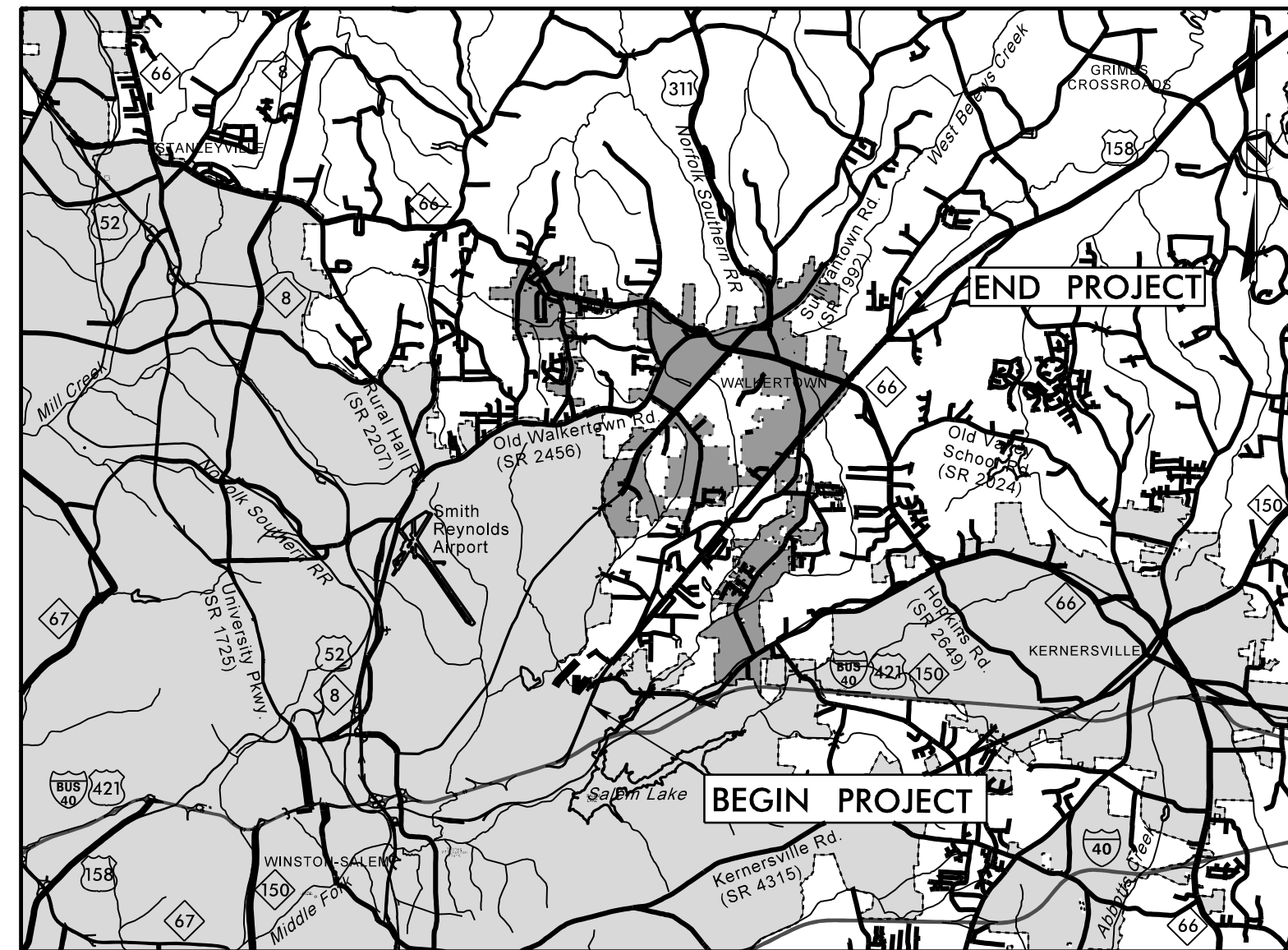


09_08/2019

TIP PROJECT: R-2577A



VICINITY MAP (NTS)

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

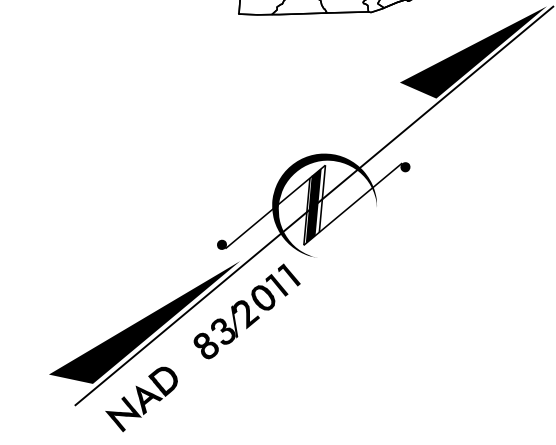
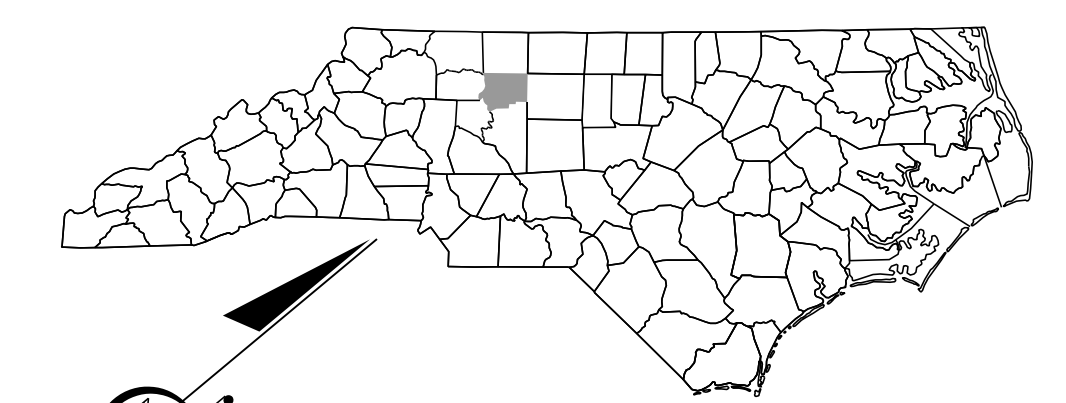
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

LOCATION: US 158 (REIDSVILLE RD.) FROM NORTH OF
US 421 / I-40 BUS. TO SR 1965 (BELEWS CREEK RD.)

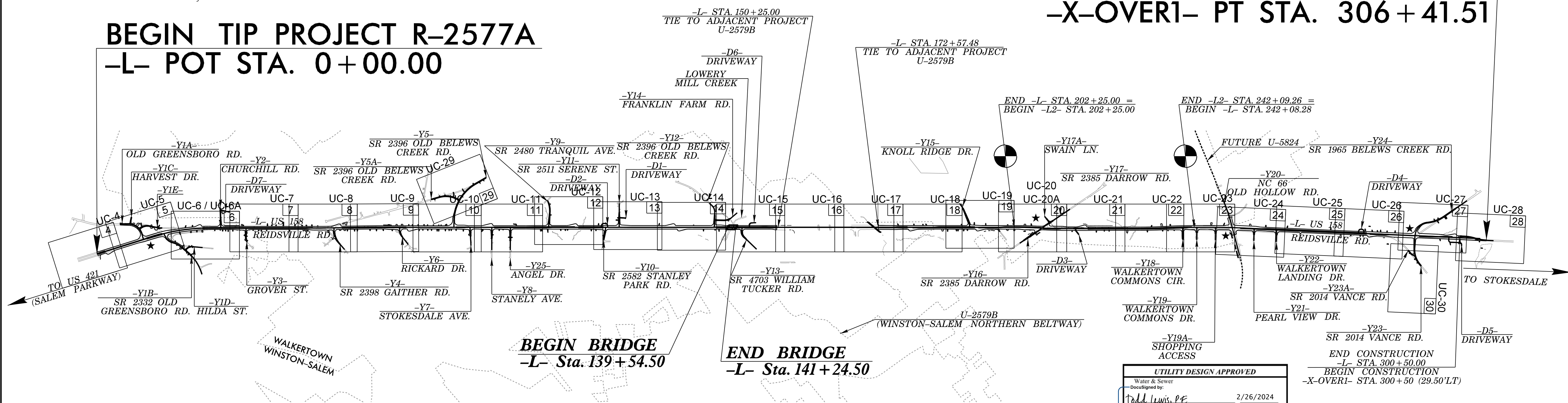
TYPE OF WORK: WATER & SEWER RELOCATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2577A	1	47
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
37405.1.2	N/A	PE	
37405.2.4	N/A	RW	
37405.2.5	N/A	UTIL.	
37405.3.1	N/A	CONST.	



END TIP PROJECT R-2577A
-X-OVER- PT STA. 306 + 41.51

BEGIN TIP PROJECT R-2577A
-L- POT STA. 0 + 00.00

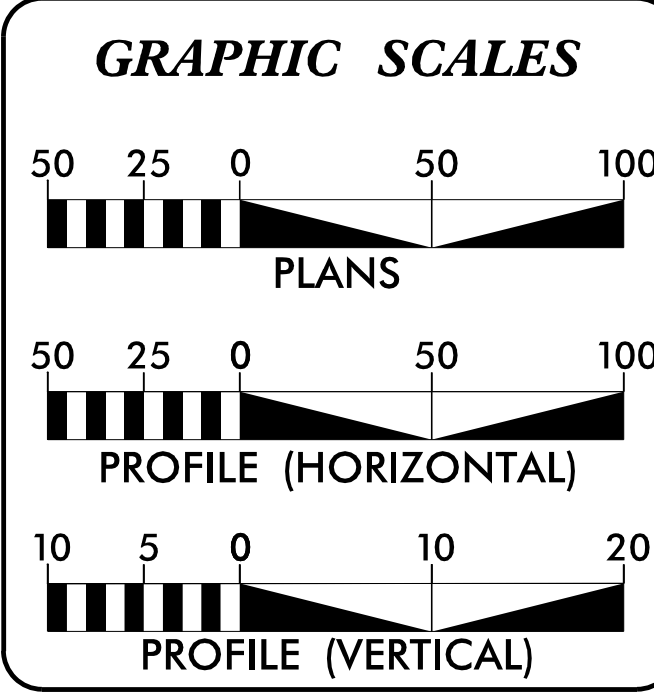


UTILITY DESIGN APPROVED
 Water & Sewer
 DocuSigned by:
 Todd Lewis, P.E. 2/26/2024
 Date

Approval of these water & sanitary sewer plans does not constitute approval for construction. Approval of construction must be in formal written agreement. Failure to obtain such agreement prior to beginning of construction will relieve the City of any financial participation in this project whatsoever.
 DocuSigned by:
 Michael Stour, P.E.
 2/26/2024

Approval by the Utilities Director of the water and sewer infrastructure depicted in these plans does not constitute approval for any other purpose than that set forth in Section 64 of the Water System Policy and Section 36 of the Sewer System Policy of the City/County Utility Commission. To the extent other permits, licenses, permissions or the like must be obtained to complete this project, such are specifically not granted by this approval and must be obtained by the Developer and/or his designee.

CONTRACT:



UTILITY OWNERS

WATER & SEWER:
 CITY OF WINSTON SALEM

INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3 THRU UC-3A	NOTES
UC-3B THRU UC-3D	DETAILS
UC-4 THRU UC-30	UTILITY CONSTRUCTION SHEETS
UC-31 THRU UC-41	PROFILE SHEETS

PLANS PREPARED BY:
 RUMMEL, KLEPPER & KAHL, LLP
 8601 SIX FORKS ROAD, FORUM 1, SUITE 700
 RALEIGH, NORTH CAROLINA 27615-3960
 NC LICENSE NO. F-0112
 1-888-521-4455 OR 919-878-9560

FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 February 26, 2021

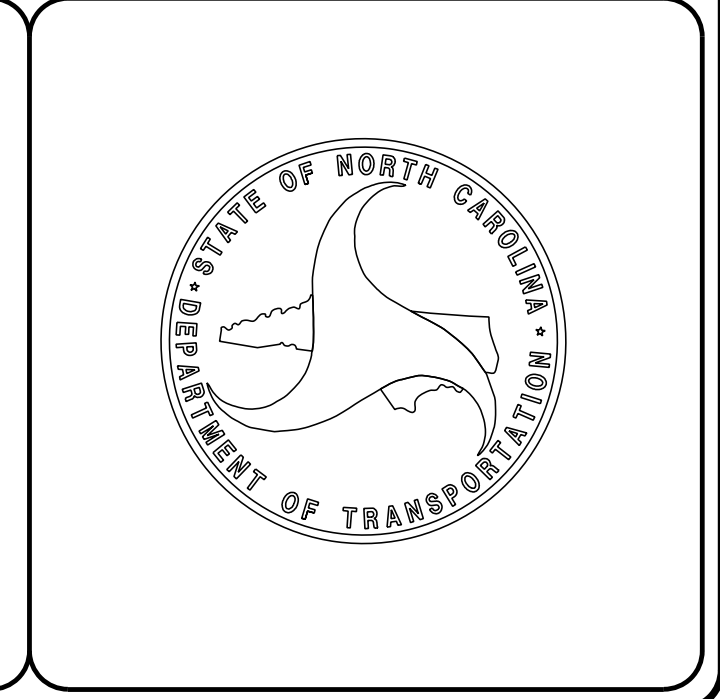
LETTING DATE:
 May 28, 2024

NCDOT CONTACT:
 Connie James, PE
 DIVISION 9

Project Engineers:
 Bryan Badey, PE
 Mariko Pyatt, PE

UTILITY ENGINEER

DocuSigned by:
 Bryan Badey 2/26/2024 P.E.

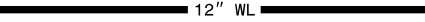



























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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS






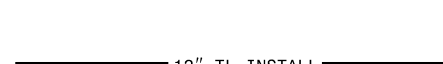
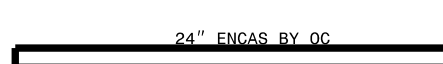
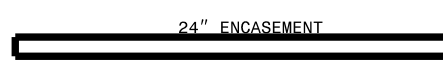
PROPOSED WATER SYMBOLS







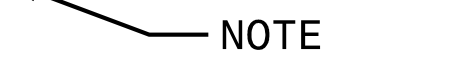
Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS












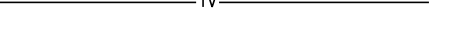

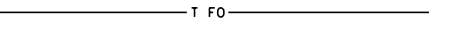

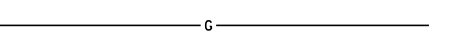













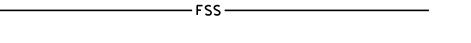

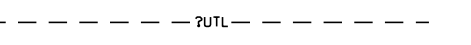







Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

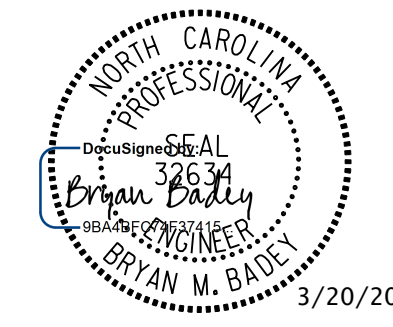
Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records		Sanitary Sewer Cleanout	
End of Information			

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

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UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
2. THE EXISTING UTILITIES BELONG TO WINSTON-SALEM AND FORYSTH COUNTY UTILITY COMMISSION . THE CONTACT PERSON IS TODD LEWIS, 336-747-6842.
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.
10. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
11. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY ASSOCIATED WITH THE WORK UNDER THIS PROJECT AND FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL HEALTH AND SAFETY LAWS, CODES, REGULATIONS, AND ORDINANCES INCLUDING BUT NOT LIMITED TO THOSE CURRENTLY MANDATED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
12. ALL EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT STANDARDS OF THE LAND QUALITY SECTION OF THE NCDEQ.
13. ALL WORK MUST CARRY A ONE-YEAR WARRANTY TO COVER ALL DEFECTS IN MATERIALS AND WORKMANSHIP.
14. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS OF NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THERAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHER IS MORE STRINGENT.

15. AS OF JULY 1, 2011 ALL METERS SHALL BE PURCHASED THROUGH THE CITY/COUNTY UTILITIES DIVISION. CONTRACTORS AND DEVELOPERS CAN PURCHASE METERS AT THE UTILITIES BUSINESS OFFICE OFF THE LOBBY OF THE STUART MUNICIPAL BUILDING, 100 E. FIRST STREET.
16. ANY UPGRADES OR WORK BEYOND THE LIMITS CURRENTLY SHOWN ON THE PLANS SHALL BE DISCUSSED AND AGREED TO AS EXTRA WORK PRIOR TO ADDITIONAL WORK BEING STARTED.

PROJECT SPECIFIC NOTES:

1. CONTRACTOR SHALL ABANDON EXISTING WATER MAIN IN PLACE EXCEPT WHERE REMOVAL IS REQUIRED FOR PROPOSED WORK OR WHERE NOTED. WITHIN THE RIGHT-OF-WAY OF NCDOT MAINTAINED ROADS, CONTRACTOR SHALL FILL ABANDONED WATER MAINS WITH FLOWABLE FILL. ABANDON EXISTING WATER MAINS PER NCDOT 2024 STANDARD SPECIFICATION SECTION 1530.
2. EXISTING WATER MAIN SHALL REMAIN IN SERVICE UNTIL PROPOSED WATER MAIN HAS BEEN TESTED, DISINFECTED, AND APPROVED.
3. EXISTING WATER SERVICES AND FIRE HYDRANTS SHALL BE CONNECTED TO PROPOSED WATER MAIN AFTER PROPOSED WATER MAIN HAS BEEN TESTED, DISINFECTED, AND APPROVED. AS SPECIFICALLY INDICATED BY PLANS, ALL RELOCATED FIRE HYDRANTS SHALL MEET OR EXCEED THE MOST CURRENT EDITION OF THE CITY OF WINSTON-SALEM'S SPECIFICATIONS AND DETAIL (VII-39). CONTRACTOR SHALL LEAVE THE OLD WATER METERS IN THE WATER METER BOX FOR PICK UP BY THE CITY/COUNTY UTILITIES, OR AS NOTED ON THE DRAWINGS.
4. FOR ALL WATER SERVICES TO BE DISTURBED BY CONSTRUCTION, CONTRACTOR SHALL REPLACE WATER METER BOXES WHICH DO NOT MEET THE REQUIREMENTS OF THE CAST IRON METER BOX FOR 5/8" AND 1" METERS DETAIL (VII-48), AS DIRECTED BY THE ENGINEER. TO DETERMINE COMPLIANCE OF THE WATER METER BOXES, CONTRACTOR SHALL EXPOSE, IN THE PRESENCE OF THE ENGINEER, EACH WATER METER BOX. CONTRACTOR SHALL LOCATE NEW WATER METER BOX PER 3/4" AND 1" WATER CONNECTION DETAIL (C-47 - C-49). CITY/COUNTY UTILITIES WILL PROVIDE THE NEW WATER METER BOXES TO THE CONTRACTOR.
5. WATER SERVICE LINES FOR PROPOSED OR RELOCATED WATER METERS SHALL BE RECONNECTED TO THE MAIN BY ABANDONING EXISTING TAP AND RENEWING TAP.

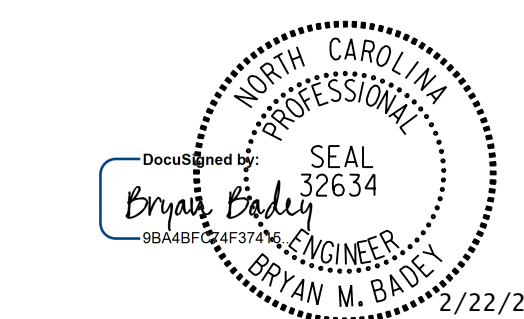
6. WATER VALVES ABANDONED IN PLACE SHALL BE ABANDONED IN THE CLOSED POSITION.
7. PROVIDE CONCRETE THRUST BLOCKS AT ALL WATER MAIN BENDS, TEES, AND CAPS UNLESS OTHERWISE NOTED.
8. PROPOSED WATER LINE SHALL BE D.I. (DUCTILE IRON PIPE).
9. STABILIZATION STONE UNDER PIPING TO BE PLACED AS REQUIRED BY CITY INSPECTOR WHEN CONDITIONS WARRANT.
10. PRIOR TO REQUESTING A FINAL INSPECTION, THE CONTRACTOR MUST SUBMIT RECORD DRAWINGS AND ENGINEER'S CERTIFICATION TO THE ENGINEERING DIVISION'S RECORD CENTER. THE OWNER MUST ALSO SUBMIT THE CONSTRUCTION CHECKLIST TO THE CITY INSPECTOR.
11. CONTACT UTILITIES FIELD OPERATIONS AT 336-462-2199 TO ARRANGE FOR CONSTRUCTION INSPECTION. A CITY INSPECTOR WILL APPROVE BACKFLOW PREVENTER TYPE, VAULT, EXACT LOCATION, AND INSPECTION REQUIREMENTS PRIOR TO INSTALLATION. A CITY INSPECTOR SHALL BE PRESENT WHEN MAKING OR TERMINATING WATER AND SEWER CONNECTIONS INTO NEW OR EXISTING WATER AND SEWER LINE.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE ENGINEER WITH A SET OF SURVEY RECORD (AS-BUILT) DRAWINGS PREPARED BY A NORTH CAROLINA REGISTERED LAND SURVEYOR CERTIFYING THE ACCURACY OF THE SURVEY HORIZONTAL AND VERTICAL LOCATIONS TO ONE TENTH (0.10) OF A FOOT, SURVEY SHALL BE TIED TO THE NORTH CAROLINA STATE PLANS COORDINATE SYSTEM (NAD83 FEET) HORIZONTALLY, AND ELEVATIONS SHALL BE NORTH AMERICAN VERTICAL DATUM (NAVD88). SURVEY POINT INFORMATION SHALL BE PROVIDED IN AN ELECTRONIC FORMAT FILE OR AN ASCII POINT TEXT FILE [X-Y COORDINATES].

THESE DRAWINGS SHALL AT A MINIMUM SHOW THE FINAL ELEVATIONS AND HORIZONTAL LOCATIONS FOR THE FOLLOWING:

ALL RELOCATION, INCLUDING VAULTS, BELOW GRADE FITTINGS, VALVES, WATER METERS AND BACKFLOW PREVENTION DEVICES ALONG THE WATER LINE ALIGNMENT. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A LETTER CERTIFYING TO THEIR COMPLIANCE WITH THE CONTRACT DRAWINGS

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UTILITY CONSTRUCTION



UTILITY CONSTRUCTION

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UNLESS ALL SIGNATURES COMPLETED**

UTILITY NOTES:

1. PRIOR TO CONSTRUCTION, NOTIFY ALL UTILITY OWNERS WHOSE FACILITIES MAY BE AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY OPERATIONS OR THOSE OF THEIR AGENTS. THE CONTRACTOR SHALL HOLD THE CITY HARMLESS FOR ANY THIRD-PARTY INCONVENIENCE CREATED BY WORK OF THEIR OWN FORCES OR THAT OF THEIR AGENTS.

2. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES, CONTRACTOR SHALL STOP WORK IMMEDIATELY, TAKE NECESSARY PRECAUTIONS TO PREVENT INJURY OR FURTHER DAMAGE, AND NOTIFY PROPER AUTHORITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING/REPAIRING ALL EXISTING STRUCTURES, CONDUITS, OR OTHER UTILITIES DAMAGED BY CONTRACTOR'S OPERATIONS.

3. FOR UTILITY LOCATE MEMBERS, CALL NORTH CAROLINA ONE-CALL @ 1-800-632-4949, FOR LOCATES OF UTILITIES NOT MEMBERS OF NORTH CAROLINA ONE-CALL CONTACT THE SPECIFIC UTILITY COMPANY.

4. CONTRACTORS SHALL ANTICIPATE HAND DIGGING AROUND EXISTING WATER SERVICES, SANITARY SEWER LATERALS, AND OTHER UTILITIES.

3. FOR ALL WATER SERVICES TO BE DISTURBED BY CONSTRUCTION, CONTRACTOR SHALL REPLACE ALL WATER METER BOXES WHICH DO NOT MEET THE REQUIREMENTS OF THE CAST IRON METER BOX FOR 5/8" AND 1" METERS DETAIL C-49, AS DIRECTED BY THE ENGINEER. TO DETERMINE COMPLIANCE OF THE WATER METER BOXES, CONTRACTOR SHALL EXPOSE, IN THE PRESENCE OF THE ENGINEER, EACH WATER METER BOX, CONTRACTOR SHALL LOCATE NEW WATER METER BOX PER V" AND 1" WATER CONNECTION DETAIL C-46-48. CITY/COUNTY UTILITIES WILL PROVIDE THE NEW WATER METER BOXES TO THE CONTRACTOR.

4. FOR ALL WATER SERVICES DISTURBED BY CONSTRUCTION, IF THE WATER SERVICES IS ACTIVE, THEN RECONNECT; IF THE WATER SERVICE IS INACTIVE, THEN REMOVE. REMOVAL SHALL INCLUDE TURNING OFF CORPORATION COCK AT THE MAIN AND REMOVING A SECTION OF PIPE BEYOND THE MAIN ON THE WATER METER SIDE.

5. CONTRACTOR IS RESPONSIBLE FOR FURNISHING BYPASS PUMPING FOR EXISTING SANITARY SEWER MAINS OR SERVICES AS NECESSARY DURING CONSTRUCTION. CONTRACTOR SHALL GIVE A MINIMUM OF 48 HOURS NOTICE PRIOR TO BEGINNING SUCH CONSTRUCTION. TRAFFIC CONTROL MEASURES, ROAD RAMPS, ETC. SHALL BE PROVIDED AS REQUIRED TO ACCOMMODATE BYPASS OPERATIONS.

LIST OF STANDARD DRAWINGS

- D1 - PIPE RELOCATION DETAIL
- C9 - BEDDING REQUIREMENTS & SAFE COVER FOR VC PIPE ON STABLE SUBGRADE
- C10 - 4" PRECAST REINFORCED CONCRETE MANHOLE
- C13 - MANHOLE BUILT OVER EXISTING LINE
- C17 - FLEXIBLE MANHOLE CONNECTOR
- C18 - MANHOLE RING & COVER (TYPE 1)
- C19 - MANHOLE RING & COVER (TYPE 2)
- C21 - 4" POLYPROPYLENE MANHOLE STEP
- C22 - SEWER CONNECTION
- C39 - CAST IRON VALVE BOX
- C40 - VALVE BOX INSTALLATION
- C41 - HYDRANT AND VALVE INSTALLATION
- C43 - CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS
- C44 - CONCRETE THRUST BLOCKS W/ ANCHORS FOR TOP VERTICAL BENDS
- C46 - 1" WATER CONNECTION
- C49 - CAST IRON METER BOX FOR 5/8" & 1" METERS
- C50 - POLYMER CONCRETE METER BOX FOR 1 1/2" AND 2" METER
- C52 - AIR RELEASE VALVE (SECTION VIEW)
- C53 - AIR RELEASE VALVE (PROFILE VIEW)
- C54 - THRUST HARNESS FOR EXITING PIPE
- W-41 - CONCRETE CRADLE PROTECTION FOR WATER LINE CROSSINGS

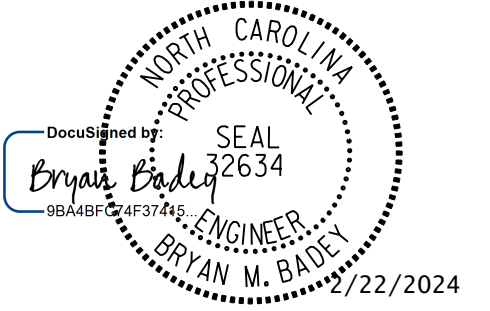
WATER AND SEWER NOTES:

1. THE MOST CURRENT EDITION OF THE CITY OF WINSTON-SALEM TECHNICAL SPECIFICATIONS AND DETAIL DRAWINGS FOR WATER LINE AND SANITARY SEWER LINE CONSTRUCTION WILL GOVERN ALL WATER AND SANITARY SEWER CONSTRUCTION AND INSTALLATION IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE NCDEQ, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION, AND APPLICABLE PLUMBING CODES, UNLESS OTHERWISE SPECIFIED HEREIN.

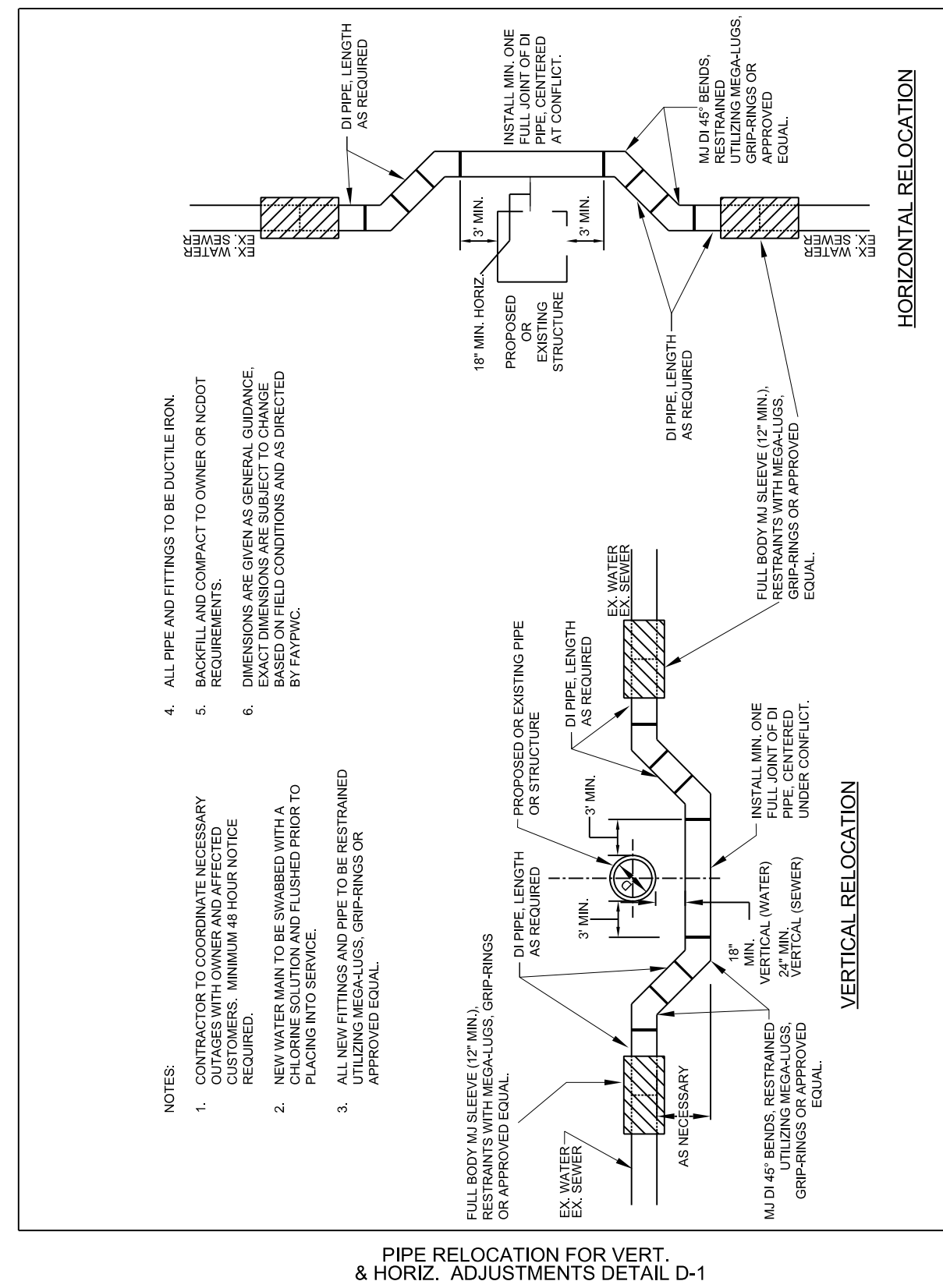
2. FOR ALL WATER SERVICES TO BE CONNECTED TO THE PROPOSED WATER MAIN, CONTRACTOR SHALL REPLACE ALL WATER SERVICE PIPING WHICH IS NOT TYPE K COPPER OR IS IN POOR CONDITION, AS DIRECTED BY THE ENGINEER. TO DETERMINE WATER SERVICE PIPING MATERIAL AND CONDITION, CONTRACTOR SHALL EXPOSE, IN THE PRESENCE OF THE ENGINEER, EACH WATER SERVICE AT THE TIE TO THE EXISTING MAIN, APPROXIMATELY TWO FEET FROM THE METER ON THE WATER MAIN SIDE, AND APPROXIMATELY TWO FEET FROM THE METER BOXES ON THE SERVICE SIDE.

2/22/2024
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 mpatt

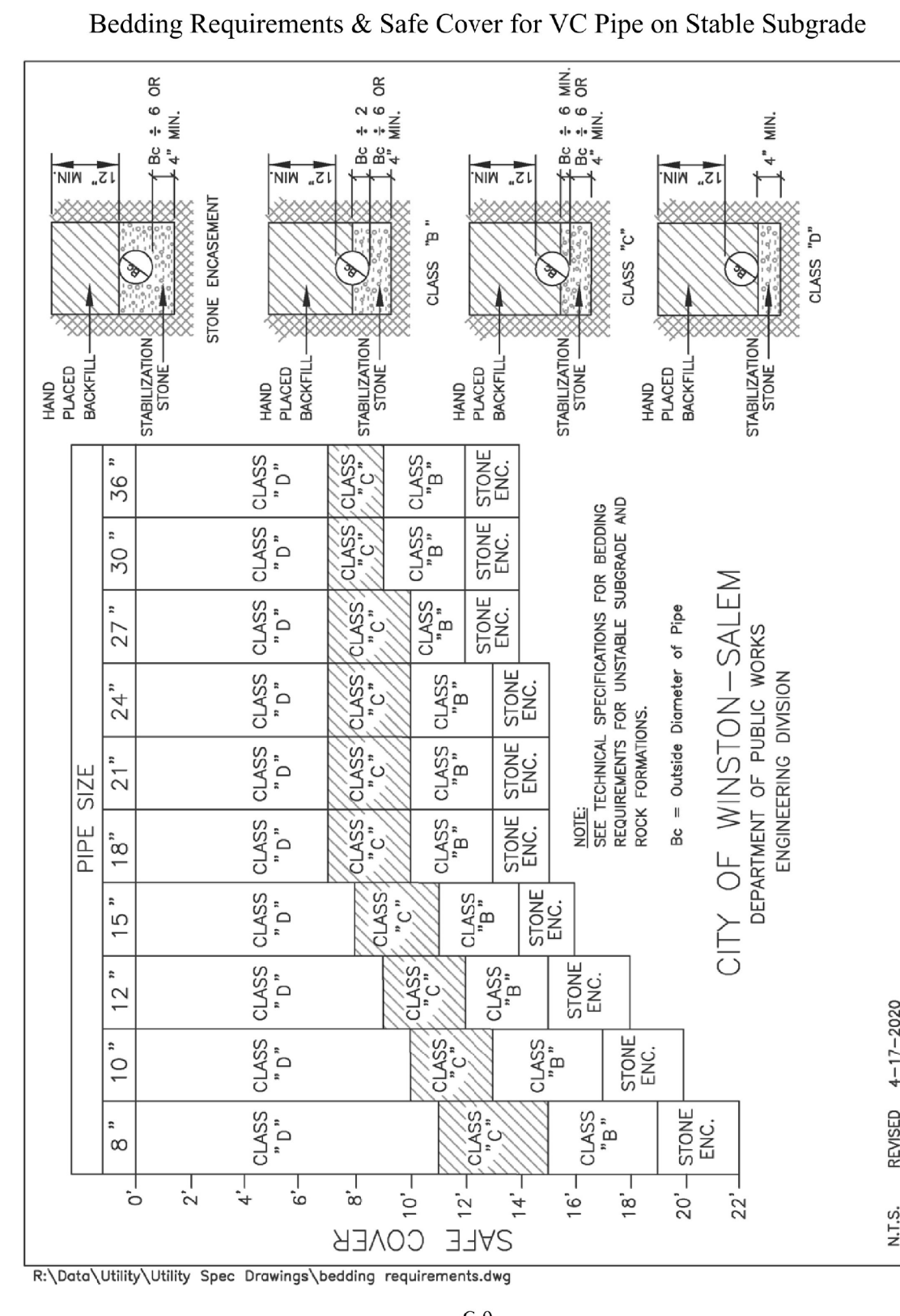
PROJECT TYPICAL DETAILS



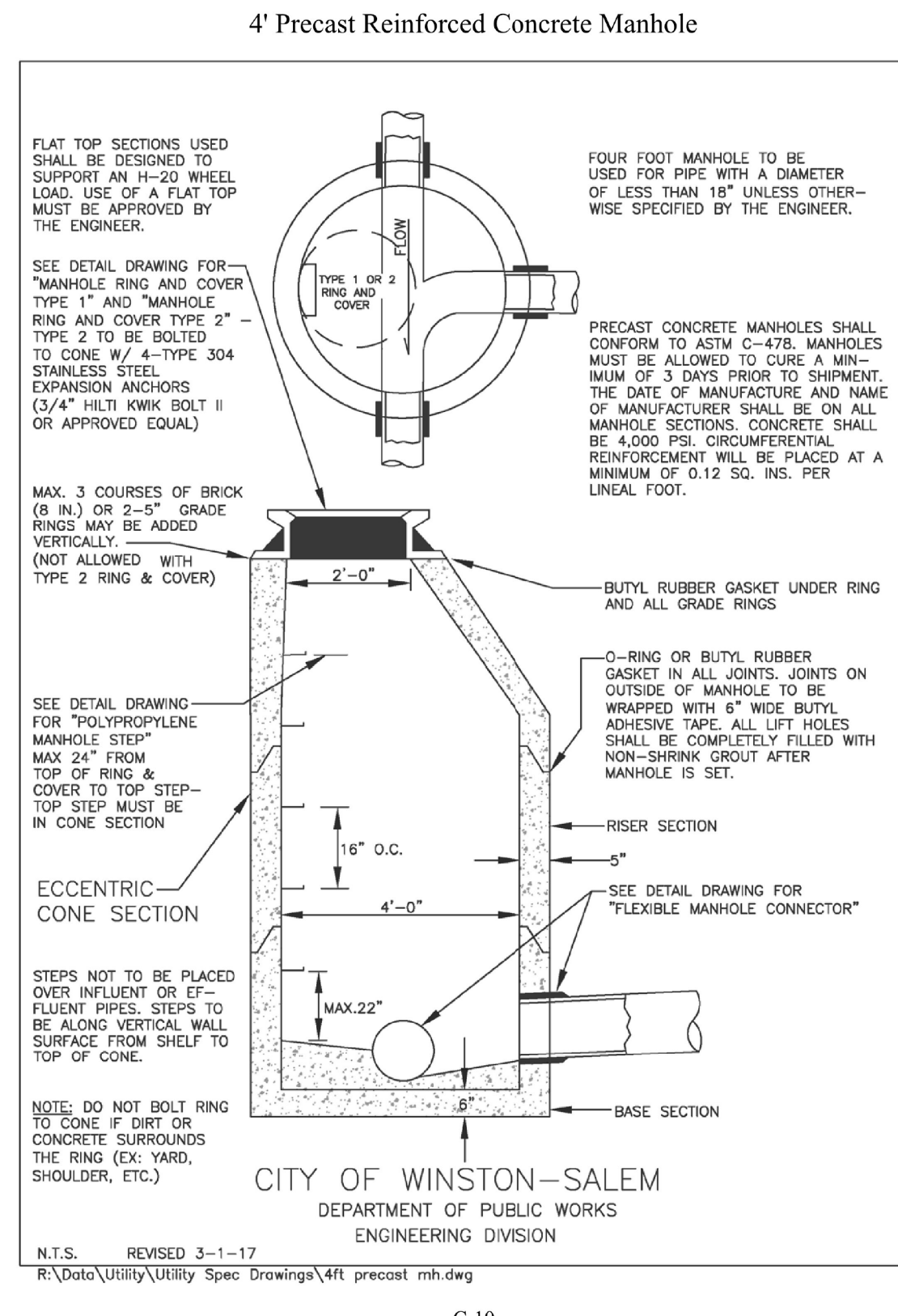
UTILITY CONSTRUCTION
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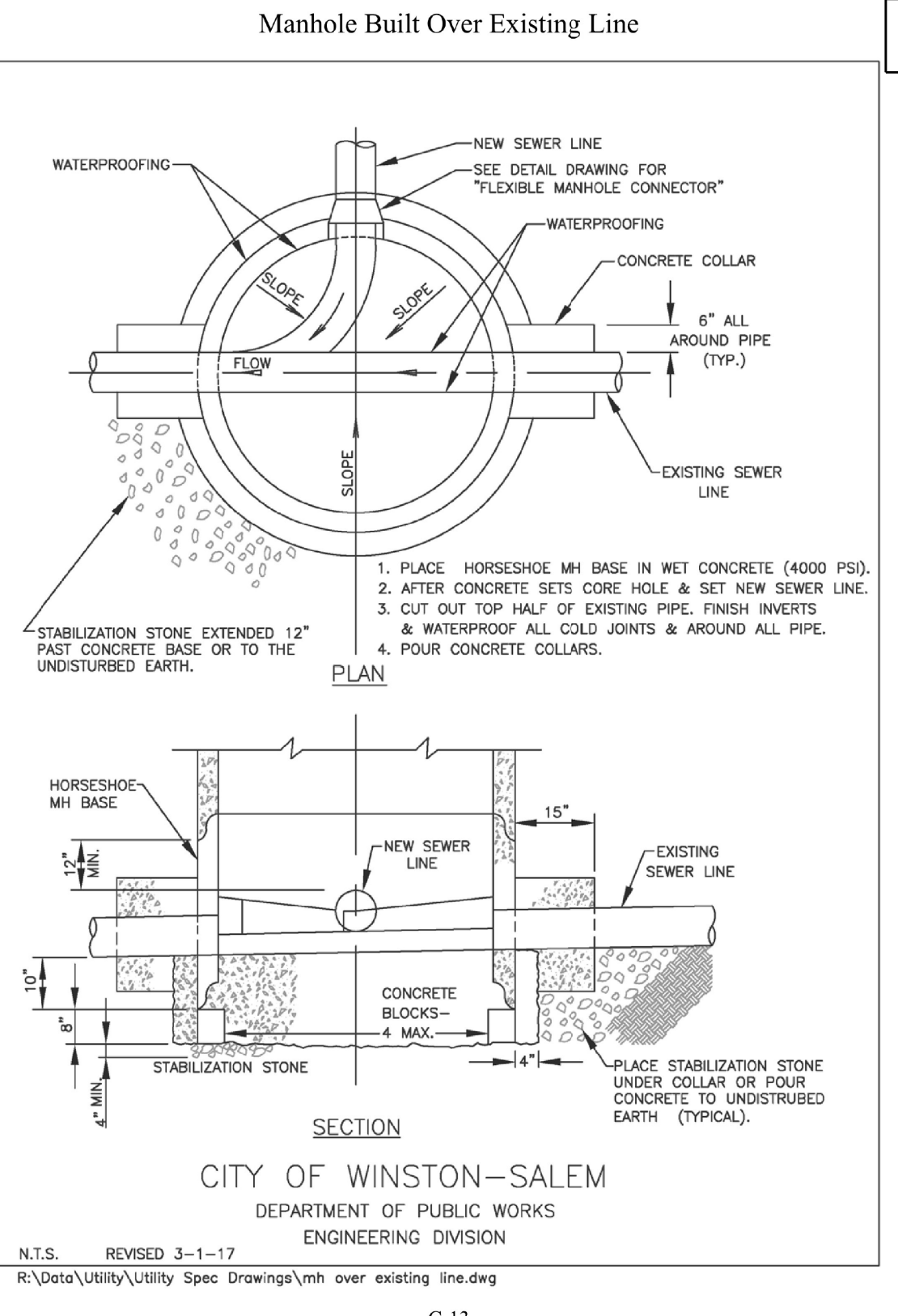
C-17



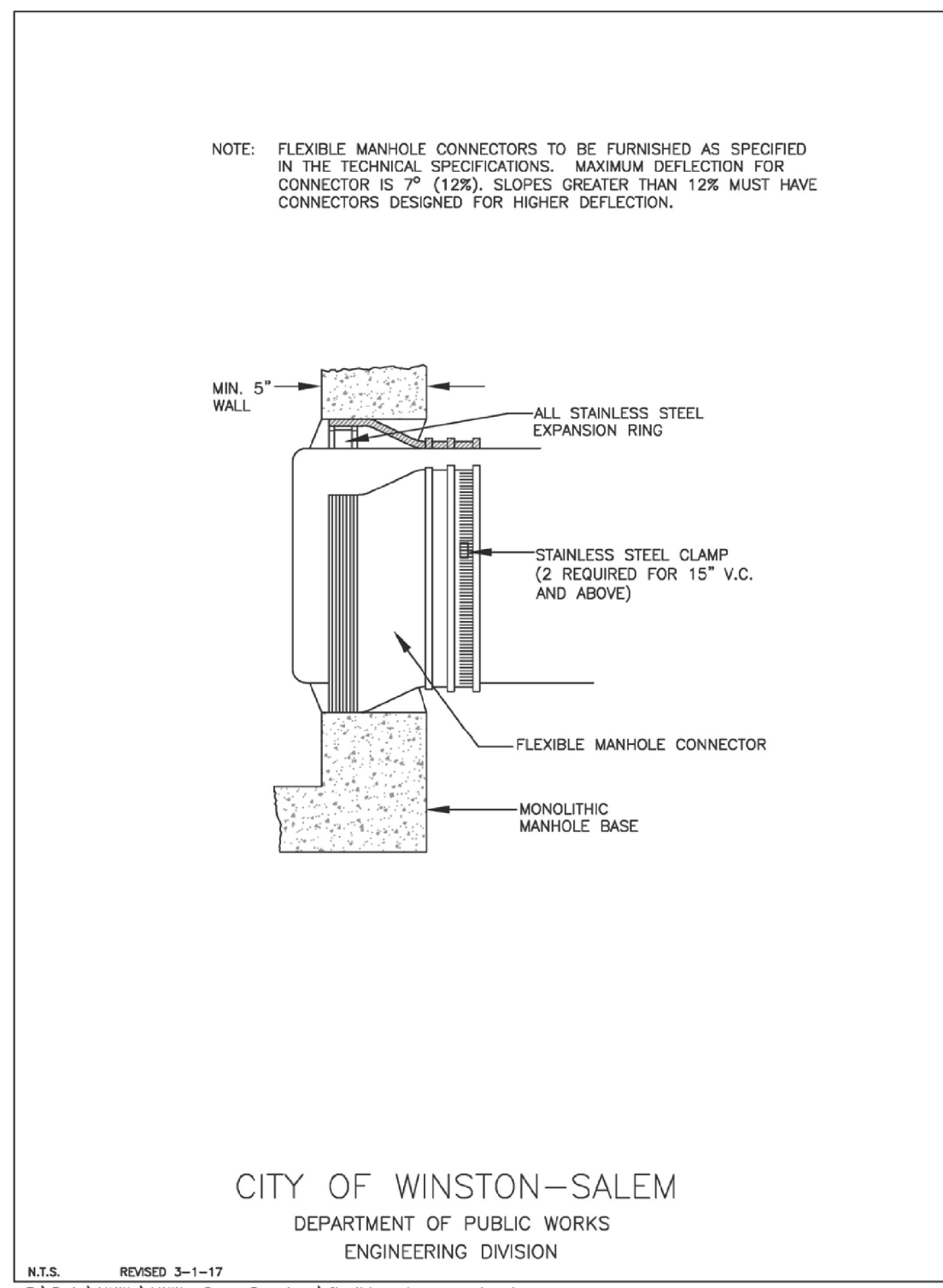
C-9



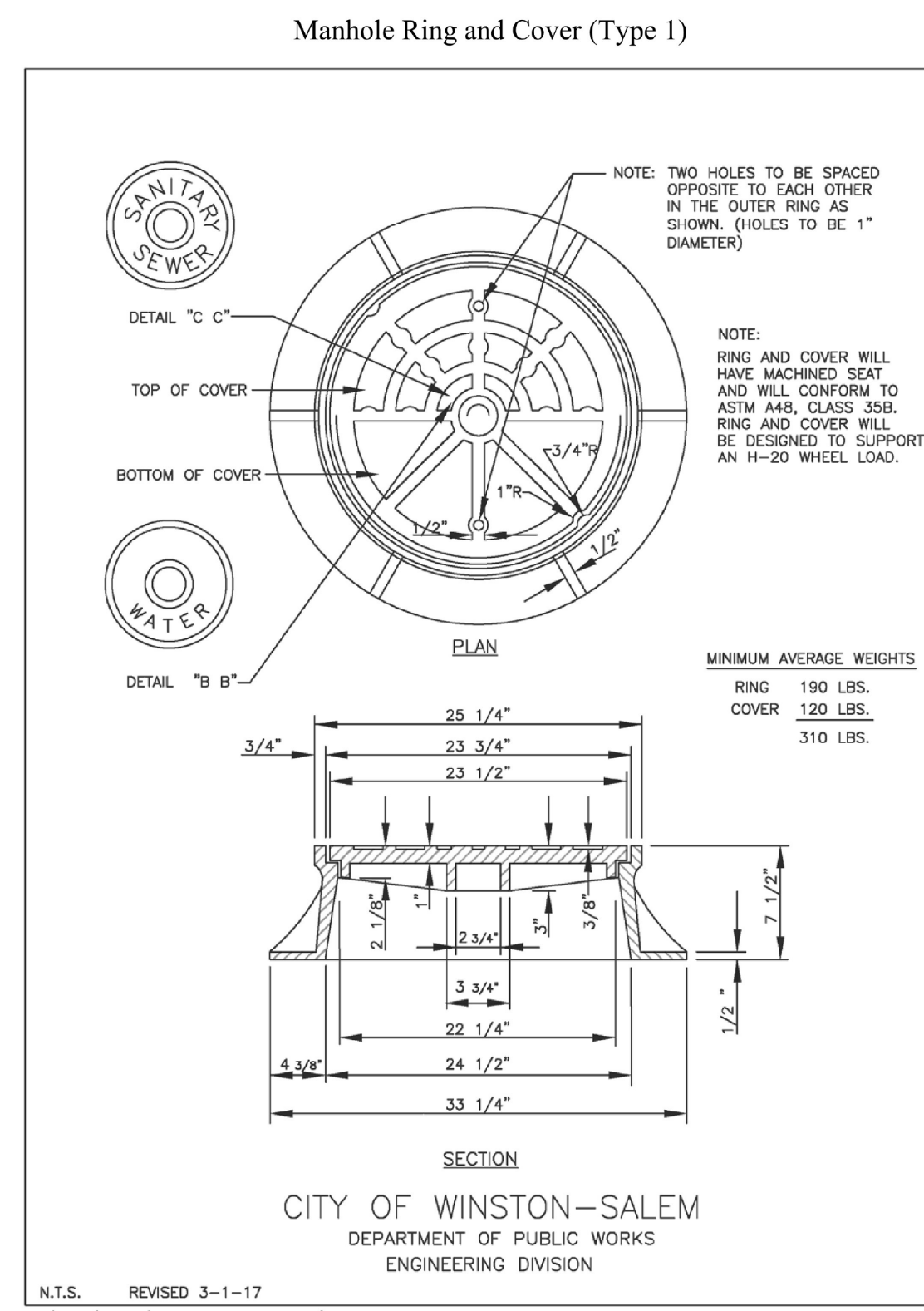
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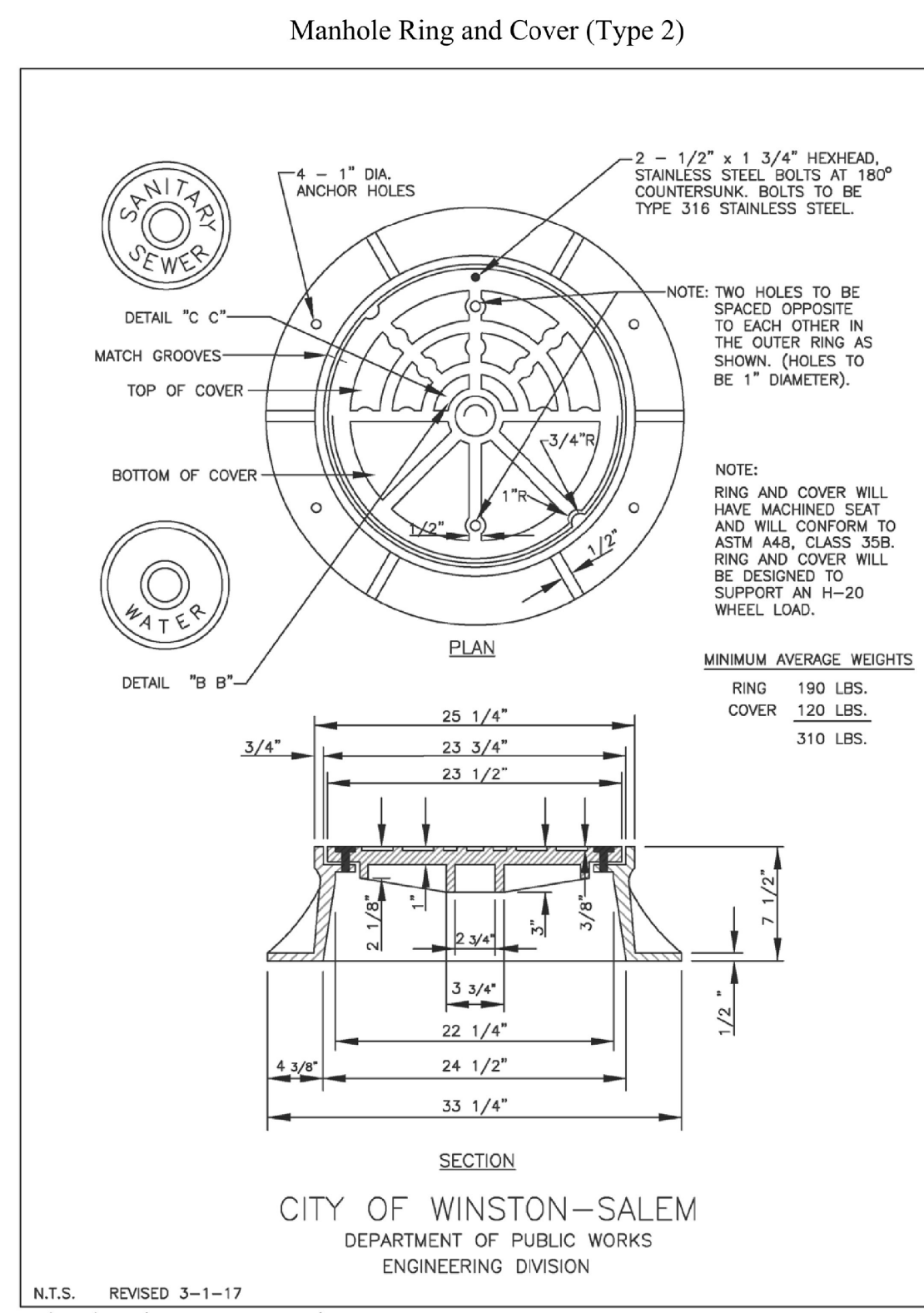
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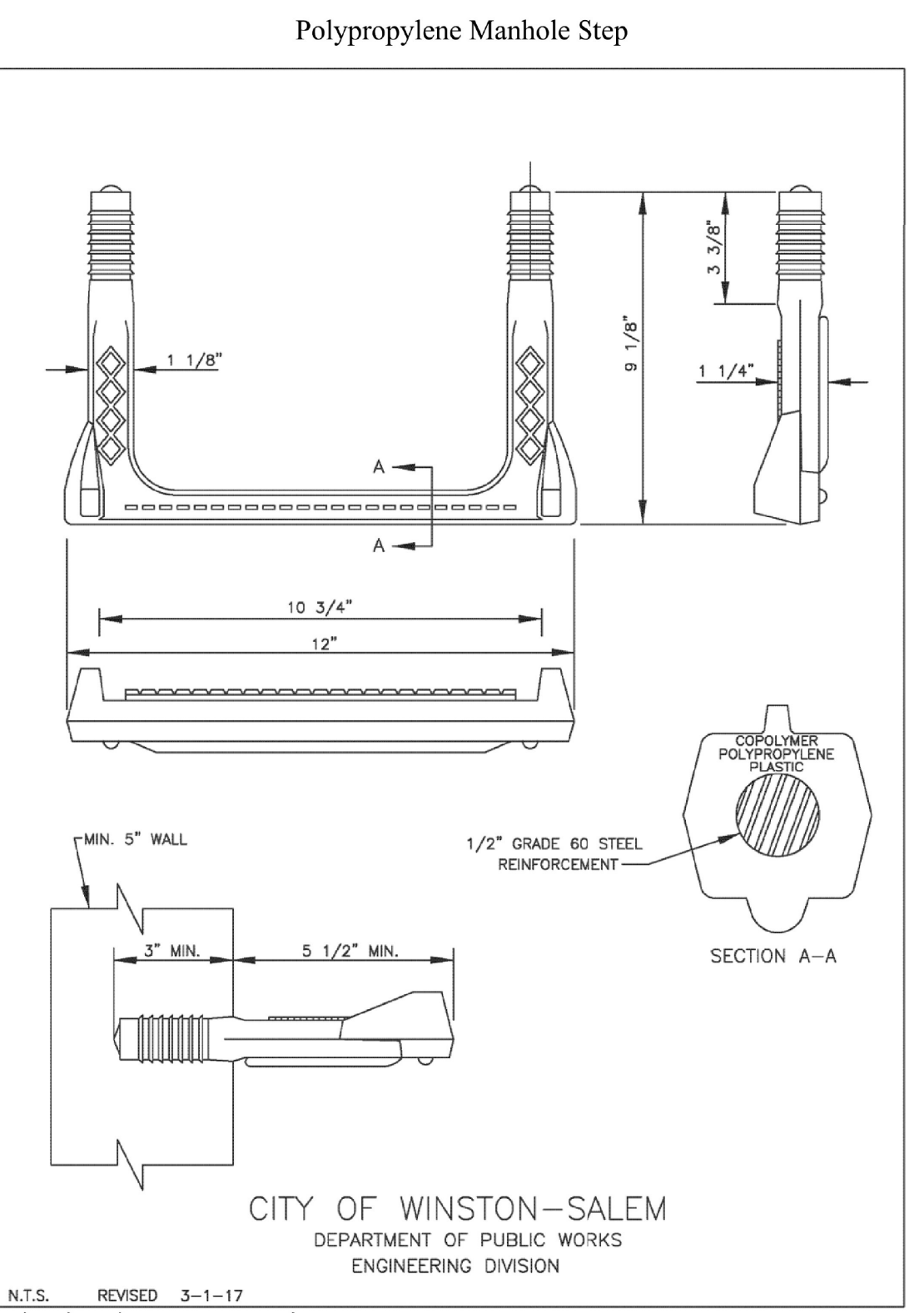
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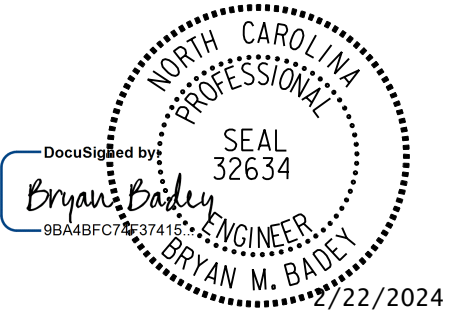
C-18



C-19

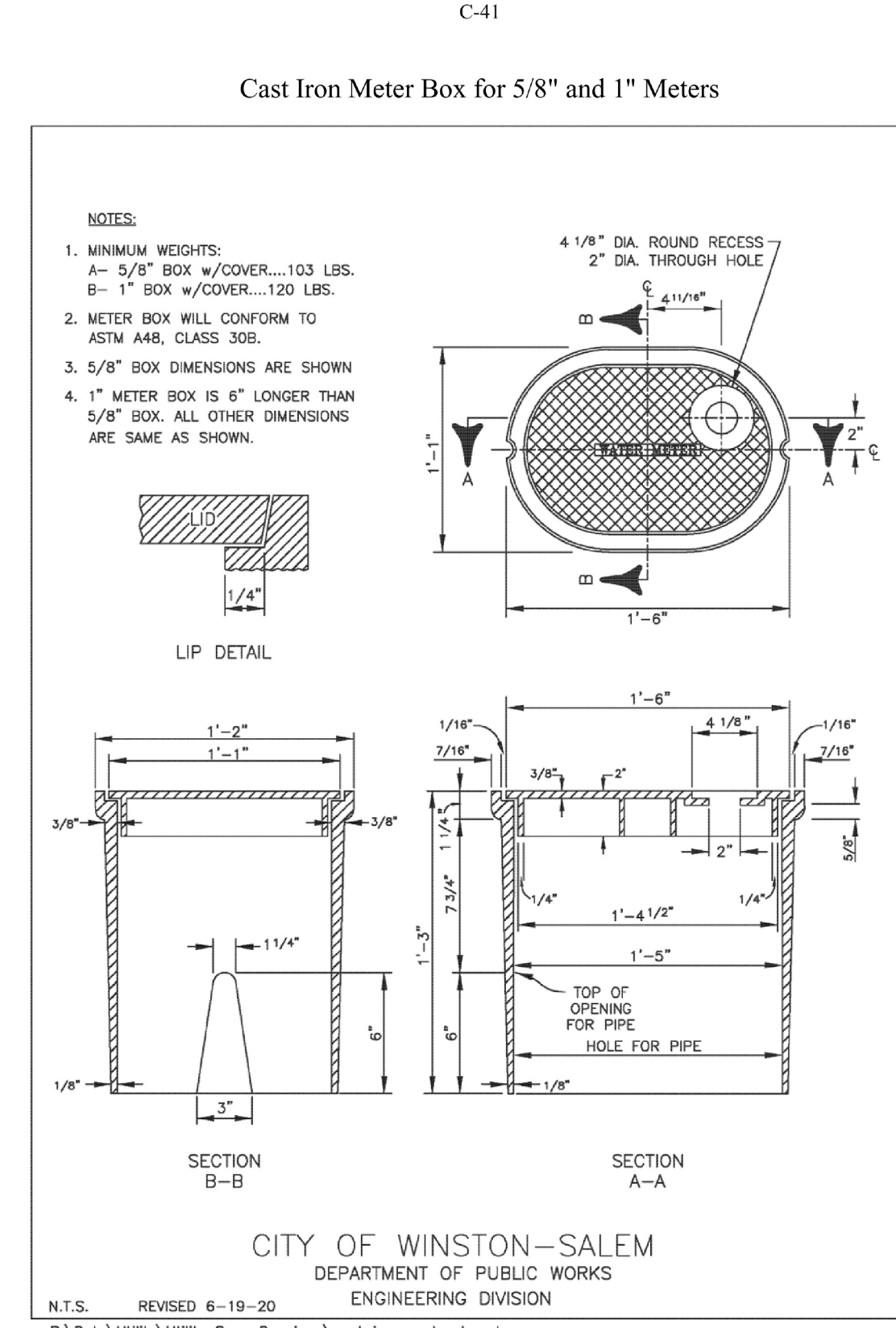
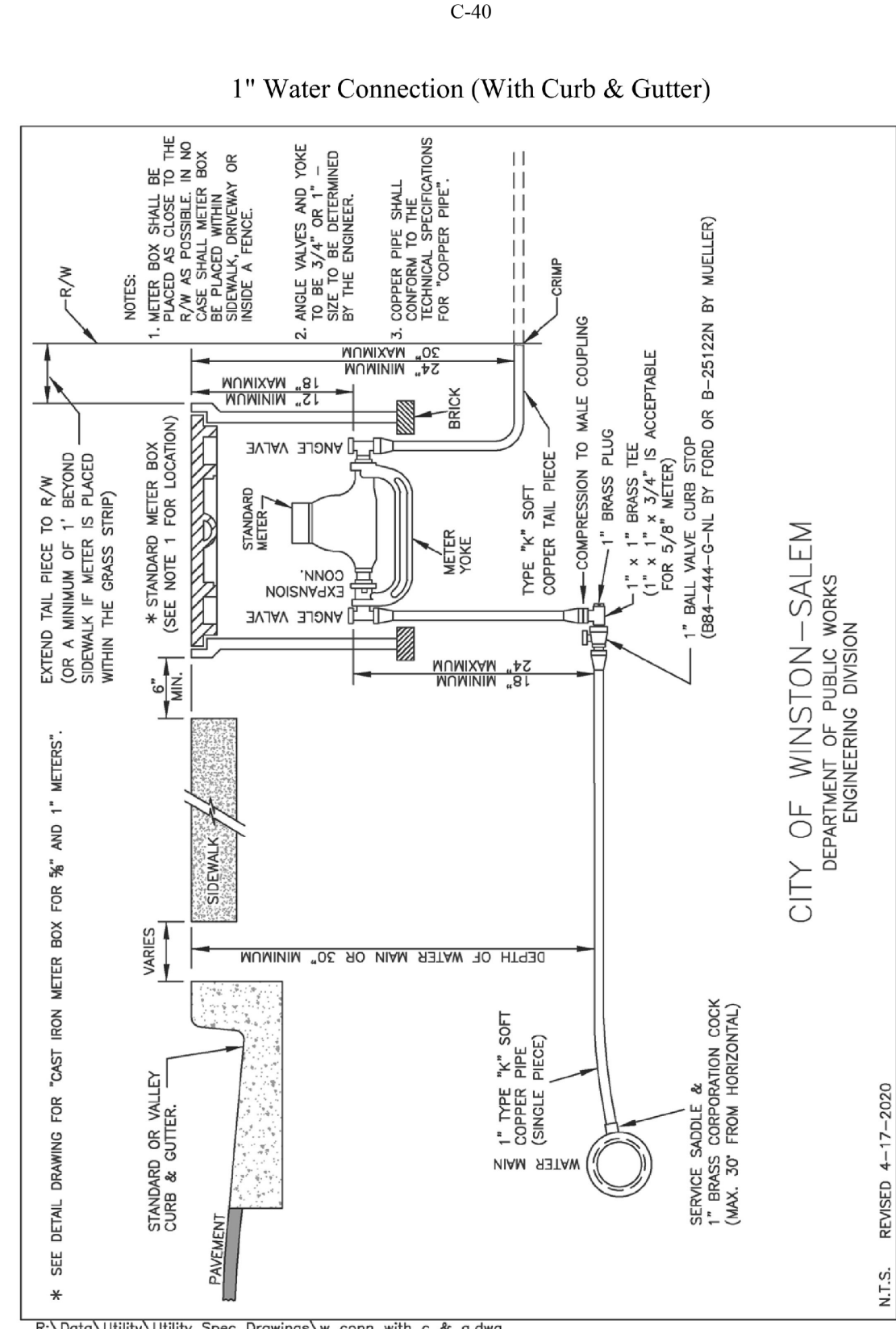
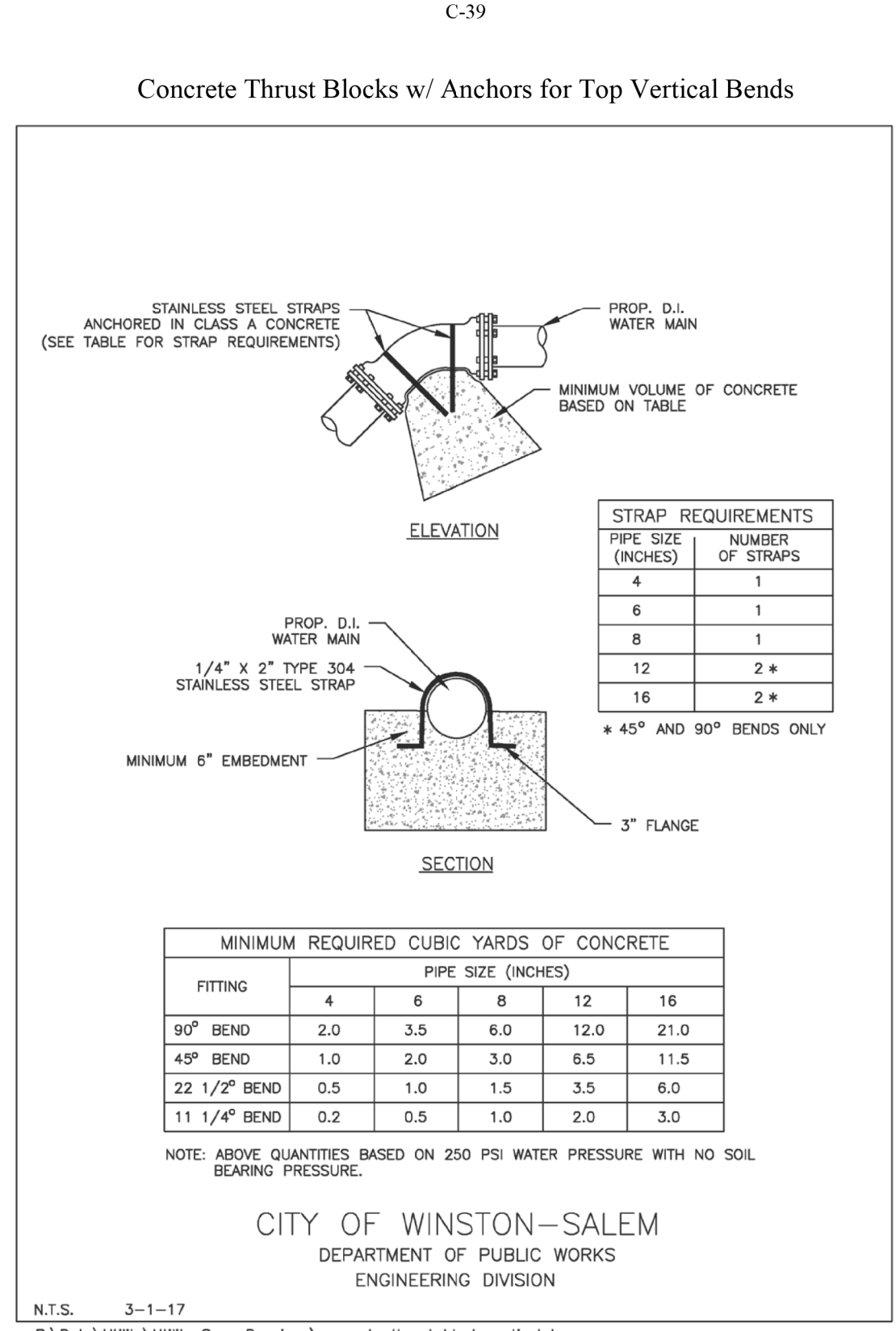
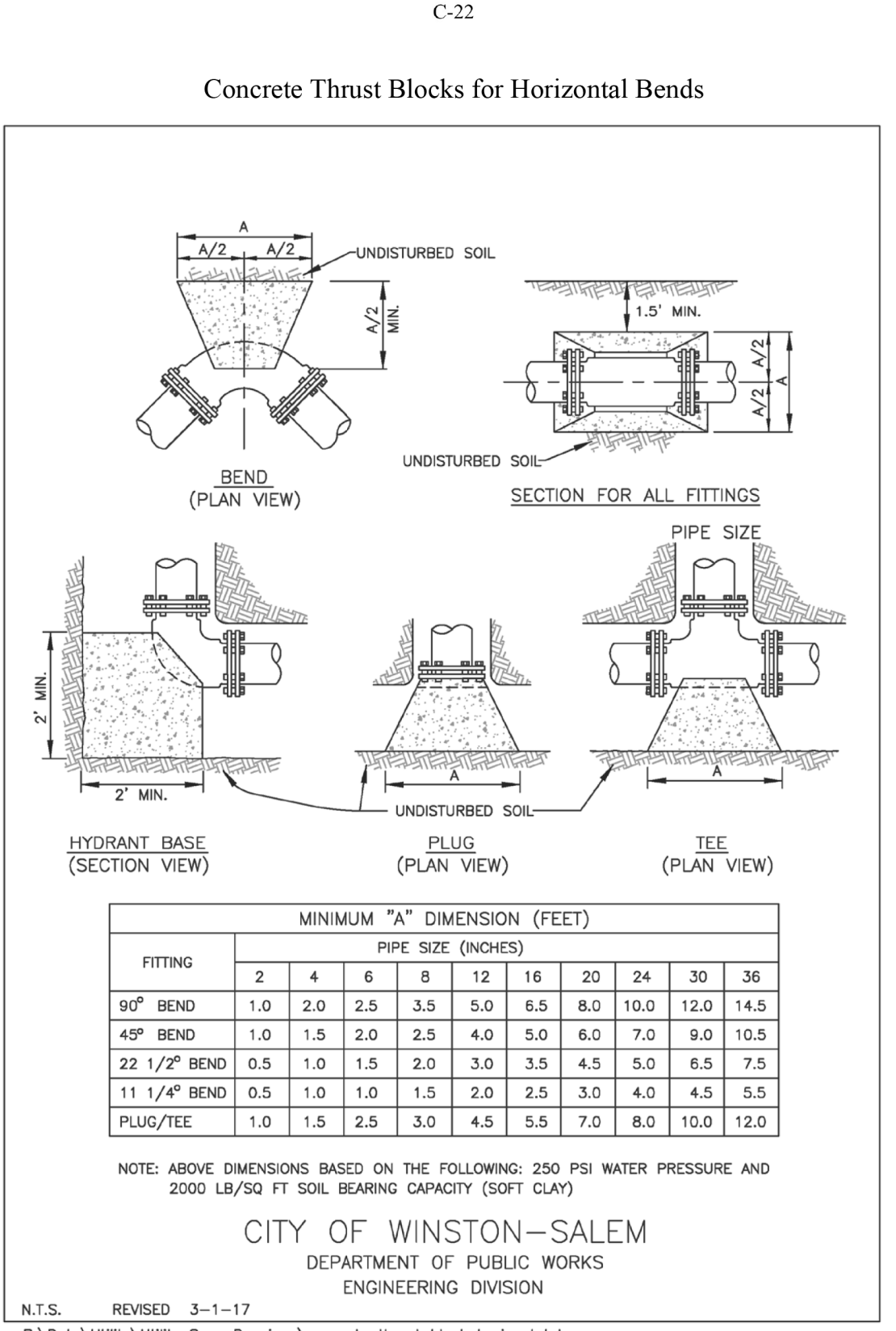
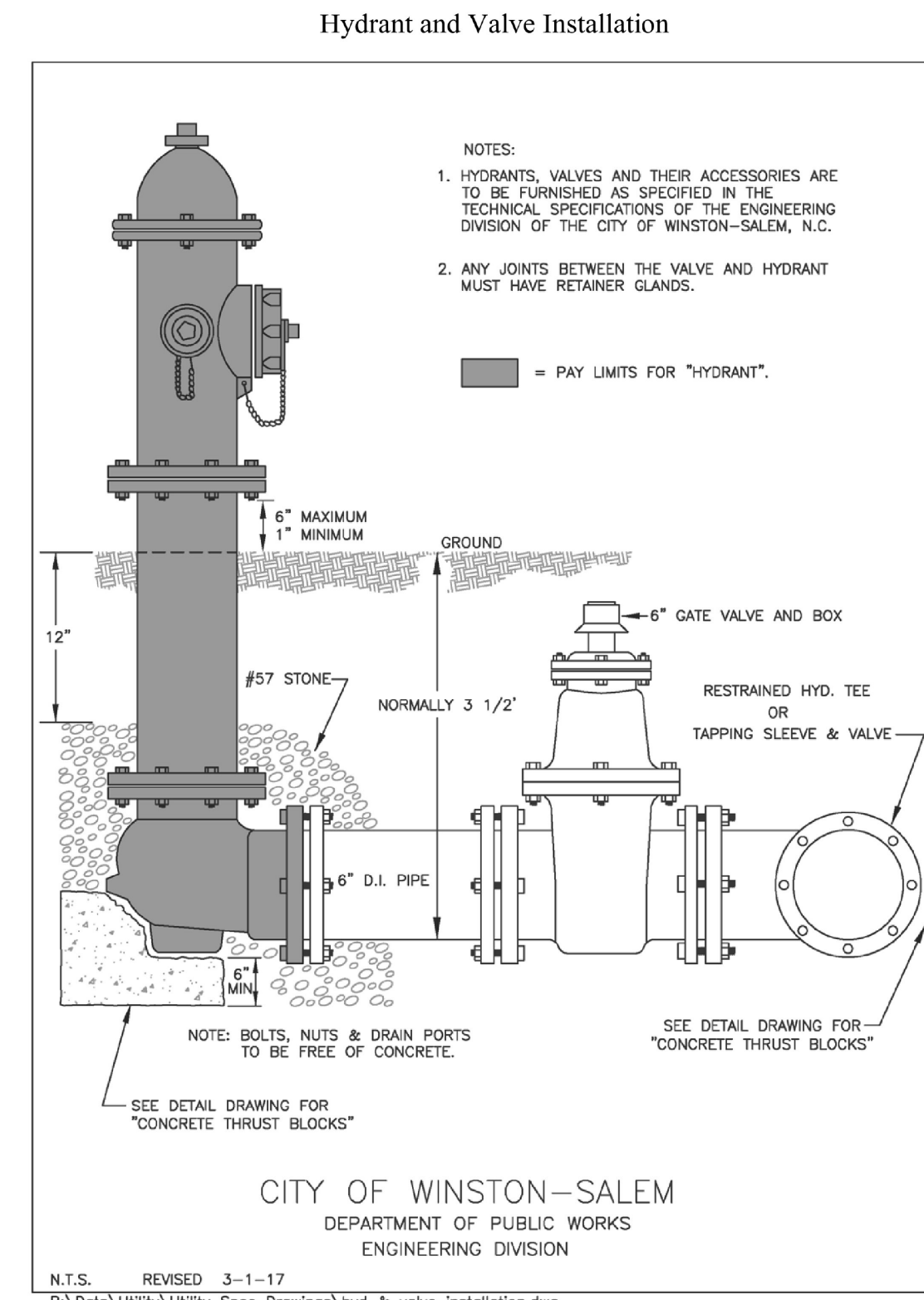
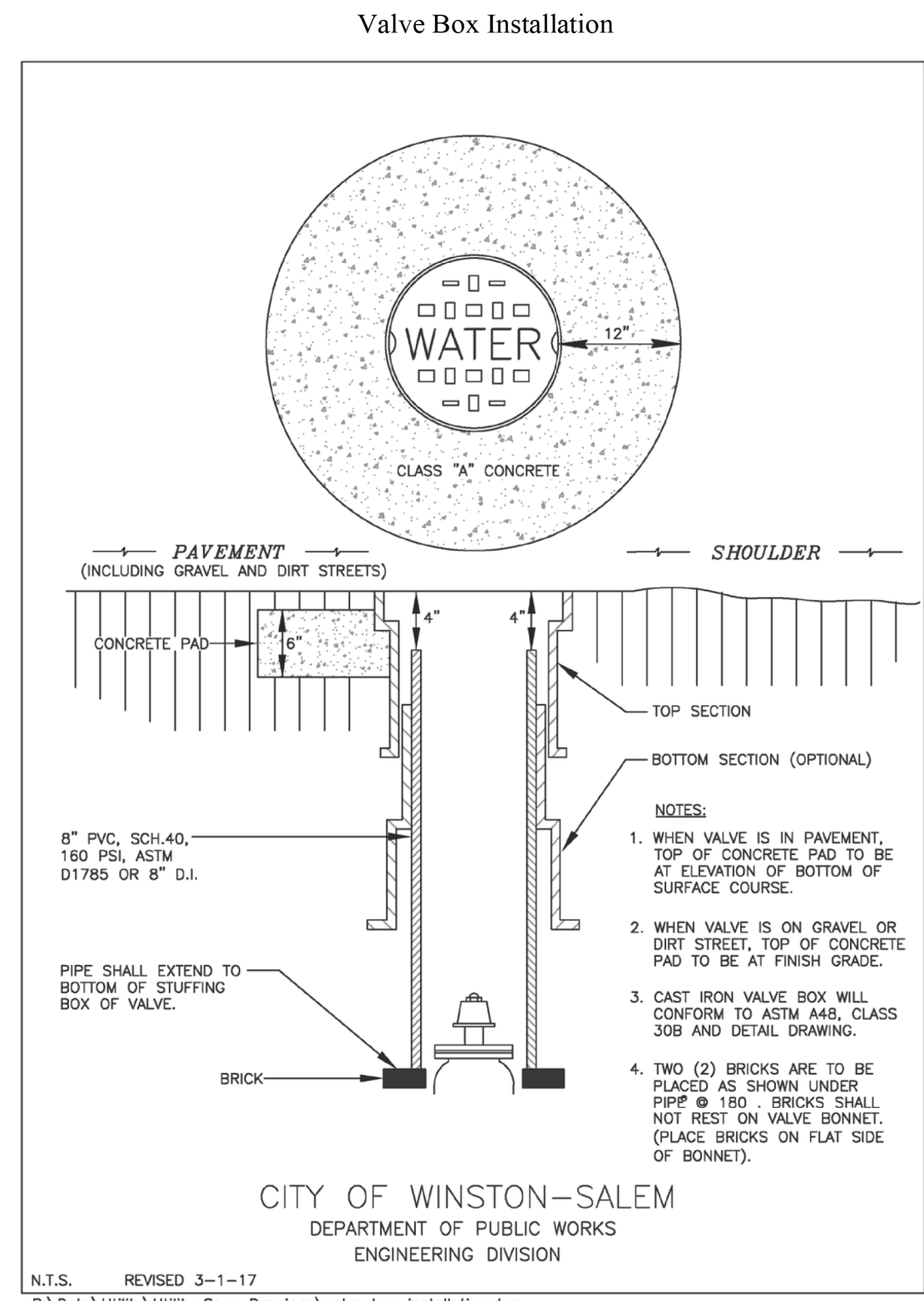
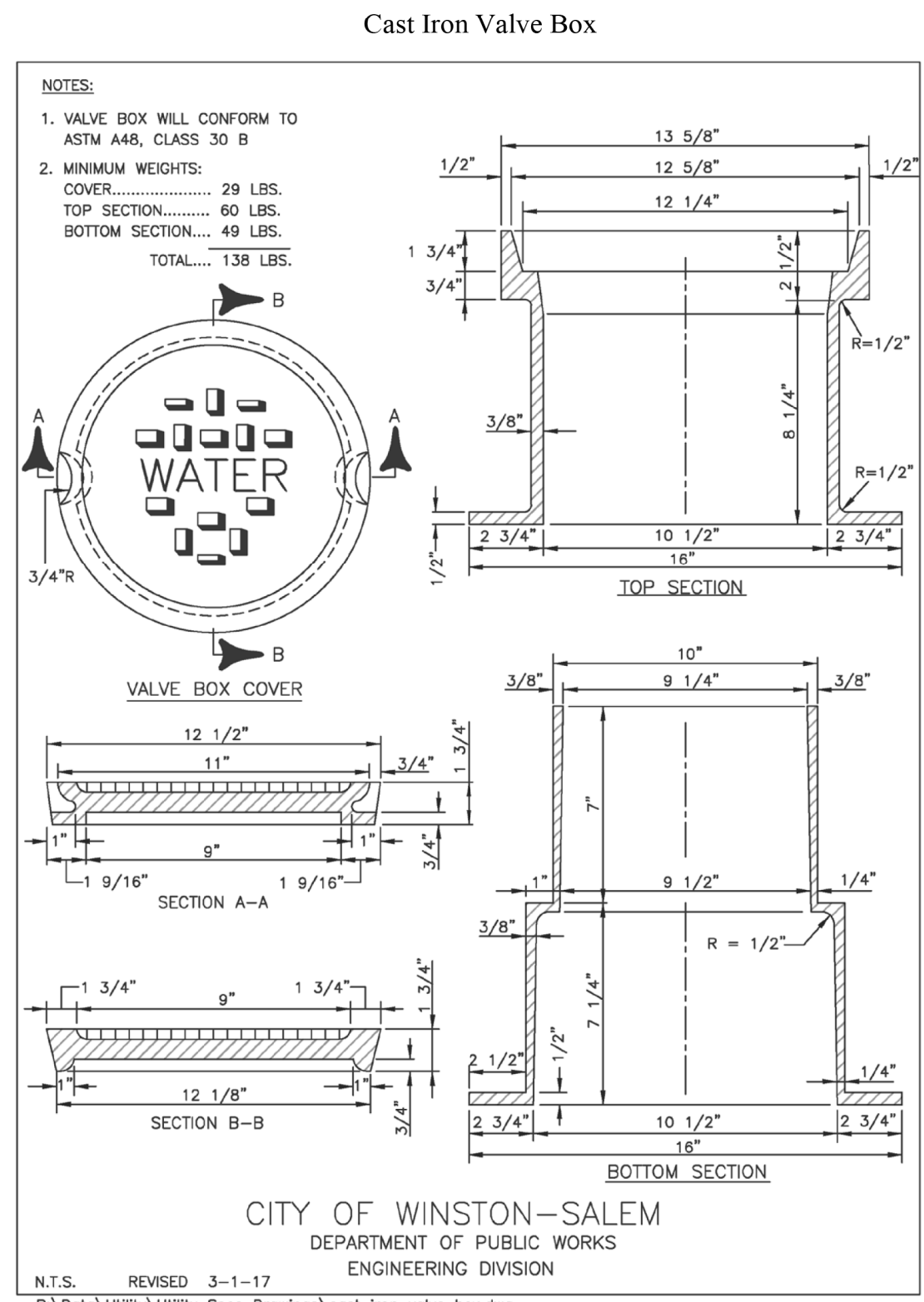
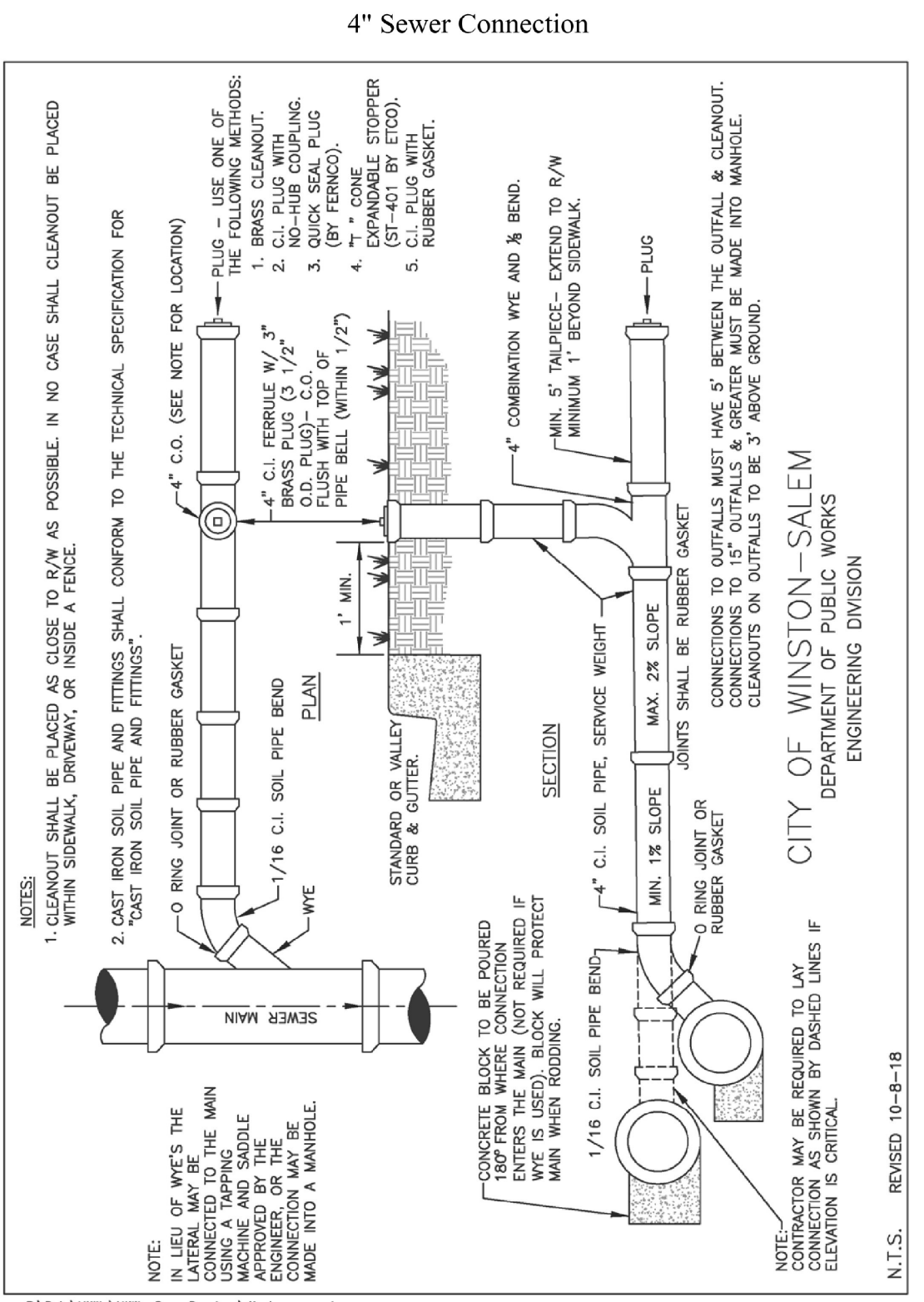


C-21



UTILITY CONSTRUCTION
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UNLESS ALL SIGNATURES COMPLETED

PROJECT TYPICAL DETAILS



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R:\Data\Utility\Utility Spec Drawings\cast iron valve box.dwg

R:\Data\Utility\Utility Spec Drawings\valve box installation.dwg

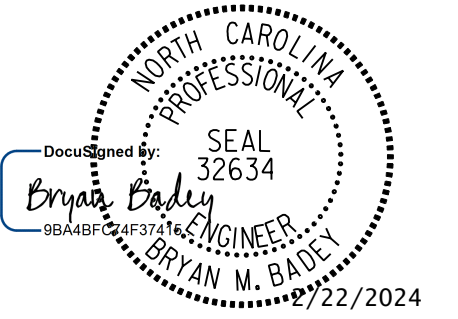
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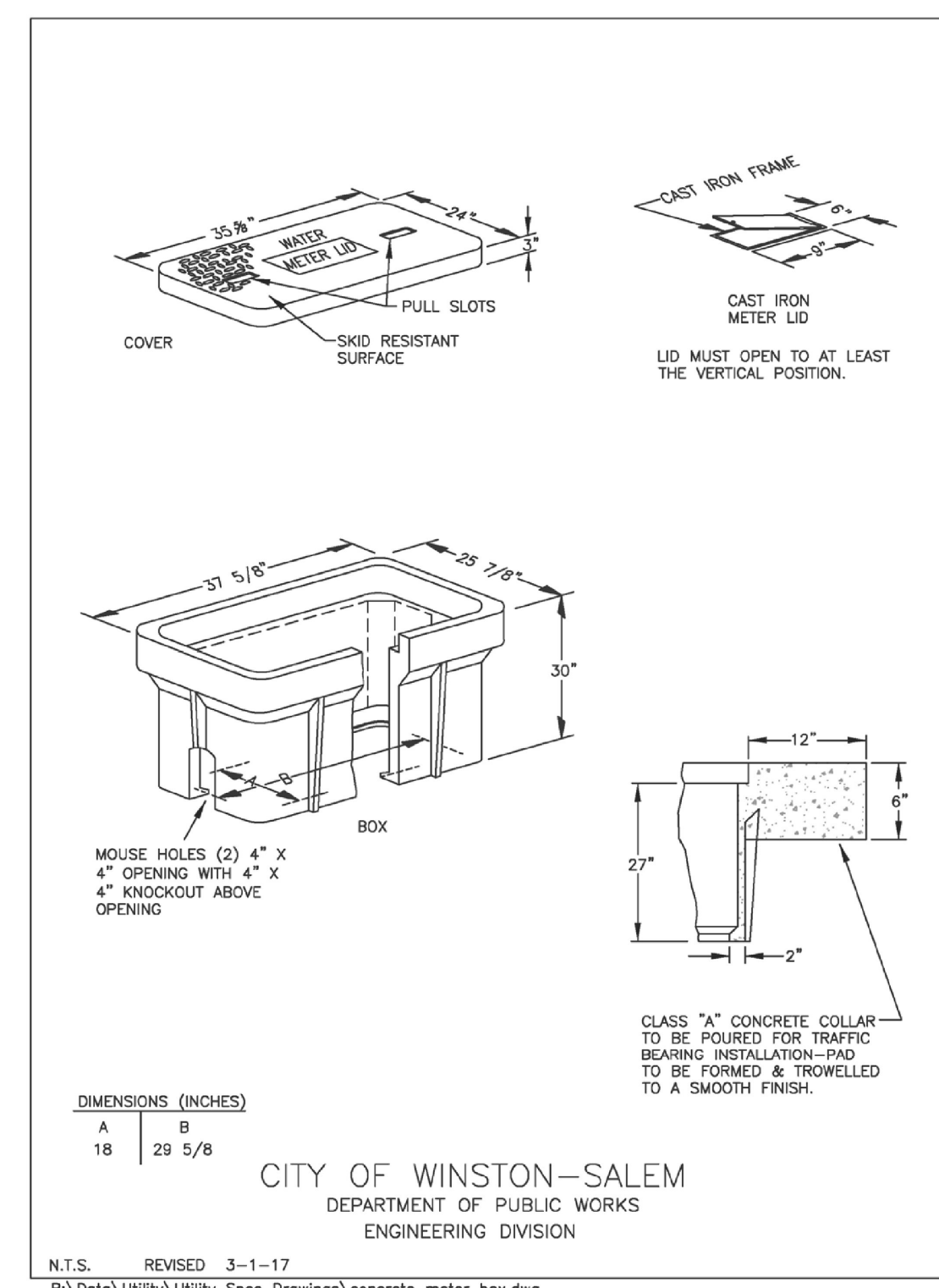
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UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
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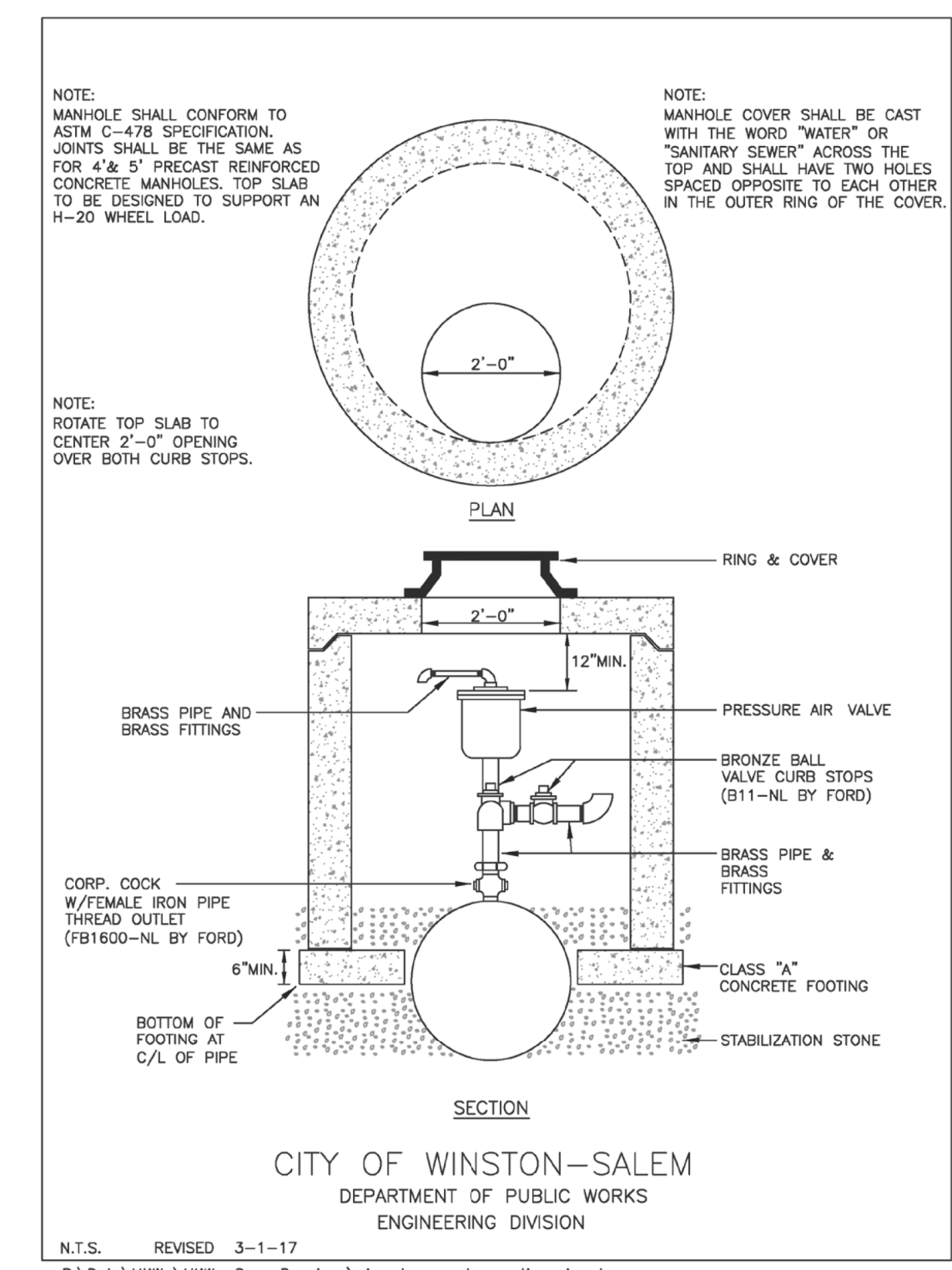
PROJECT TYPICAL DETAILS

Polymer Concrete Meter Box for 1 1/2" and 2" Meters



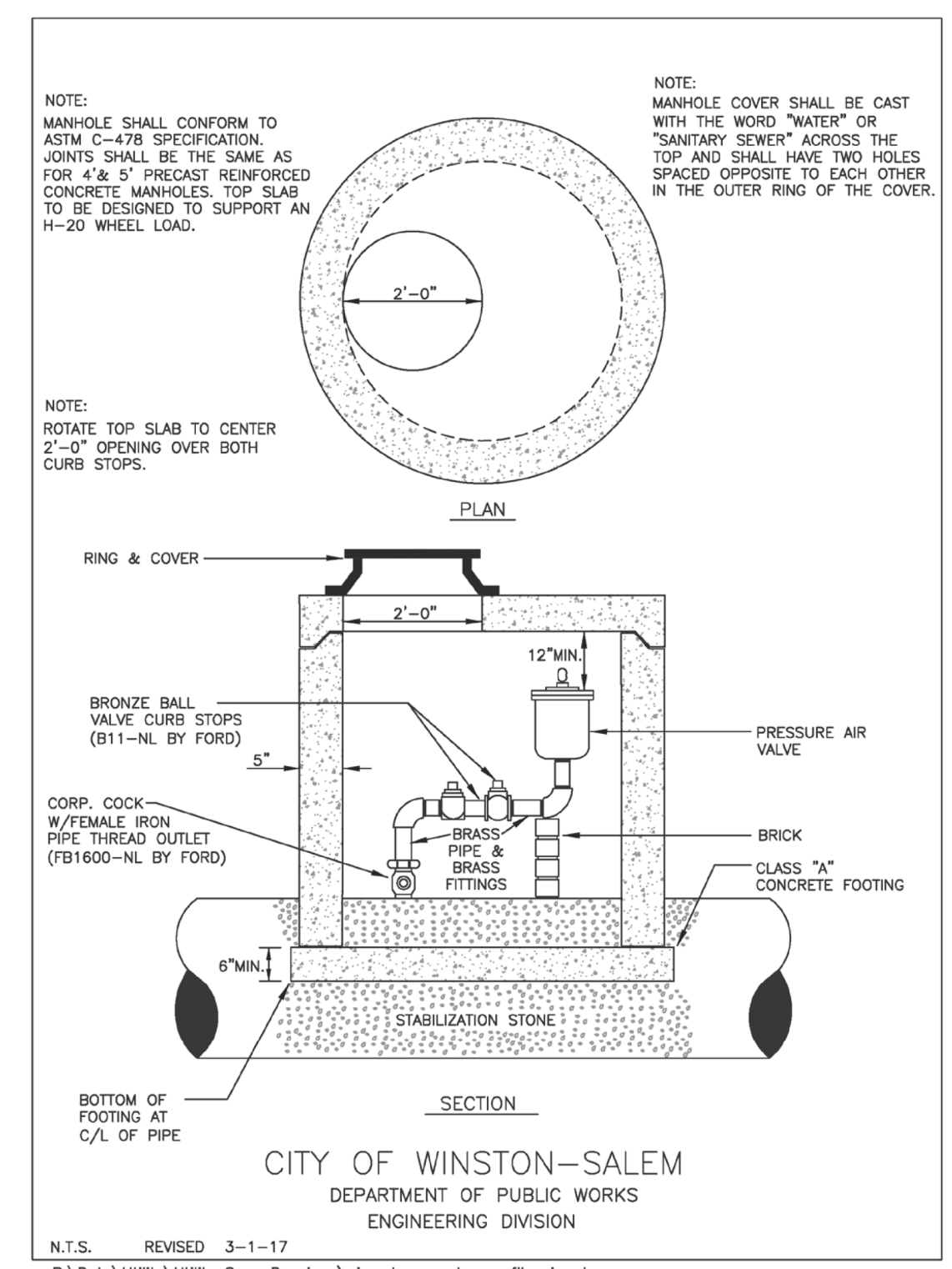
C-50

Air Release Valve (Section View)



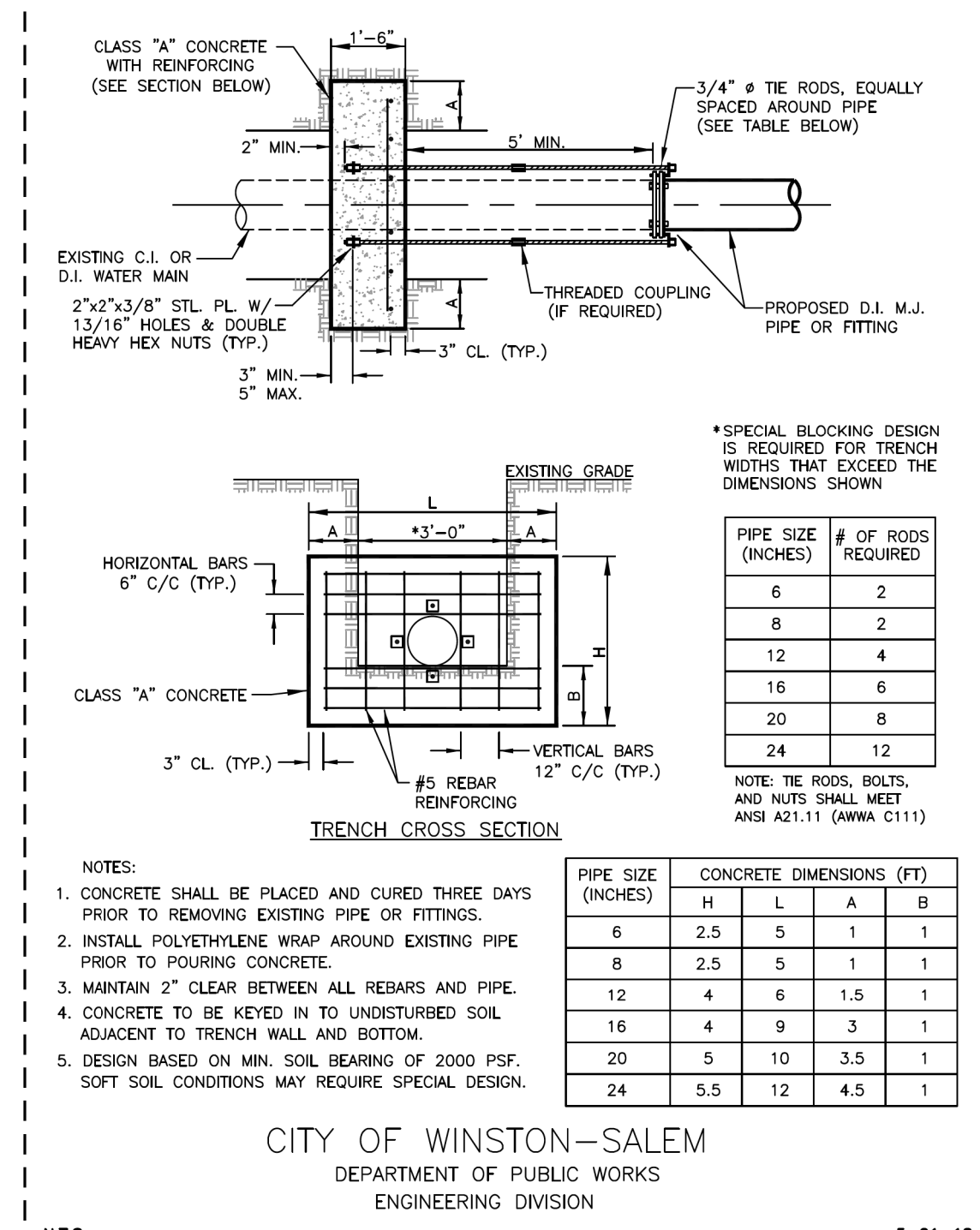
C-52

Air Release Valve (Profile View)

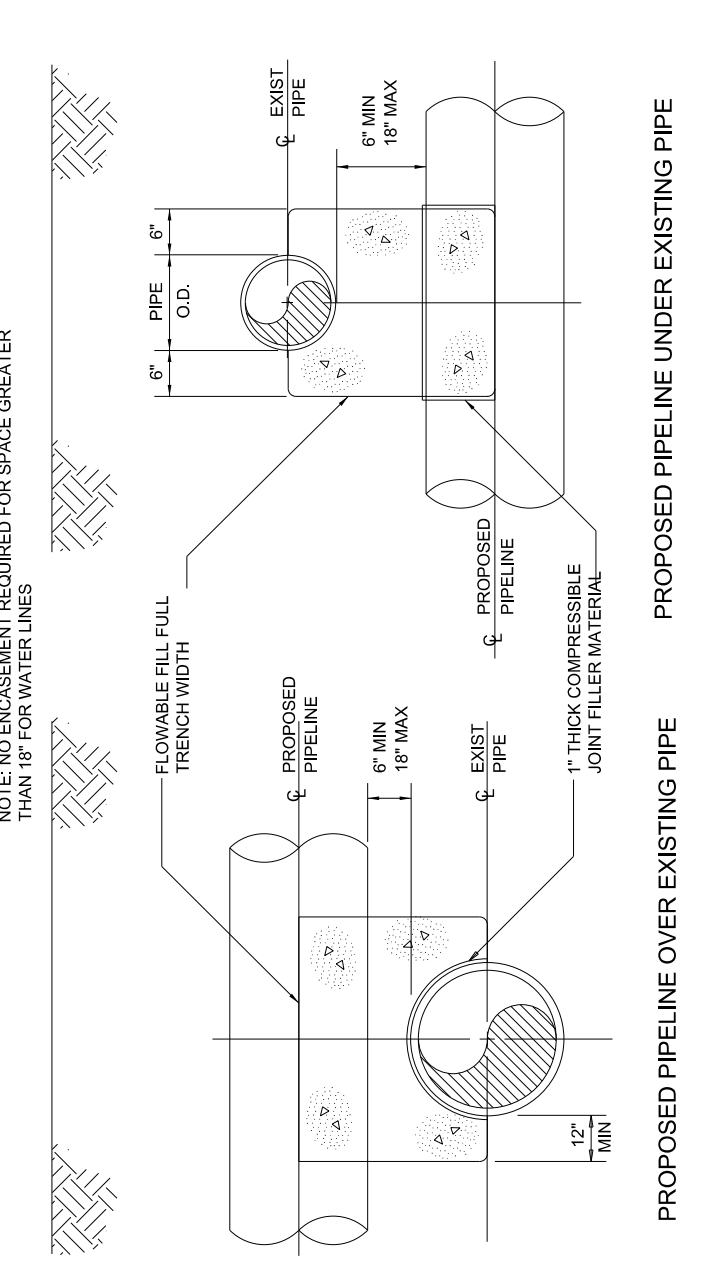


C-53

THRUST HARNESS FOR EXISTING PIPE



5-21-18



CONCRETE CRADLE PROTECTION FOR WATER LINE CROSSINGS DWG. NO. W-41

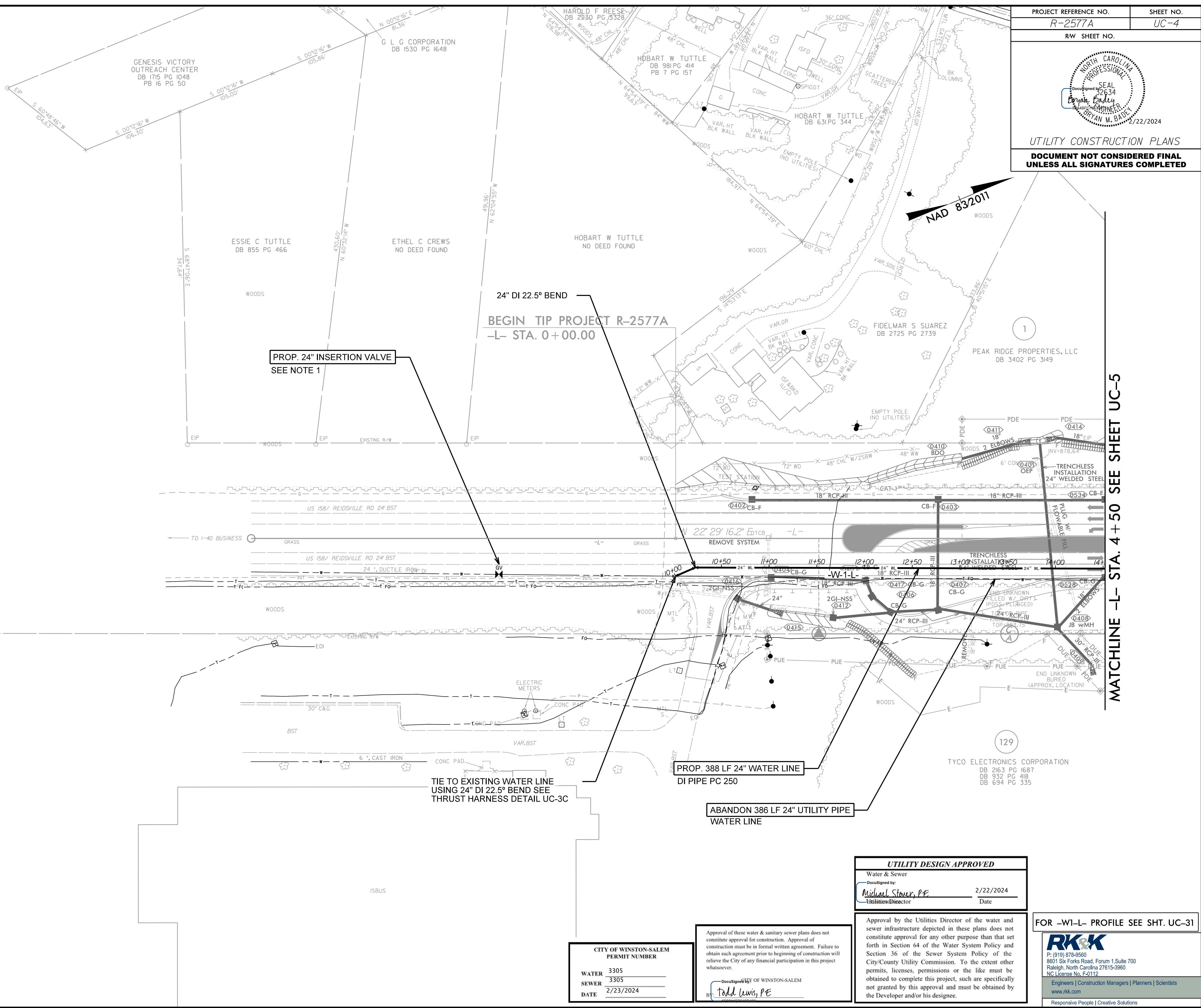
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SEAL
2634
2/22/2024
NORTH CAROLINA PROFESSIONAL ENGINEER
BRYAN M. BAILEY

UTILITY CONSTRUCTION PLANS
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NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1530 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
1. INSERTION VALVE LOCATED 180 LF AWAY FROM PROPOSED TIE-IN.



PROP. 24" INSERTION VALVE
SEE NOTE 1

24" DI 22.5" BEND
BEGIN TIP PROJECT R-2577A
-L- STA. 0+00.00

TIE TO EXISTING WATER LINE
USING 24" DI 22.5" BEND SEE
THRUST HARNESS DETAIL UC-3C

PROP. 388 LF 24" WATER LINE
DI PIPE PC 250

ABANDON 386 LF 24" UTILITY PIPE
WATER LINE

MATCHLINE -L- STA. 4+50 SEE SHEET UC-5

CITY OF WINSTON-SALEM PERMIT NUMBER	
WATER	3305
SEWER	3305
DATE	2/23/2024

Approval of these water & sanitary sewer plans does not constitute approval for construction. Approval of construction must be in formal written agreement. Failure to obtain such agreement prior to beginning of construction will relieve the City of any financial participation in this project whatsoever.

DocuSigned by:
Todd Lewis, PE
2/23/2024

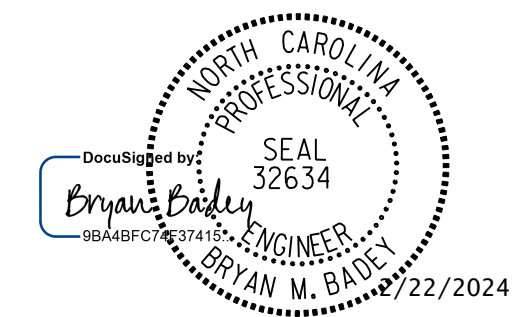
UTILITY DESIGN APPROVED
Water & Sewer
DocuSigned by:
Michael Stover, PE
2/22/2024
Utilities Director Date

Approval by the Utilities Director of the water and sewer infrastructure depicted in these plans does not constitute approval for any other purpose than that set forth in Section 64 of the Water System Policy and Section 36 of the Sewer System Policy of the City/County Utility Commission. To the extent other permits, licenses, permissions or the like must be obtained to complete this project, such are specifically not granted by this approval and must be obtained by the Developer and/or his designee.

FOR -W1-L- PROFILE SEE SHT. UC-31

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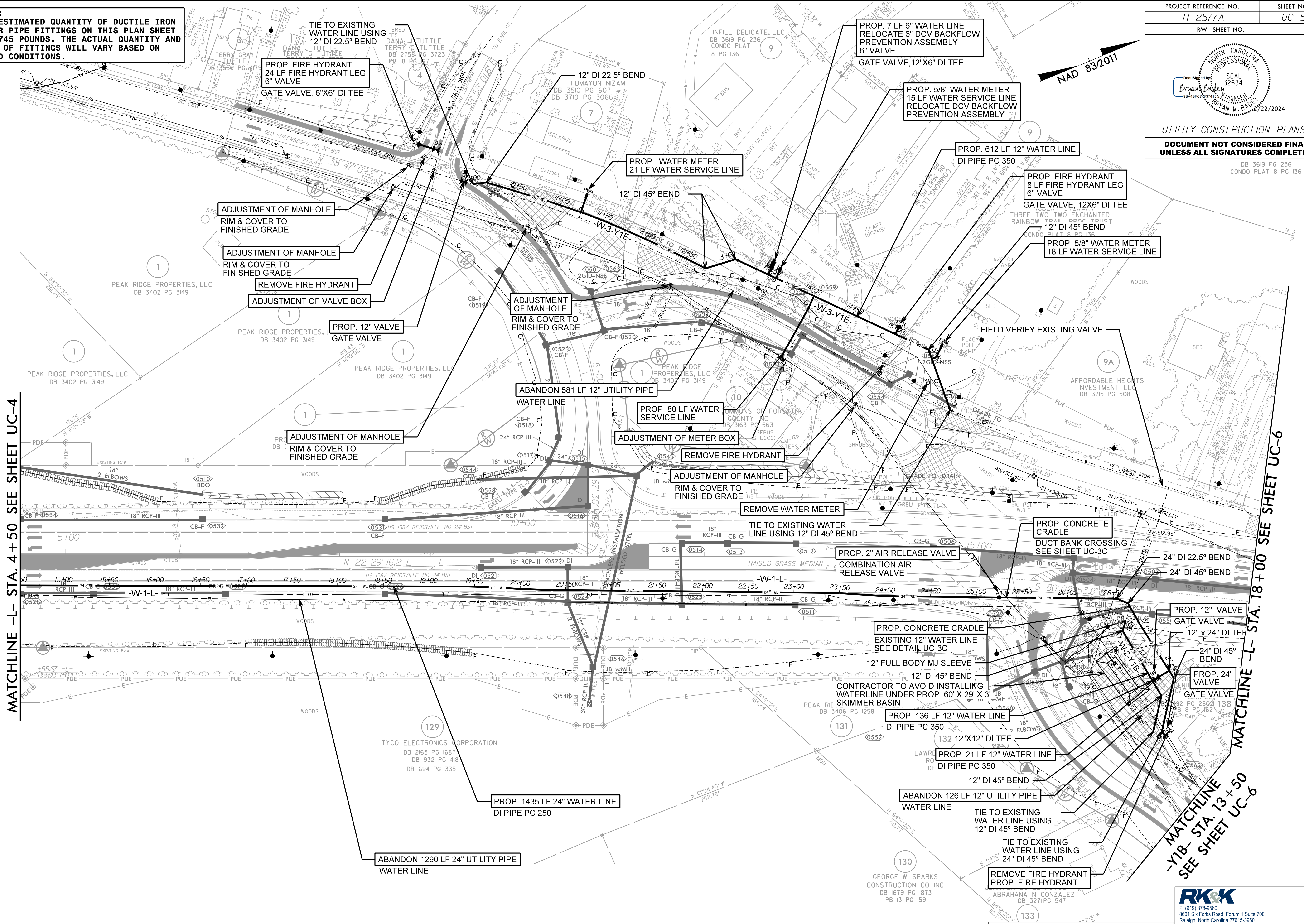
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2/22/2024
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UTILITY CONSTRUCTION PLANS
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DB 3619 PG 236
CONDO PLAT 8 PG 136

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 7745 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



MATCHLINE -L- STA. 4+50 SEE SHEET UC-4

MATCHLINE -L- STA. 18+00 SEE SHEET UC-6

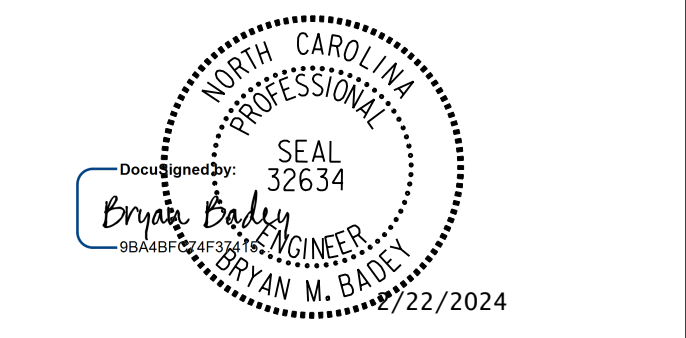
MATCHLINE -Y1B- STA. 13+50 SEE SHEET UC-6

FOR -W1-L- PROFILE SEE SHT. UC-31
FOR -W2-Y1B- PROFILE SEE SHT. UC-31
FOR -W3-Y1E- PROFILE SEE SHT. UC-32

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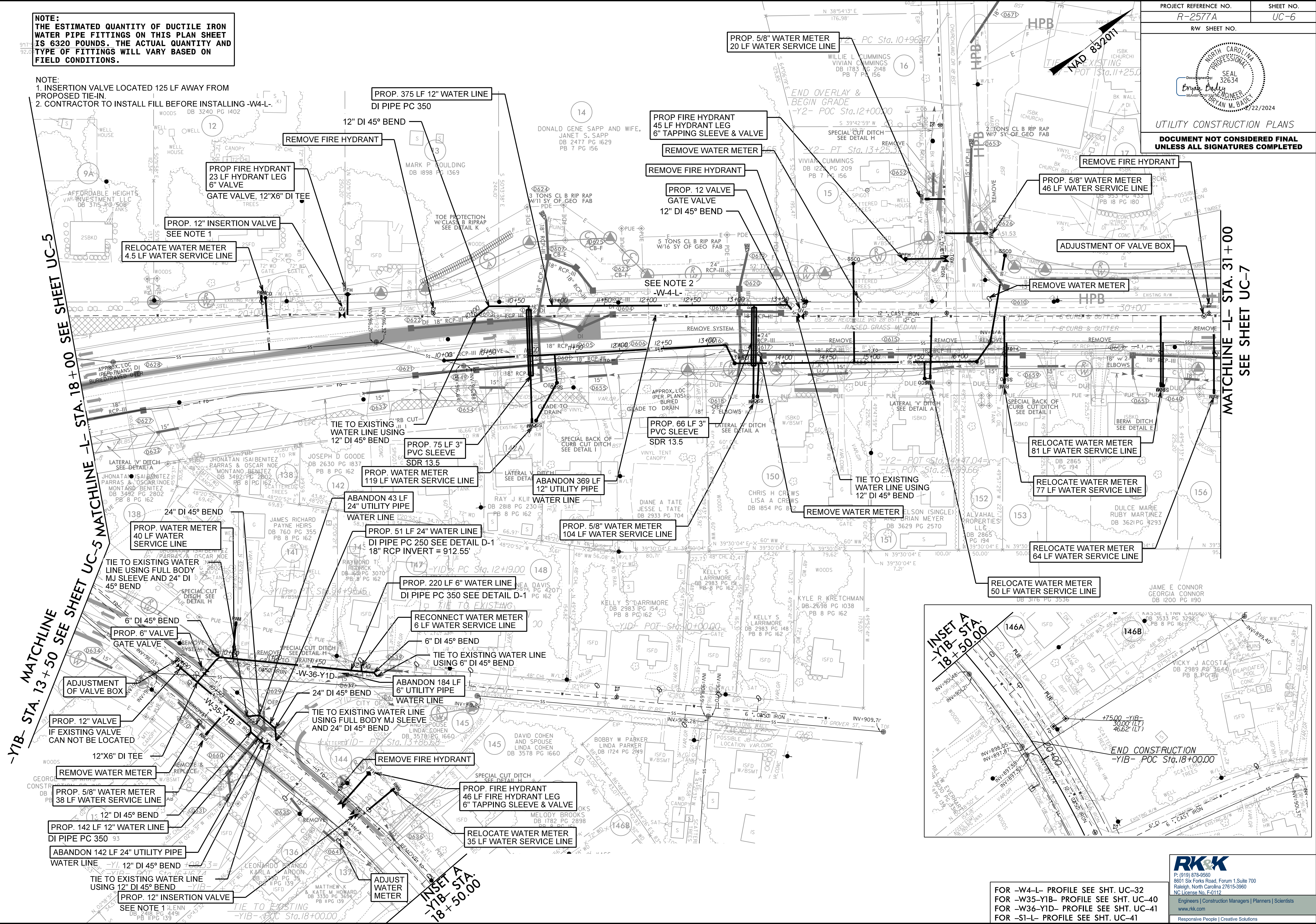
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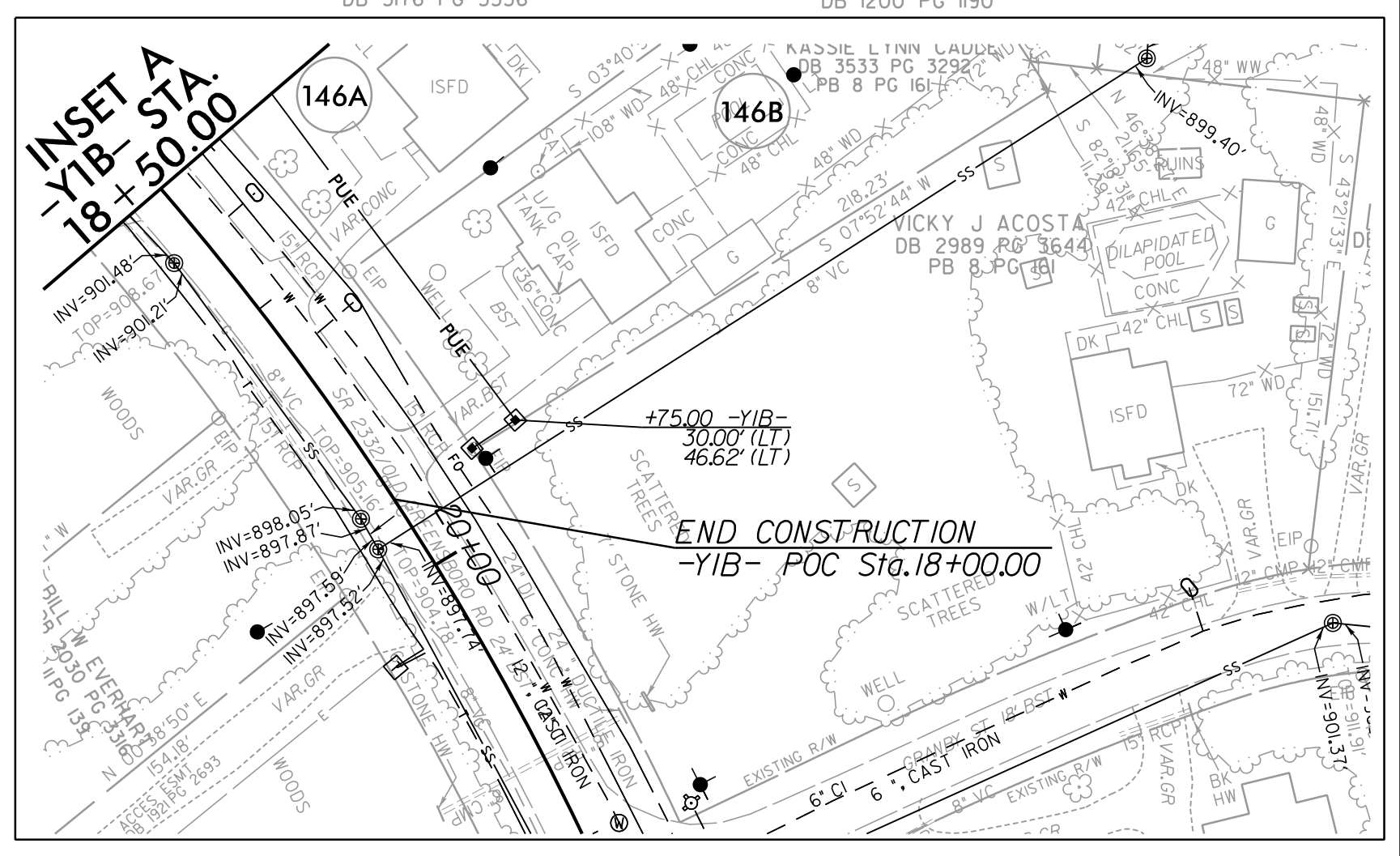
NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 6320 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
1. INSERTION VALVE LOCATED 125 LF AWAY FROM PROPOSED TIE-IN.
2. CONTRACTOR TO INSTALL FILL BEFORE INSTALLING -W4-L-.

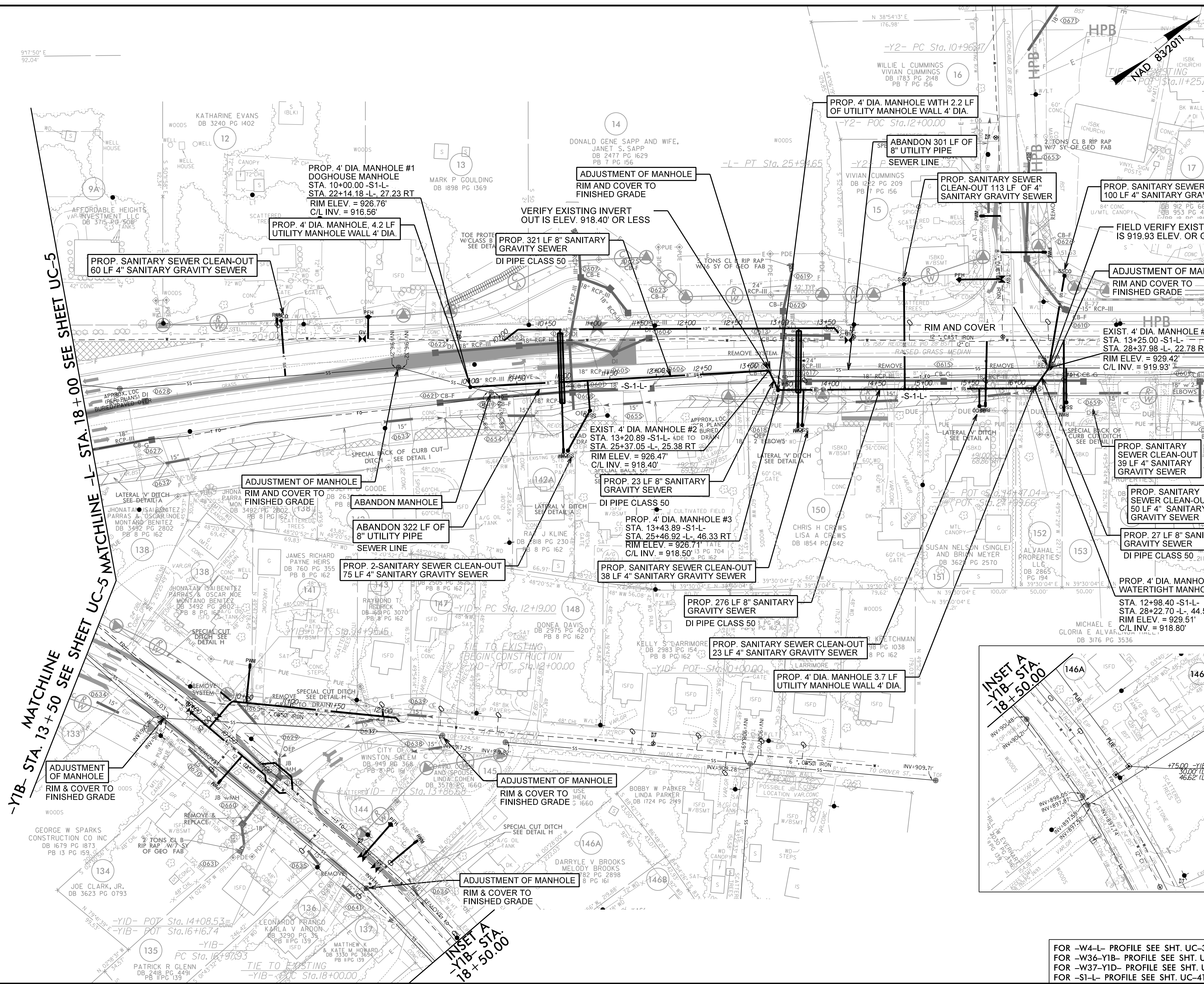


-YIB- STA. 13 + 50 SEE SHEET UC-5 MATCHLINE -L- STA. 18 + 00 SEE SHEET UC-5

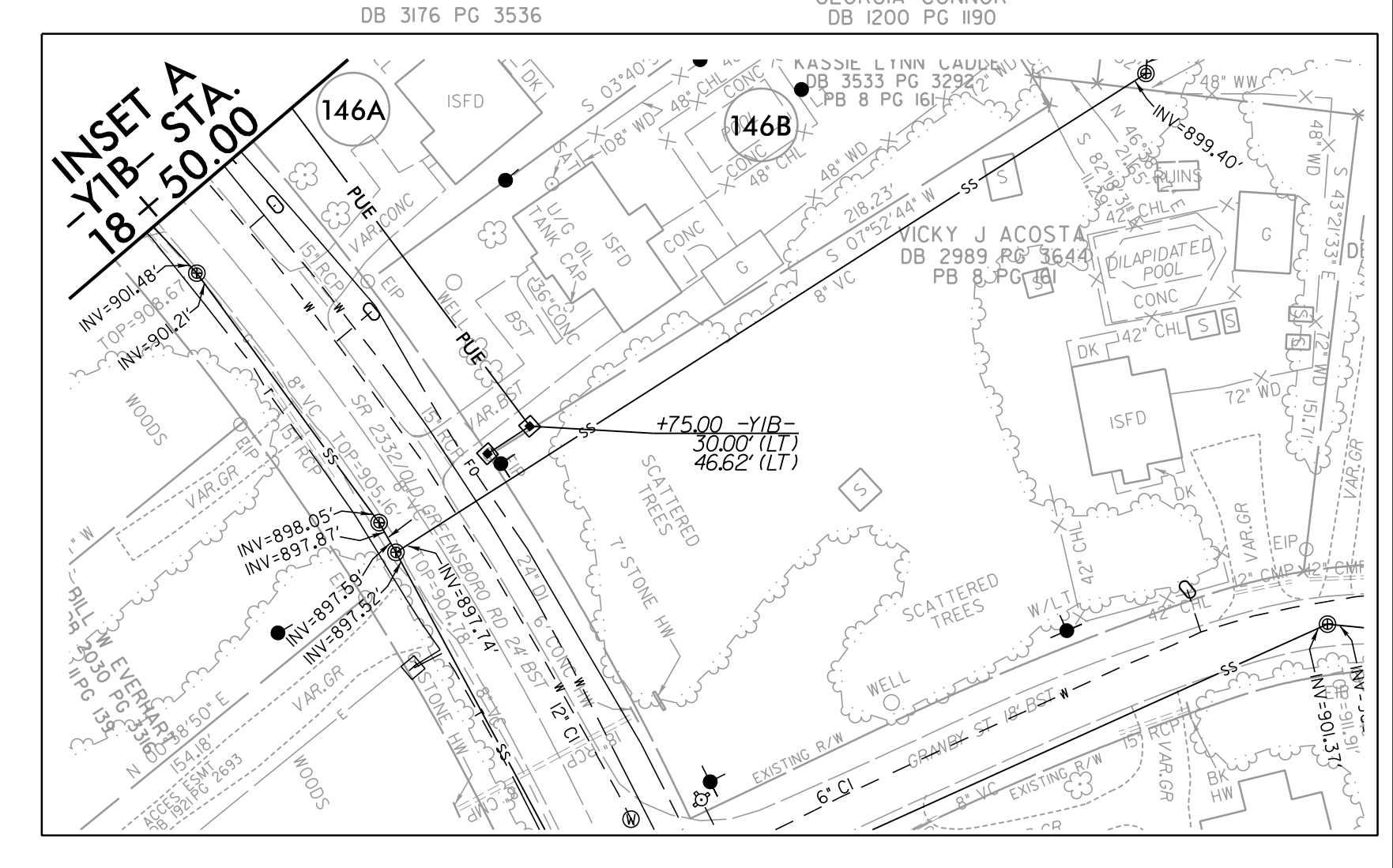
MATCHLINE -L- STA. 31 + 00 SEE SHEET UC-7



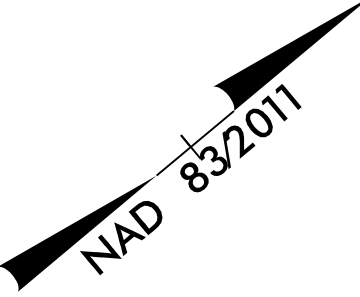
FOR -W4-L- PROFILE SEE SHT. UC-32
FOR -W35-YID- PROFILE SEE SHT. UC-40
FOR -S1-L- PROFILE SEE SHT. UC-41



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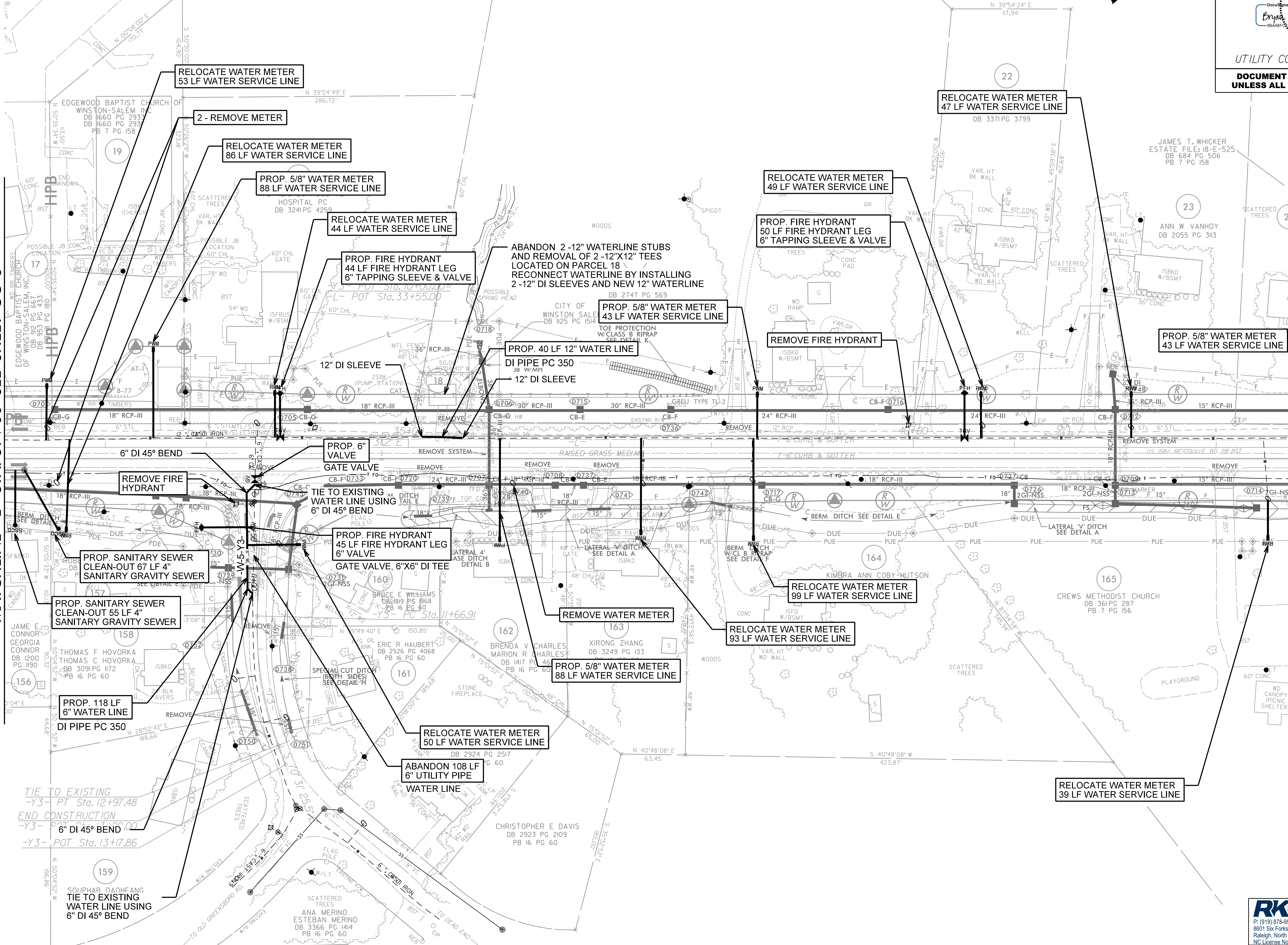


NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 725 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



MATCHLINE -L- STA. 31+00 SEE SHEET UC-6

MATCHLINE -L- STA. 44+00 SEE SHEET UC-8



TIE TO EXISTING
-Y3- PT Sta. 12+97.48
END CONSTRUCTION
-Y3-
-Y3- POT Sta. 13+17.86

PROP. 118 LF
6\"/>

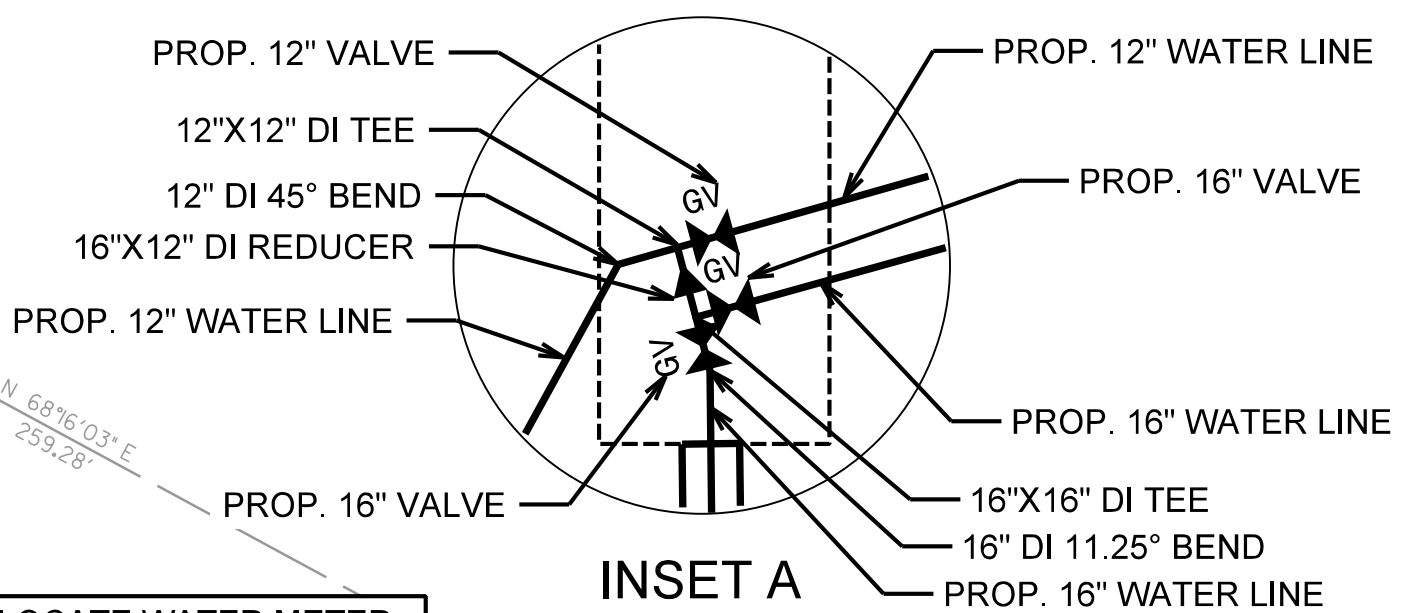
FOR -W5-L- PROFILE SEE SHT. UC-32

8/17/19

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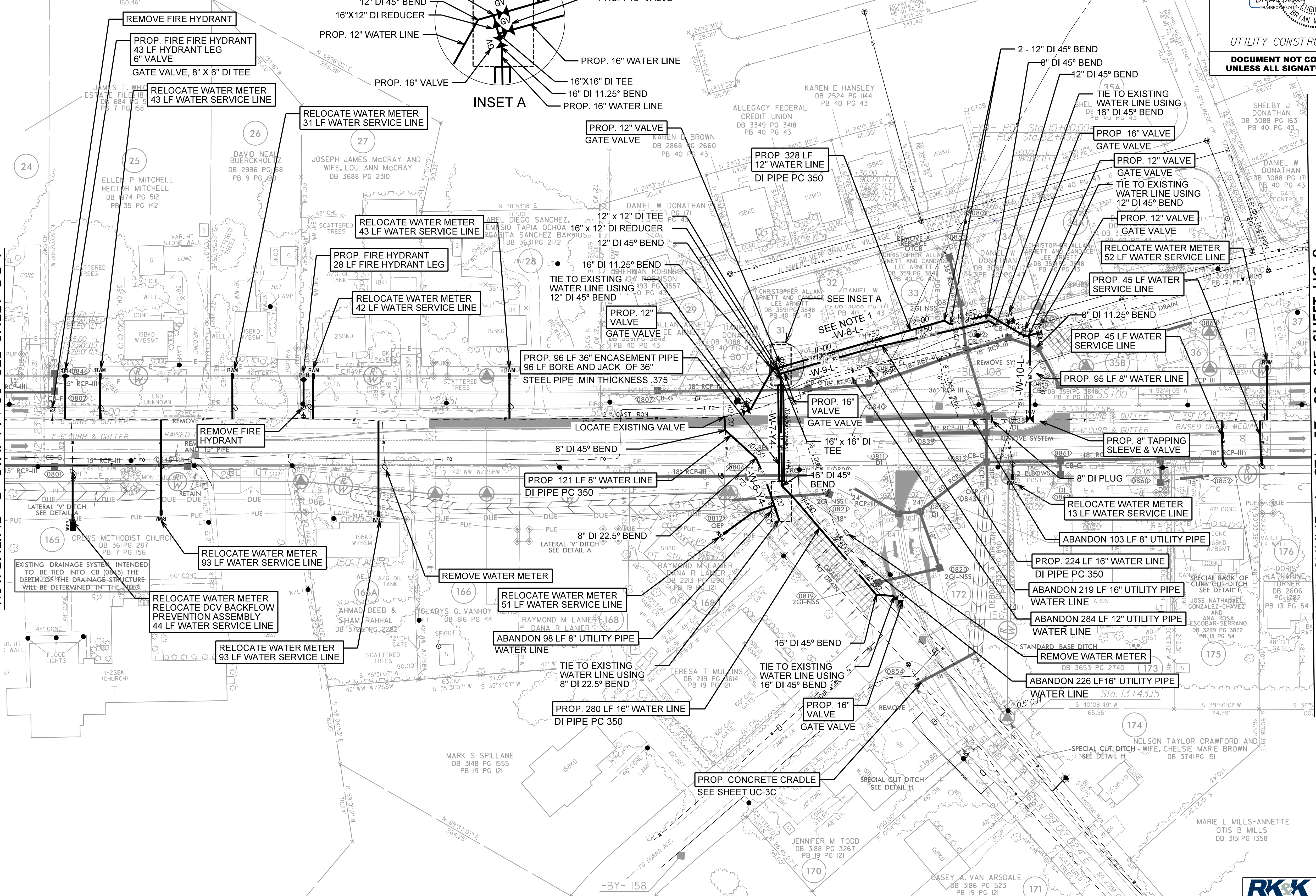
NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 6645 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
1. CONTRACTOR TO INSTALL FILL BEFORE INSTALLING -W8-L-



MATCHLINE -L- STA. 44 + 00 SEE SHEET UC-7

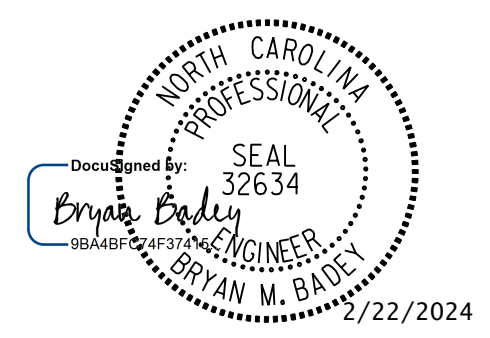
MATCHLINE -L- STA. 57 + 00 SEE SHEET UC-9



FOR -W6-Y4- PROFILE SEE SHT. UC-32
 FOR -W7-Y4- PROFILE SEE SHT. UC-33
 FOR -W8-L- PROFILE SEE SHT. UC-33
 FOR -W9-L- PROFILE SEE SHT. UC-33
 FOR -W10-L- PROFILE SEE SHT. UC-33

8/17/2024

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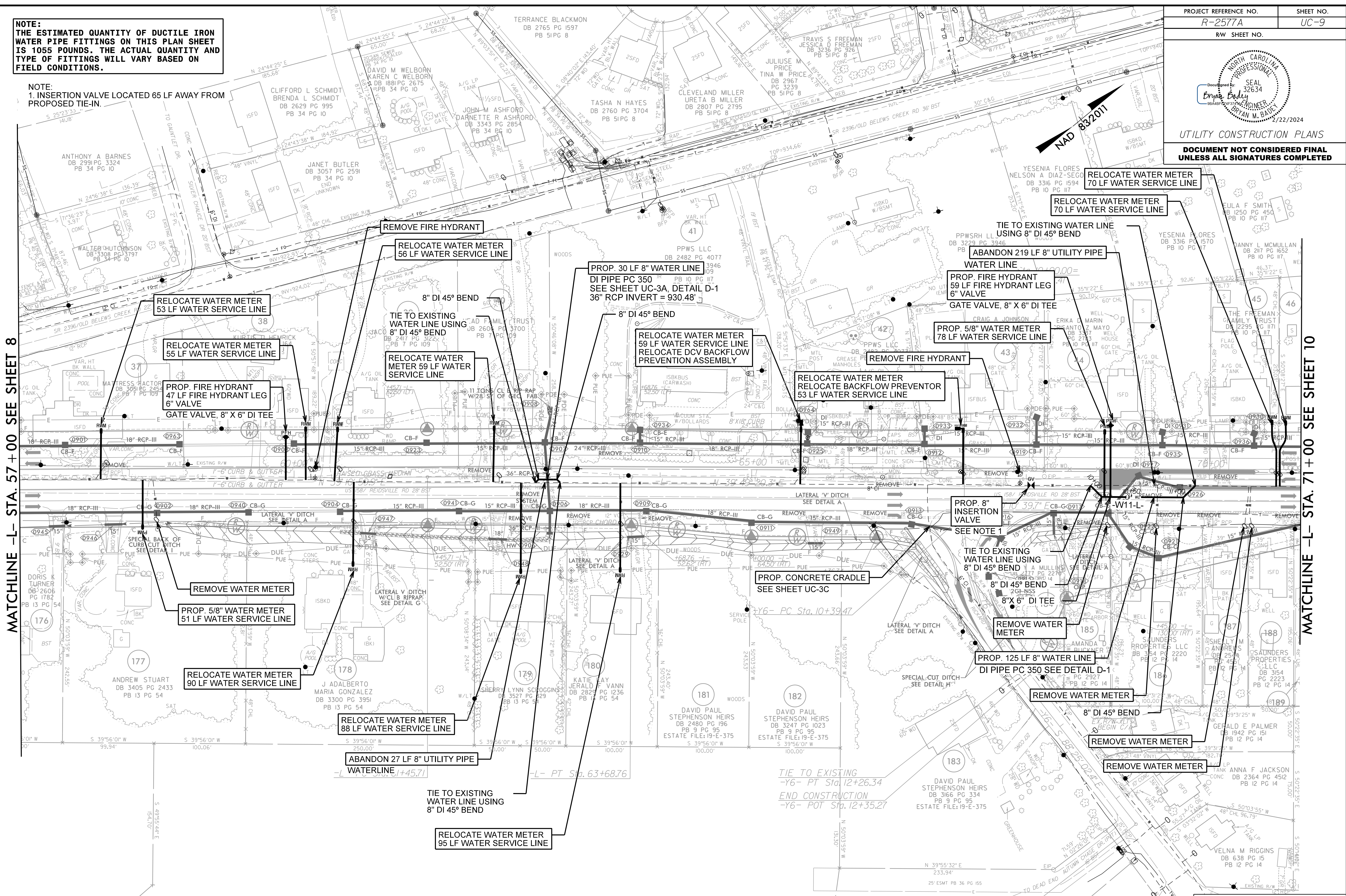
UTILITY CONSTRUCTION PLANS
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1055 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
1. INSERTION VALVE LOCATED 65 LF AWAY FROM PROPOSED TIE-IN.

MATCHLINE -L- STA. 57+00 SEE SHEET 8

MATCHLINE -L- STA. 71+00 SEE SHEET 10



8/17/2024

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CARLA D MEADOWS
DB 2498 PG 901
PB 36 PG 155

FOR -W11-L- PROFILE SEE SHT. UC-33

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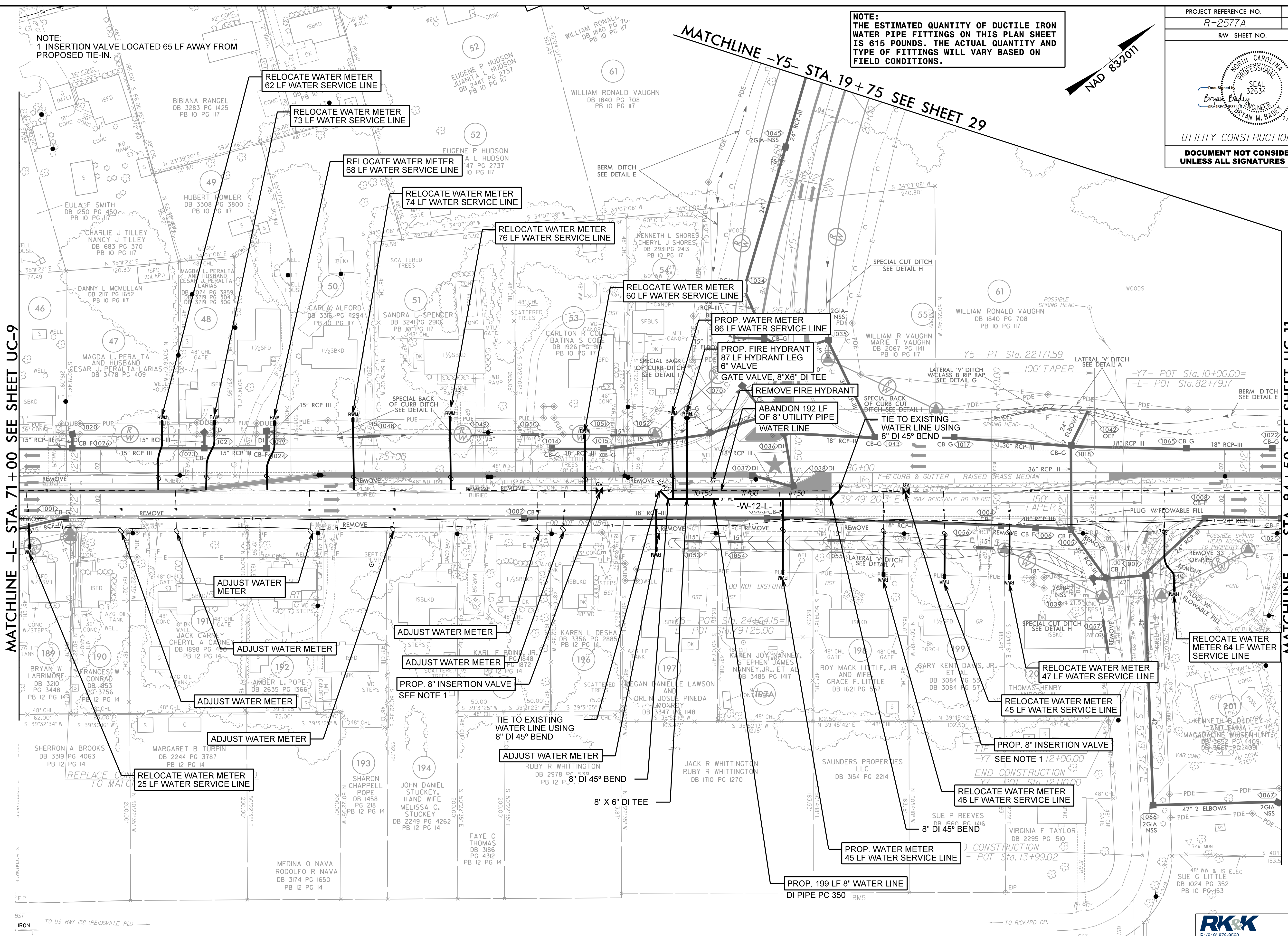
NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 615 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



MATCHLINE -Y5- STA. 19+75 SEE SHEET 29

MATCHLINE -L- STA. 71+00 SEE SHEET UC-9

MATCHLINE -L- STA. 84+50 SEE SHEET UC-11



NOTE:
1. INSERTION VALVE LOCATED 65 LF AWAY FROM PROPOSED TIE-IN.

RELOCATE WATER METER
62 LF WATER SERVICE LINE

RELOCATE WATER METER
73 LF WATER SERVICE LINE

RELOCATE WATER METER
68 LF WATER SERVICE LINE

RELOCATE WATER METER
74 LF WATER SERVICE LINE

RELOCATE WATER METER
76 LF WATER SERVICE LINE

RELOCATE WATER METER
60 LF WATER SERVICE LINE

PROP. WATER METER
86 LF WATER SERVICE LINE

PROP. FIRE HYDRANT
87 LF HYDRANT LEG
6" VALVE

REMOVE FIRE HYDRANT

ABANDON 192 LF
OF 8" UTILITY PIPE
WATER LINE

ADJUST WATER METER

ADJUST WATER METER

ADJUST WATER METER

PROP. 8" INSERTION VALVE
SEE NOTE 1

ADJUST WATER METER

ADJUST WATER METER

RELOCATE WATER METER
25 LF WATER SERVICE LINE

TIE TO EXISTING
WATER LINE USING
8" DI 45° BEND

ADJUST WATER METER

8" X 6" DI TEE

RELOCATE WATER METER
47 LF WATER SERVICE LINE

RELOCATE WATER METER
45 LF WATER SERVICE LINE

PROP. 8" INSERTION VALVE
SEE NOTE 1 12+00.00

RELOCATE WATER METER
46 LF WATER SERVICE LINE

PROP. WATER METER
45 LF WATER SERVICE LINE

PROP. 199 LF 8" WATER LINE
DI PIPE PC 350 BM5

RELOCATE WATER METER
64 LF WATER SERVICE LINE

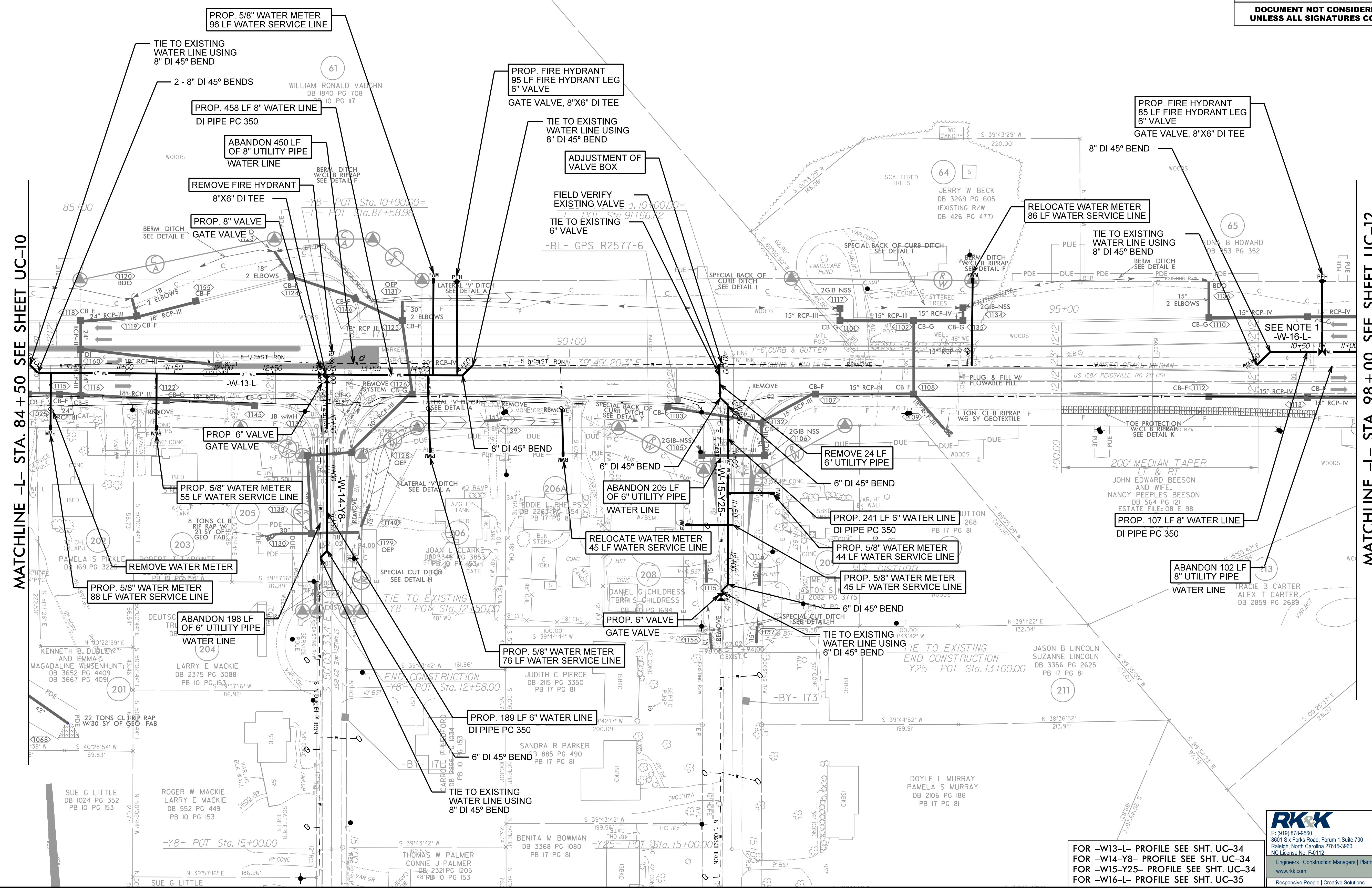
FOR -W12-L- PROFILE SEE SHT. UC-34

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MANNA BAPTIST CH
DB 1636 PG 1729

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 2085 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

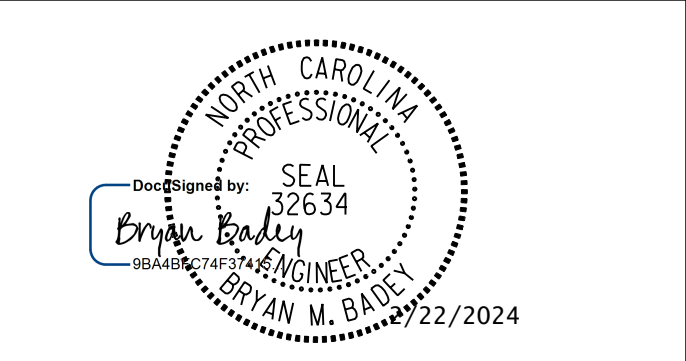
NOTES:
1. CONTRACTOR TO INSTALL FILL BEFORE INSTALLING -W16-L.



MATCHLINE -L- STA. 84 + 50 SEE SHEET UC-10

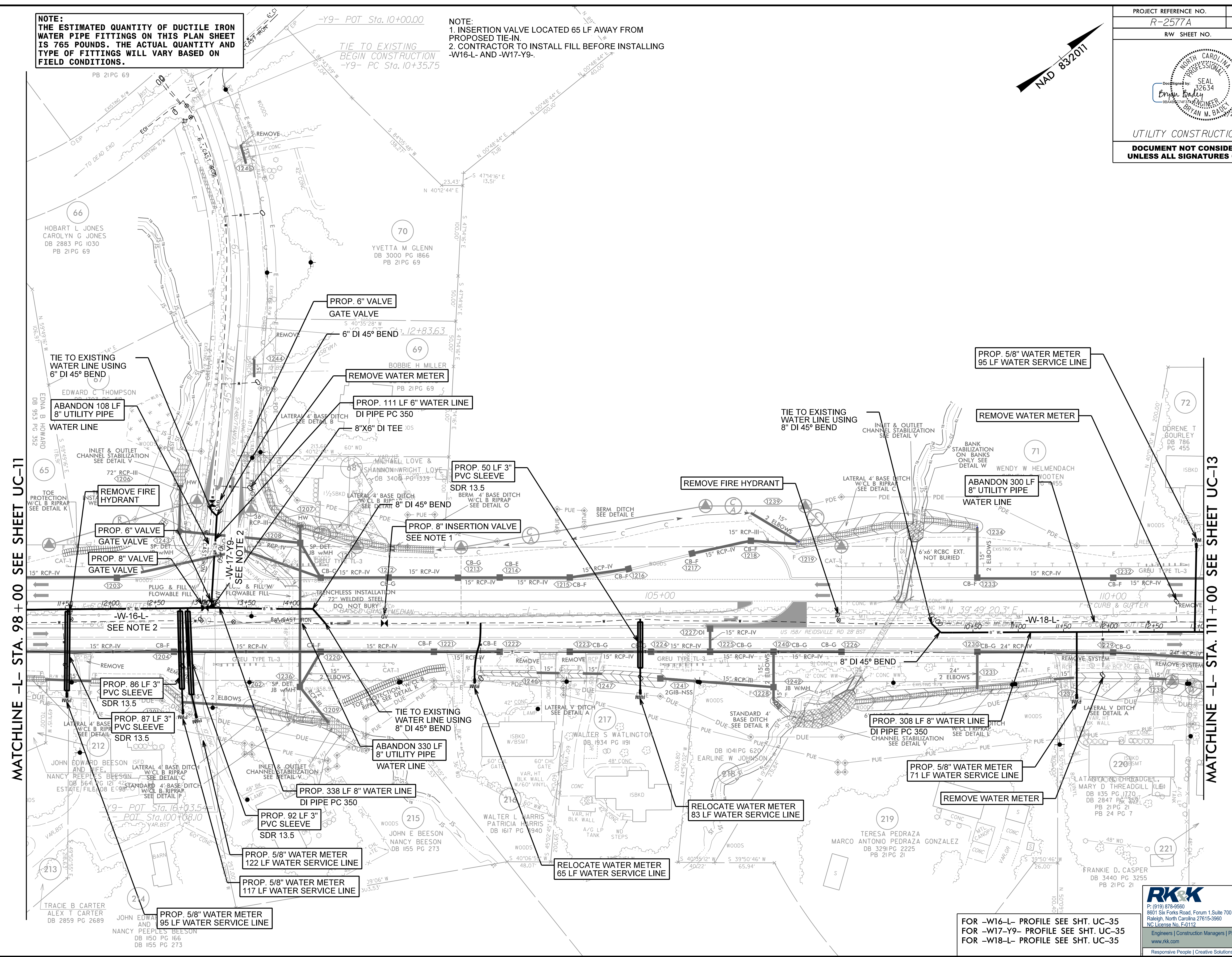
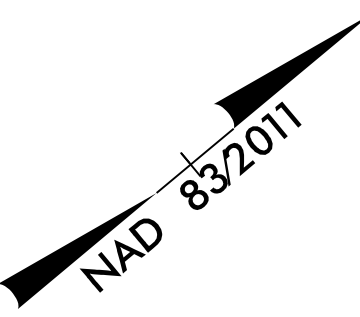
MATCHLINE -L- STA. 98 + 00 SEE SHEET UC-12

FOR -W13-L- PROFILE SEE SHT. UC-34
 FOR -W14-Y8- PROFILE SEE SHT. UC-34
 FOR -W15-Y25- PROFILE SEE SHT. UC-34
 FOR -W16-L- PROFILE SEE SHT. UC-35



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 765 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
1. INSERTION VALVE LOCATED 65 LF AWAY FROM PROPOSED TIE-IN.
2. CONTRACTOR TO INSTALL FILL BEFORE INSTALLING -W16-L- AND -W17-Y9-.



MATCHLINE -L- STA. 98+00 SEE SHEET UC-11

MATCHLINE -L- STA. 111+00 SEE SHEET UC-13

FOR -W16-L- PROFILE SEE SHT. UC-35
FOR -W17-Y9- PROFILE SEE SHT. UC-35
FOR -W18-L- PROFILE SEE SHT. UC-35



8/17/99

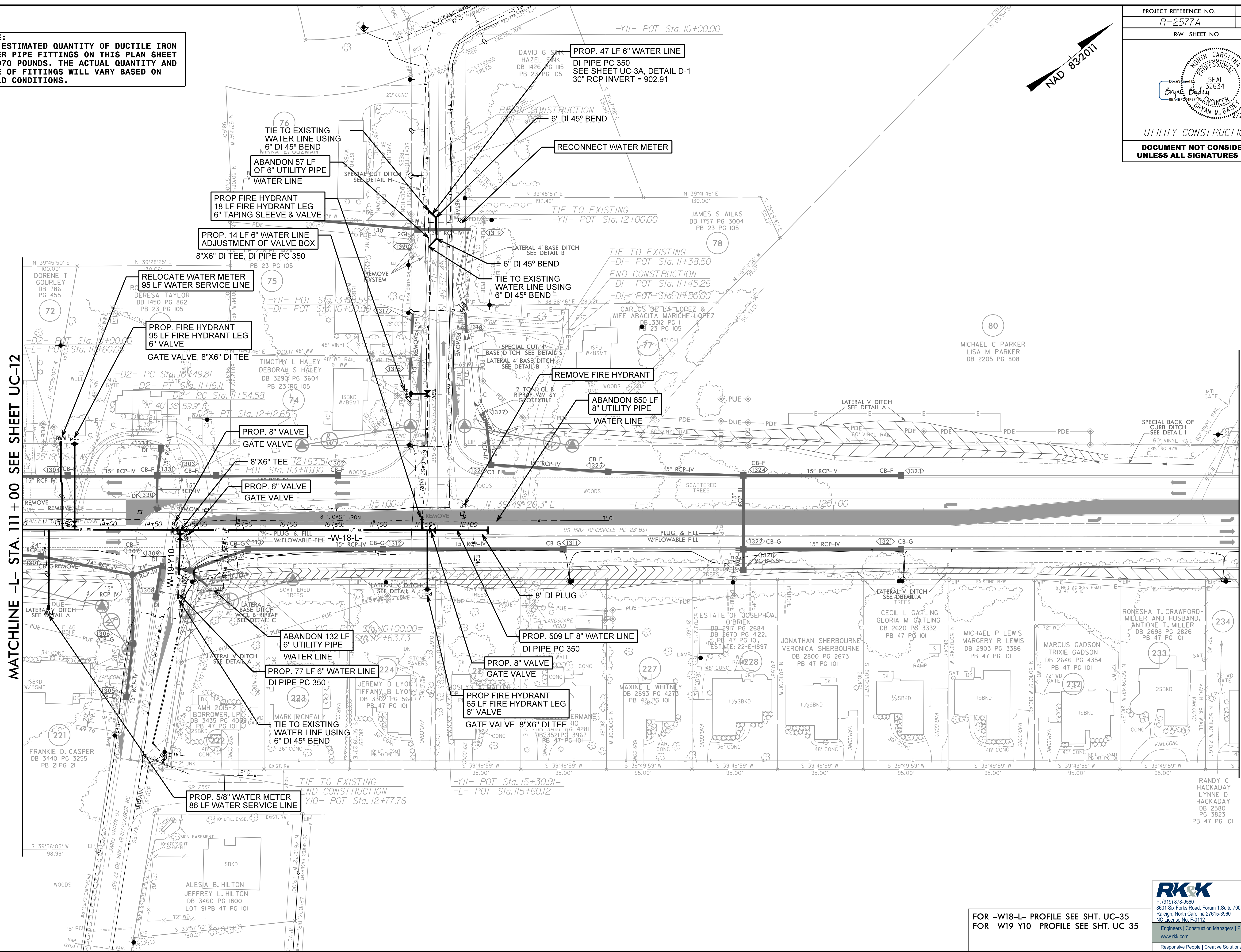
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NAD 83/2011

Seal of the State of North Carolina
Professional Engineer
Bryan M. Baldy
No. 32634
2/22/2024

UTILITY CONSTRUCTION PLANS
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NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 970 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



8/17/199

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FOR -W18-L- PROFILE SEE SHT. UC-35
FOR -W19-Y10- PROFILE SEE SHT. UC-35

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