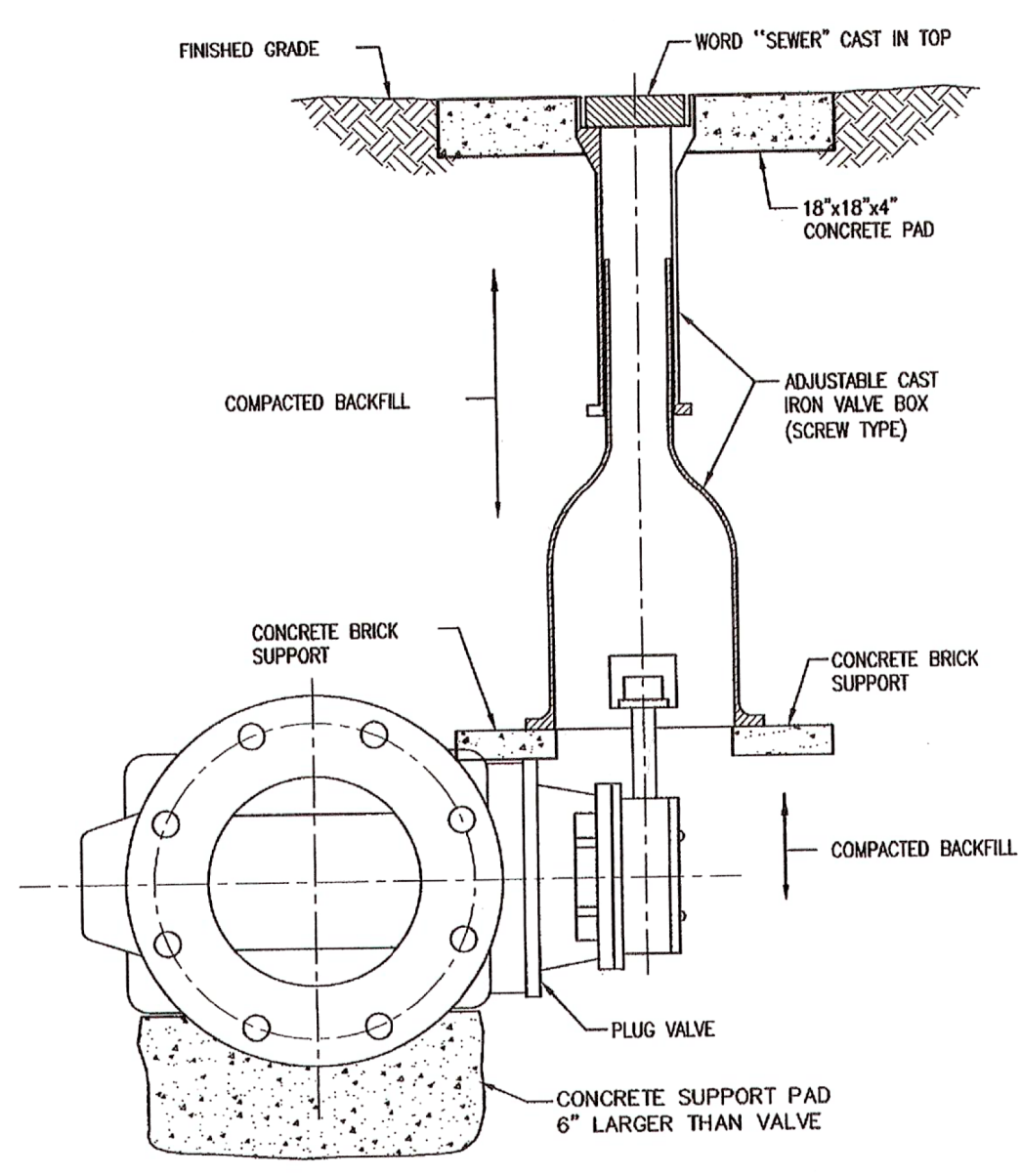
PLANS FOR BIDDING ONLY
RFC PLANS TO BE ISSUED UPON
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TO CONSTRUCT (WATER AND
SANITARY SEWER) FROM NCDEQ



- CONTRACTOR SHALL ADJUST THE DEPTH OF FORCE MAIN WITH AIR VALVE DIMENSIONS
- 24" MIN. (TOP OF RISER)
- 4"x2" DI TEE, TAPPED W/ 1" S.S. PIPE, 1" BALL VALVE, S.S. NIPPLE
- SERVICE SADDLE (MATCH VALVE SIZE)
- MINIMUM 6" NO. 57 WASHED STONE
- NOTES:
1. COMBINATION AIR VALVE TO BE INSTALLED AT ACTUAL HIGH POINT OF LINE.
 2. COMBINATION AIR VALVE SHALL BE OFFSET IN MANHOLE TO PROVIDE ACCESS.
 3. VALVE SIZE AS SHOWN ON DRAWINGS OR DETAILED IN THE SPECIFICATIONS.
 4. ALL PIPING FOR COMBINATION AIR VALVE SHALL BE BRASS OR STAINLESS STEEL.
 5. CONTRACTOR SHALL ADJUST THE DEPTH OF THE FORCE MAIN AT ALL HIGH POINTS TO ACCOMMODATE THE INSTALLATION OF THE COMBINATION AIR VALVE.

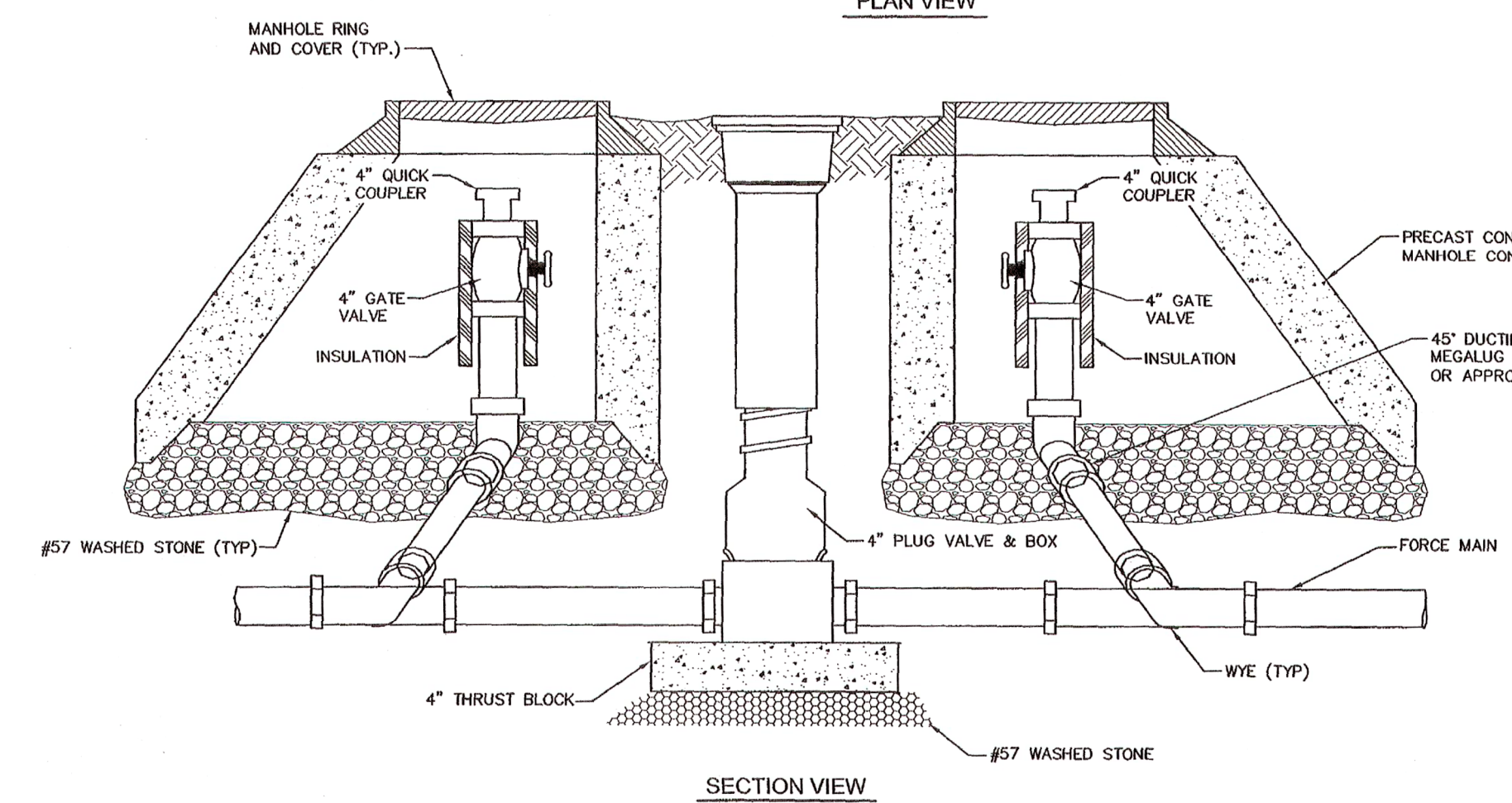
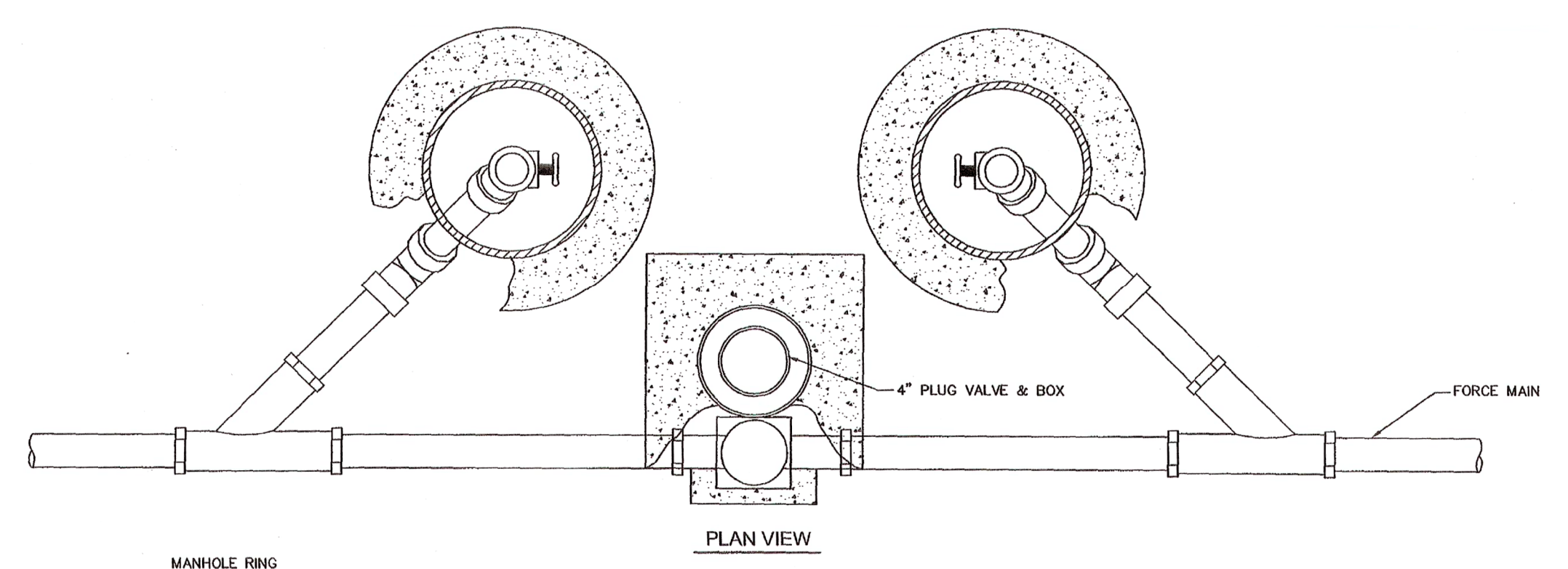
SEWAGE FORCE MAIN COMBINATION AIR VALVE

REVISION DATE - NOVEMBER 3, 2008

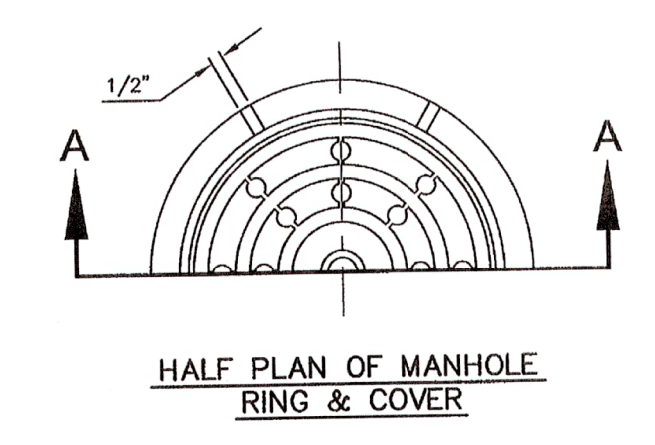


PLUG VALVE DETAIL

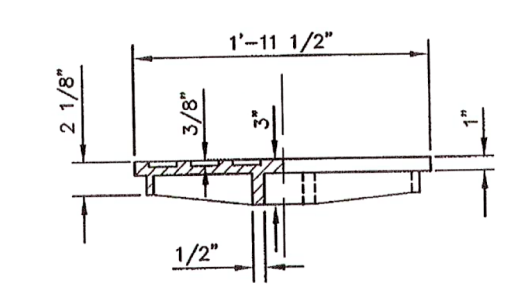
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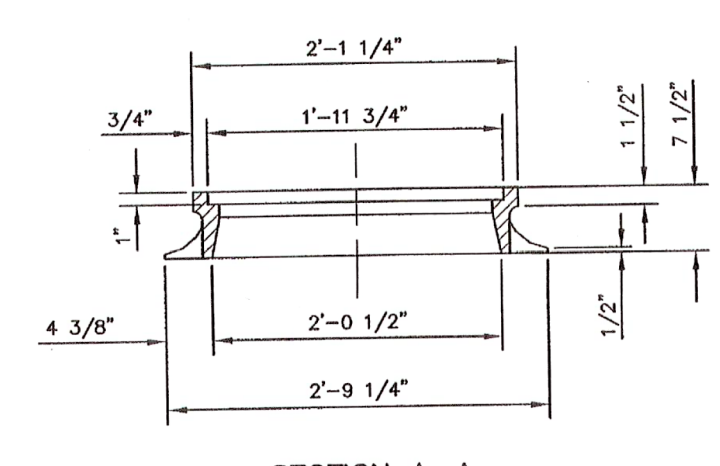
FORCE MAIN FLUSHING CONNECTION DETAIL



HALF PLAN OF MANHOLE RING & COVER



SECTION A-A MANHOLE COVER

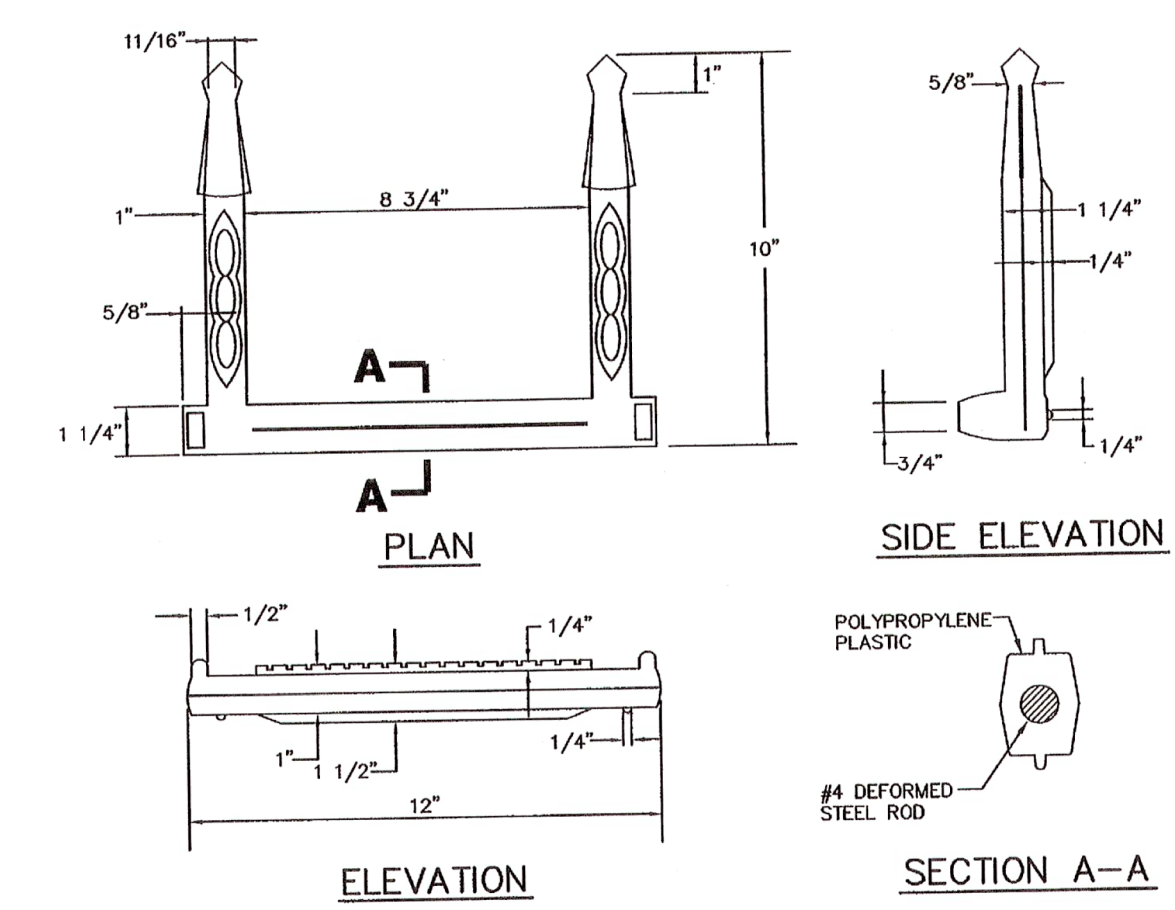


SECTION A-A MANHOLE RING

NOTE: TRAFFIC BEARING RING AND COVER. MINIMUM WEIGHT 315 POUNDS

MANHOLE RING & COVER

REVISION DATE - NOVEMBER 3, 2008



ELEVATION

SECTION A-A

CONSTRUCTION NOTES: 1. ALL STEPS SHALL PROTRUDE A MINIMUM OF 5" AND A MAXIMUM OF 7" FROM INSIDE FACE OF STRUCTURE WALL. 2. STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED PRIOR WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SAID STEPS.

MANHOLE STEPS

REVISION DATE - NOVEMBER 3, 2008

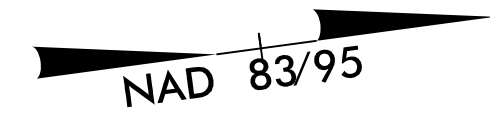
PLANS PREPARED BY:

RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

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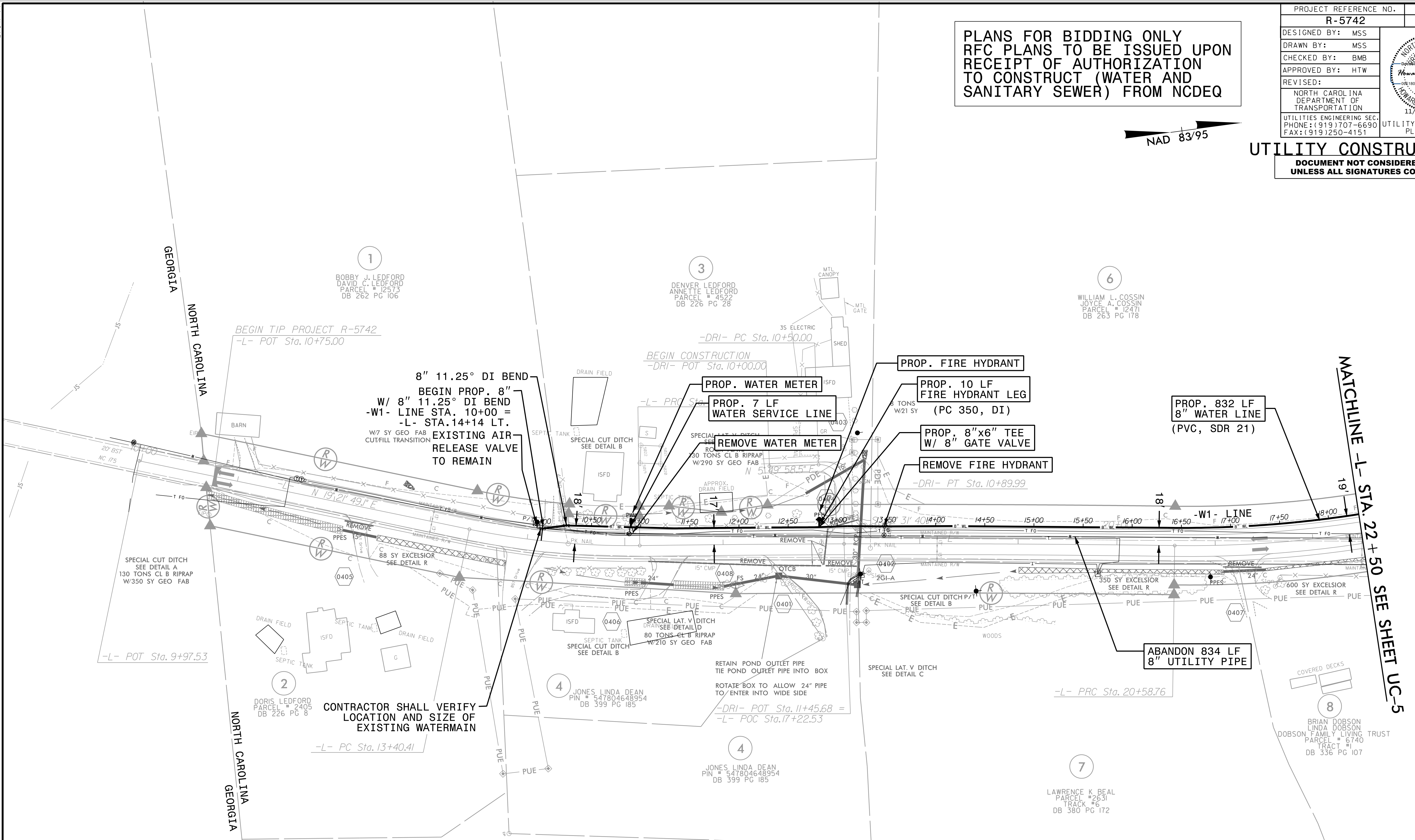
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PLANS FOR BIDDING ONLY
RFC PLANS TO BE ISSUED UPON
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SANITARY SEWER) FROM NCDEQ



PROJECT REFERENCE NO. R-5742	SHEET NO. UC-4
DESIGNED BY: MSS	
DRAWN BY: MSS	
CHECKED BY: BMB	
APPROVED BY: HTW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION
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NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 395 POUNDS. THE ACTUAL QUANTITY AND
TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.

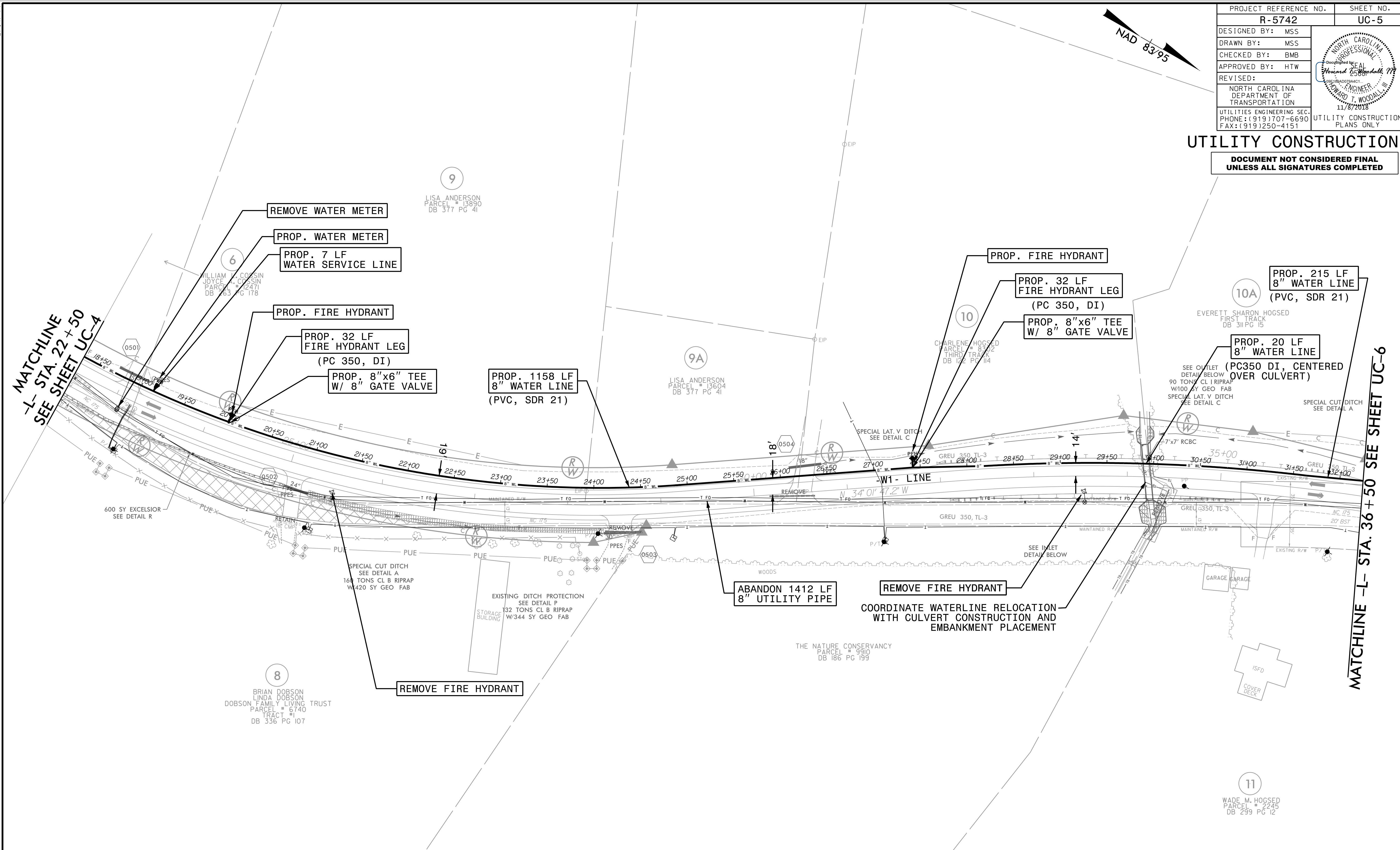
PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

FOR -W1- PROFILE SEE SHTS. 19-20

PROJECT REFERENCE NO. R-5742	SHEET NO. UC-5
DESIGNED BY: MSS	
DRAWN BY: MSS	
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APPROVED BY: HTW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
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MATCHLINE
-L- STA. 22+50
SEE SHEET UC-4

MATCHLINE -L- STA. 36+50
SEE SHEET UC-6

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 350 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PLANS FOR BIDDING ONLY
 RFC PLANS TO BE ISSUED UPON RECEIPT OF AUTHORIZATION TO CONSTRUCT (WATER AND SANITARY SEWER) FROM NCDEQ

PLANS PREPARED BY:
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
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FOR -W1- PROFILE SEE SHTS. 19-20

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11/17/2018

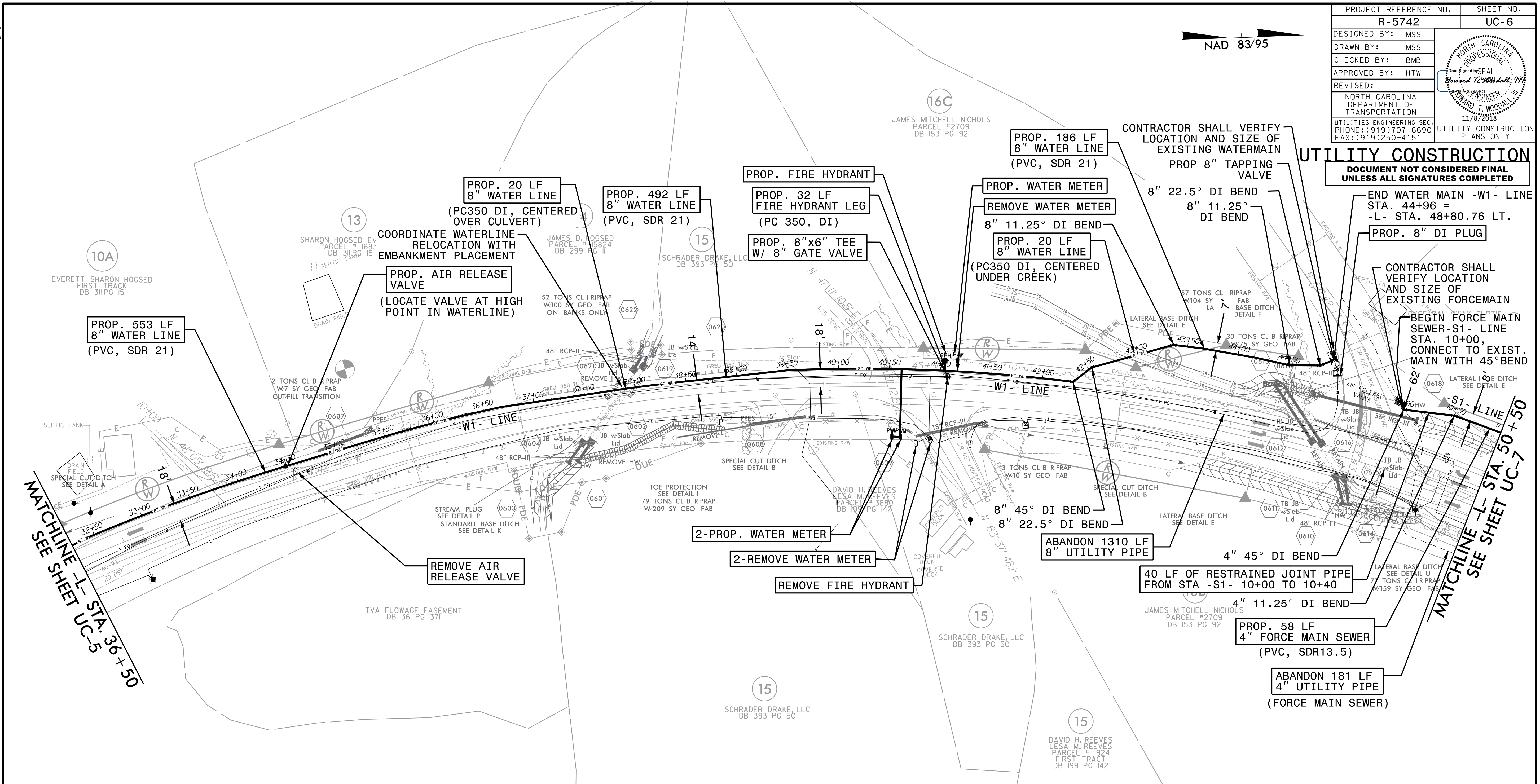
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PROJECT REFERENCE NO.	SHEET NO.
R-5742	UC-6
DESIGNED BY: MSS	
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APPROVED BY: HTW	
REVISOR:	UTILITY CONSTRUCTION PLANS ONLY
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UTILITY CONSTRUCTION

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MATCHLINE -L- STA. 36+50
SEE SHEET UC-5

MATCHLINE -L- STA. 50+50
SEE SHEET UC-7

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 770 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 150 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

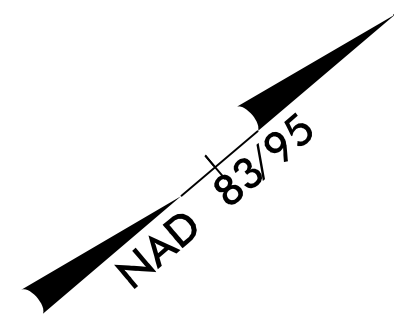
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PLANS PREPARED BY:

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 900 RIDGEFIELD DRIVE SUITE 350
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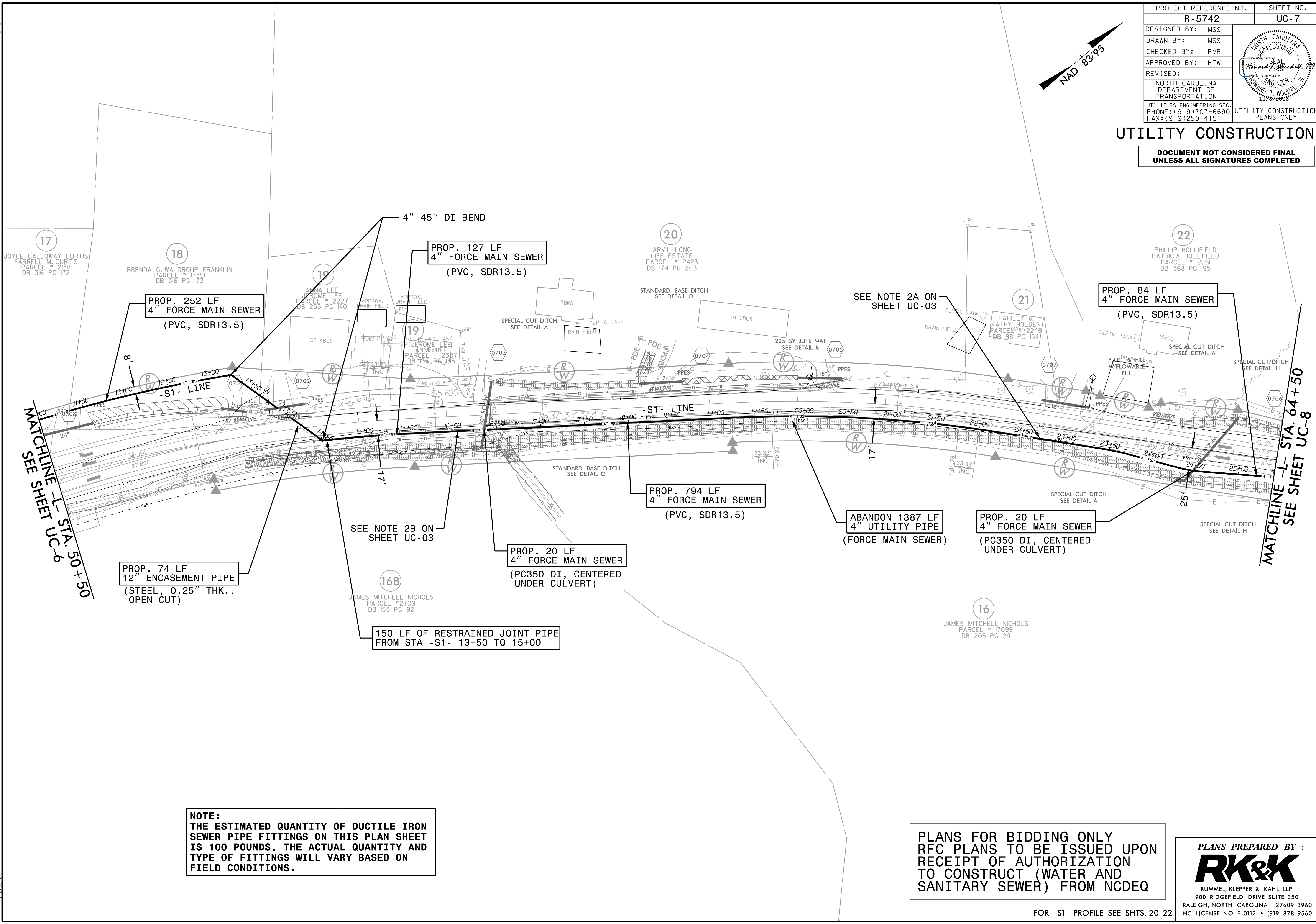
FOR -W1- PROFILE SEE SHTS. 19-20
 FOR -S1- PROFILES SEE SHTS. 20-22

PROJECT REFERENCE NO.	SHEET NO.
R-5742	UC-7
DESIGNED BY: MSS	
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MATCHLINE -L- STA. 50+50
SEE SHEET UC-6

MATCHLINE -L- STA. 64+50
SEE SHEET UC-8

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 100 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PLANS FOR BIDDING ONLY
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FOR -S1- PROFILE SEE SHTS. 20-22

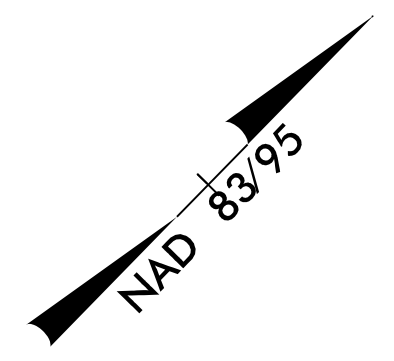
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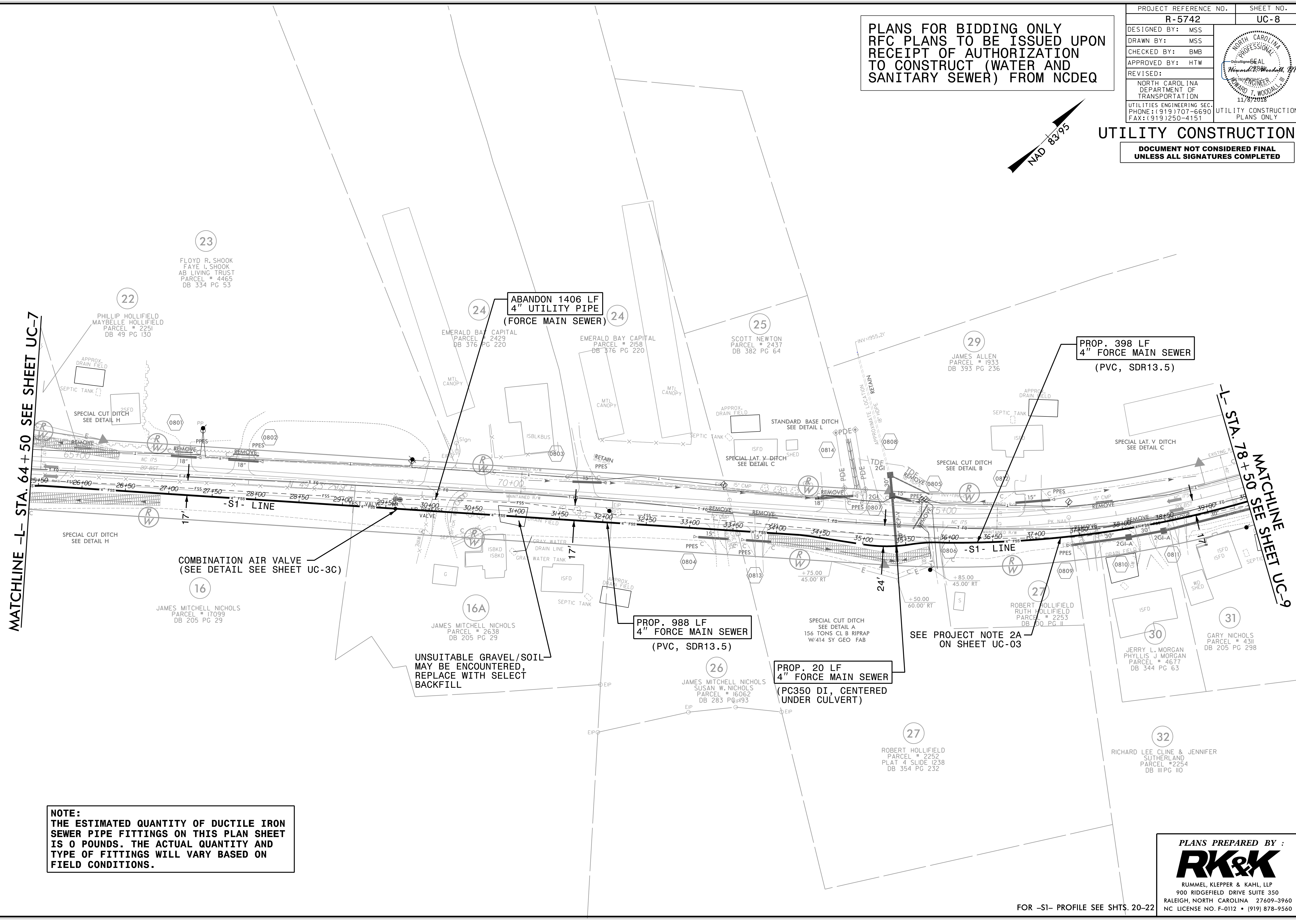
PLANS FOR BIDDING ONLY
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PROJECT REFERENCE NO.	R-5742	SHEET NO.	UC-8
DESIGNED BY:	MSS		
DRAWN BY:	MSS		
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APPROVED BY:	HTW		
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MATCHLINE -L- STA. 64 + 50 SEE SHEET UC-7

MATCHLINE -L- STA. 78 + 50 SEE SHEET UC-9

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 0 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PLANS PREPARED BY:

 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
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FOR -S1- PROFILE SEE SHTS. 20-22

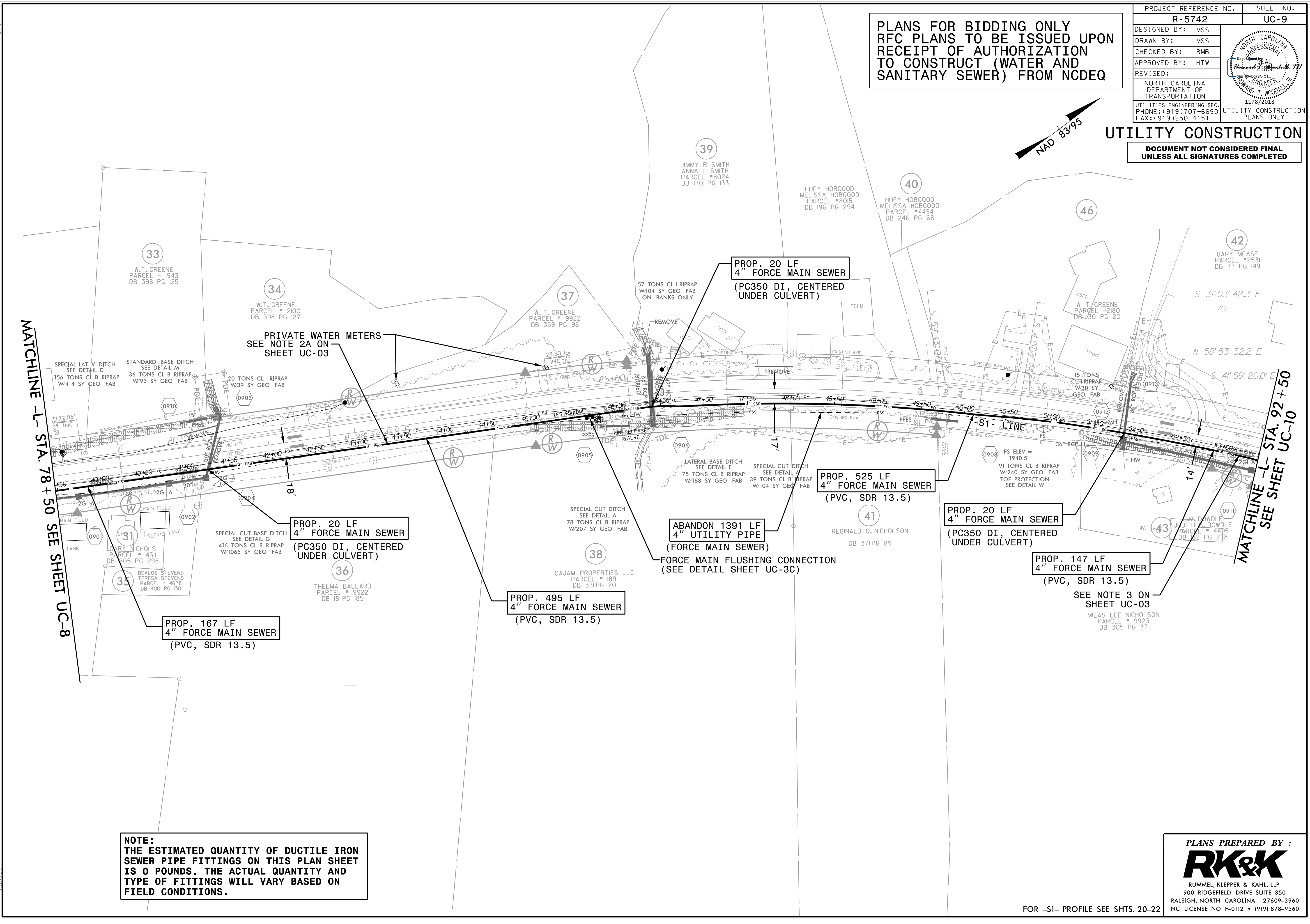
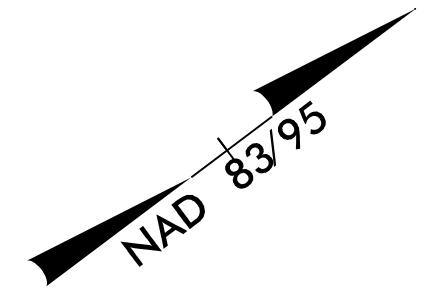
08/18/2018

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RECEIPT OF AUTHORIZATION
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SANITARY SEWER) FROM NCDEQ

PROJECT REFERENCE NO.	SHEET NO.
R-5742	UC-9
DESIGNED BY: MSS	
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NOTE:
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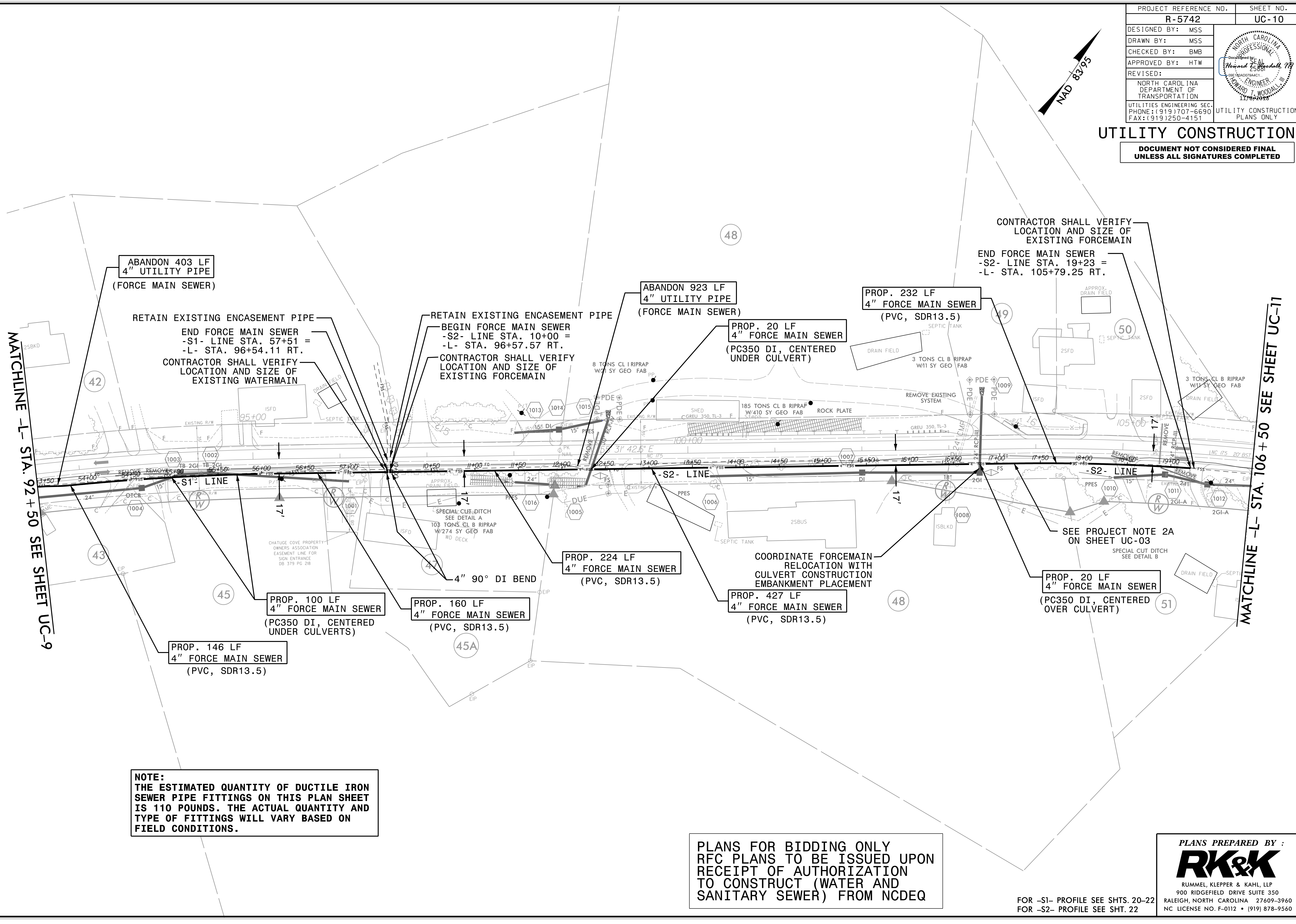
FOR -S1- PROFILE SEE SHTS. 20-22

11/8/2018
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PROJECT REFERENCE NO.	R-5742	SHEET NO.	UC-10
DESIGNED BY:	MSS		
DRAWN BY:	MSS		
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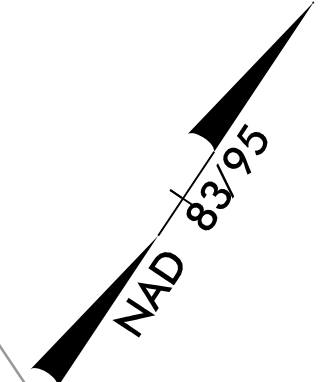
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MATCHLINE -L- STA. 92+50 SEE SHEET UC-9

MATCHLINE -L- STA. 106+50 SEE SHEET UC-11



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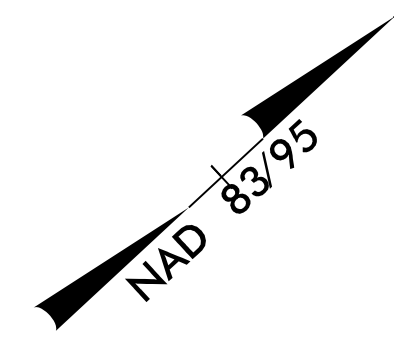
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 FOR -S2- PROFILE SEE SHT. 22

8/12/2018

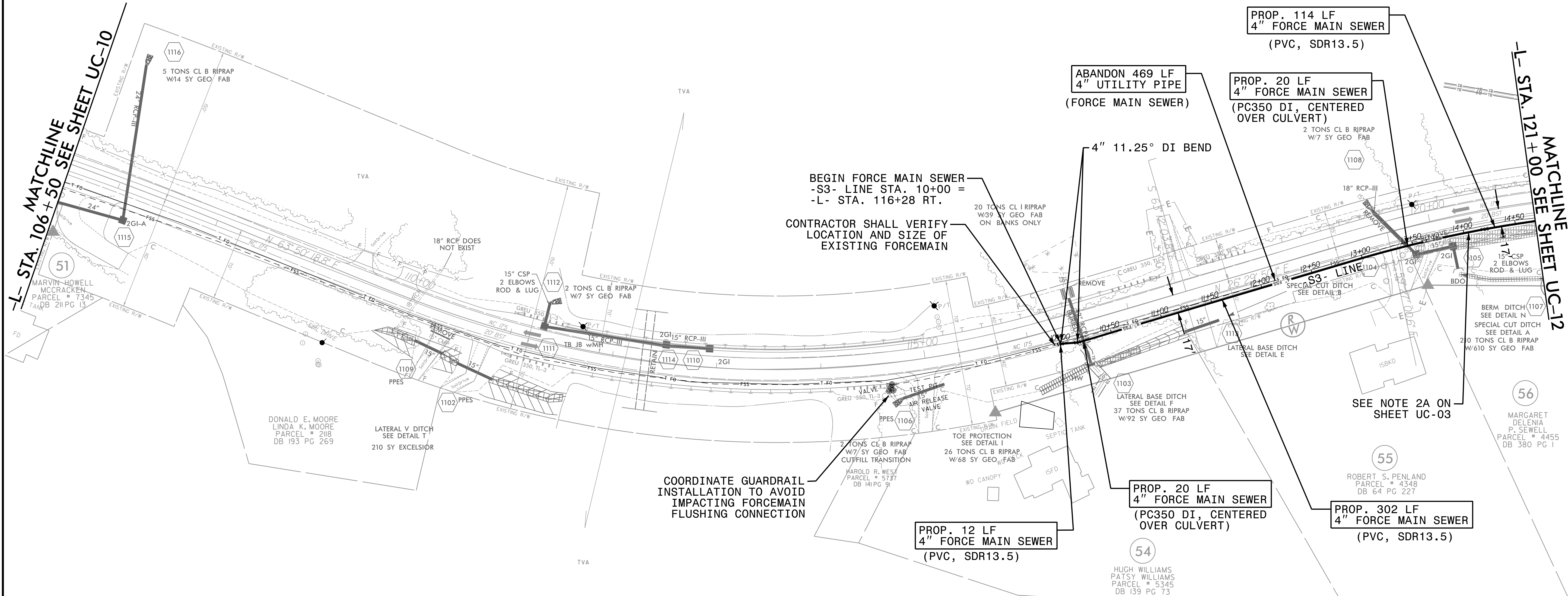
PROJECT REFERENCE NO.	SHEET NO.
R-5742	UC-11
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L- STA. 106+50 MATCHLINE
 SEE SHEET UC-10

L- STA. 121+00 MATCHLINE
 SEE SHEET UC-12

NOTE:
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 SEWER PIPE FITTINGS ON THIS PLAN SHEET
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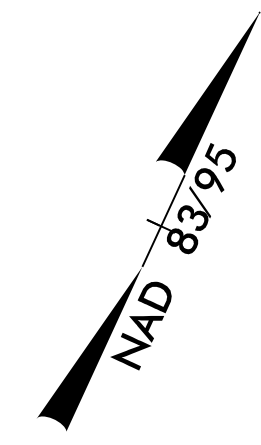
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FOR -S3- PROFILE SEE SHTS. 23-24

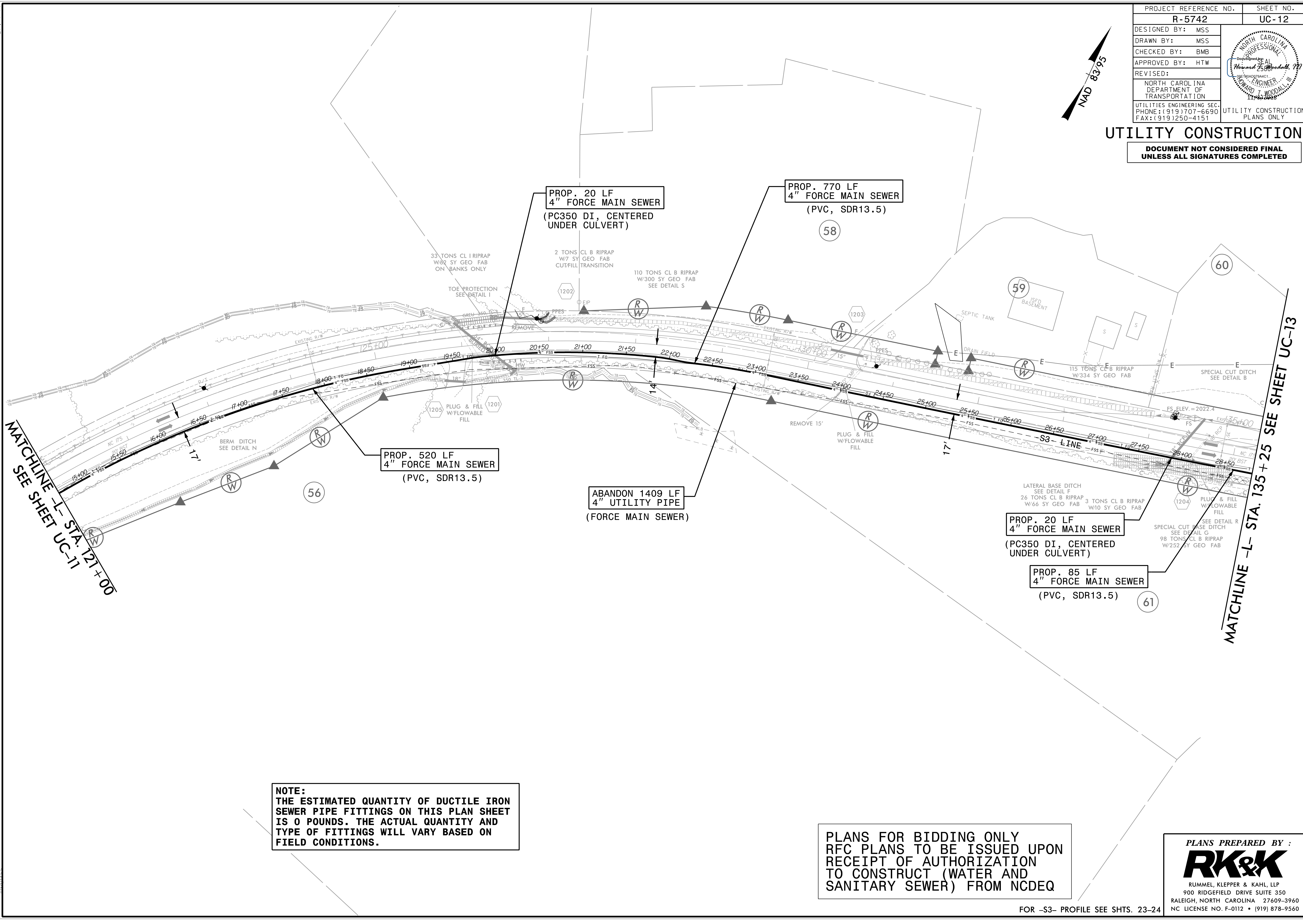
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MATCHLINE -L- STA. 121+00
SEE SHEET UC-11

MATCHLINE -L- STA. 135+25
SEE SHEET UC-13

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 0 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

FOR -S3- PROFILE SEE SHTS. 23-24

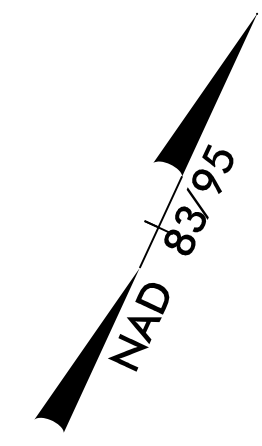
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PROJECT REFERENCE NO.	R-5742	SHEET NO.	UC-13
DESIGNED BY:	MSS		
DRAWN BY:	MSS		
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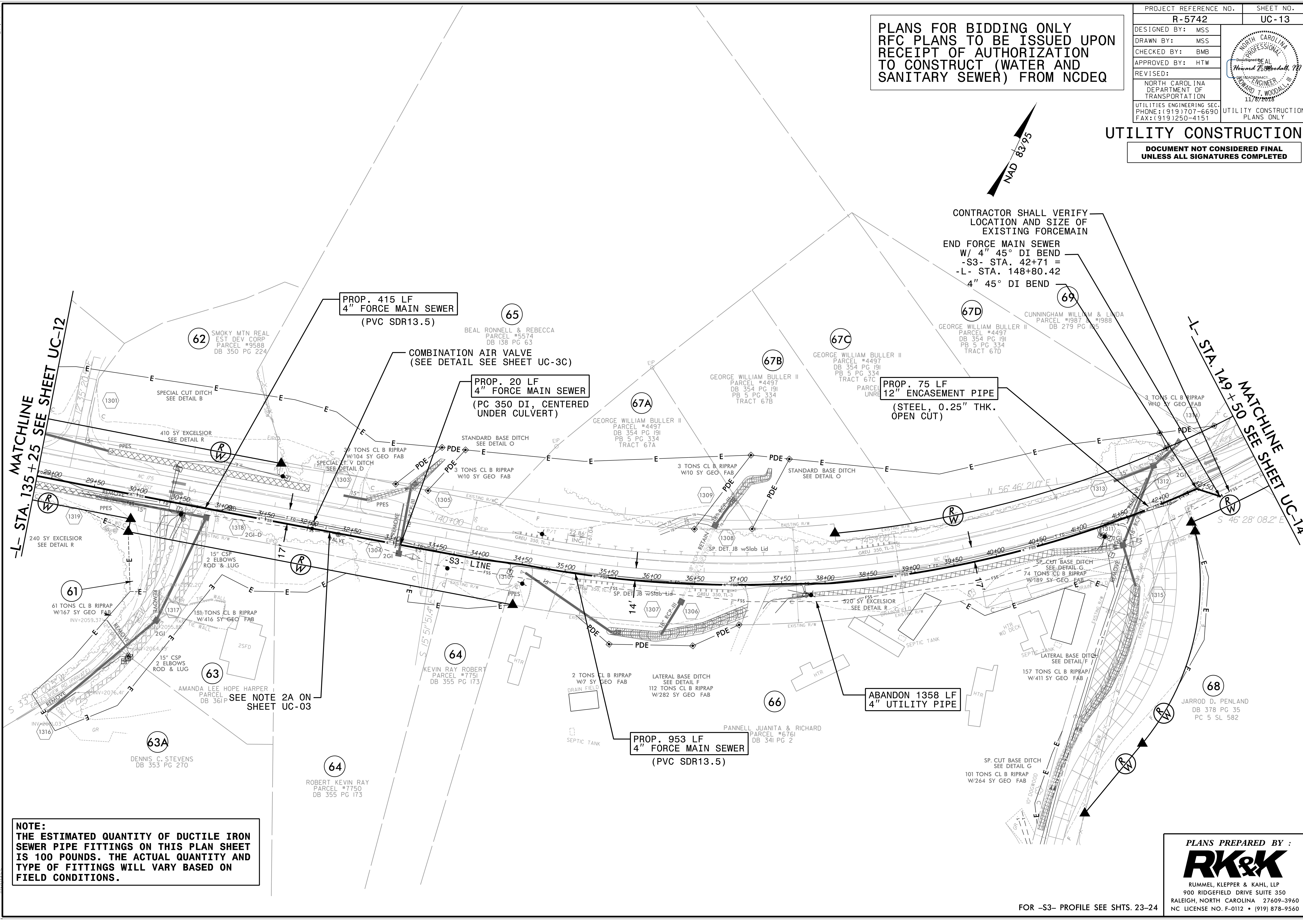
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CONTRACTOR SHALL VERIFY
 LOCATION AND SIZE OF
 EXISTING FORCEMAIN
 END FORCE MAIN SEWER
 W/ 4" 45° DI BEND
 -S3- STA. 42+71 =
 -L- STA. 148+80.42
 4" 45° DI BEND



MATCHLINE
 -L- STA. 135+25 SEE SHEET UC-12

MATCHLINE
 -L- STA. 149+50 SEE SHEET UC-14

PROP. 415 LF
 4" FORCE MAIN SEWER
 (PVC SDR13.5)

PROP. 20 LF
 4" FORCE MAIN SEWER
 (PC 350 DI, CENTERED
 UNDER CULVERT)

PROP. 75 LF
 12" ENCASMENT PIPE
 (STEEL, 0.25" THK.
 OPEN CUT)

ABANDON 1358 LF
 4" UTILITY PIPE

PROP. 953 LF
 4" FORCE MAIN SEWER
 (PVC SDR13.5)

NOTE:
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 SEWER PIPE FITTINGS ON THIS PLAN SHEET
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 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
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FOR -S3- PROFILE SEE SHTS. 23-24

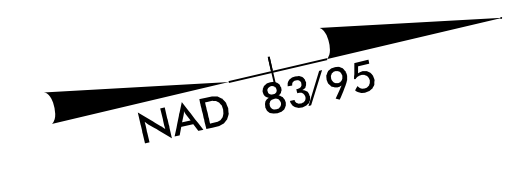
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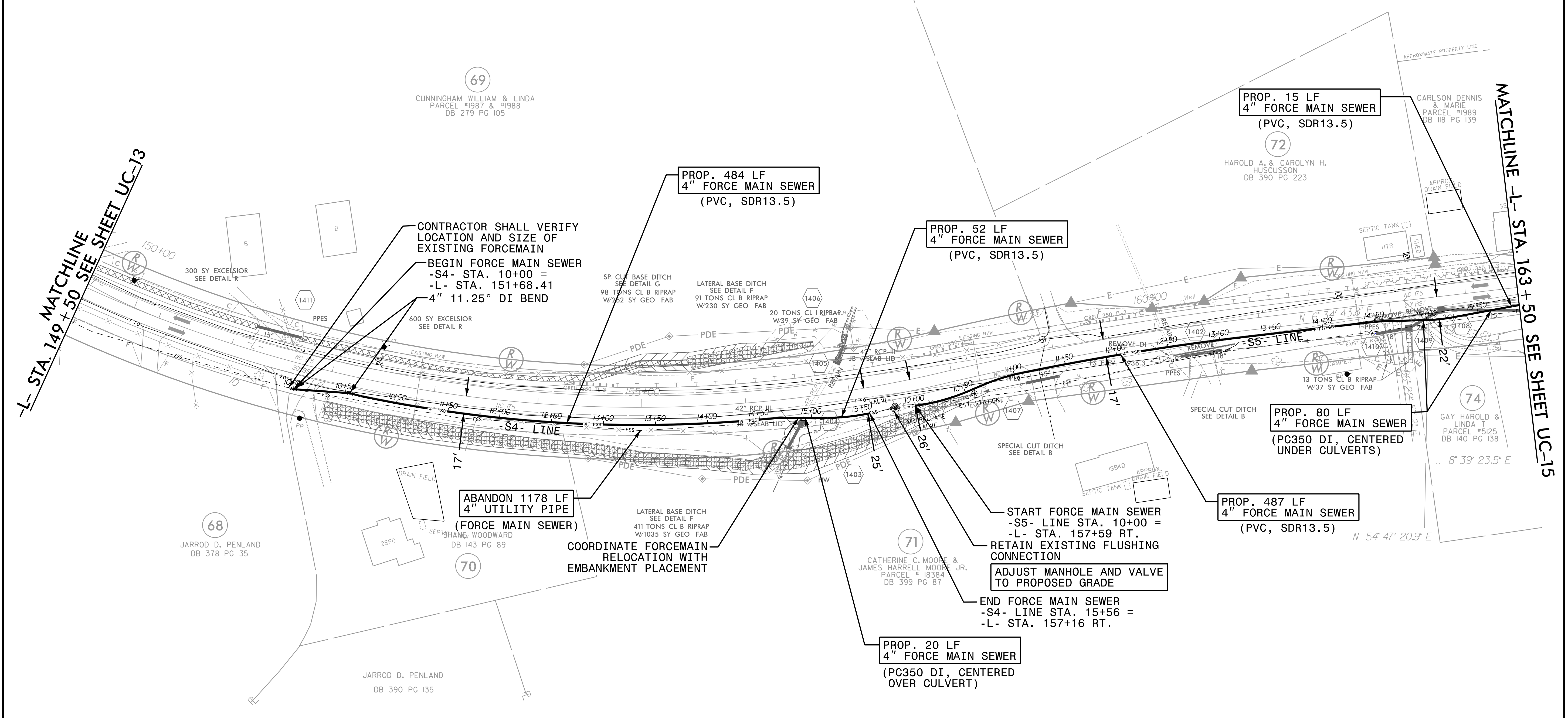
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PROJECT REFERENCE NO.	R-5742	SHEET NO.	UC-14
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APPROVED BY:	HTW		
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	



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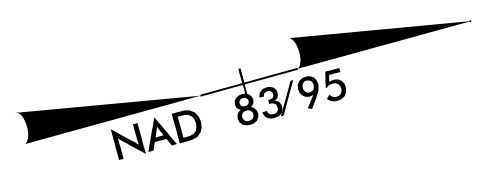
NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 100 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PLANS PREPARED BY:
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900 RIDGEFIELD DRIVE SUITE 350
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FOR -S4- PROFILE SEE SHT. 24

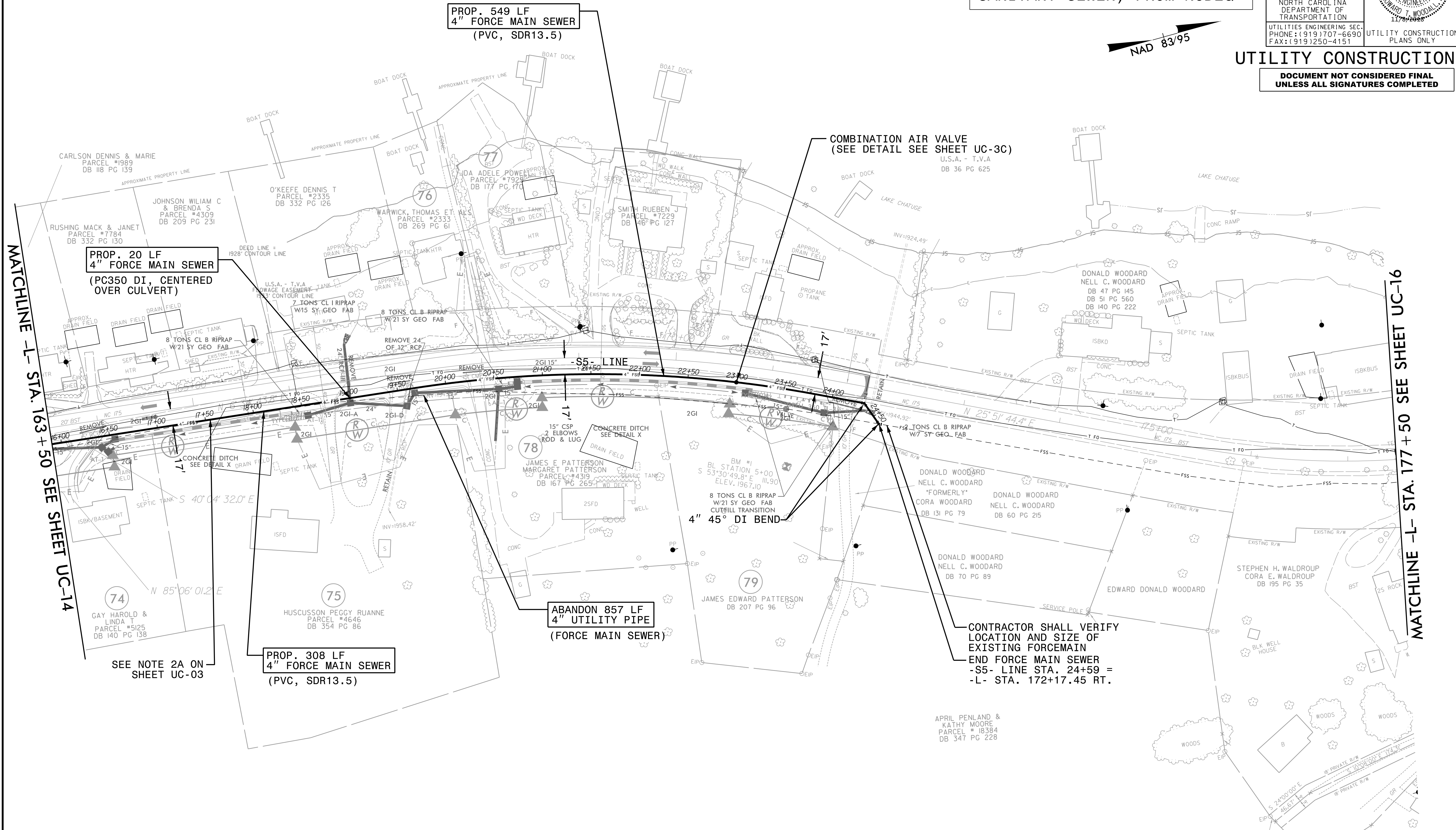
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PROJECT REFERENCE NO.	SHEET NO.
R-5742	UC-15
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MATCHLINE -L- STA. 163 + 50 SEE SHEET UC-14

MATCHLINE -L- STA. 177 + 50 SEE SHEET UC-16

**PROP. 20 LF
4" FORCE MAIN SEWER
(PC350 DI, CENTERED
OVER CULVERT)**

**PROP. 549 LF
4" FORCE MAIN SEWER
(PVC, SDR13.5)**

**PROP. 308 LF
4" FORCE MAIN SEWER
(PVC, SDR13.5)**

**ABANDON 857 LF
4" UTILITY PIPE
(FORCE MAIN SEWER)**

**COMBINATION AIR VALVE
(SEE DETAIL SEE SHEET UC-3C)
U.S.A. - T.V.A
DB 36 PG 625**

**CONTRACTOR SHALL VERIFY
LOCATION AND SIZE OF
EXISTING FORCEMAIN
END FORCE MAIN SEWER
-S5- LINE STA. 24+59 =
-L- STA. 172+17.45 RT.**

**NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
SEWER PIPE FITTINGS ON THIS PLAN SHEET
IS 100 POUNDS. THE ACTUAL QUANTITY AND
TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.**

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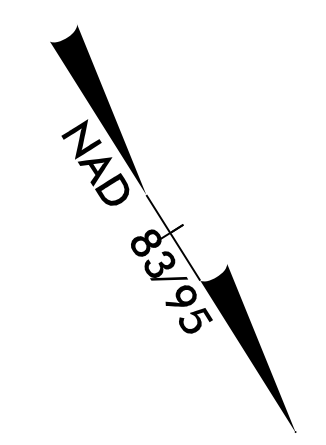
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PROJECT REFERENCE NO.	R-5742	SHEET NO.	UC-16
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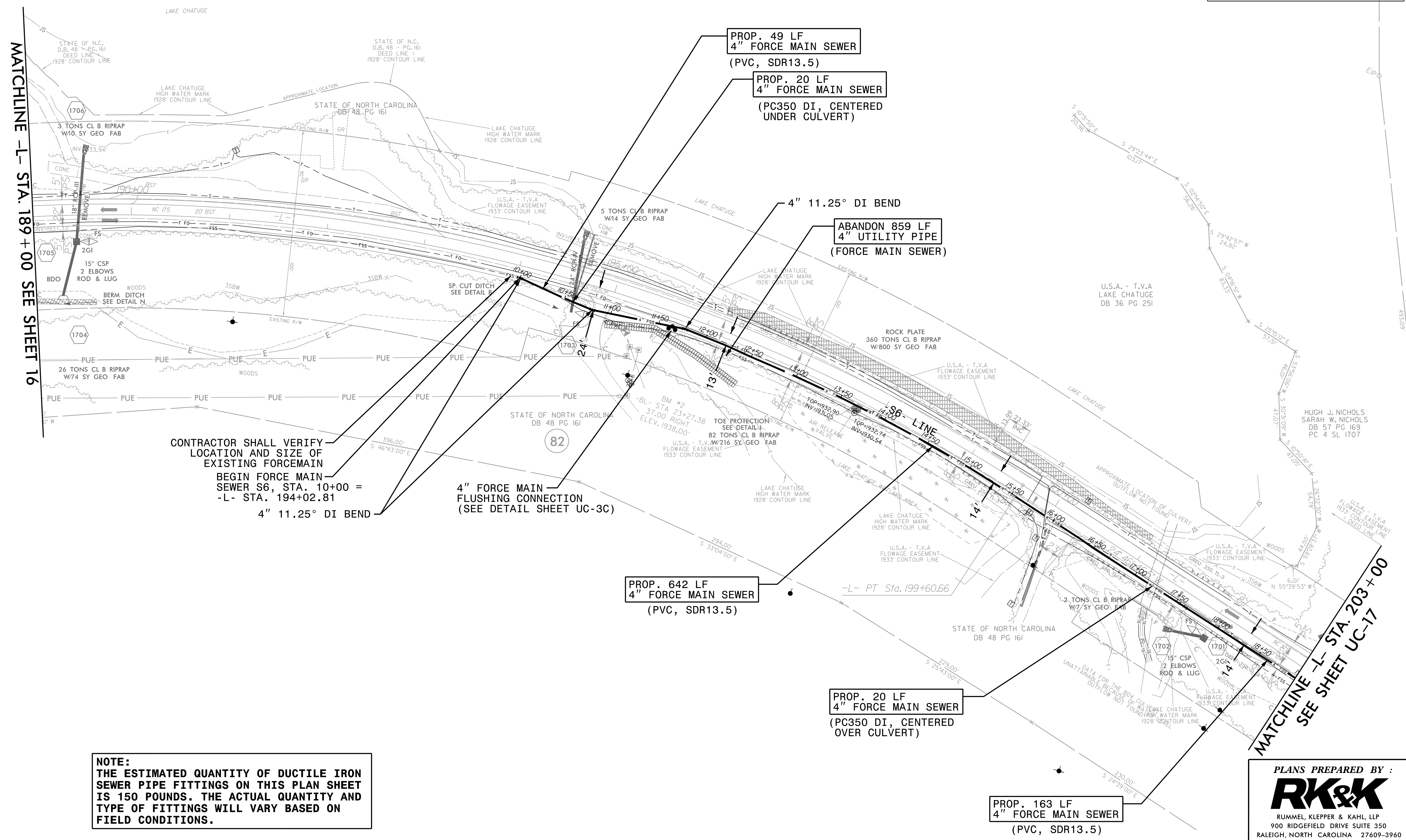
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 FRONTIER COMMUNICATIONS
 765 CHURCH STREET
 MURPHY, N.C. 28906
 828-837-5800

SEWER
 CLAY COUNTY WATER & SEWER
 33 MAIN ST.
 HAYESVILLE, N.C.
 828-389-1361

U.S.A. - T.V.A
 LAKE CHATUGE
 DB 36 PG 251



MATCHLINE -L- STA. 189 + 00 SEE SHEET 16

MATCHLINE -L- STA. 203 + 00
SEE SHEET UC-17

CONTRACTOR SHALL VERIFY
 LOCATION AND SIZE OF
 EXISTING FORCEMAIN
 BEGIN FORCE MAIN
 SEWER S6, STA. 10+00 =
 -L- STA. 194+02.81
 4" 11.25° DI BEND

4" FORCE MAIN
 FLUSHING CONNECTION
 (SEE DETAIL SHEET UC-3C)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 SEWER PIPE FITTINGS ON THIS PLAN SHEET
 IS 150 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

PROP. 163 LF
 4" FORCE MAIN SEWER
 (PVC, SDR13.5)

FOR -S6- PROFILE SEE SHT. 26

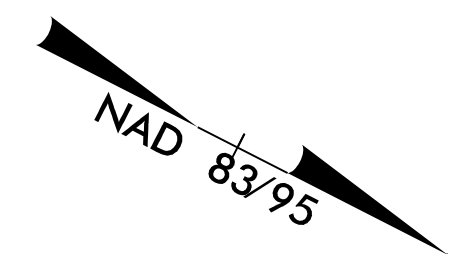
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 UC16

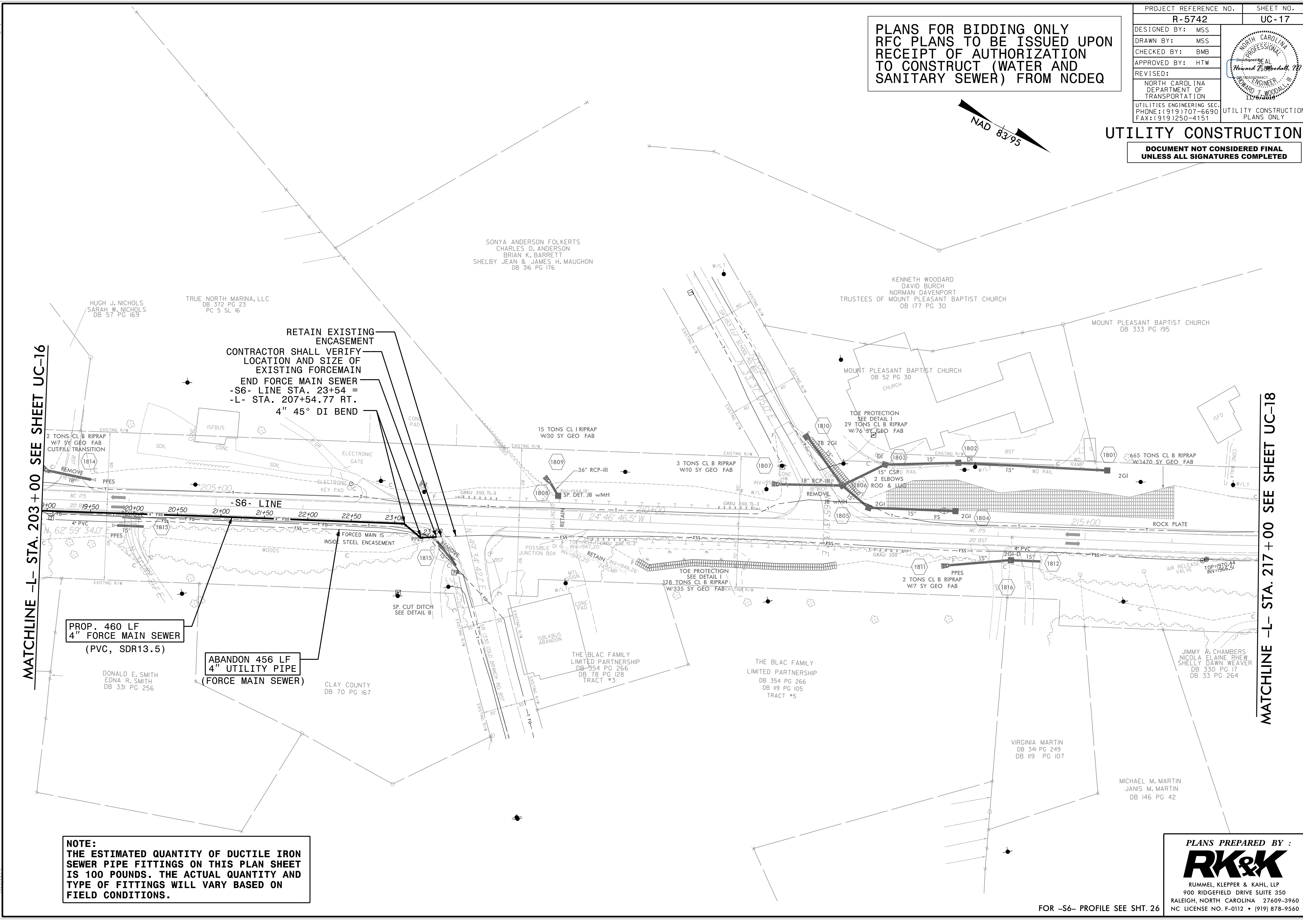
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MATCHLINE -L- STA. 203+00 SEE SHEET UC-16

MATCHLINE -L- STA. 217+00 SEE SHEET UC-18

RETAIN EXISTING
 ENCASEMENT
 CONTRACTOR SHALL VERIFY
 LOCATION AND SIZE OF
 EXISTING FORCEMAIN
 END FORCE MAIN SEWER
 -S6- LINE STA. 23+54 =
 -L- STA. 207+54.77 RT.
 4" 45° DI BEND

PROP. 460 LF
 4" FORCE MAIN SEWER
 (PVC, SDR13.5)

ABANDON 456 LF
 4" UTILITY PIPE
 (FORCE MAIN SEWER)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 SEWER PIPE FITTINGS ON THIS PLAN SHEET
 IS 100 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

FOR -S6- PROFILE SEE SHT. 26

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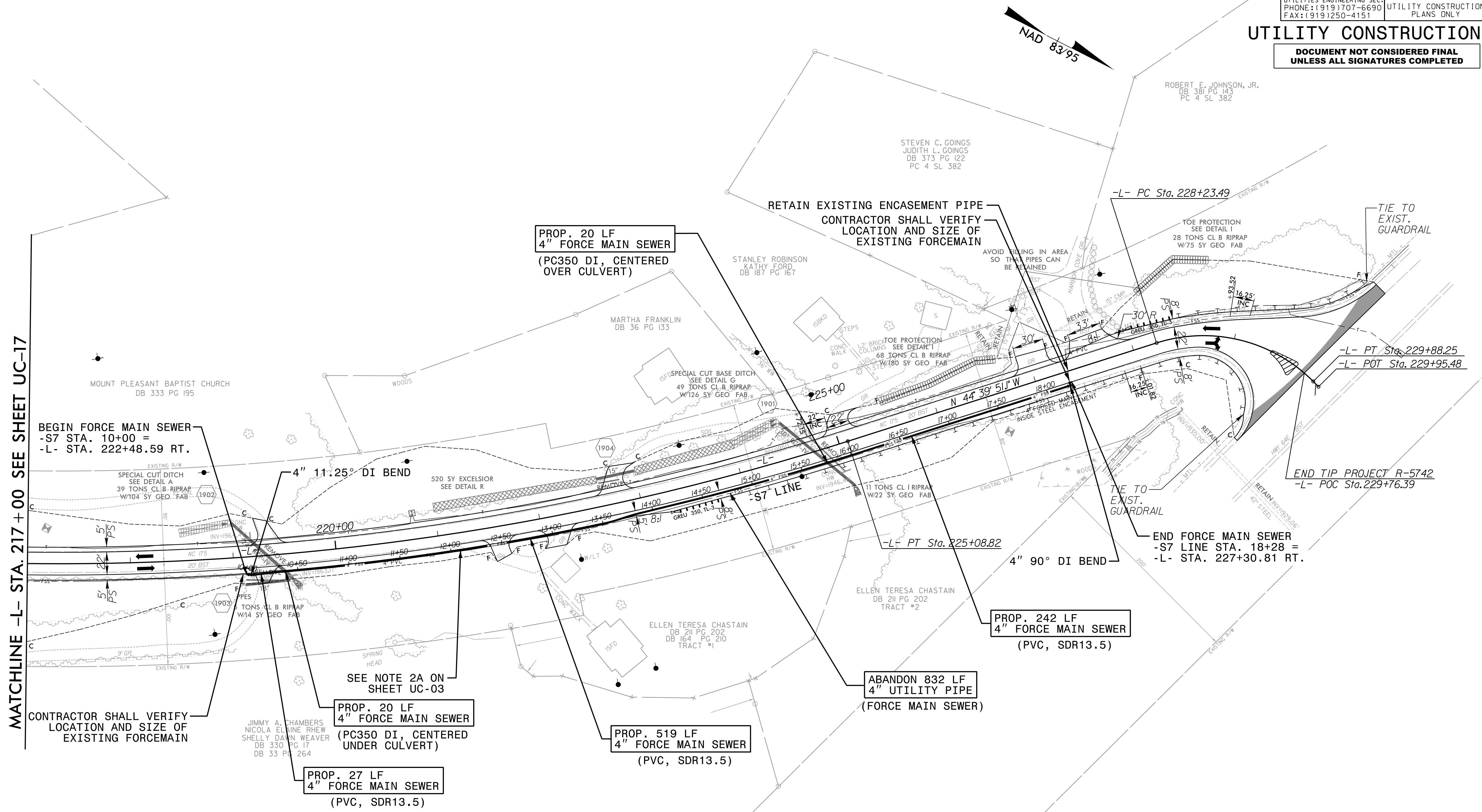
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MATCHLINE -L- STA. 217 + 00 SEE SHEET UC-17

BEGIN FORCE MAIN SEWER
 -S7 STA. 10+00 =
 -L- STA. 222+48.59 RT.

PROP. 20 LF
 4" FORCE MAIN SEWER
 (PC350 DI, CENTERED
 OVER CULVERT)

PROP. 242 LF
 4" FORCE MAIN SEWER
 (PVC, SDR13.5)

PROP. 20 LF
 4" FORCE MAIN SEWER
 (PC350 DI, CENTERED
 UNDER CULVERT)

PROP. 519 LF
 4" FORCE MAIN SEWER
 (PVC, SDR13.5)

PROP. 27 LF
 4" FORCE MAIN SEWER
 (PVC, SDR13.5)

ABANDON 832 LF
 4" UTILITY PIPE
 (FORCE MAIN SEWER)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 SEWER PIPE FITTINGS ON THIS PLAN SHEET
 IS 105 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

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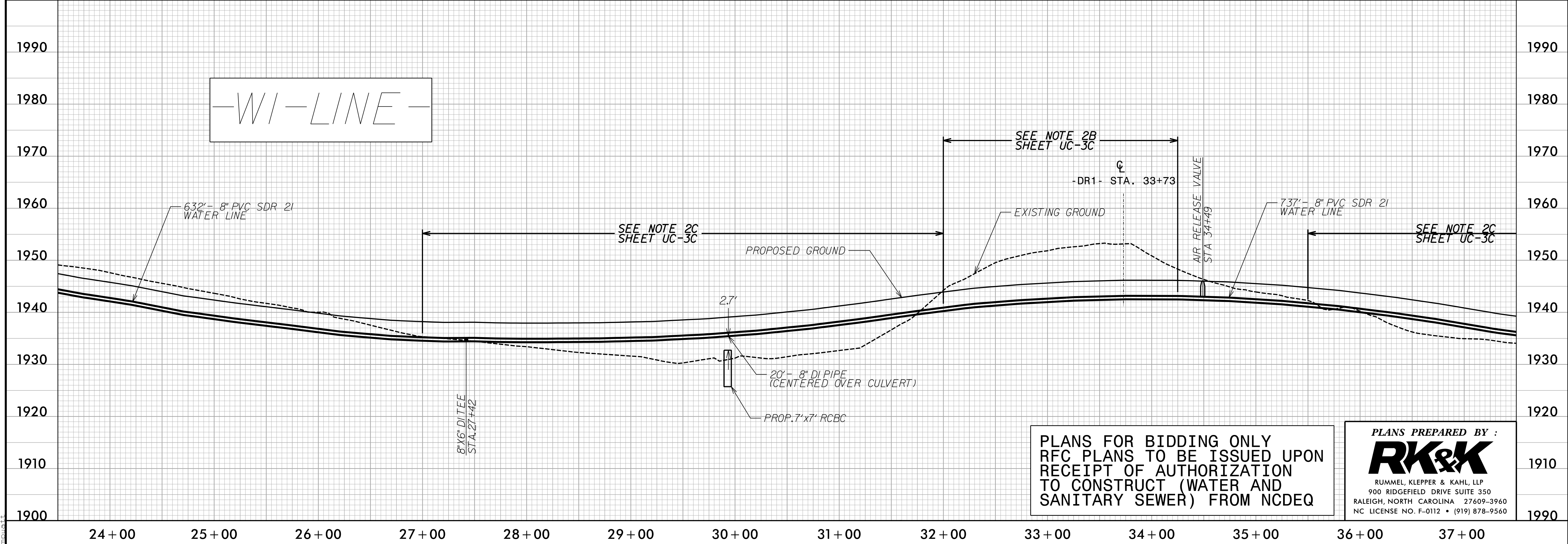
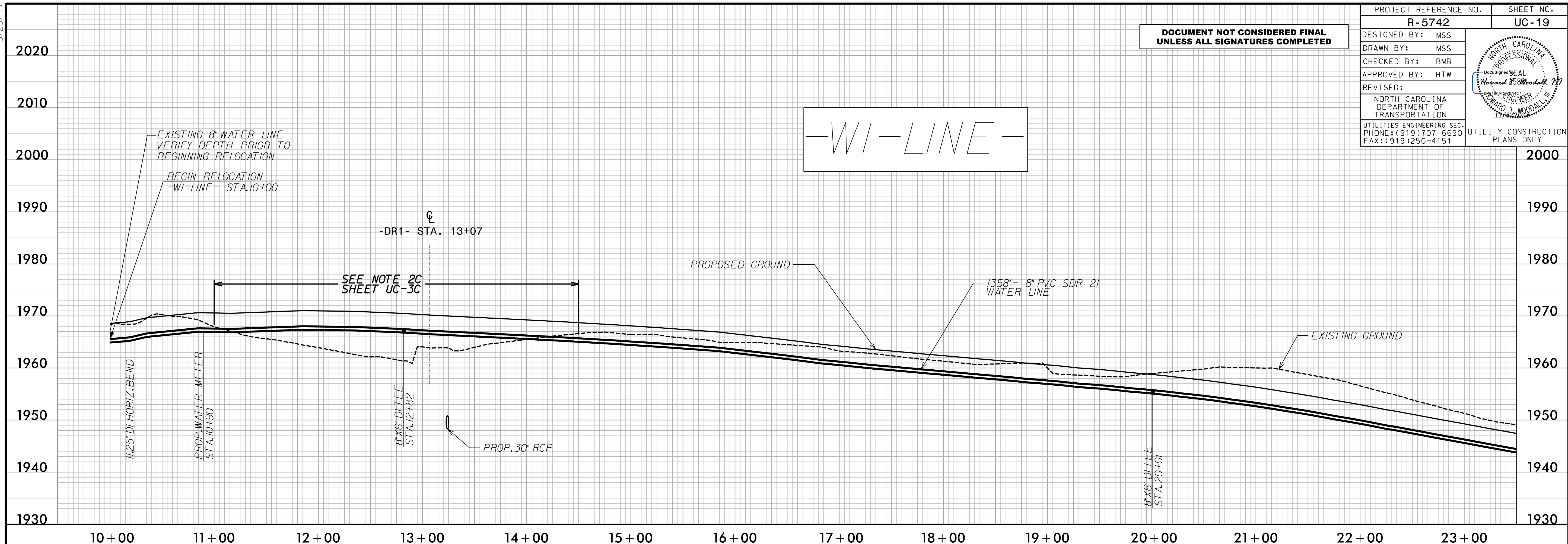
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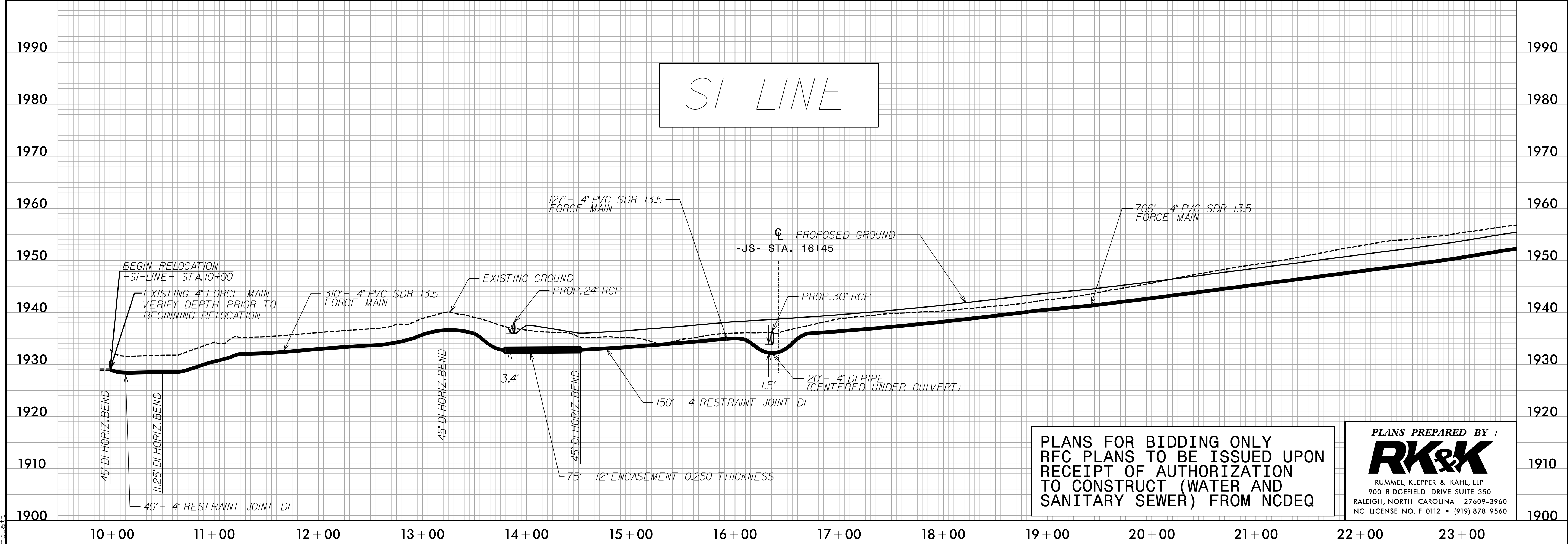
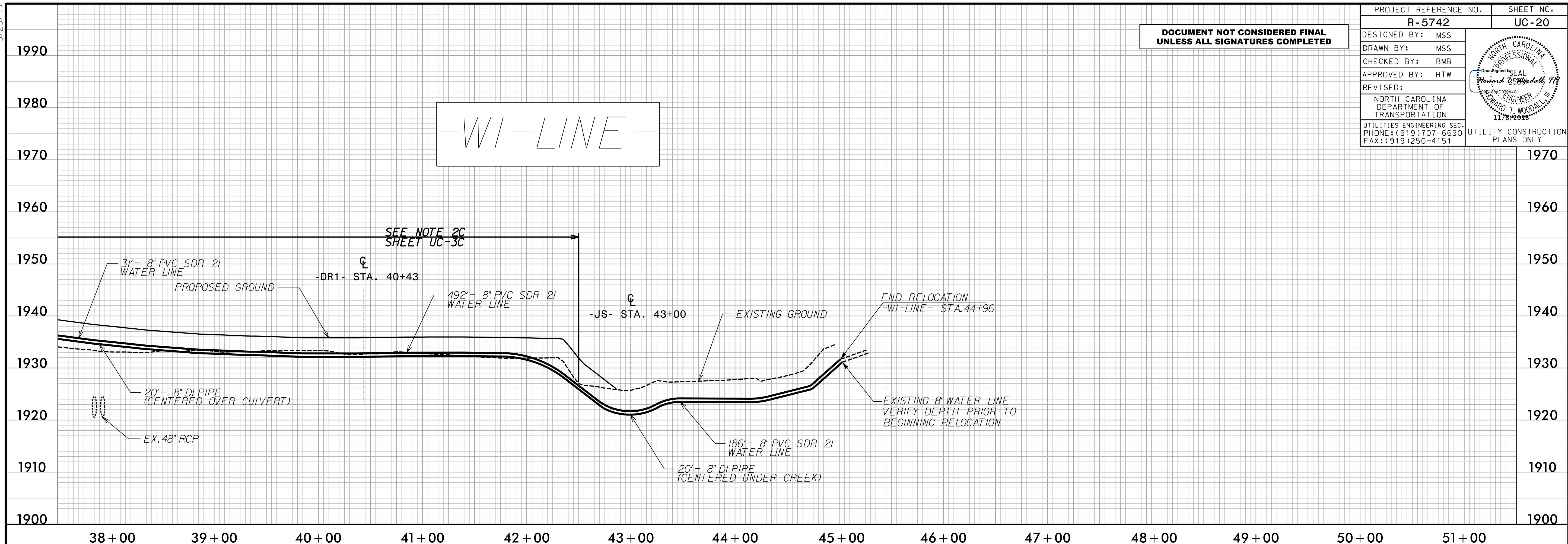
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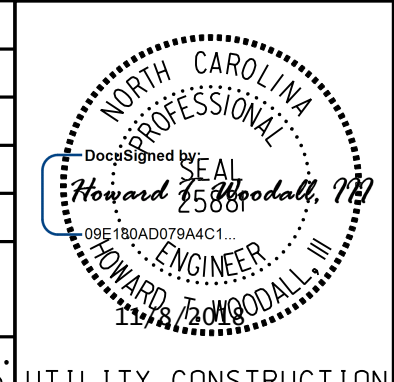
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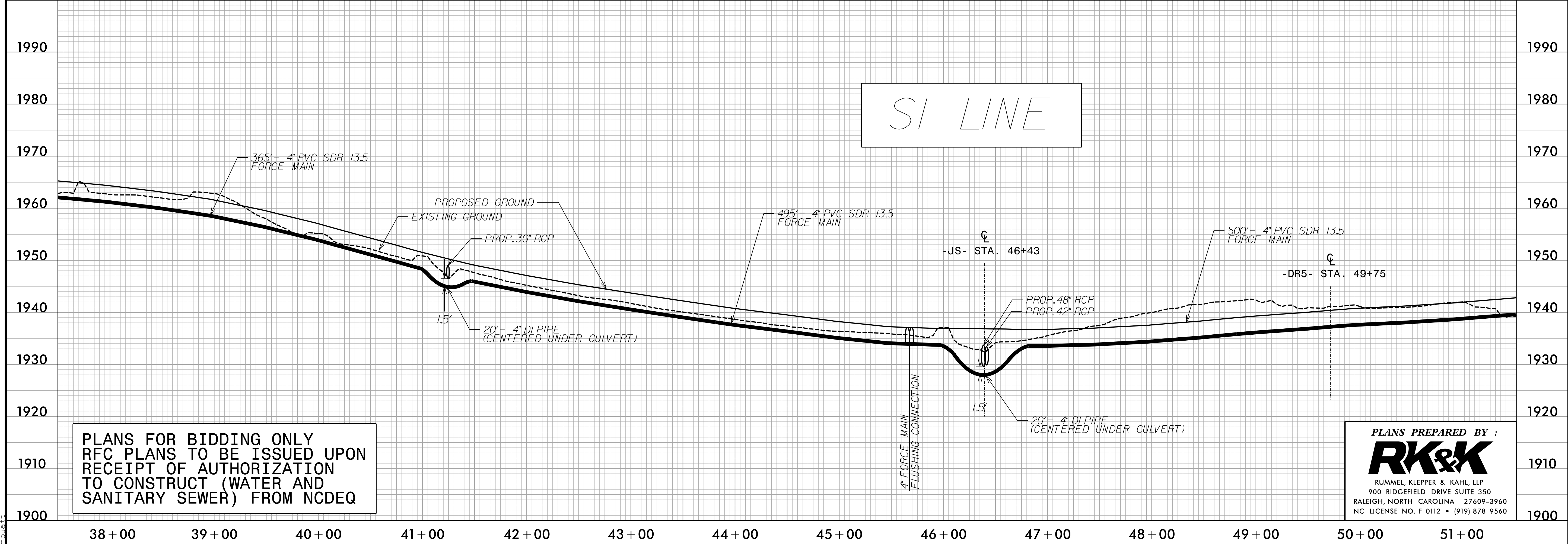
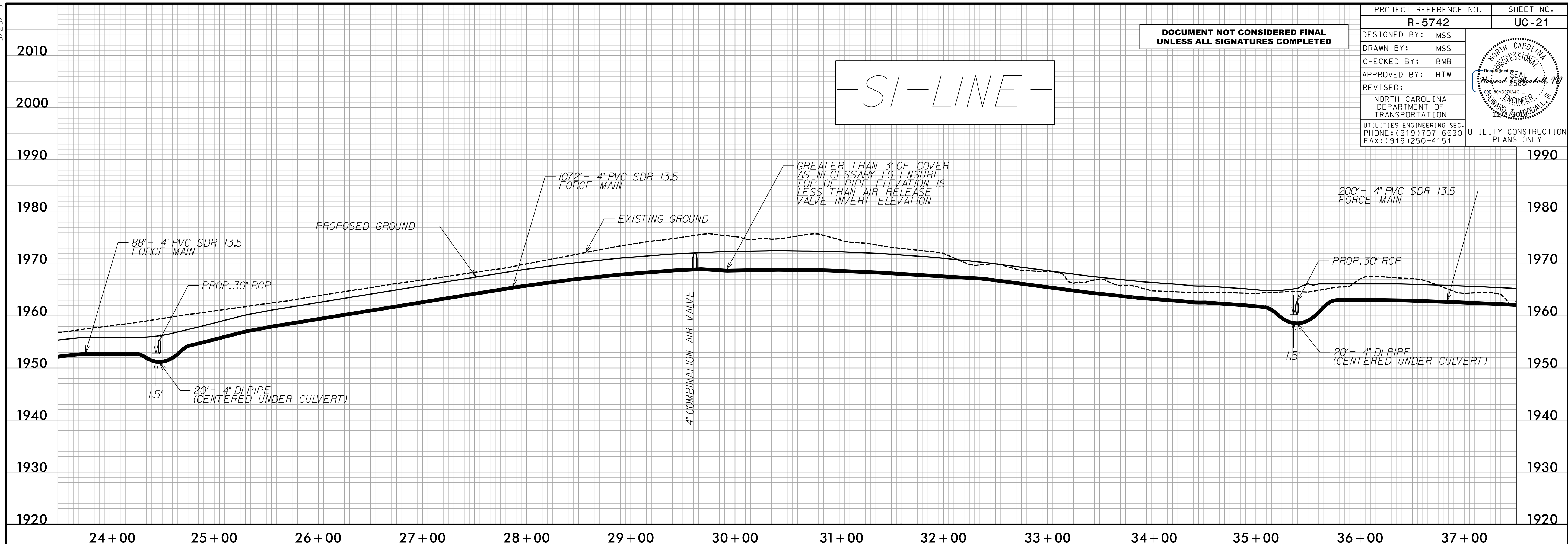
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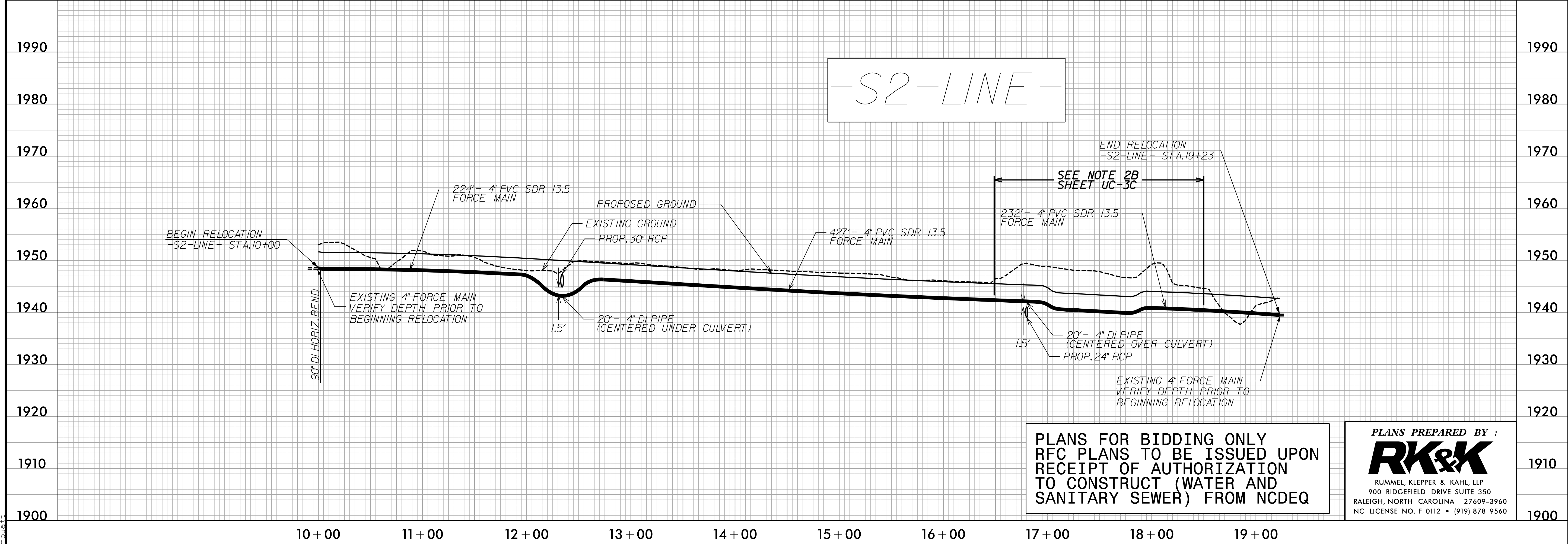
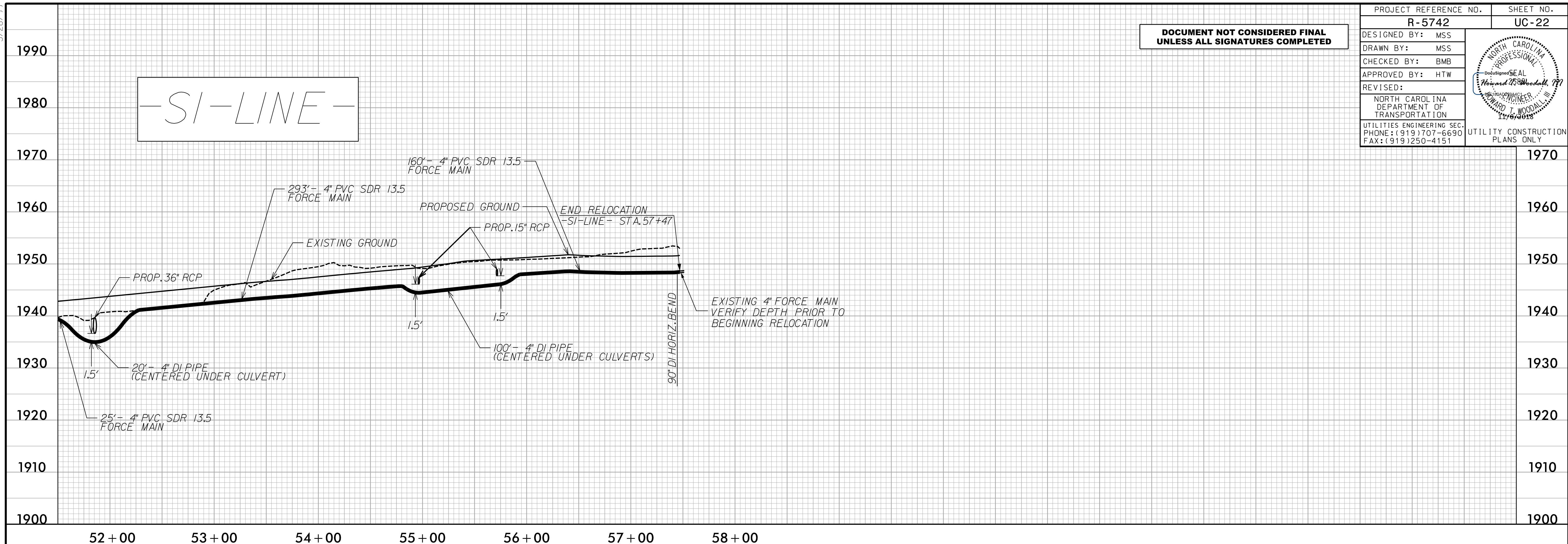
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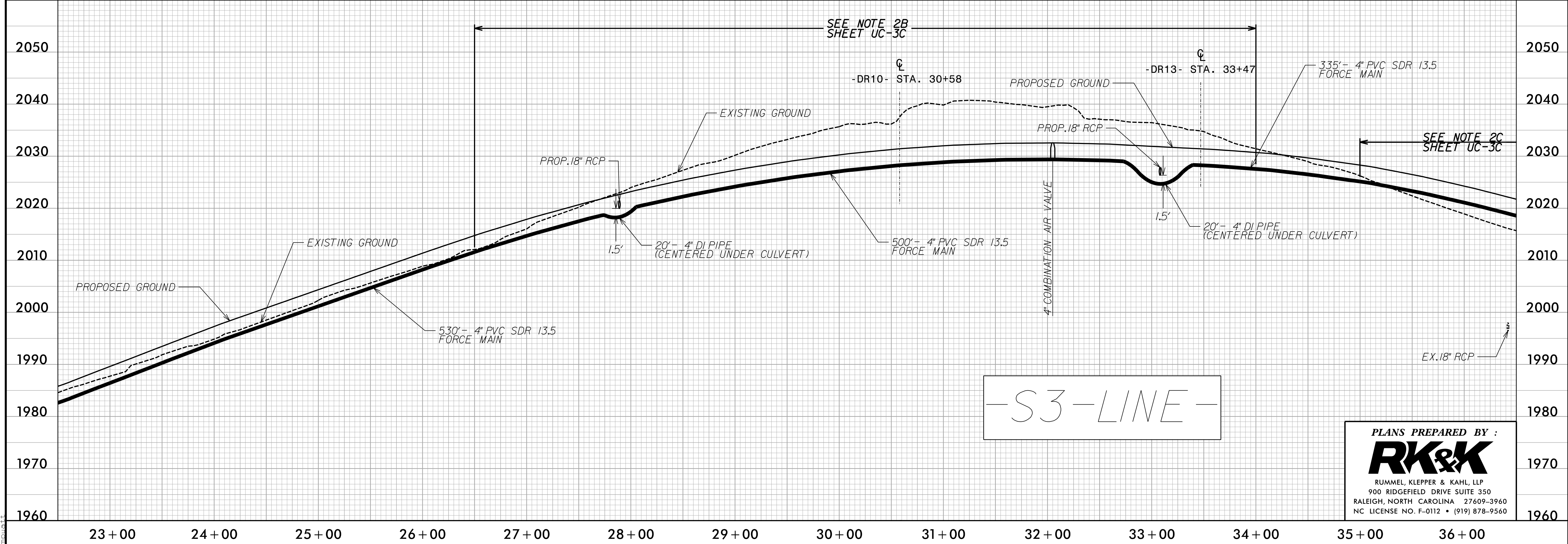
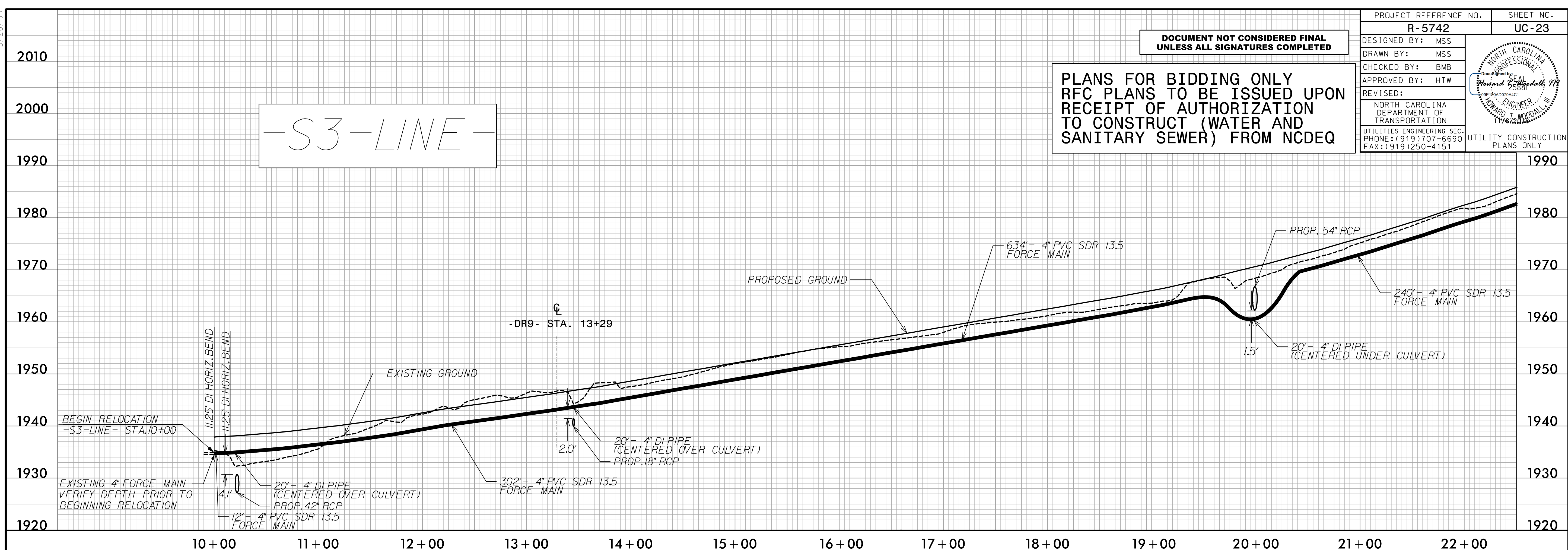
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-S3-LINE-



-S3-LINE-

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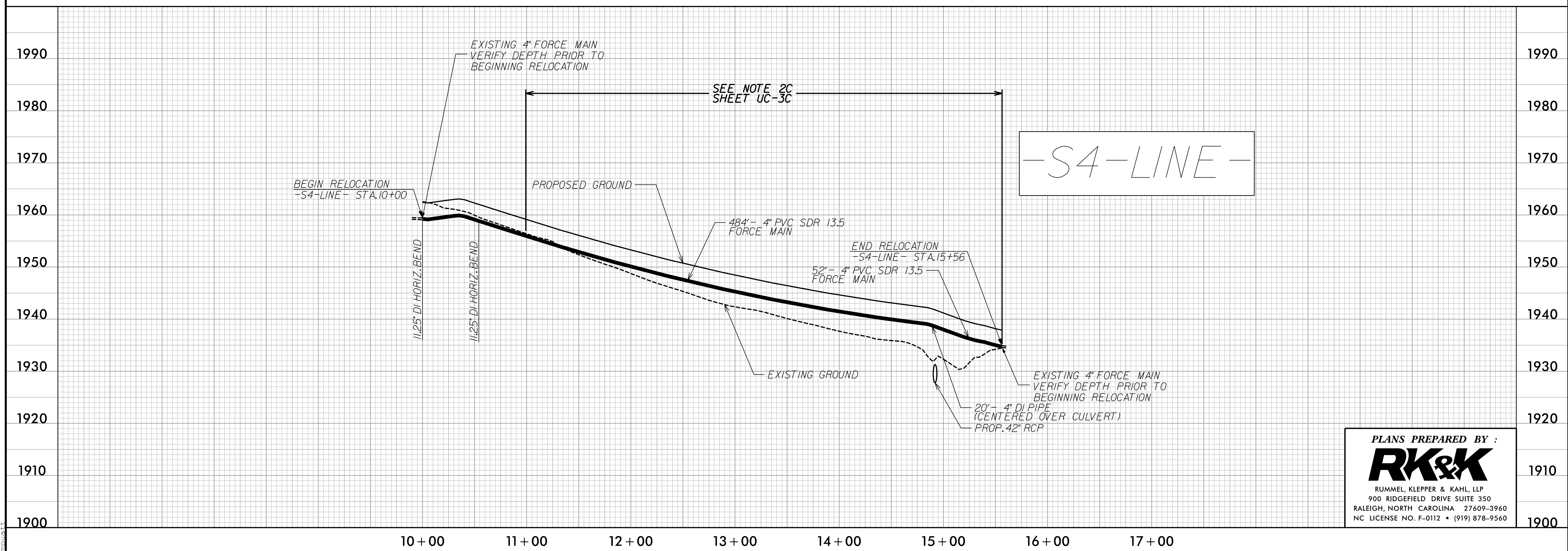
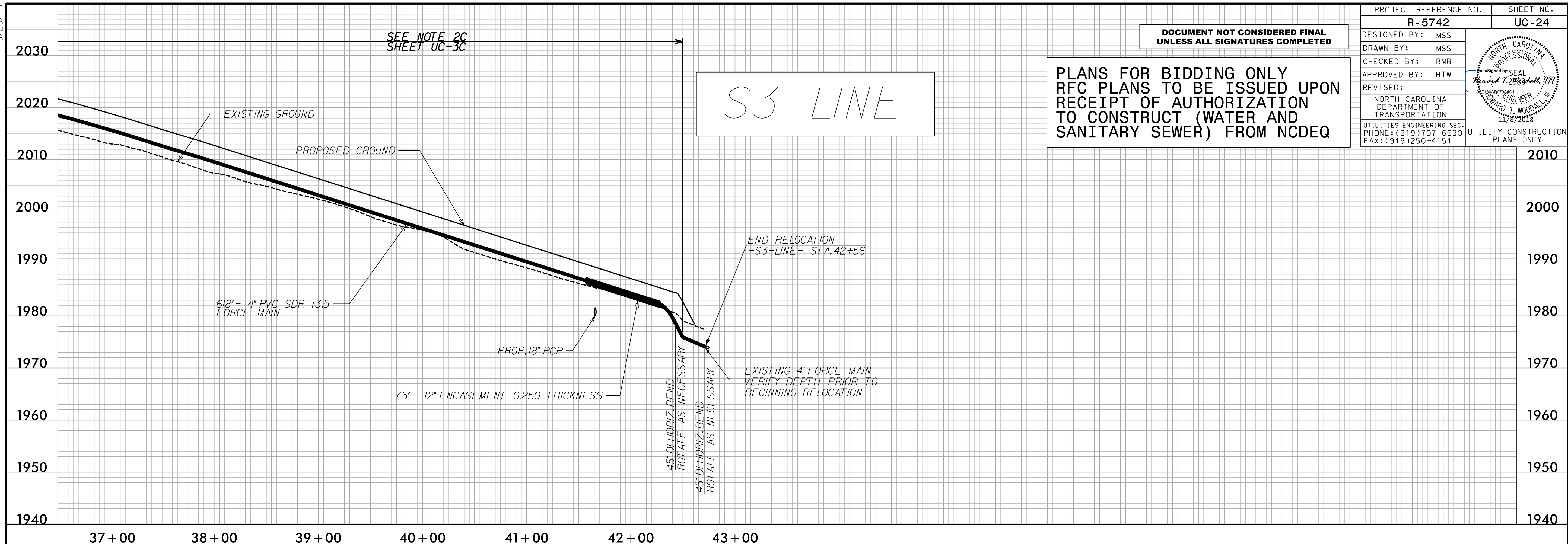
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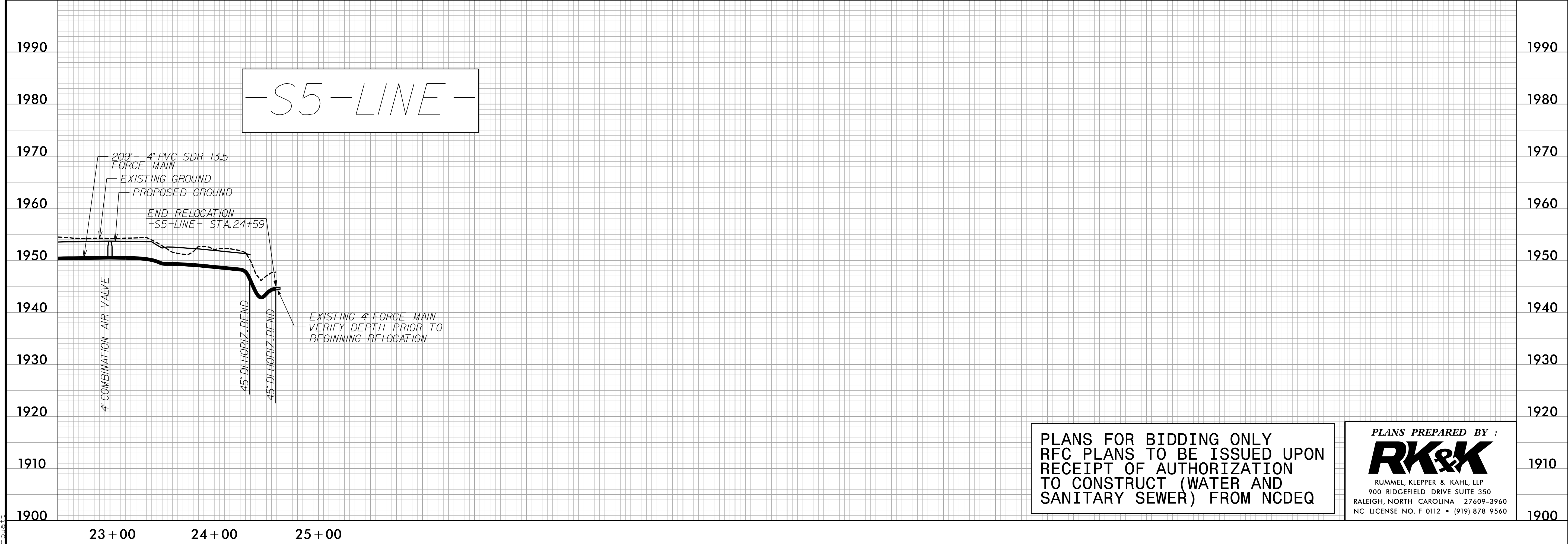
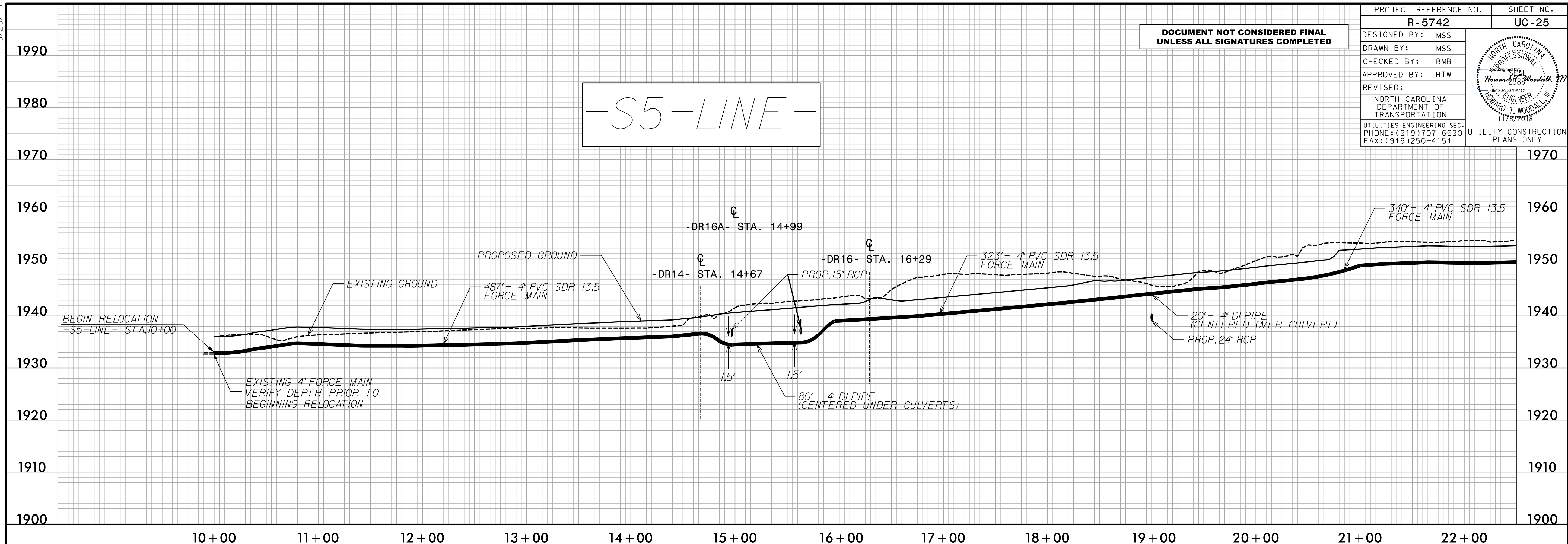
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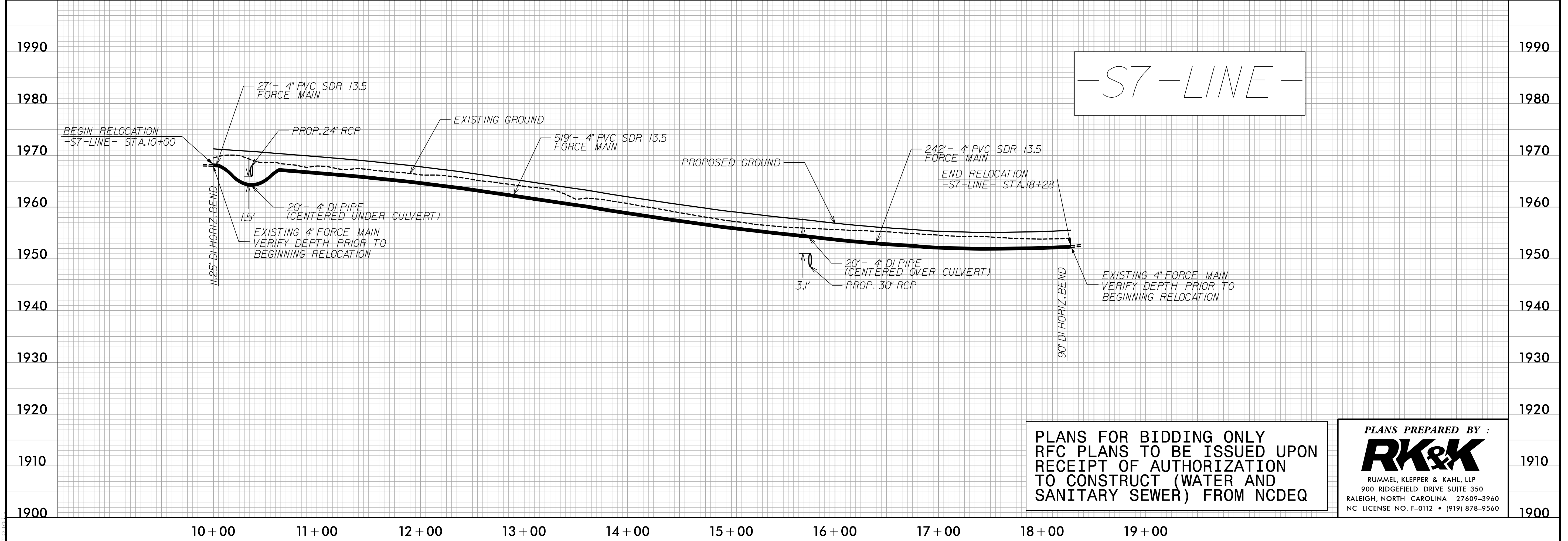
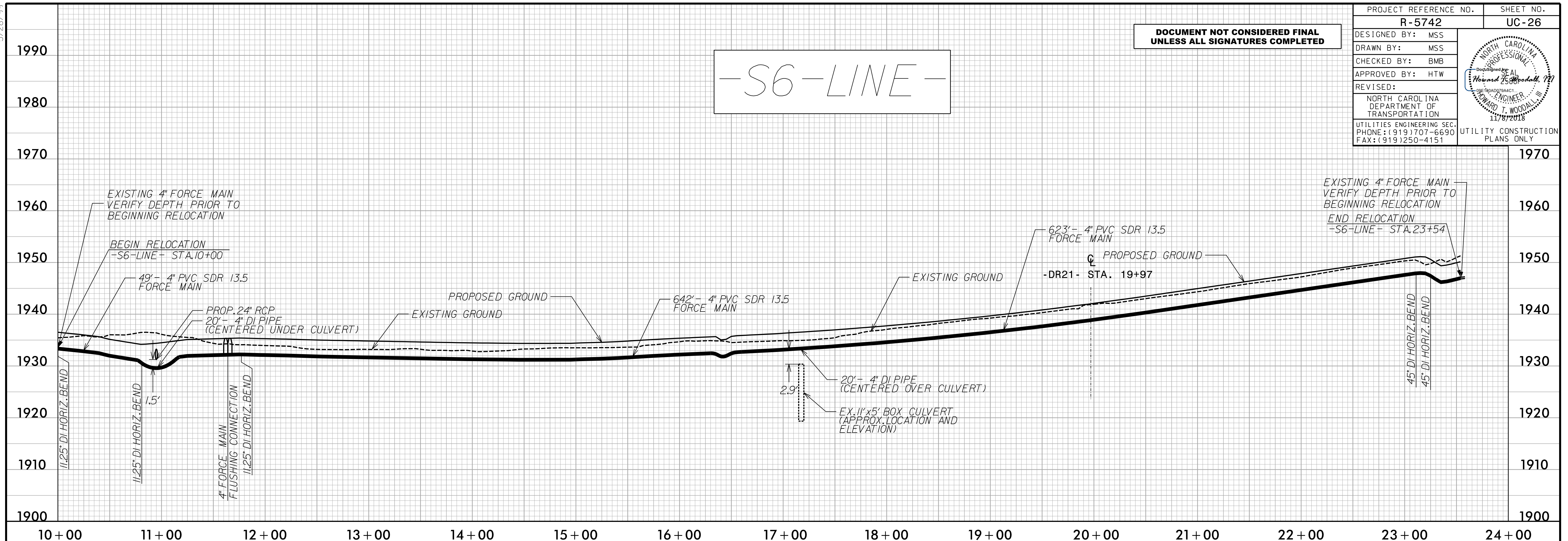
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