

09/08/09

TIP PROJECT: U-5815BA

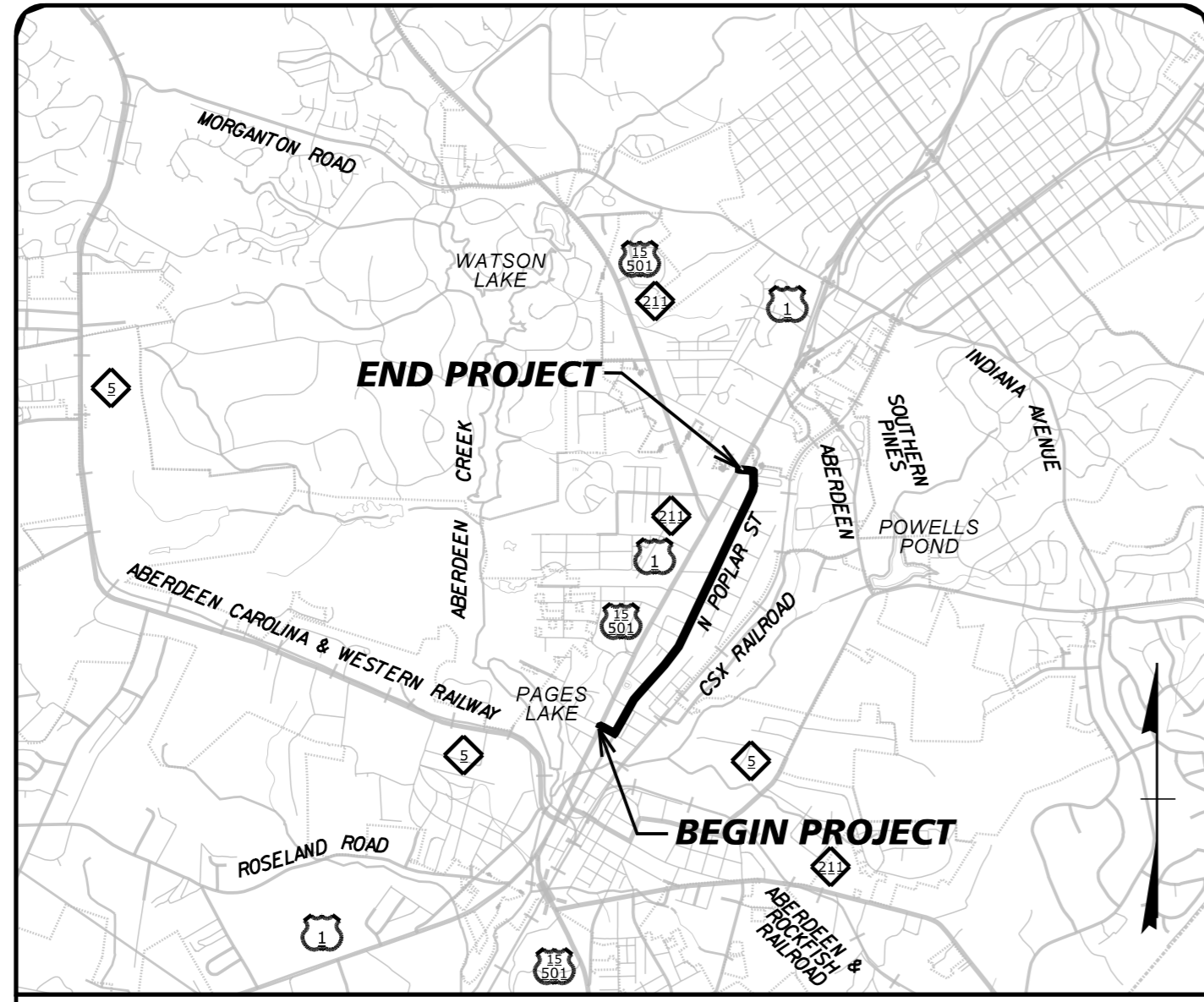
CONTRACT: 204752

T.I.P. NO.	SHEET NO.
U-5815BA	UC-1

WBS Element	Description
54041.1.4	P.E.
54041.2.7	ROW
54041.2.8	UTILITIES
54041.3.5	CONSTRUCTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
MOORE COUNTY

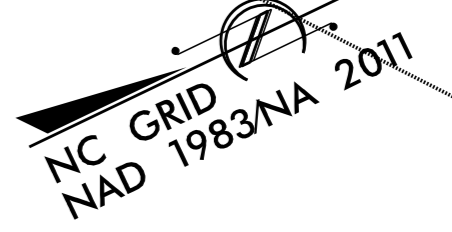
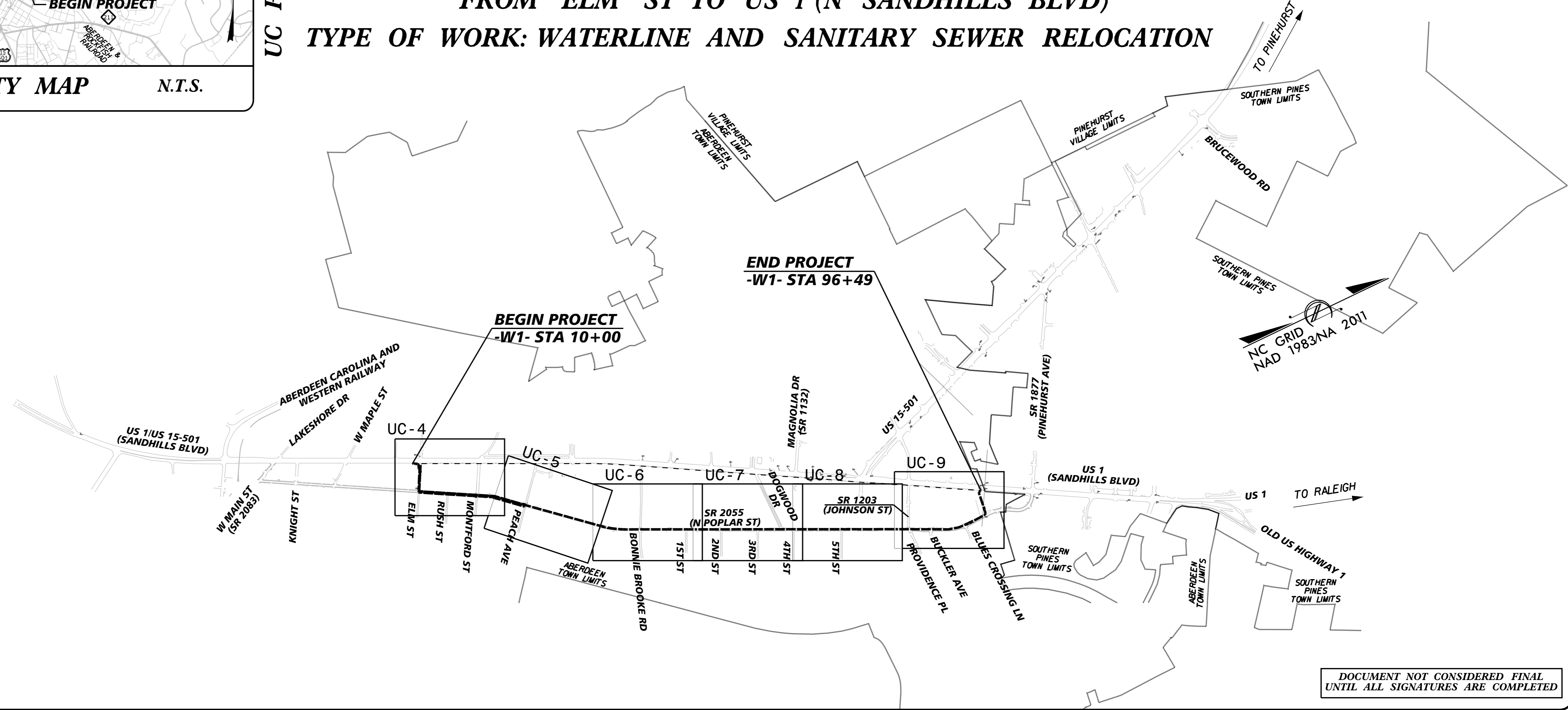


VICINITY MAP N.T.S.

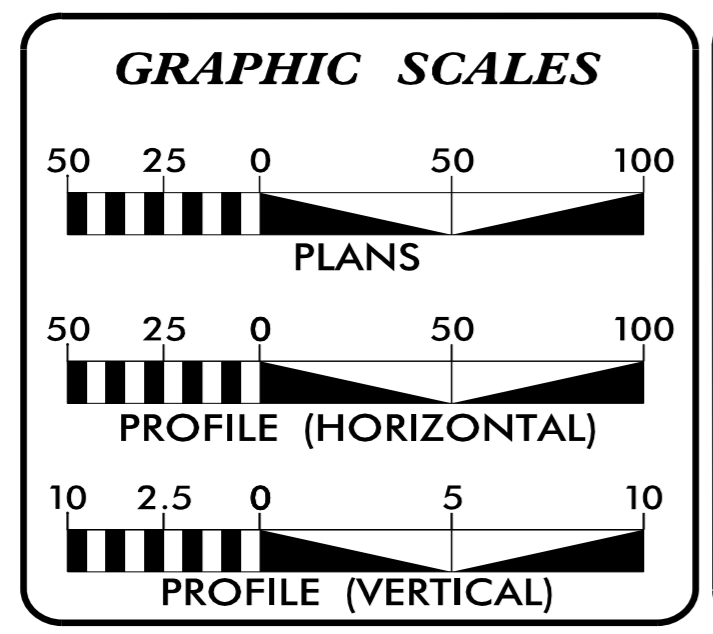
UC PLANS

LOCATION: ELM STREET FROM US 1 (SANDHILLS BLVD) TO SR 2055 (NORTH POPLAR ST) AND SR 2055 (NORTH POPLAR ST) FROM ELM ST TO US 1 (N SANDHILLS BLVD)

TYPE OF WORK: WATERLINE AND SANITARY SEWER RELOCATION



DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOLOGY
UC-3	UTILITY NOTES
UC-3A THRU UC-3E	UTILITY DETAILS
UC-4 THRU UC-9	UTILITY CONSTRUCTION SHEETS
UC-10 THRU UC-14	UTILITY PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) WATER (TRANSMISSION) - SOUTHERN PINES
(B) WATER (DISTRIBUTION)- ABERDEEN
(C) SANITARY SEWER - ABERDEEN

PREPARED IN THE OFFICE OF

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SEAL

7/1/2022

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	..... 12" WL
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	..... RFH
Remove Fire Hydrant	..... REM FH
Water Meter	..... PWM
Relocate Water Meter	..... RWM
Remove Water Meter	..... REM WM
Water Pump Station	..... PST(W)
RPZ Backflow Preventer	..... PRPZ
DCV Backflow Preventer	..... PBFP
Relocate RPZ Backflow Preventer	..... RRPZ
Relocate DCV Backflow Preventer	..... RBFP

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	..... 12" SS
Force Main Sewer Line (Sized as Shown)	..... 12" FSS
Manhole (Sized per Note) •
Sewer Pump Station	..... PST(SS)

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole ⚡
Telephone Pole ☎
Joint Use Pole ⚡☎
Telephone Pedestal	..... TP PED
Utility Line by Others (Type as Shown)	..... PROP O/H POW LINES
Trenchless Installation	..... 12" TL INSTALL
Encasement by Open Cut	..... 24" ENCAS BY OC
Encasement	..... 24" ENCASEMENT

Thrust Block	..... |
Air Release Valve	..... AR
Utility Vault	..... UV
Concrete Pier	..... CP
Steel Pier	..... SP
Plan Note	..... ↖ NOTE
Pay Item Note	..... ↖ PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole ⚡
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	..... P
*Underground Telephone Cable	..... T
*Underground Telephone Conduit	..... TC
*Underground Fiber Optics Telephone Cable	..... T FO
*Underground TV Cable	..... TV
*Underground Fiber Optics TV Cable	..... TV FO
*Underground Gas Pipeline	..... G
Aboveground Gas Pipeline	..... A/G Gas
*Underground Water Line	..... W
Aboveground Water Line	..... A/G Water
*Underground Gravity Sanitary Sewer Line	..... SS
Aboveground Gravity Sanitary Sewer Line	..... A/G Sanitary Sewer
*Underground SS Forced Main Line	..... FSS
Underground Unknown Utility Line	..... ?UL
SUE Test Hole ⚡
Water Meter ⊖
Water Valve ⊗
Fire Hydrant ◇
Sanitary Sewer Cleanout ⊗

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

5/14/99

3/15/2022

5/14/2022

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT ITS EXPENSE, UNLESS PREVIOUSLY OBTAINED BY THE OWNER(S) AND PROVIDED AT THE PRECONSTRUCTION CONFERENCE.
2. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR WRITTEN CONSENT OF THE UTILITY OWNER OR THEIR AUTHORIZED REPRESENTATIVE MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE UTILITY OWNER(S) AND PUBLIC. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE WORK ZONE TRAFFIC CONTROL PLANS AND SHALL ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, TO ENSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK.
5. ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO NCDEQ REGULATIONS, AND TO CURRENT UTILITY OWNER REGULATIONS, STANDARDS, AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN FROM EACH UTILITY OWNER AND ENGINEER APPROVED SUBMITTALS FOR ALL MATERIALS PROPOSED TO BE INCORPORATED IN THE WORK PRIOR TO ORDERING ANY MATERIALS OR COMMENCING UTILITY CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY OWNERS LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION, OR AS OTHERWISE SPECIFIED HEREIN. TOWN OF SOUTHERN PINES INSPECTIONS CAN BE REACHED VIA PHONE AT 910-692-1983. TOWN OF ABERDEEN PUBLIC WORKS CAN BE REACHED VIA PHONE AT (910) 944-4504.
7. ALL PIPE LENGTHS ARE MEASURED ALONG A HORIZONTAL PLANE. SANITARY SEWER LINES ARE MEASURED TO CENTER OF MANHOLE.
8. THE CONTRACTOR SHALL PROVIDE ALL STAKEOUT SURVEY. ANY EXISTING STAKEOUT OR BENCHMARKS SHALL NOT BE RELIED UPON BY THE CONTRACTOR.
9. COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD 83).
10. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE UTILITY OWNER PRIOR TO CONSTRUCTION.
11. LOCATIONS OF EXISTING SHOWN UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE SIZE, DEPTH, MATERIAL AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND TO TAKE WHATEVER STEPS ARE NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER AND THE OWNER(S) ASSUME NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. PRIOR TO DIGGING ON AND OFF SITE, THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY "NC 811" 1-800-632-4949. THE CONTRACTOR SHALL CONTACT ANY UTILITY OWNER WHOSE UTILITIES ARE NOT LOCATED BY "NC 811" FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR TO PRECONSTRUCTION CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.
12. DEPTH AND LOCATION OF BURIED DATA AND TELECOMMUNICATIONS CABLES (FIBER OPTICS AND CONVENTIONAL) ARE KNOWN TO VARY DUE TO INSTALLATION TECHNIQUES. CONTRACTOR SHALL COORDINATE ITS WORK WITH CONFLICTING CABLES AS NECESSARY FOR INSTALLATION OF THE PROPOSED WATER AND SEWER. COORDINATION WITH EXISTING UTILITIES SHALL BE INCLUDED IN THE PROJECT SCHEDULE. COORDINATION AND PHASING RELATED TO EXISTING UTILITIES ARE INCLUSIVE TO THE PROJECT AND NO SPECIFIC OR ADDITIONAL PAYMENT SHALL BE MADE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY PROVIDERS ANY SUPPORT OF EXISTING UTILITY POLES OR OTHER ITEMS AS REQUIRED FOR TRENCH EXCAVATION. ALL COSTS OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR.
14. THE CONTRACTOR SHALL VERIFY THE VOLTAGES OF ALL ELECTRICAL UTILITIES AND FOLLOW THE APPROPRIATE OSHA STANDARDS WHEN WORKING IN THEIR VICINITY.
15. UNLESS OTHERWISE INDICATED, ALL GRADE ELEVATIONS SHOWN ARE ALONG THE PIPE CENTERLINE.
16. ALL PAVEMENT CUTS SHALL BE SAWCUT OR MILLED ALONG A CONTINUOUS STRAIGHT LINE AND REPAVED PER NCDOT REQUIREMENTS AND AS SPECIFIED HEREIN.
17. TRAFFIC ISLANDS, CURBS, CONCRETE DRIVEWAYS, AND OTHER CONCRETE SURFACINGS SHALL BE REPLACED TO THE FIRST EXPANSION JOINT BEYOND THE TRENCH EXCAVATION LIMITS AND TO THE FULL WIDTH. ALL CONCRETE WORK SHALL MATCH EXISTING.
18. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SHEETING AND/OR ACTIVE SHORING REQUIRED FOR THE INSTALLATION OF THE UTILITY. ALL EXCAVATIONS SHALL BE KEPT WITHIN THE LIMITS SPECIFIED. EXCAVATION WITHIN PAVED AREAS SHALL BE KEPT TO A MINIMUM. SHEETING AND/OR ACTIVE SHORING SHALL BE INSTALLED AS REQUIRED TO PROTECT EXISTING UTILITIES.
19. PLACED RIP-RAP SHALL HAVE A MINIMUM DEPTH OF 1.5 TIMES THE MAXIMUM STONE DIAMETER AND SHALL HAVE A LAYER OF TYPE II GEOTEXTILE SEPARATOR PLACED BETWEEN THE SOIL AND STONE.
20. IMMEDIATELY PRIOR TO DISTURBANCE, CONTRACTOR SHALL OBTAIN DIGITALLY RECORDED VIDEO OF THE UTILITY ALIGNMENTS INCLUDING EACH DRIVEWAY, SIDEWALK, SIGN, LANDSCAPING, ETC., TO BE DISTURBED. EACH SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER. VIDEO SHALL BE SUBMITTED TO THE UTILITY OWNER(S) AND THE ENGINEER PRIOR TO WORK.
21. CONTRACTOR SHALL MAINTAIN A MEANS FOR ACCESS TO EACH PROPERTY, RESIDENCE, AND BUSINESS AT ALL TIMES.

3/15/2022

22. DURING CONSTRUCTION, EMERGENCY VEHICLE APPARATUS ACCESS AND ACCESS TO FIRE HYDRANTS SHALL BE MAINTAINED AT ALL TIMES.

23. ALL CONSTRUCTION SHALL BE LIMITED TO STREET RIGHTS-OF-WAY AND OBTAINED EASEMENTS. WHERE THE CONTRACTOR DETERMINES THAT ENCROACHMENT ONTO PRIVATE PROPERTY IS NECESSARY AND AN EASEMENT HAS NOT BEEN PROVIDED, THE CONTRACTOR SHALL CONTACT INDIVIDUAL PROPERTY OWNERS AND OBTAIN WRITTEN APPROVAL FOR THAT ENCROACHMENT. SUCH APPROVALS SHALL BE PROVIDED TO THE UTILITY OWNER, NCDOT, AND THE ENGINEER.

24. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AND TENNANTS AT LEAST 7 DAYS PRIOR TO CONSTRUCTION THAT CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THEIR AREA.

25. CONTRACTOR SHALL REMOVE AND REPLACE ALL CONFLICTING MAIL BOXES, CULVERTS, HEADWALLS, ORNAMENTAL STRUCTURES, SIGNS, HARDSCAPING, ETC. WITHIN THE RIGHT OF WAY OR PERMANENT EASEMENT UNLESS OTHERWISE SHOWN ON THE PLANS OR IN THE CONTRACT DOCUMENTS. CONFLICTING TREES WITHIN THE RIGHT OF WAY SHALL BE REMOVED AND NOT REPLANTED.

26. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL TRAFFIC CONTROL MEASURES AND PUBLIC NOTICE AS REQUIRED BY NCDOT ALONG STATE ROADWAYS AND AS REQUIRED BY TOWN OF SOUTHERN PINES OR TOWN OF ABERDEEN ALONG TOWN STREETS AND PUBLIC PARKING AREAS.

27. TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED OR COVERED WITH ROAD PLATES AT THE END OF EACH WORK DAY. OPEN ENDS OF INSTALLED PIPE SHALL BE CAPPED WITH A WATERTIGHT CAP DESIGNED FOR THE INTENDED USE.



28. CONTRACTOR SHALL MAKE PAVEMENT REPAIRS WITHIN 3 DAYS OF PAVEMENT CUT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

29. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL TOOLS, APPLIANCES, CONSTRUCTION EQUIPMENT AND MACHINERY, SURPLUS MATERIALS, AND DEBRIS AND SHALL RESTORE TO ORIGINAL CONDITION OR BETTER ALL PROPERTY NOT DESIGNATED FOR ALTERATION BY THE CONTRACT DOCUMENTS.

30. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS FOR ALL UTILITY CONSTRUCTION AND MEET ALL UTILITY OWNER REQUIREMENTS PRIOR TO PLACING THE PIPELINE(S) IN SERVICE OR, IF SO AUTHORIZED BY THE UTILITY OWNER, IMMEDIATELY THEREAFTER. SEE UC PROJECT SPECIAL PROVISIONS FOR RECORD DRAWING REQUIREMENTS.

UTILITY NOTES:

1. UTILITY SEPARATION REQUIREMENTS:
 - A. DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - B. WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE OWNER. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - C. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - D. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - E. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, DIP MATERIALS & A CONCRETE CRADLE IN ACCORDANCE WITH DETAIL 4/UC-3D SHALL BE INSTALLED.
 - F. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
2. MINIMUM PIPE COVER FOR DISTRIBUTION WATER MAINS SHALL BE 3 FEET AND TRANSMISSION WATER MAINS SHALL BE 5 FEET, UNLESS DUCTILE IRON PIPE IS USED AND LESS COVER IS SPECIFICALLY SHOWN ON DRAWINGS OR AS APPROVED BY THE UTILITY OWNER OR ENGINEER.
3. TRENCH EXCAVATION SHALL BE PER DETAIL 3/UC-3D. BEDDING AND BACKFILL FOR SERVICE LINES SHALL BE PER DETAIL 1/UC-3D, AND BEDDING AND BACKFILL FOR MAINS SHALL BE IN ACCORDANCE WITH DETAIL 2/UC-3D.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING USERS THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE COORDINATED WITH AND TAKE PLACE AT A TIME AND DATE ACCEPTABLE TO THE UTILITY OWNER. A 72 HOUR ADVANCE NOTICE SHALL BE PROVIDED TO AFFECTED CUSTOMERS.
5. ALL UTILITY PIPELINES FOR THIS PROJECT SHALL BE MATERIAL AND SIZE AS NOTED ON THE DRAWINGS.
6. ALL PRESSURIZED FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT WITH PRESSURE RATING EQUAL TO OR HIGHER THAN HOST PIPE, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
7. ALL MECHANICAL JOINTS SHALL BE FITTED WITH WEDGE-TYPE MECHANICAL RESTRAINT ACCESSORY KITS DESIGNED FOR THE INTENDED USE AND MATERIAL, AS APPROVED BY UTILITY OWNER. RESTRAINED JOINT PIPING SHALL BE INSTALLED TO THE STATIONS SHOWN ON THE PROFILE DRAWINGS AT MINIMUM. DEVIATIONS FROM THE DESIGN MAY RESULT IN ADDITIONAL REQUIRED RESTRAINED LENGTH. SEE GENERAL NOTE 2.
8. PIPE ALIGNMENT SHOWN IS BASED ON STANDARD DUCTILE IRON MECHANICAL JOINT FITTINGS. JOINT DEFLECTIONS SHALL NOT EXCEED 75 PERCENT OF MANUFACTURER'S RECOMMENDED DEFLECTION. CONTRACTOR SHALL ADJUST PIPELINE ALIGNMENT AND DEFLECT JOINTS AS NECESSARY TO ACCOMMODATE THE STANDARD BENDS SHOWN.

PREPARED BY:  421 FAYETTEVILLE STREET, SUITE 600 RALEIGH, NC 27601	PROJECT REFERENCE NO.	SHEET NO.
	U-5815BA	UC-3
	DESIGNED BY: NLH	
	DRAWN BY: JNB	
	CHECKED BY: CPM	
APPROVED BY: NLH		
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

9. DETECTABLE WARNING TAPE AND TRACER WIRE IS REQUIRED FOR ALL BURIED PIPE AND SHALL BEAR THE APPROPRIATE AWPA COLORING AND TEXT FOR THE APPLICABLE UTILITY. INSULATED 14GA TRACER WIRE SHALL BE INSTALLED ALONG ALL PIPELINES AND SHALL BE ACCESSIBLE FROM THE FINISHED GRADE WITHIN ALL VALVE BOXES, MANHOLES, AND OTHER END POINTS OF TRACER WIRE. SPLICES IN TRACER WIRE SHALL BE MADE WITH SPLICE CONNECTORS DESIGNED FOR THE INTENDED PURPOSE AND IN ACCORDANCE WITH TRACER WIRE MANUFACTURER'S RECOMMENDATIONS.

10. ALL MANHOLE COVERS AND VALVE BOX LIDS FOR WATER SHALL READ "WATER", ALL MANHOLE COVERS AND VALVE BOX LIDS FOR SEWER SHALL READ "SEWER", AND ALL SHALL BE IN ACCORDANCE WITH NCDOT AND APPLICABLE UTILITY OWNER STANDARDS AND DETAILS.

11. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE OWNER(S) AND ENGINEER.

12. EXISTING WATER SERVICES SHALL REMAIN IN SERVICE AT ALL TIMES UNTIL THE PROPOSED MAIN IS TESTED AND PHASED INTO SERVICE.

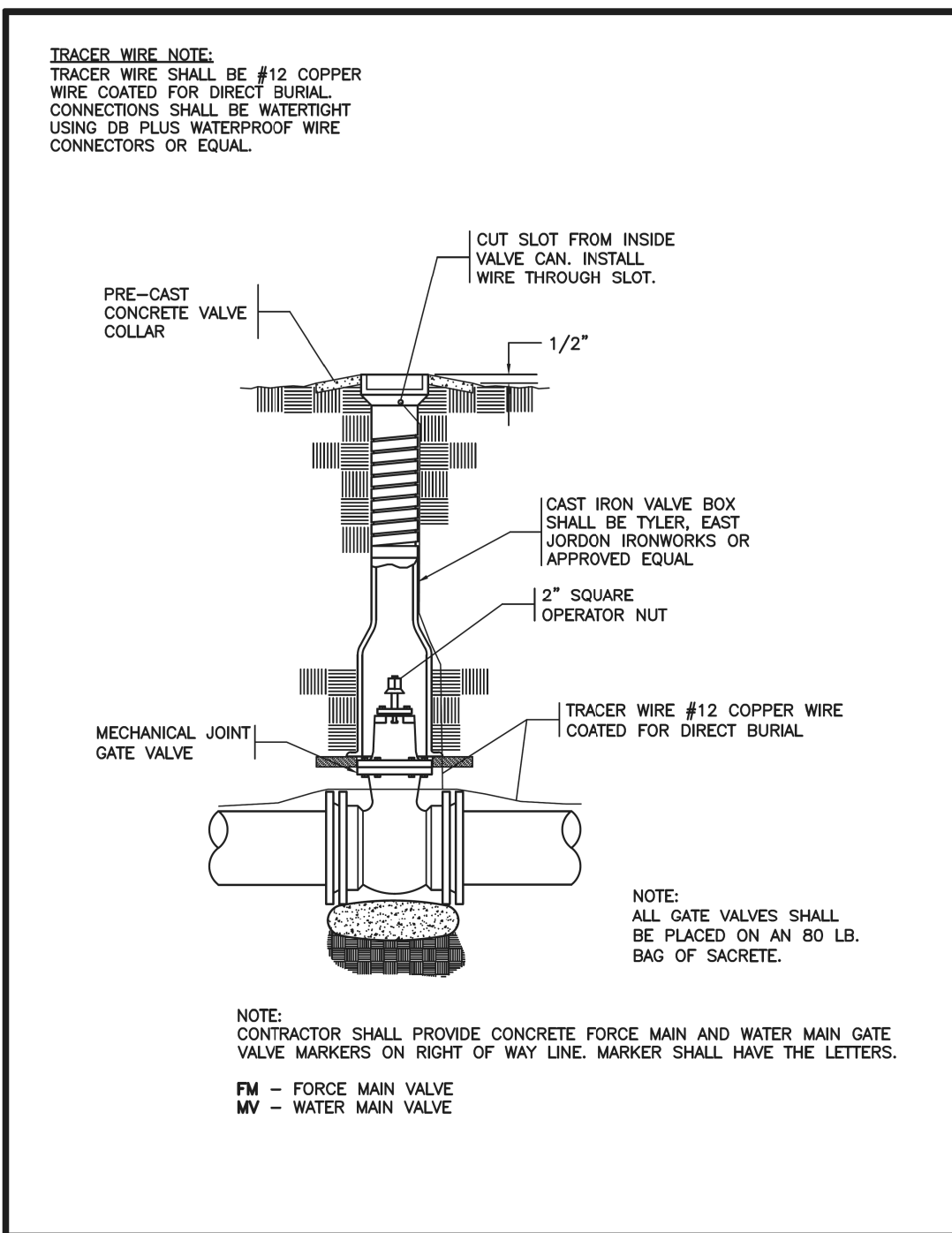
GENERAL SEQUENCE:

1. FOR EACH WATER LINE AND SEWER LINE RELOCATION, THE CONTRACTOR SHALL PROVIDE THE UTILITY OWNER WITH A DETAILED INSTALLATION, CONNECTION, AND SERVICE INTERRUPTION PLAN FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE RELOCATION. AT A MINIMUM, EACH PLAN SHALL ADDRESS THE FOLLOWING:
 - A. SEQUENCE OF CONSTRUCTION OPERATIONS.
 - B. PROCEDURE FOR FLUSHING, TESTING, AND DISINFECTION OF ALL AFFECTED PIPING AND VALVES, AS REQUIRED BY THE UTILITY OWNER.
 - C. PHASING AND SCHEDULE FOR ALL CONNECTIONS, INCLUDING PLANNED SERVICE OUTAGES, DURATION, AND CONTINGENCY PLAN.
2. NO INTERRUPTION OF SERVICE WILL BE PERMITTED UNTIL THE FOREGOING PLAN HAS BEEN APPROVED BY THE UTILITY OWNER. THE UTILITY OWNER'S PERSONNEL SHALL OPERATE THE UTILITY OWNER'S EXISTING FACILITIES INVOLVED IN THE INTERRUPTIONS OF SERVICE.
3. PLANNED SERVICE CONNECTION INTERRUPTIONS SHALL LAST NO LONGER THAN 8 HOURS UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER. ALL INTERRUPTIONS OF SERVICES SHALL BE COORDINATED WITH AND SCHEDULED AT TIMES ACCEPTABLE TO THE UTILITY OWNER.
4. WRITTEN WATER SERVICE INTERRUPTION NOTICES SHALL BE PROVIDED TO ALL AFFECTED CUSTOMERS AT LEAST 72 HOURS PRIOR TO EACH PLANNED INTERRUPTION.

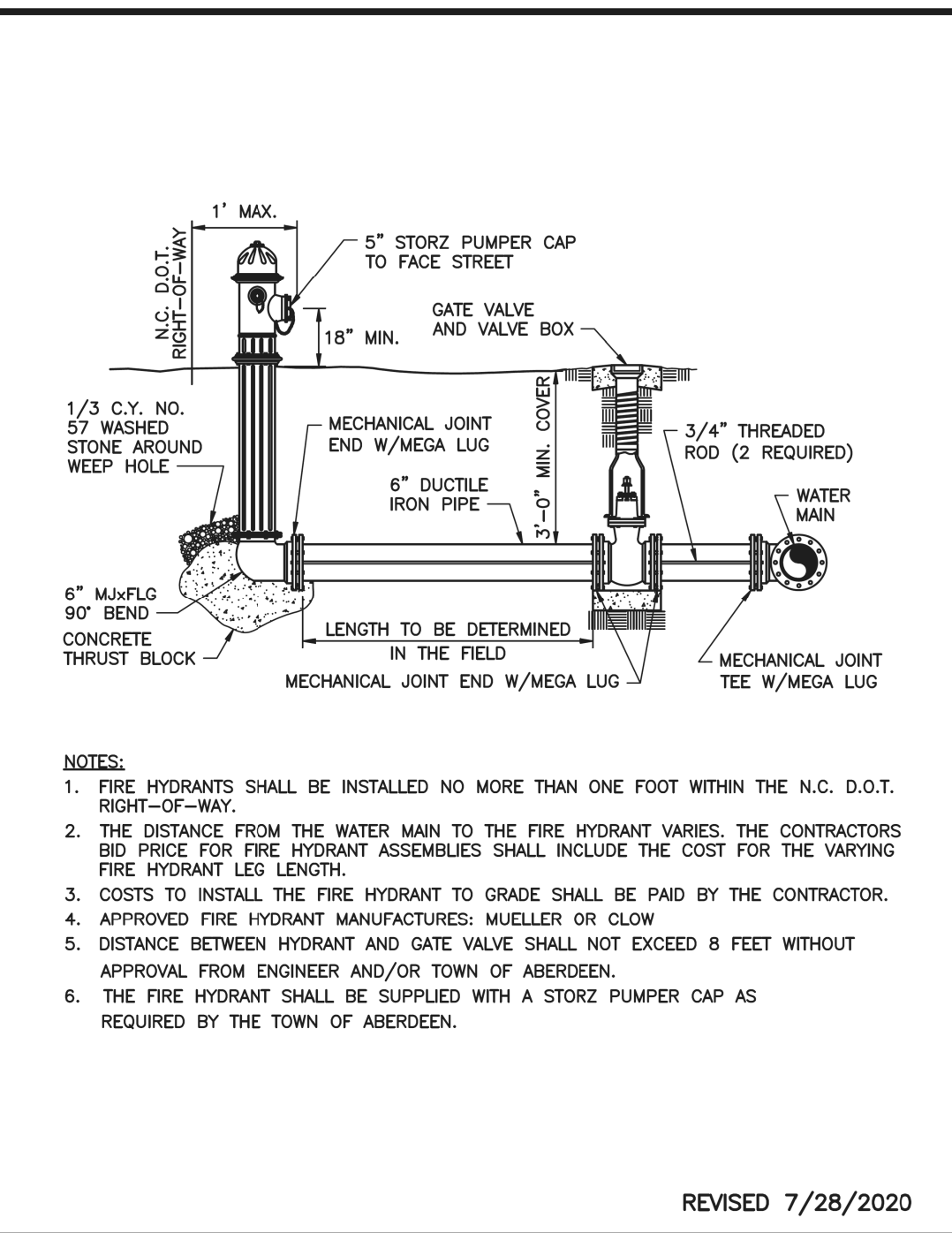
TRANSMISSION MAIN SEQUENCE:

1. ALL REQUIREMENTS LISTED UNDER "GENERAL SEQUENCE" NOTES SHALL APPLY TO THE TOWN OF SOUTHERN PINES TRANSMISSION MAIN.
2. INSTALL PROPOSED TRANSMISSION WATER MAIN TO THE MAXIMUM EXTENT POSSIBLE, FILL/FLUSH VIA THE JUMPER SHOWN ON SHEET UC-4, AND PASS ALL ACCEPTANCE TESTS REQUIRED BY OWNER PRIOR TO MAKING FINAL CONNECTIONS. FILL, FLUSH, AND TEST WITHIN A SCHEDULE AND DURATION ACCEPTABLE TO THE OWNER AND THE DEPARTMENT.
4. TAKE ALL PREPARATIONS NECESSARY TO MINIMIZE SHUTDOWN DURATION PRIOR TO INITIATING SHUTDOWN, INCLUDING BUT NOT LIMITED TO TRENCHING AND EXCAVATION FOR CONNECTIONS, REMOVAL OF TEMPORARY PIPING AND BLOWOFF(S), ENSURING ALL NECESSARY EQUIPMENT, PERSONNEL, AND MATERIALS ARE ON SITE.
5. INSTALL PROPOSED LINE STOP SHOWN ON SHEET UC-9, ALLOWING CONCRETE FOR THRUST RESTRAINT AND FOOTING TO CURE MIN 7-DAYS. ACTIVATE LINE STOP AND REPLACE 18" BUTTERFLY VALVE SHOWN ON SHEET UC-9. LINE STOPPAGE AND VALVE REPLACEMENT MUST TAKE PLACE BETWEEN THE HOURS OF 11:00PM AND 5:00AM. REMOVE LINE STOP.
6. MAKE FINAL CONNECTIONS AT -W1- STA 96+50 AND -W1- STA 10+00. FINAL CONNECTIONS MUST BE MADE SIMULTANEOUSLY ON A SINGLE WEEKEND DAY BETWEEN 9:00AM AND 4:00PM. DISINFECT FINAL CONNECTION COMPONENTS BY SWABBING/SPRAYING AND VISUALLY LEAK CHECK PRIOR TO LINE ACTIVATION.
7. ABANDON 18" TRANSMISSION MAIN BY DRAINING ALL WATER AND CAPPING WITH DI MJ CAPS.

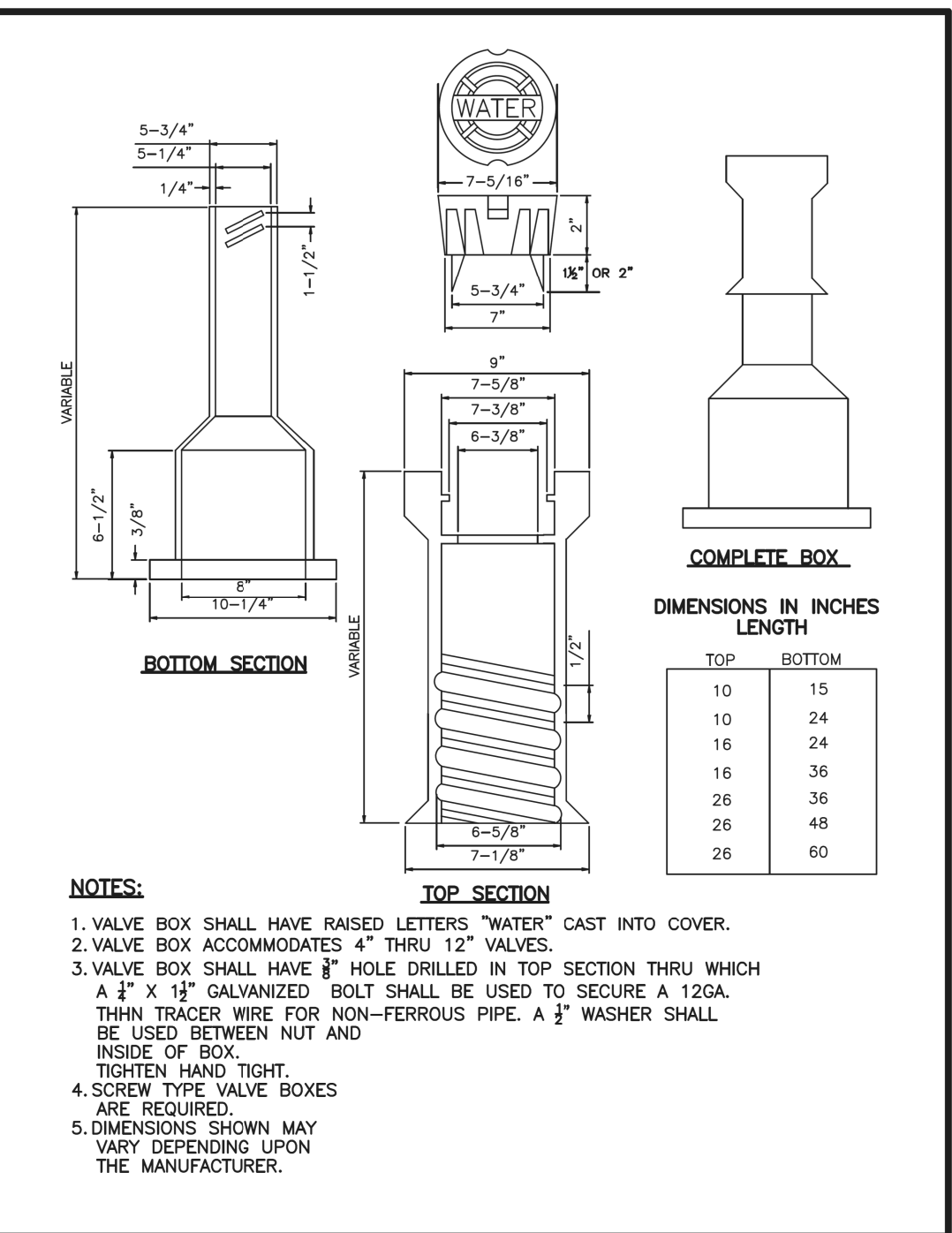
UTILITY CONSTRUCTION



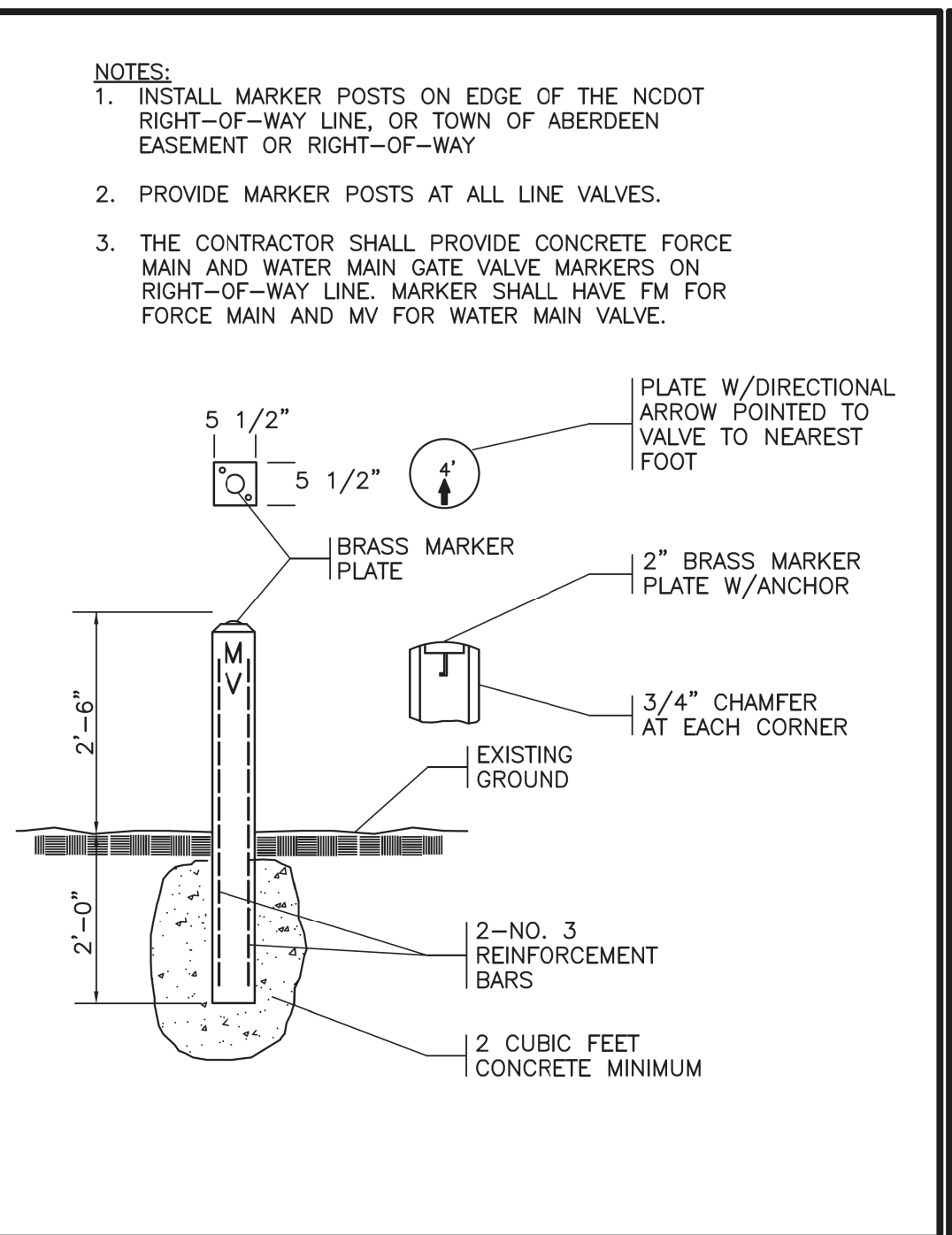
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Gate Valve Assembly W.1



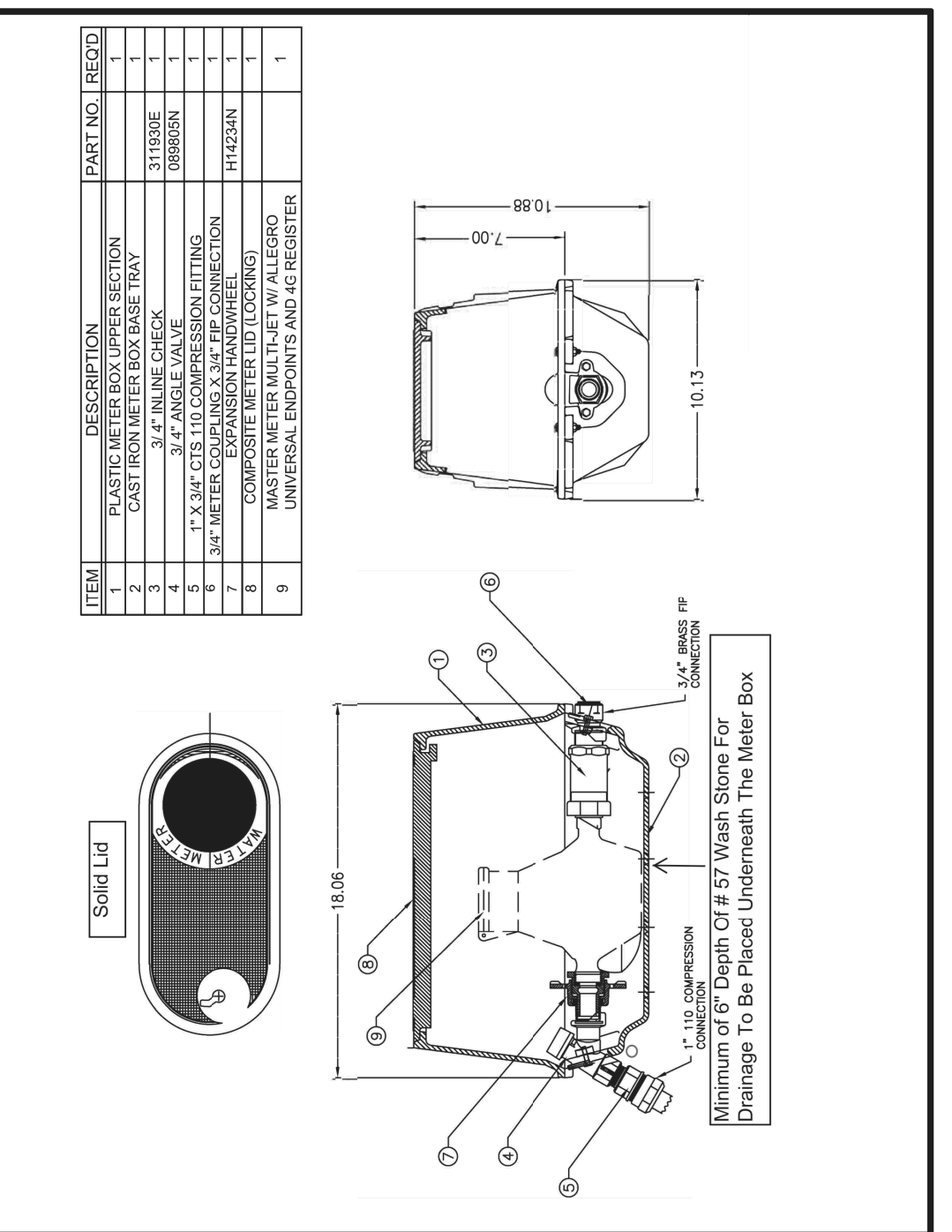
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Fire Hydrant And Valve Detail W.2



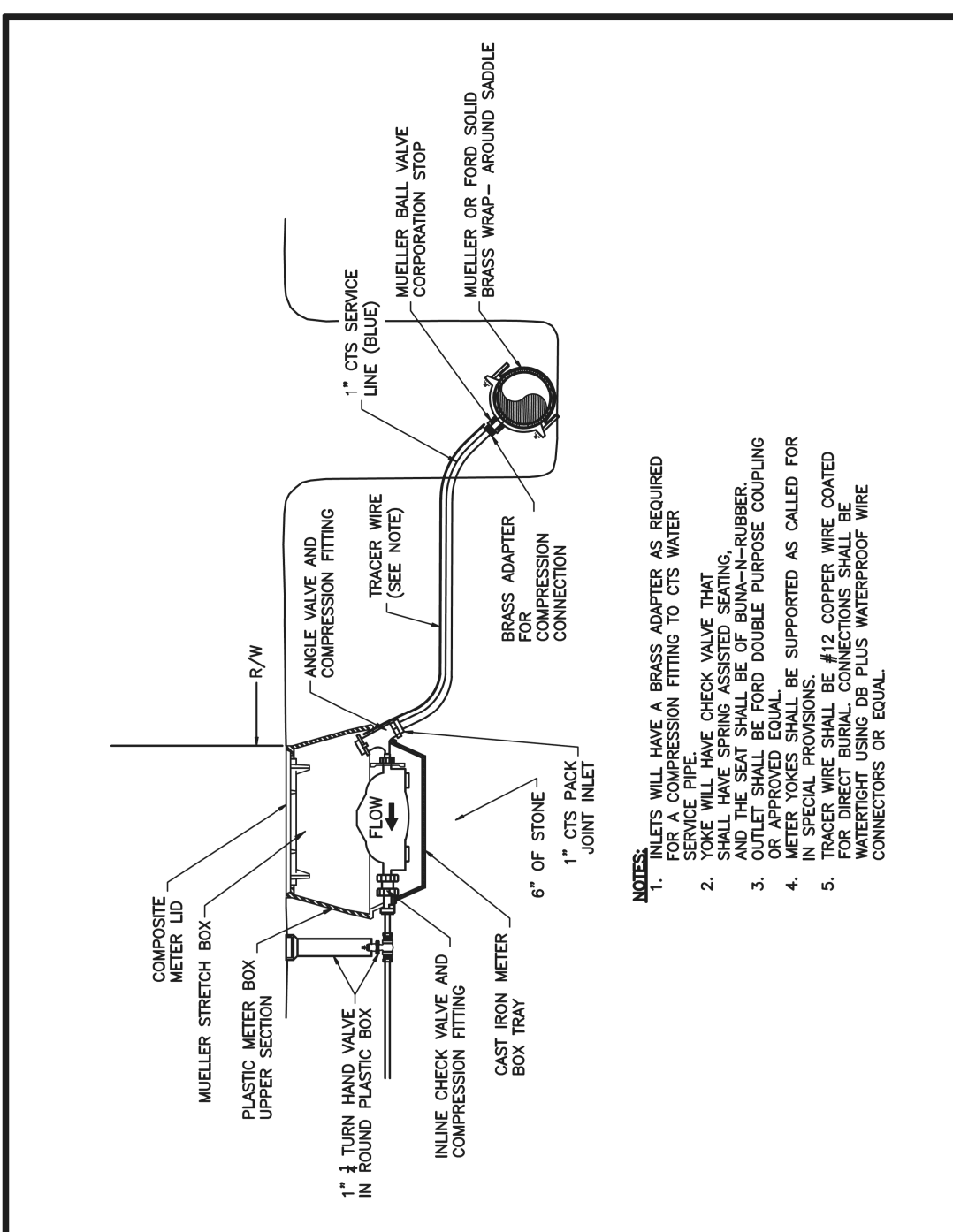
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Valve Box Detail W.3



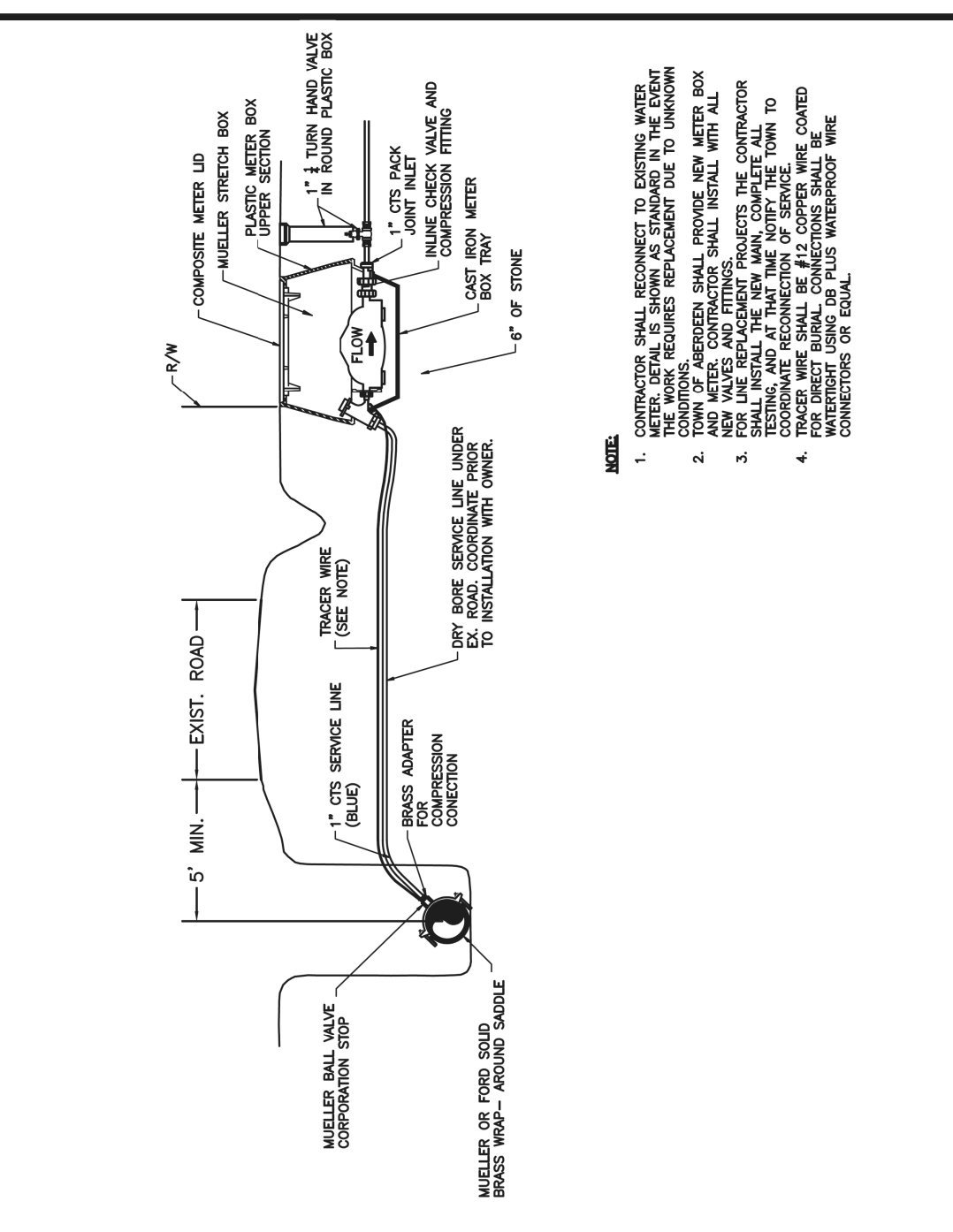
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Valve Marker Post Detail W.4



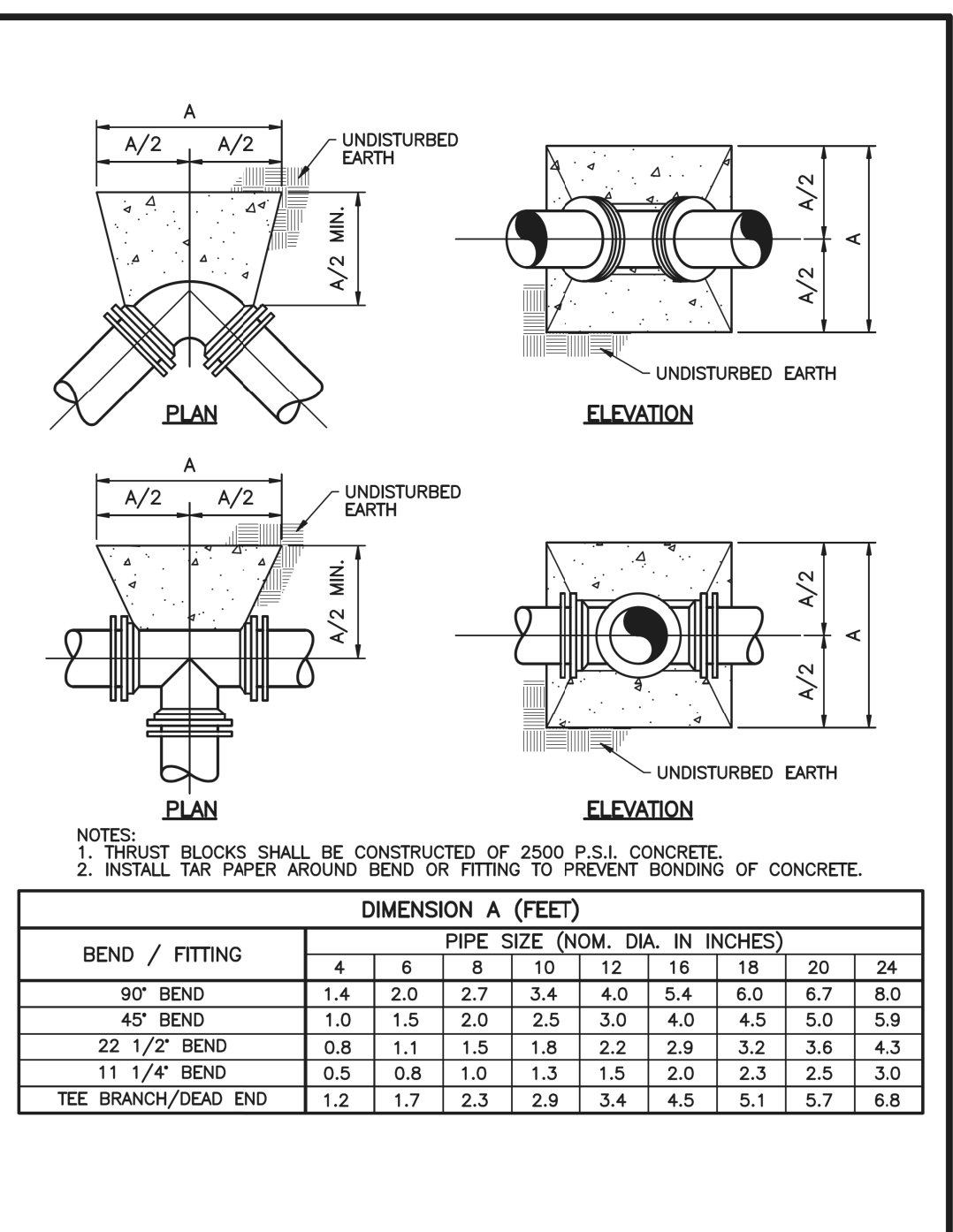
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Water Meter Box Detail W.5



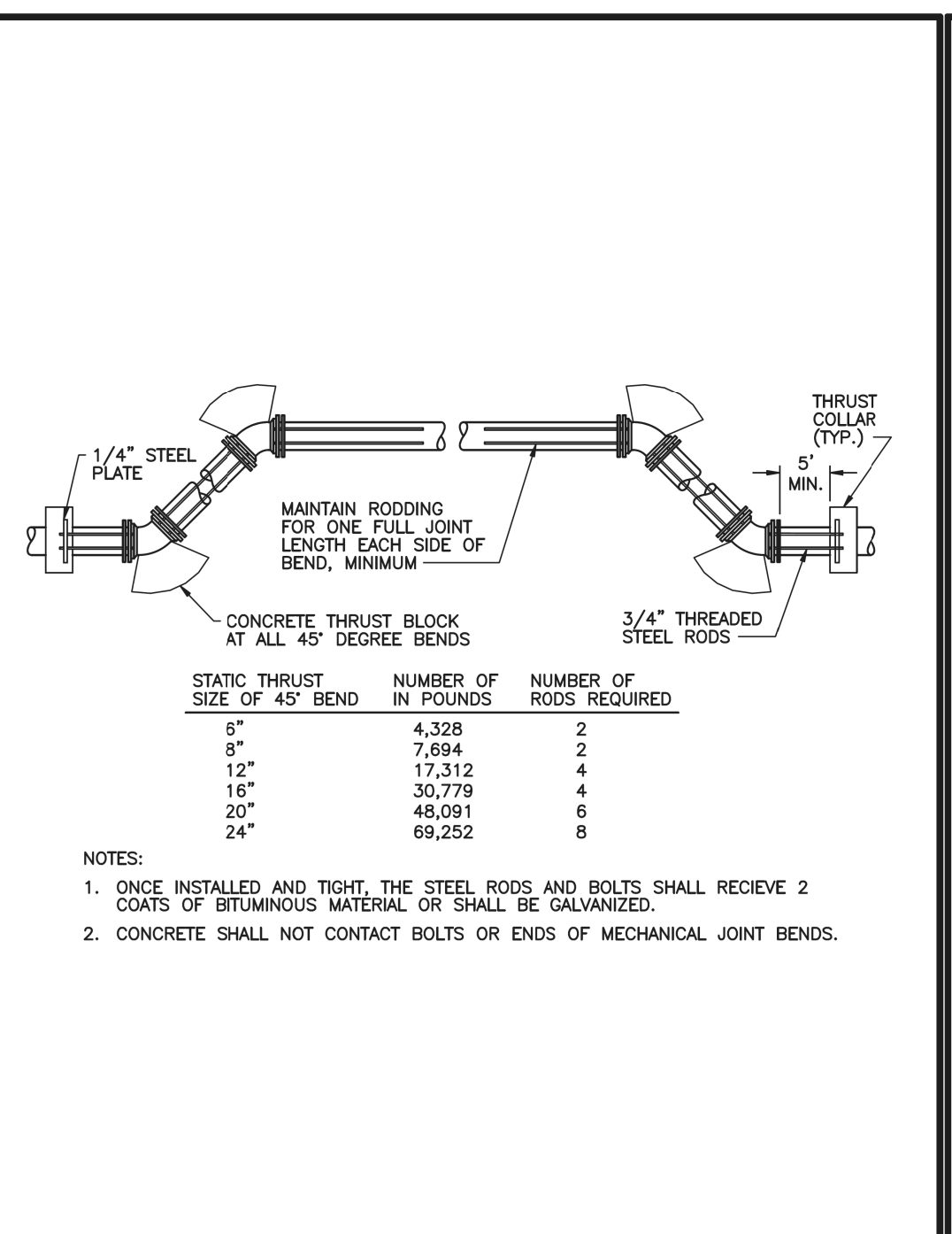
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Typical House Service Detail - Short W.6



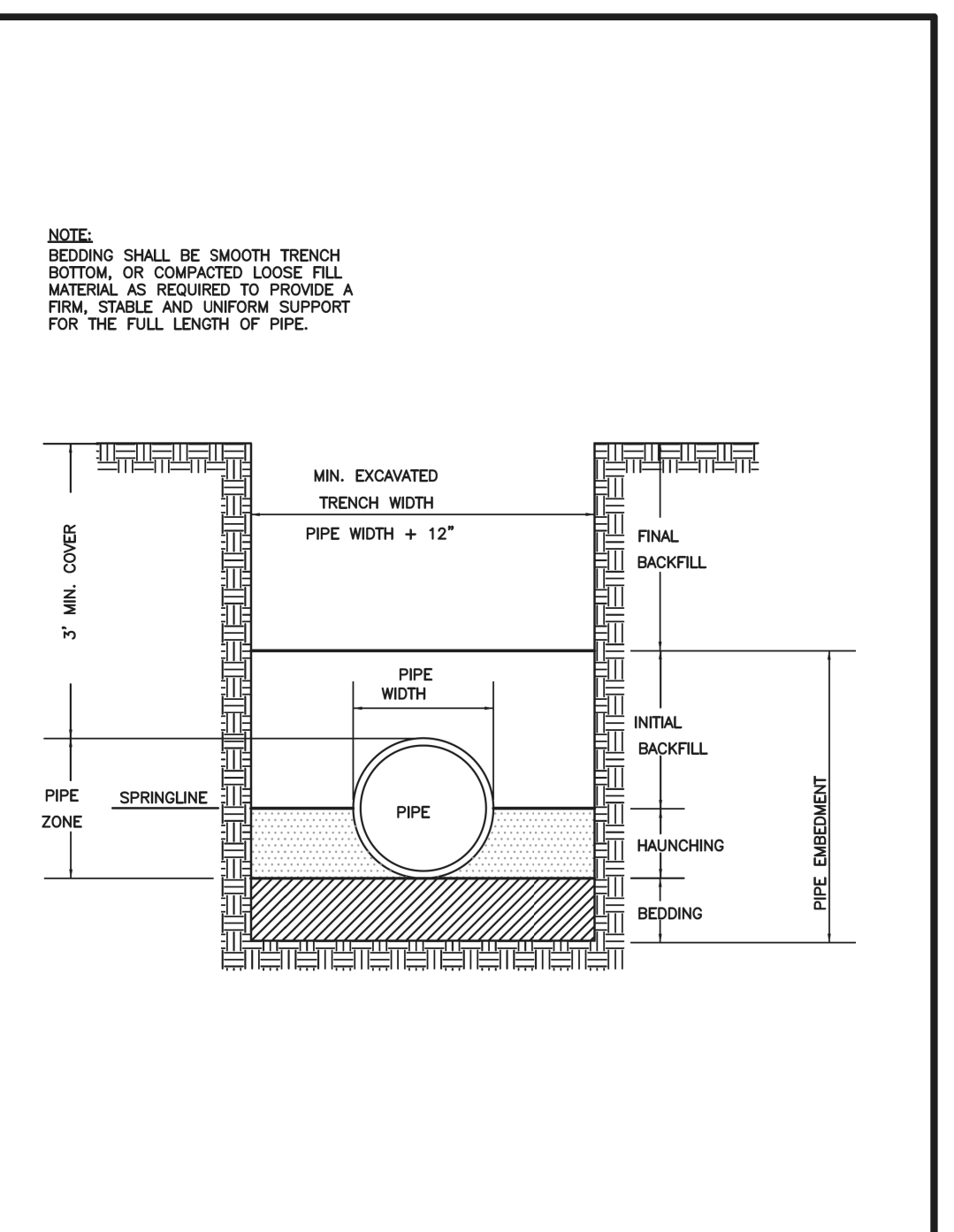
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Typical House Service Detail - Long W.7



WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Concrete Thrust Block Detail W.8



WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Vertical Bends W.9



WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Water Main Trench Detail W.10

Kimley Horn
 421 FAYETTEVILLE STREET, SUITE 600
 RALEIGH, NC 27601

PROJECT REFERENCE NO. U-5815BA
 SHEET NO. UC-3B

DESIGNED BY: NLH
 DRAWN BY: JNB
 CHECKED BY: CPM
 APPROVED BY: NLH
 REVISED:

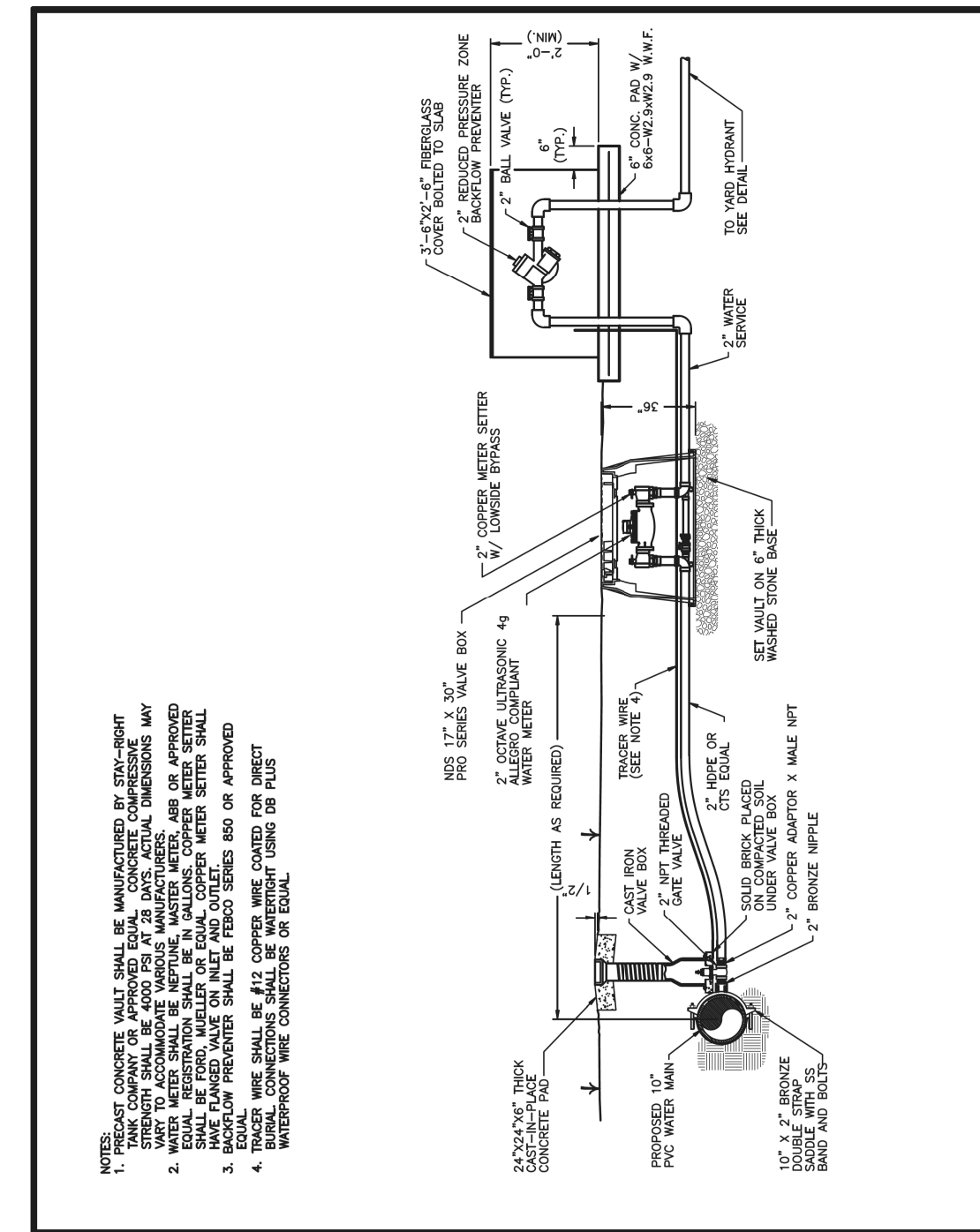
STANDARD DETAILS
 DESIGNED BY
 TOWN OF ABERDEEN

NORTH CAROLINA
 DEPARTMENT OF
 TRANSPORTATION

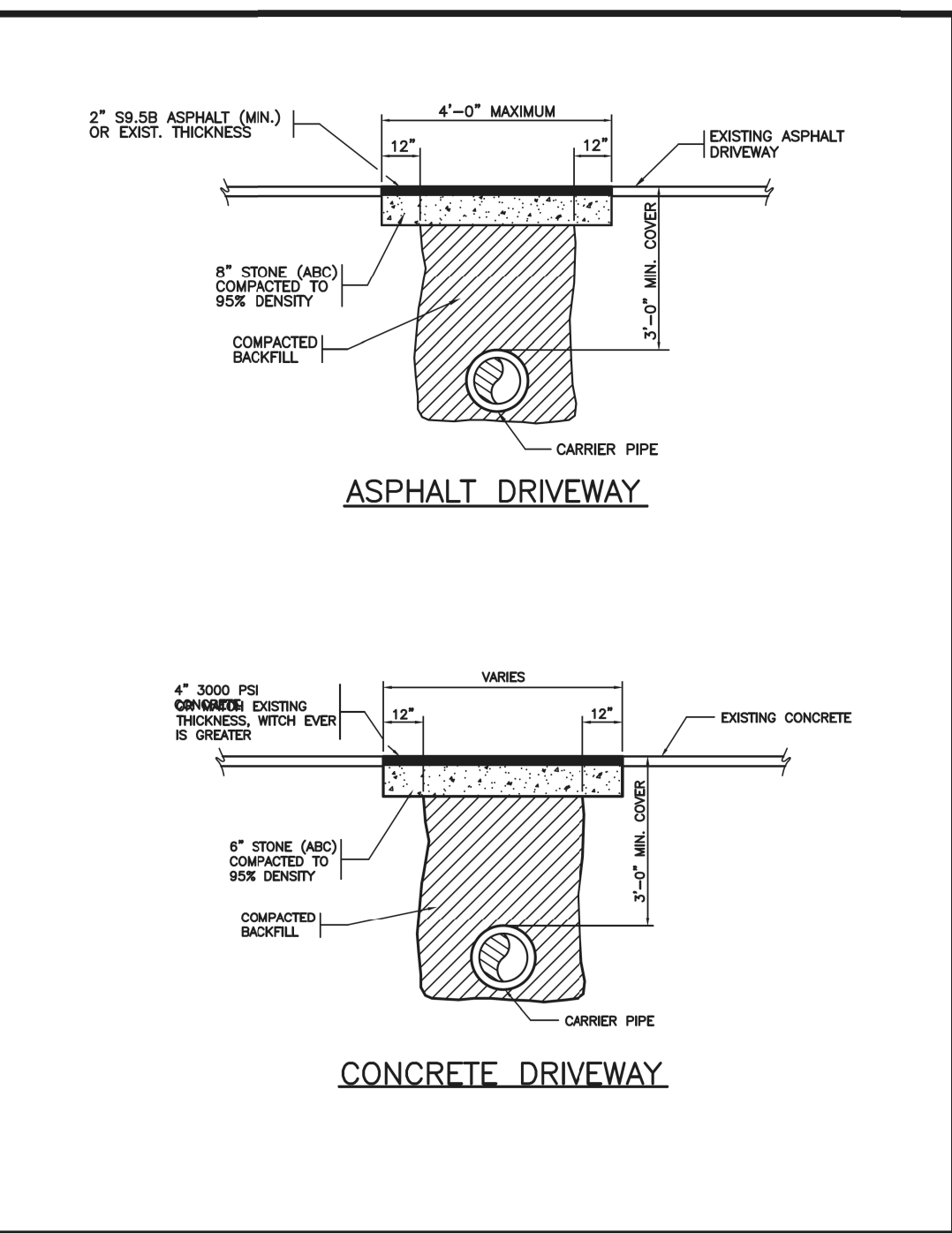
UTILITIES ENGINEERING SEC.
 PHONE: (919) 707-6690
 FAX: (919) 250-4151

UTILITY CONSTRUCTION
 PLANS ONLY

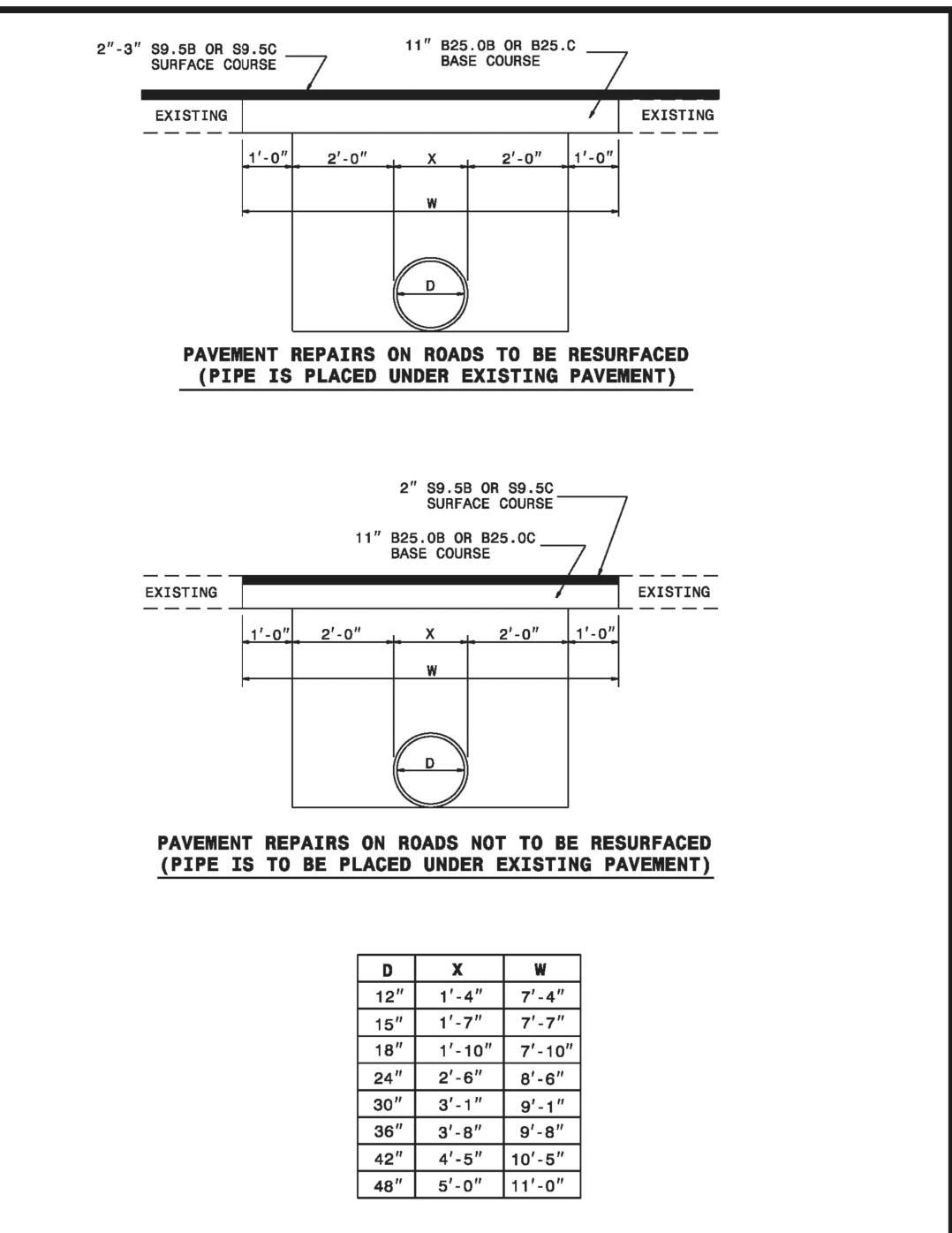
UTILITY CONSTRUCTION



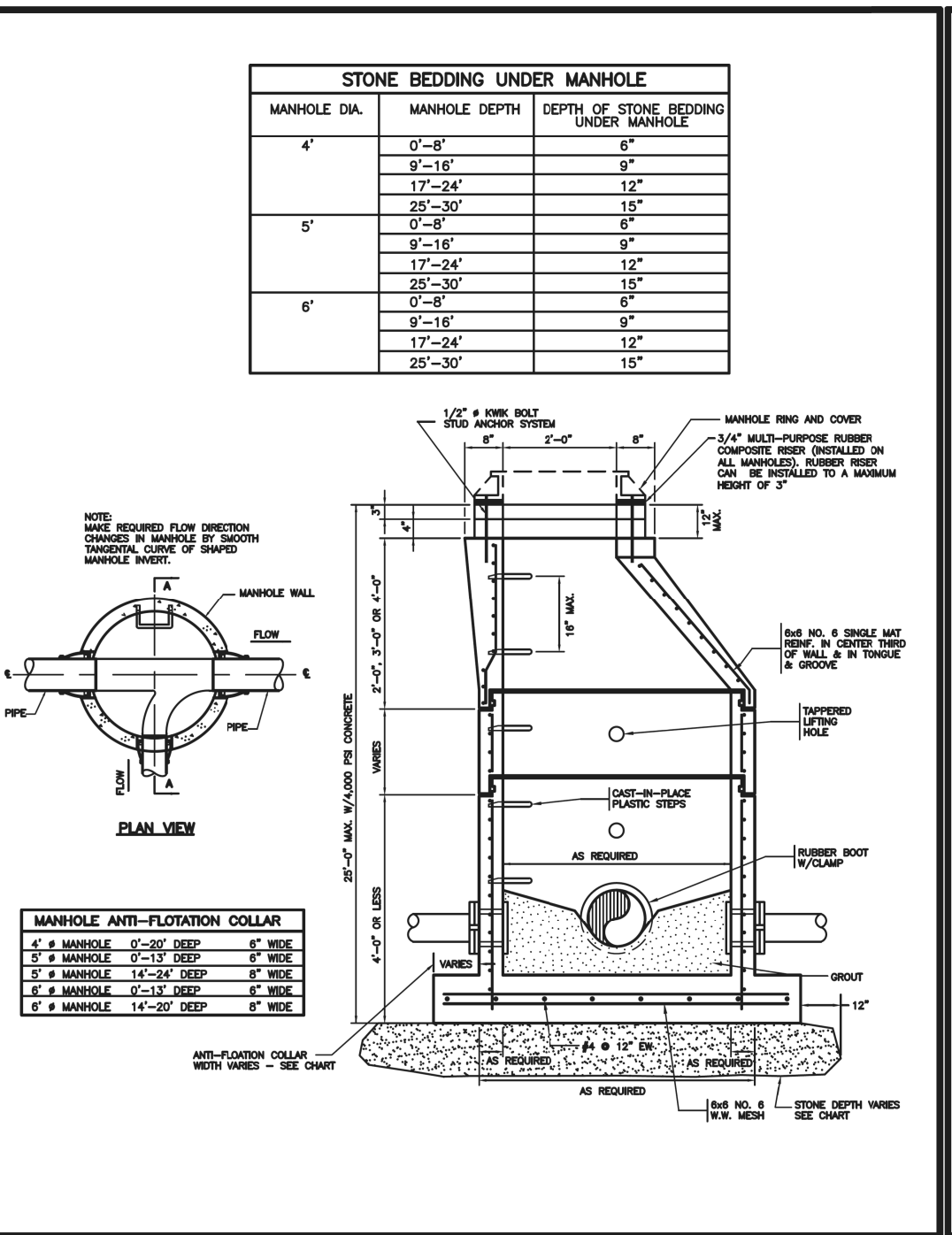
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 2 Inch Water Service With Backflow Preventer
 W.11



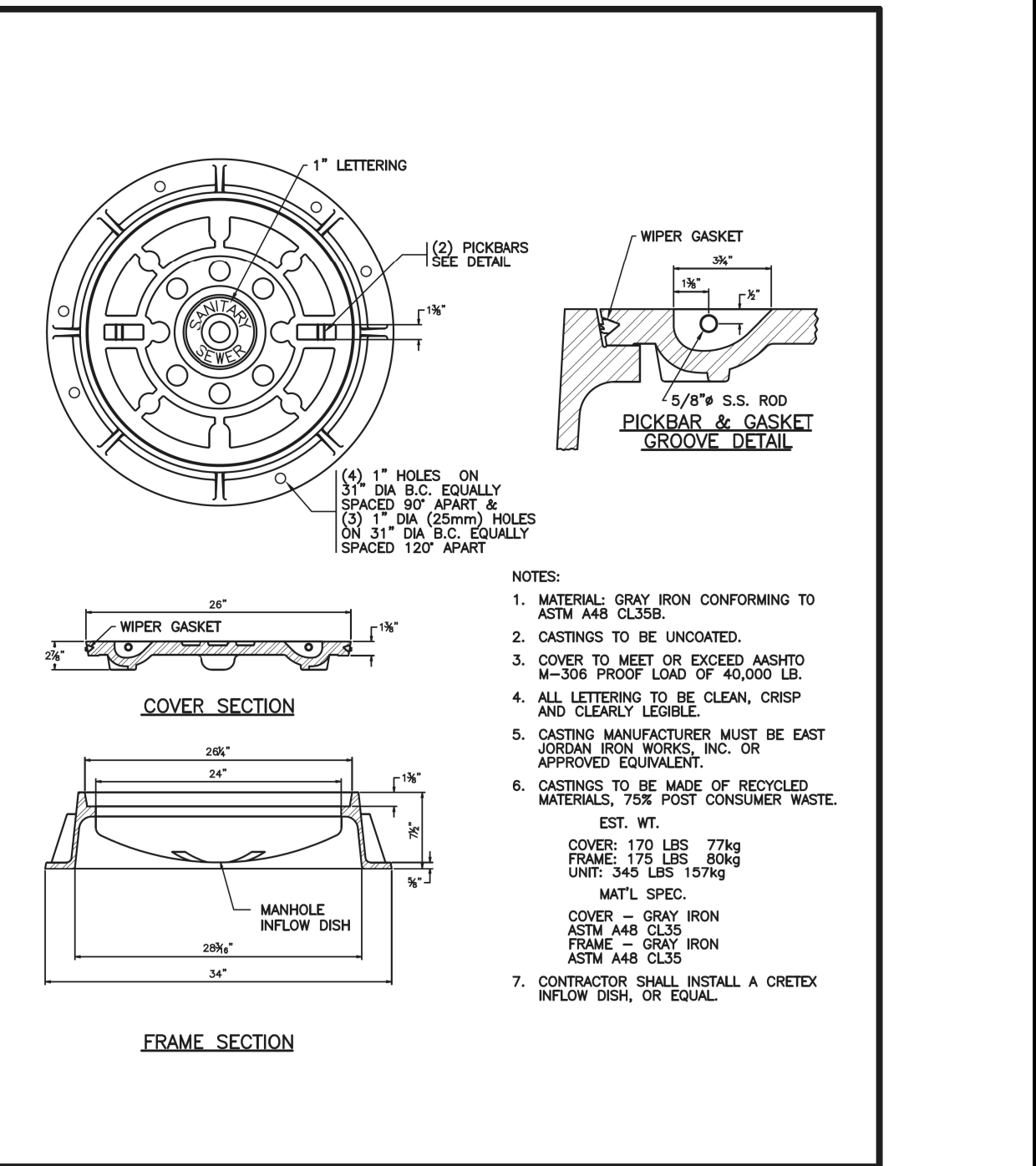
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Town Streets Open Cut And Patch Detail
 W.14



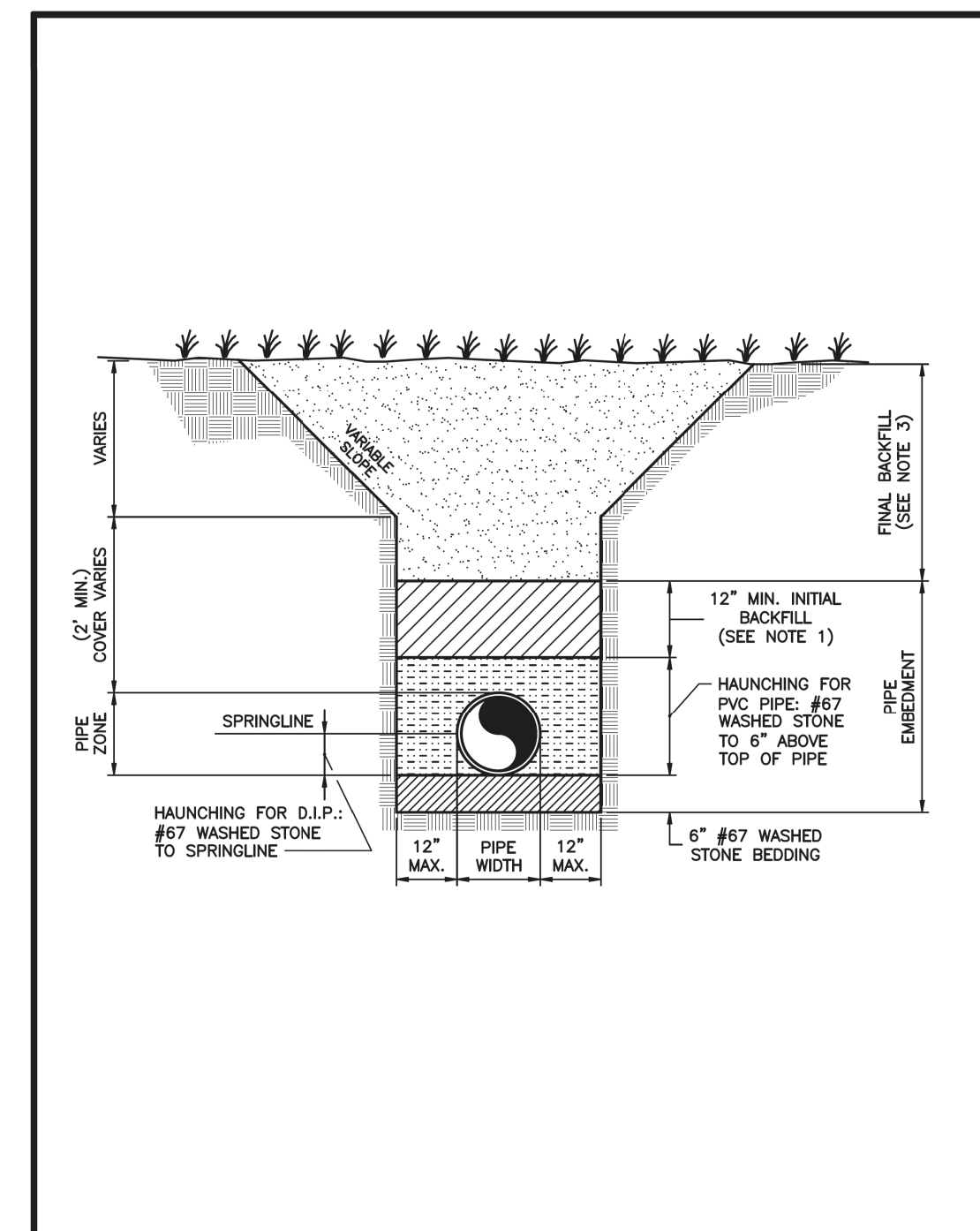
WATER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 NCDOT Open Cut And Patch At Crossings And Intersections
 W.15



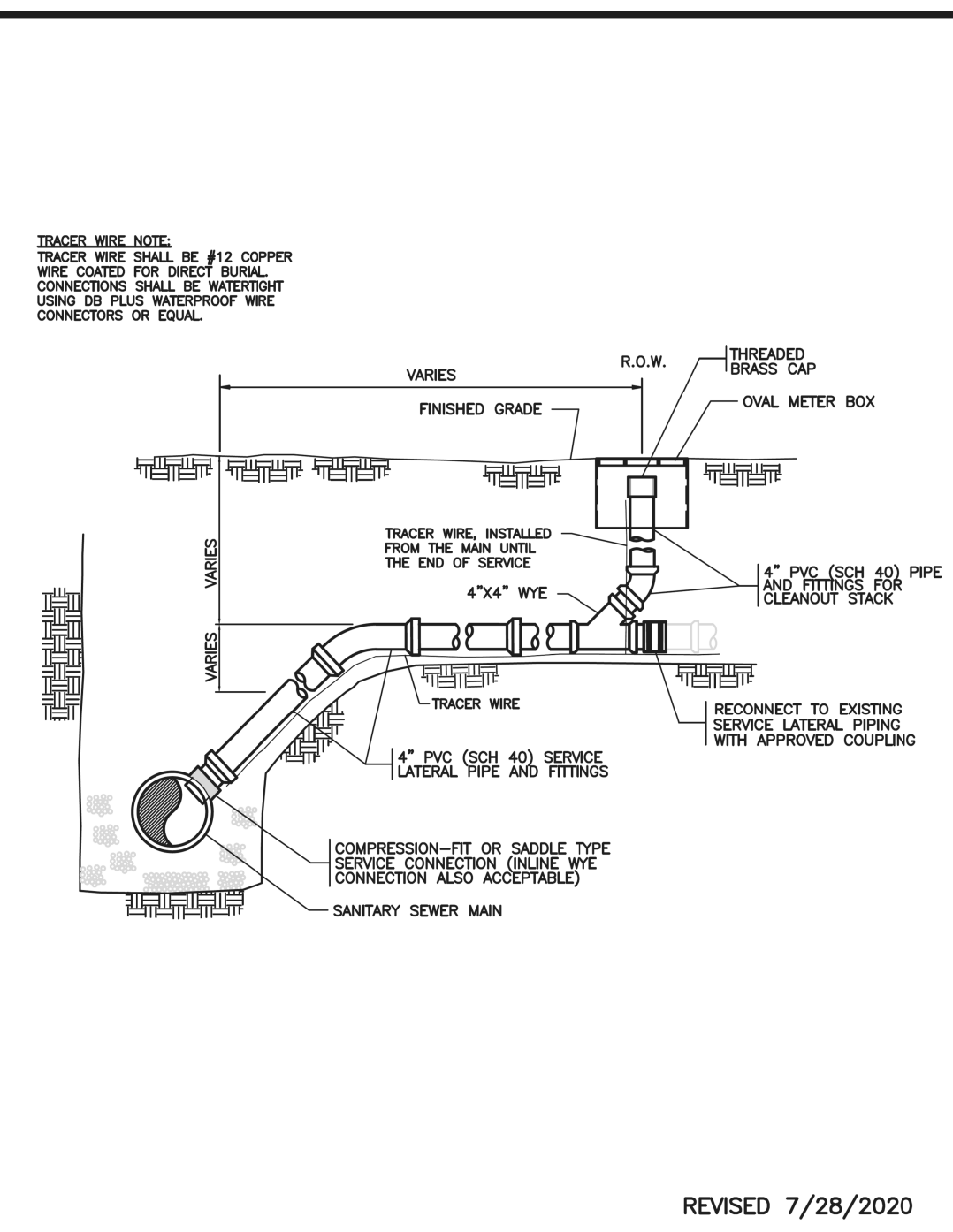
SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Precast Manhole Detail
 S.1



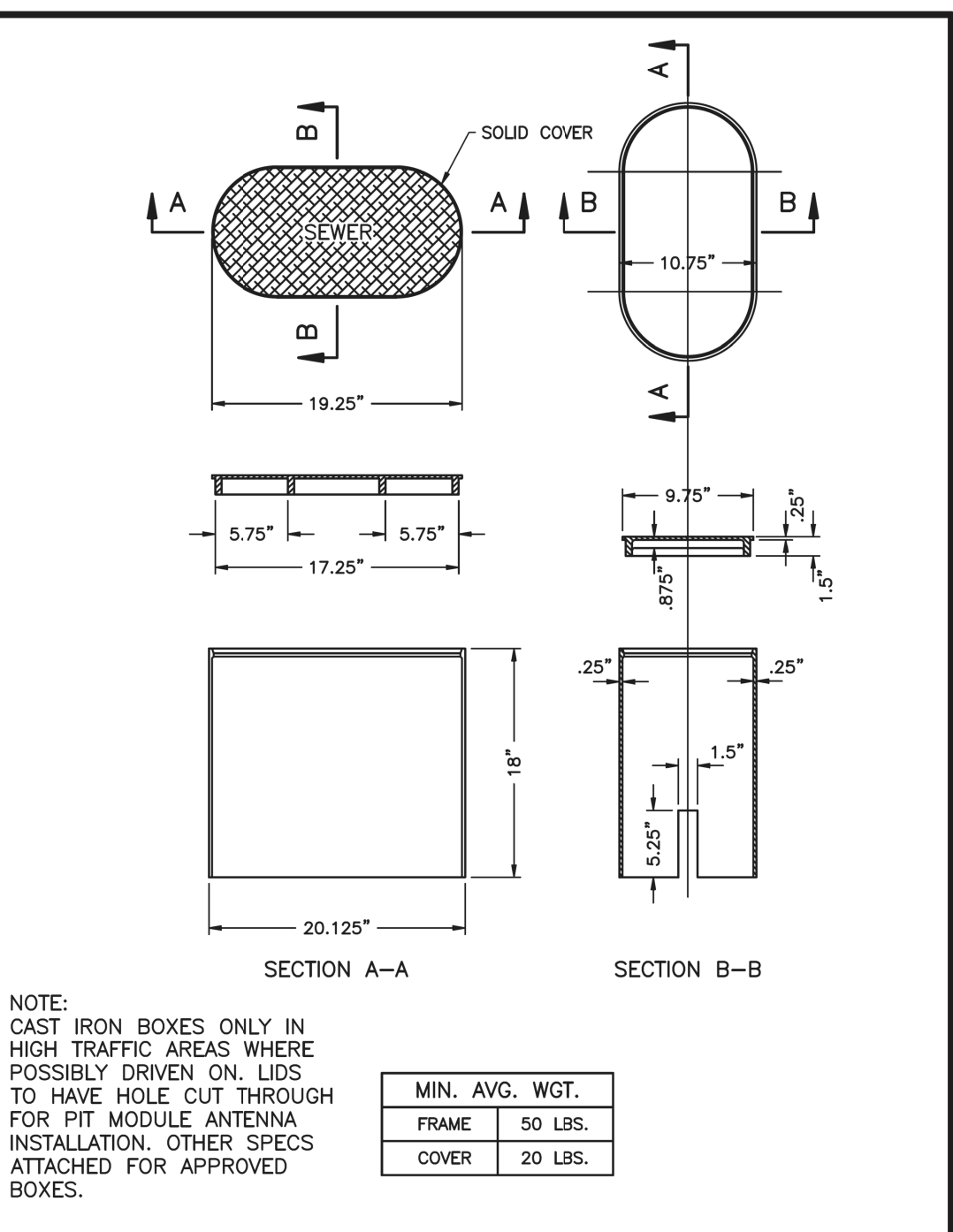
SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Heavy Duty Watertight Manhole Ring And Cover Detail
 S.4



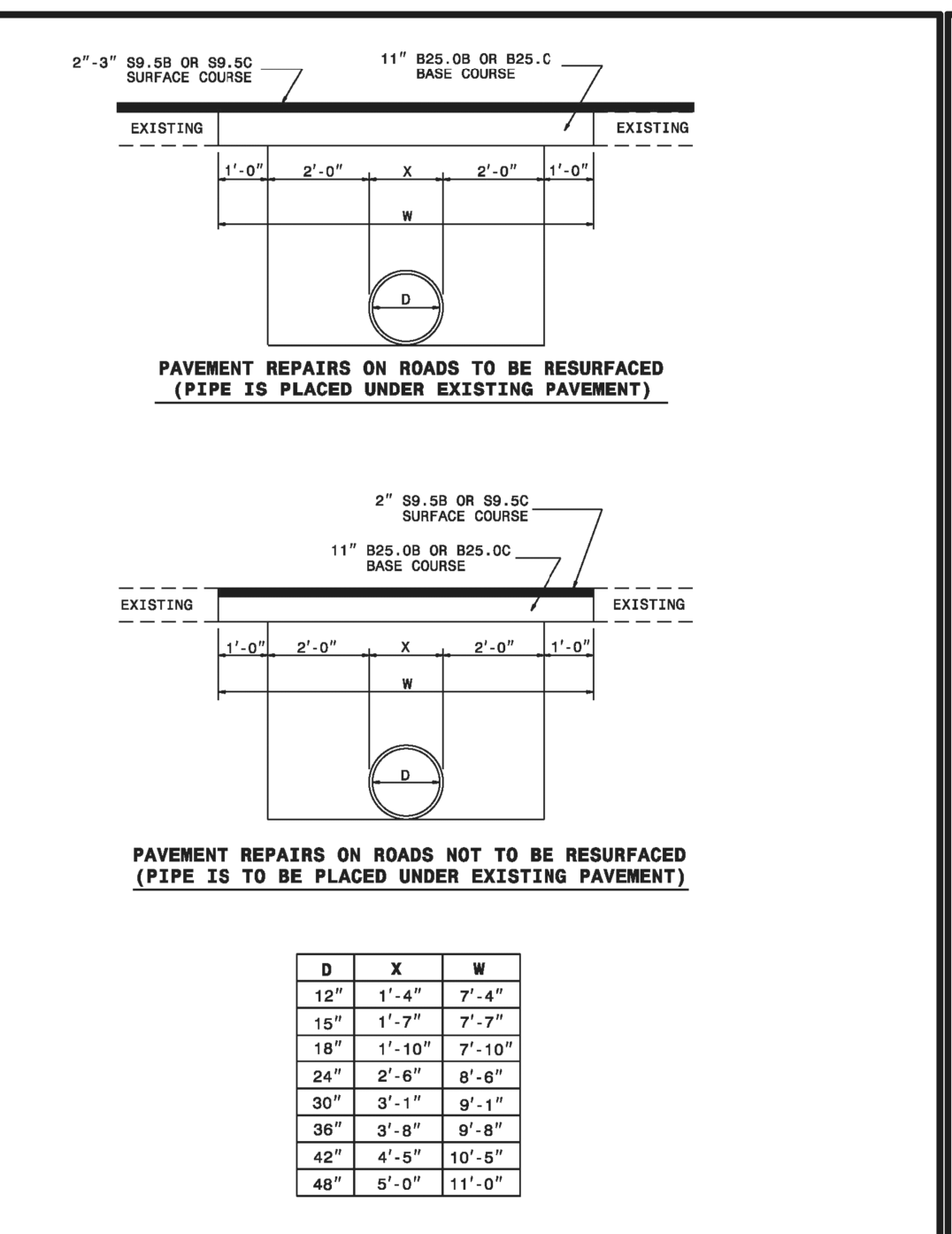
SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Gravity Sewer Main Trench Detail
 S.5



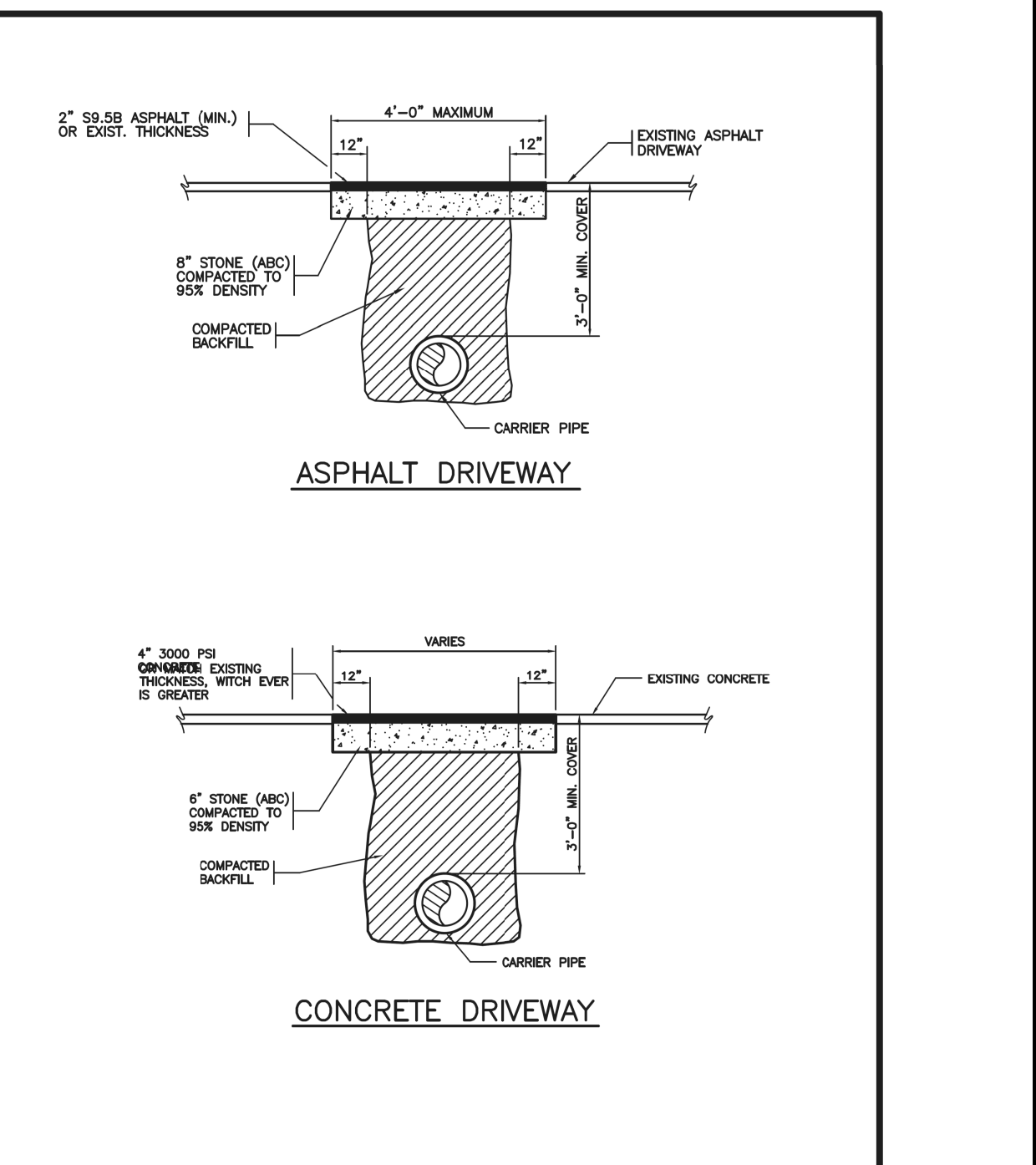
SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Service Lateral Detail
 S.7



SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Sewer Cleanout Box Detail
 S.8

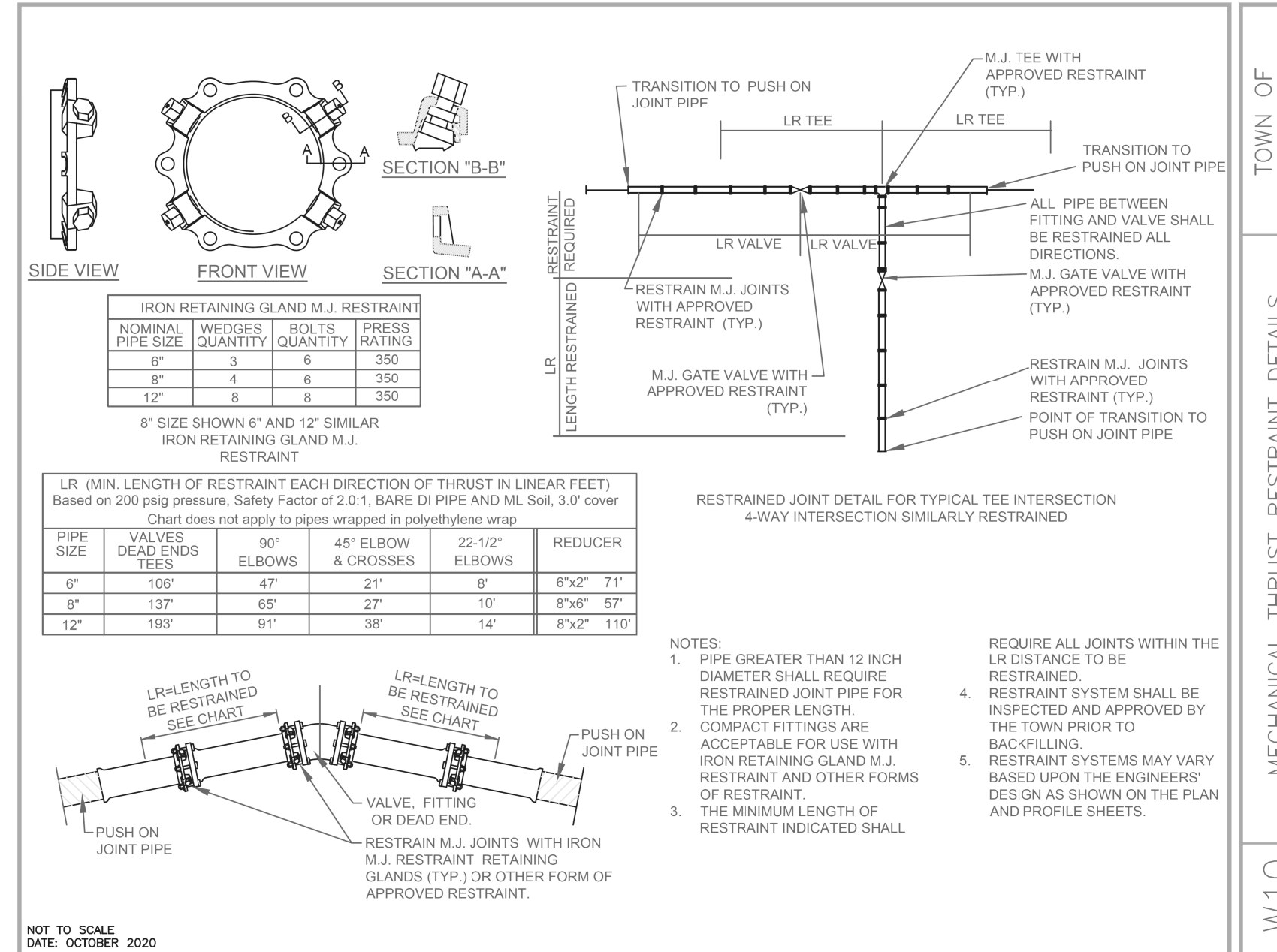
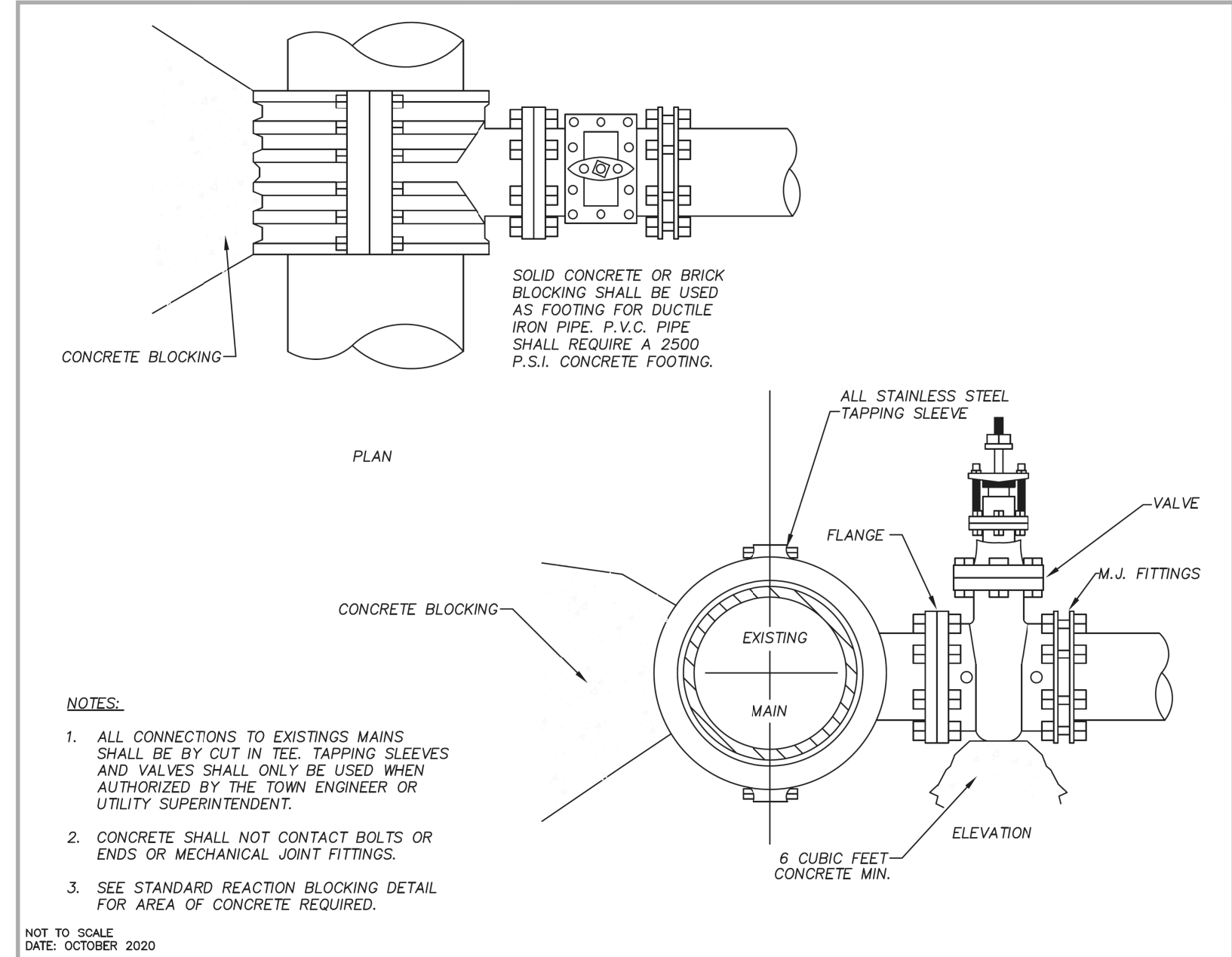
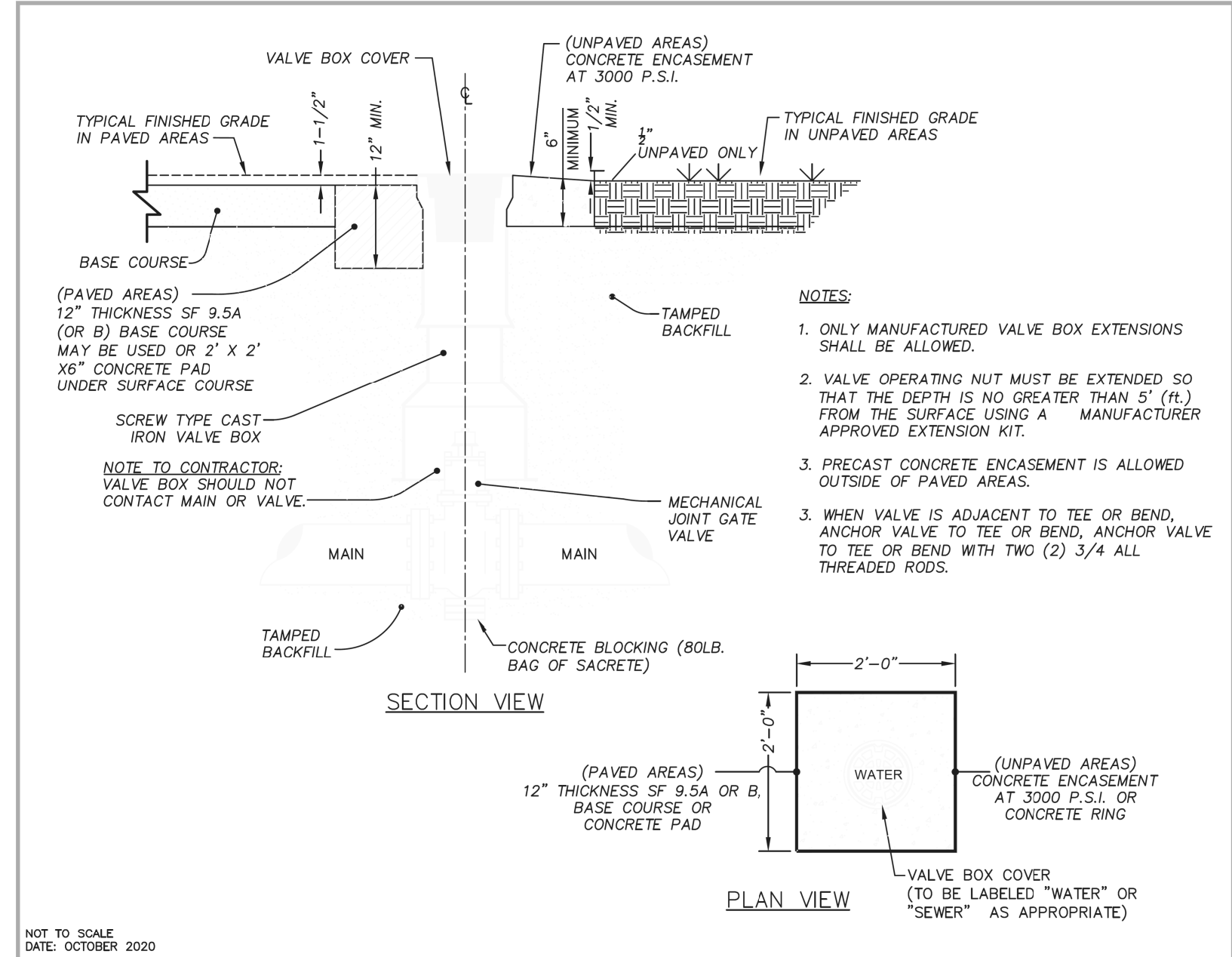


SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 NCDOT Open Cut And Patch At Crossing And Intersections
 S.18

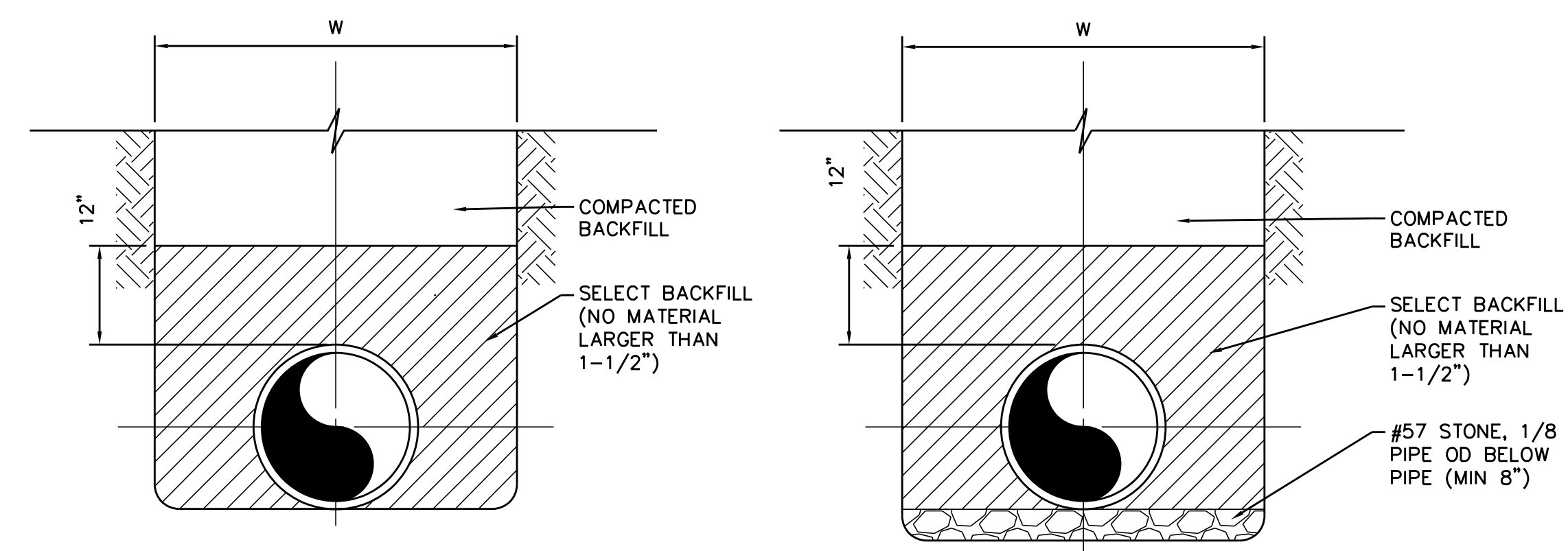


SEWER SYSTEM DETAILS FOR THE TOWN OF ABERDEEN, MOORE COUNTY, NORTH CAROLINA
 Town Streets Open Cut And Patch Detail
 S.19

UTILITY CONSTRUCTION



UTILITY CONSTRUCTION



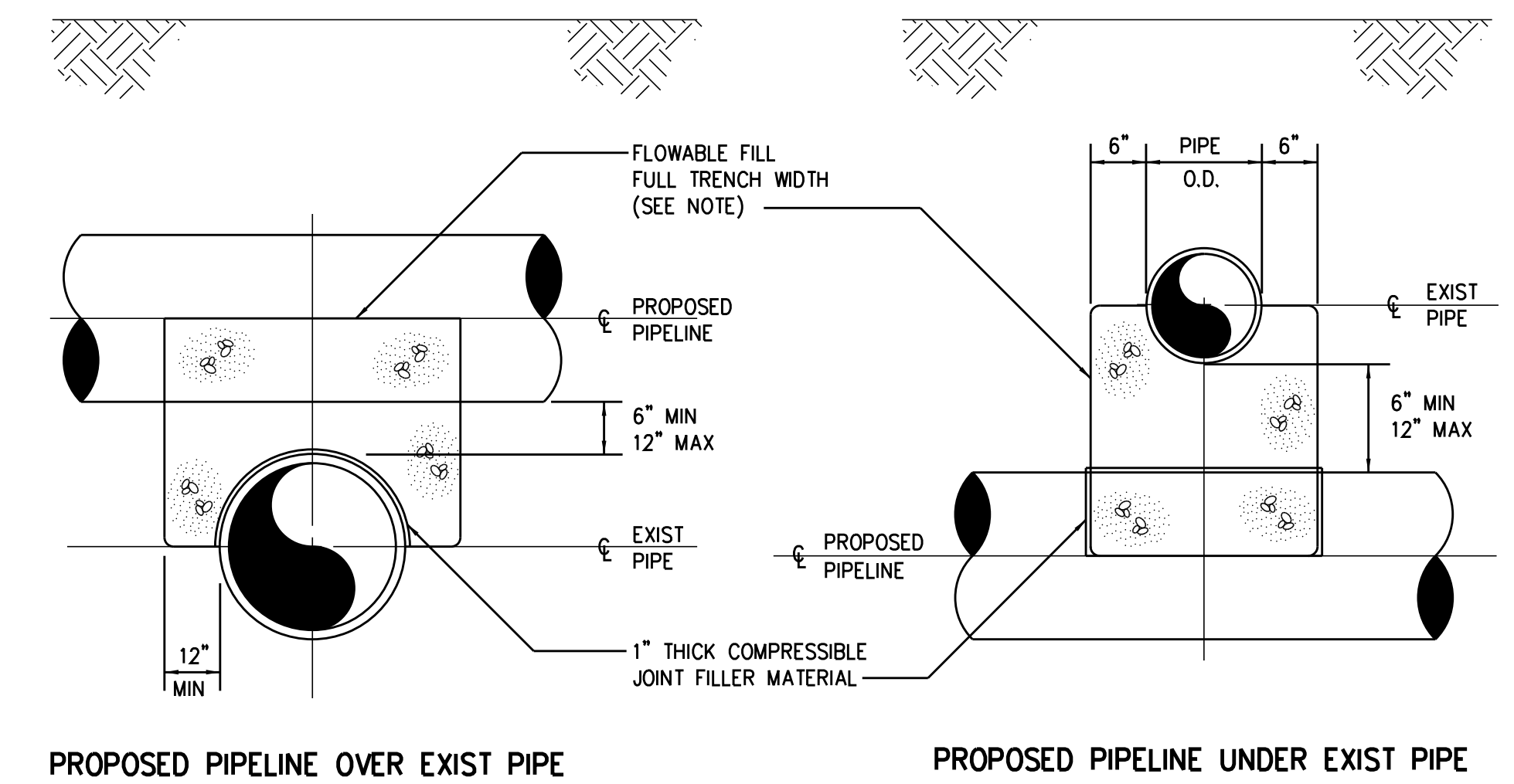
INTERNAL DIAMETER OF PIPE	WIDTH OF TRENCH W	
	MAX	MIN
4"-6"	3'-9"	2'-0"
8"-10"	3'-9"	2'-2"
12"	3'-9"	O.D.+2'
14"-16"	4'-2"	O.D.+2'
18"	4'-4"	O.D.+2'
20",21"	4'-8"	O.D.+2'
24"	5'-0"	O.D.+2'

W = TRENCH WIDTH AT BOTTOM OF PIPE.

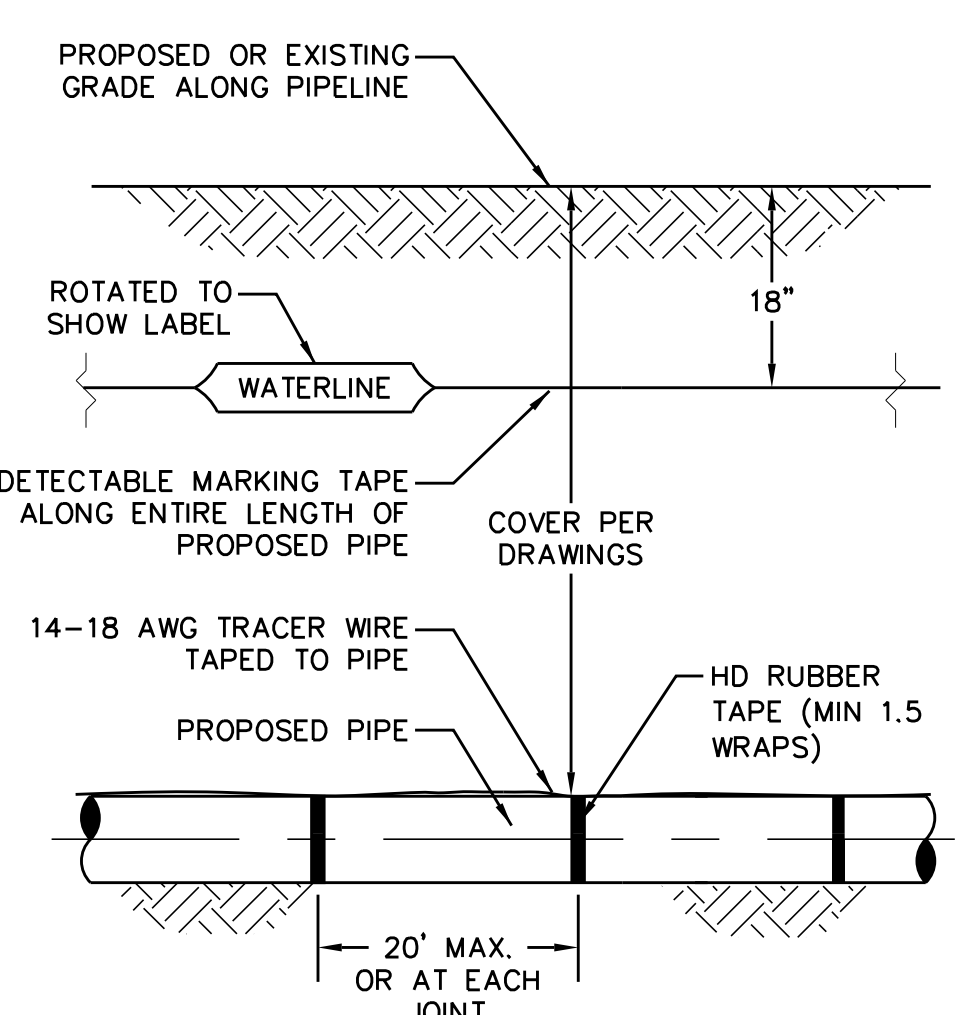
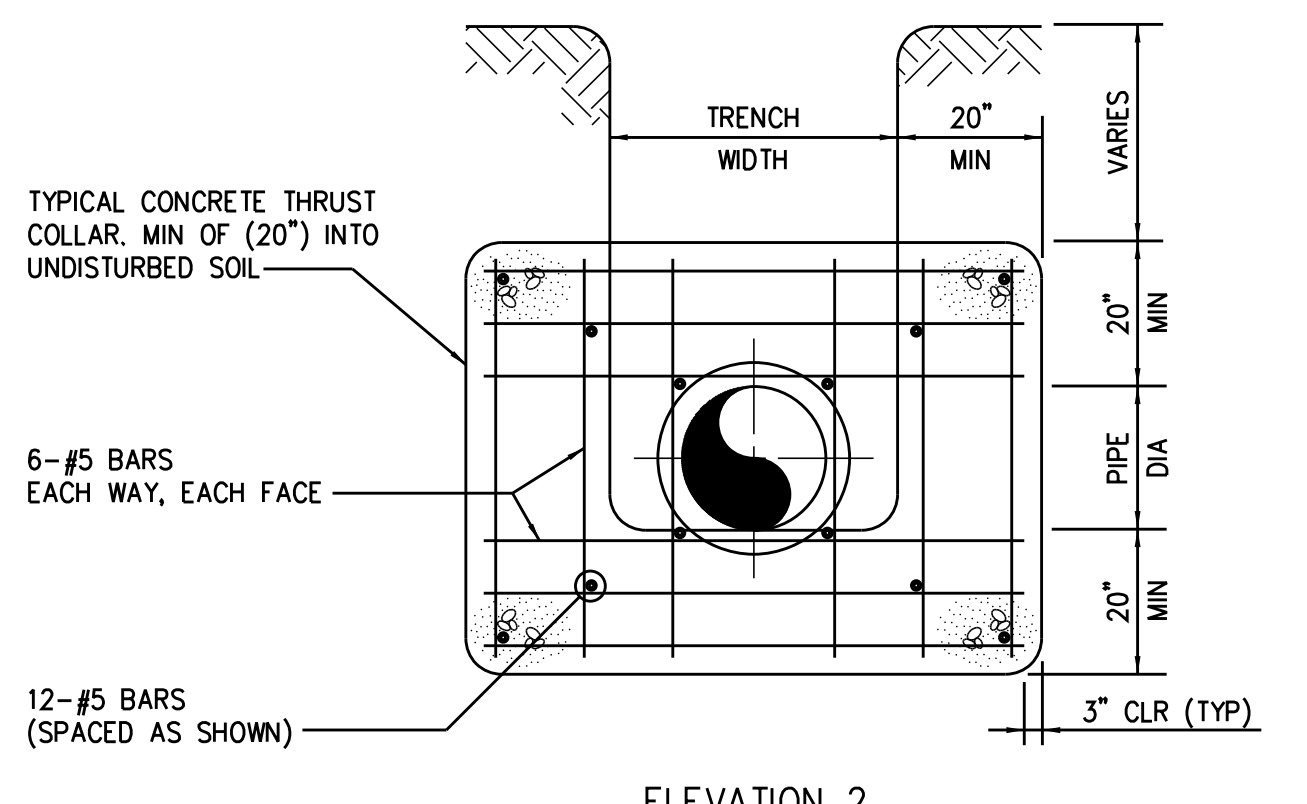
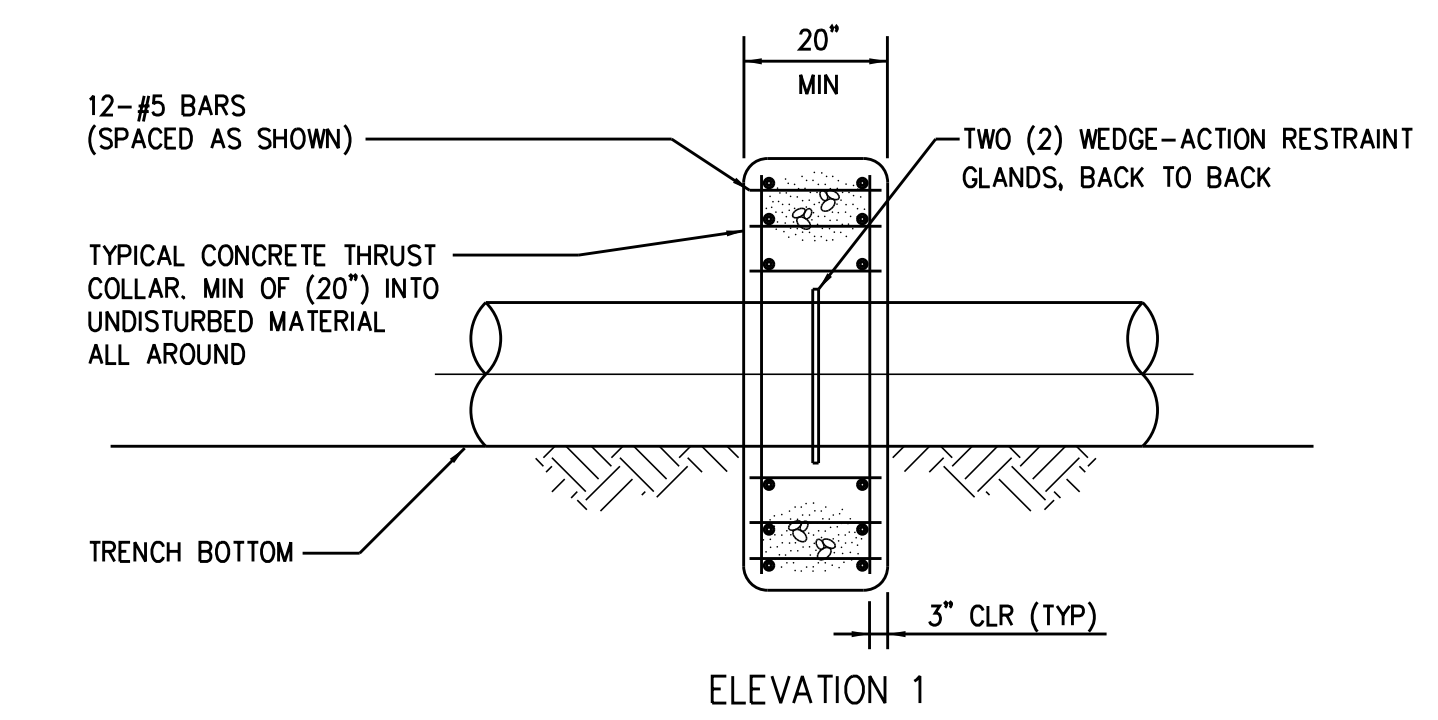
1 BEDDING TYPE A - SERVICE LINES
 UC-3D SCALE: N.T.S.

2 BEDDING TYPE B - UTILITY MAINS
 UC-3D SCALE: N.T.S.

3 TRENCH EXCAVATION LIMITS
 UC-3D SCALE: N.T.S.



NOTE: NO ENCASEMENT REQUIRED FOR SPACE GREATER THAN 12"



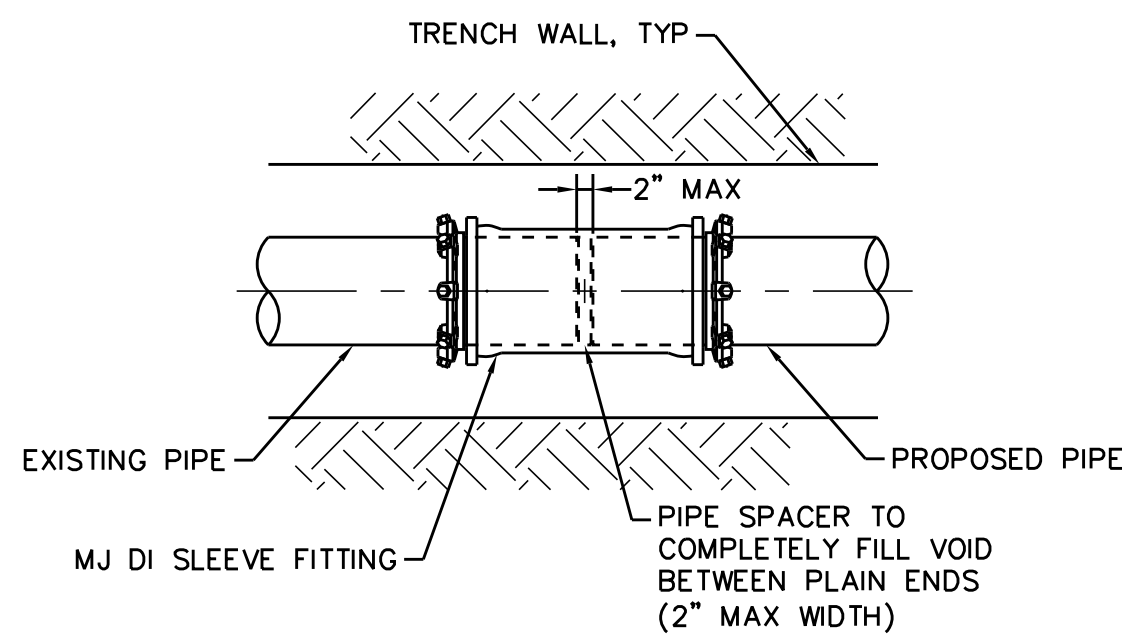
5/14/2022

3/15/2022

DESIGN PRESSURE		
200 PSI		
PIPE SIZE	ROD DIA	NUMBER REQ'D
4" TO 8"	3/4"	2
10" TO 20"	3/4"	4
24"	3/4"	6
30"	1"	6
36"	1"	8

1. THREADED RODS FOR PIPE DIAMETERS LARGER THAN 12" SHALL BE ASTM A193 (GRADE B7). ALL OTHER THREADED RODS SHALL BE ASTM A36.
2. ALL HARDWARE IN CONTACT WITH SOIL SHALL BE PAINTED WITH TWO COATS HIGH BUILD COAL TAR EPOXY (MIN 26 MIL DRY FILM THICKNESS)
5. RODS SHALL BE EQUALLY SPACED AROUND PIPE.

1 THREADED ROD SCHEDULE
UC-3E SCALE: N.T.S.



- NOTES:
1. SLEEVES SHALL BE DUCTILE IRON MECHANICAL JOINT (DI MJ) OF THE SAME OR HIGHER PRESSURE RATING AS THE HOST PIPE.
 2. RESTRAINT GLANDS SHALL BE DESIGNED FOR THE INTENDED USE AND SHALL CONSIST OF MULTIPLE GRIPPING WEDGES INCORPORATED INTO A FOLLOWER GLAND AND BOLT-ACTUATED BY TORQUE-LIMITING TWIST OFF NUTS.

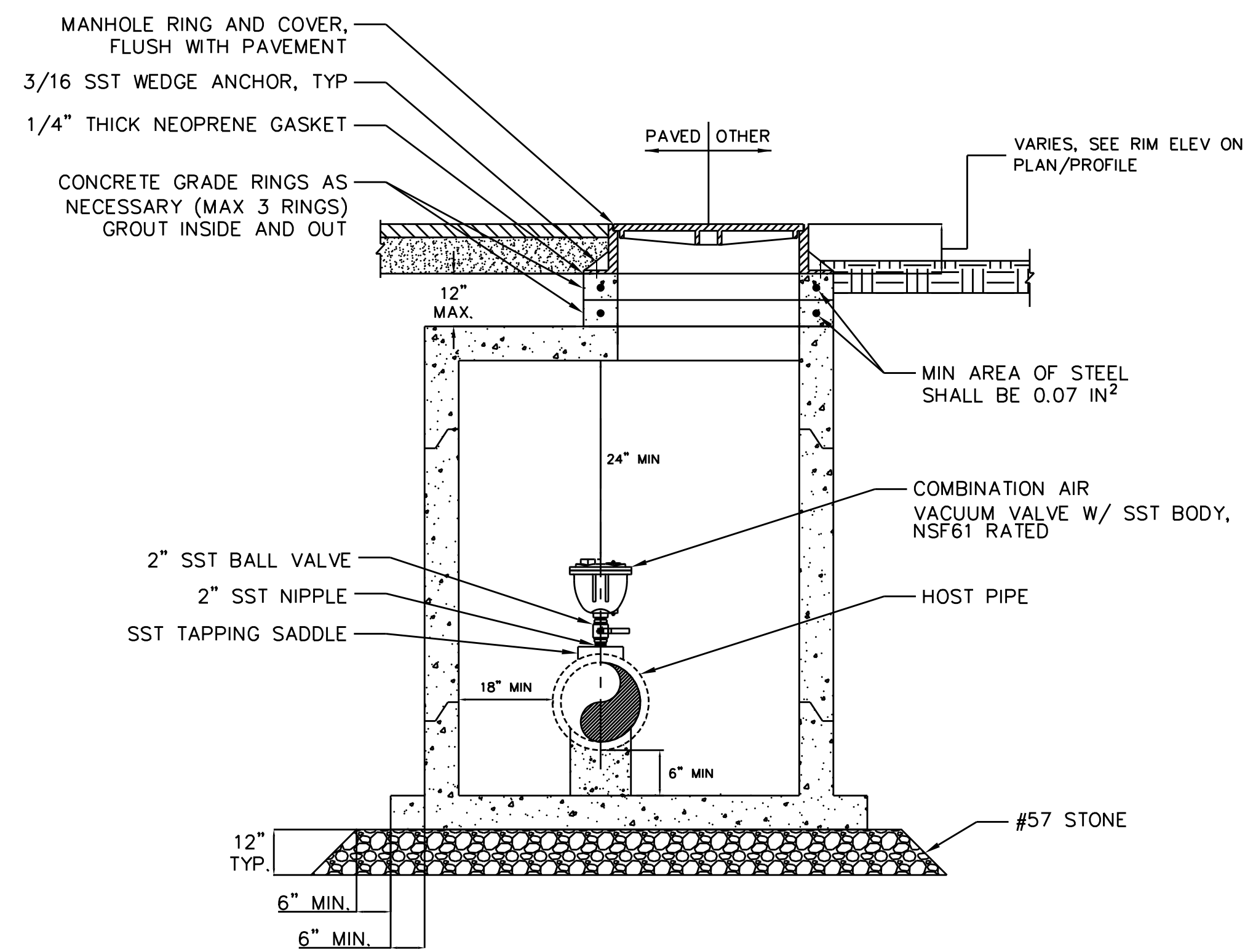
2 RESTRAINED MJ SOLID SLEEVE
UC-3E SCALE: N.T.S.



421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

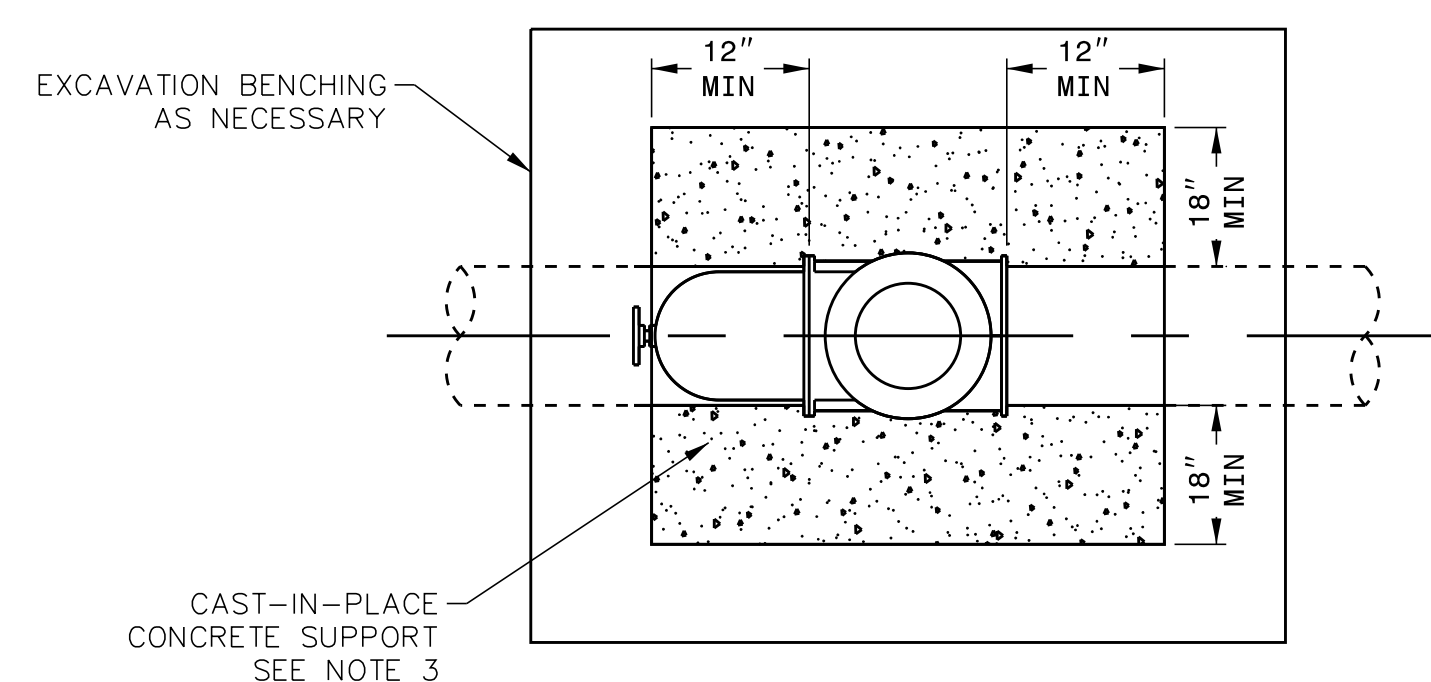
PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-3E
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

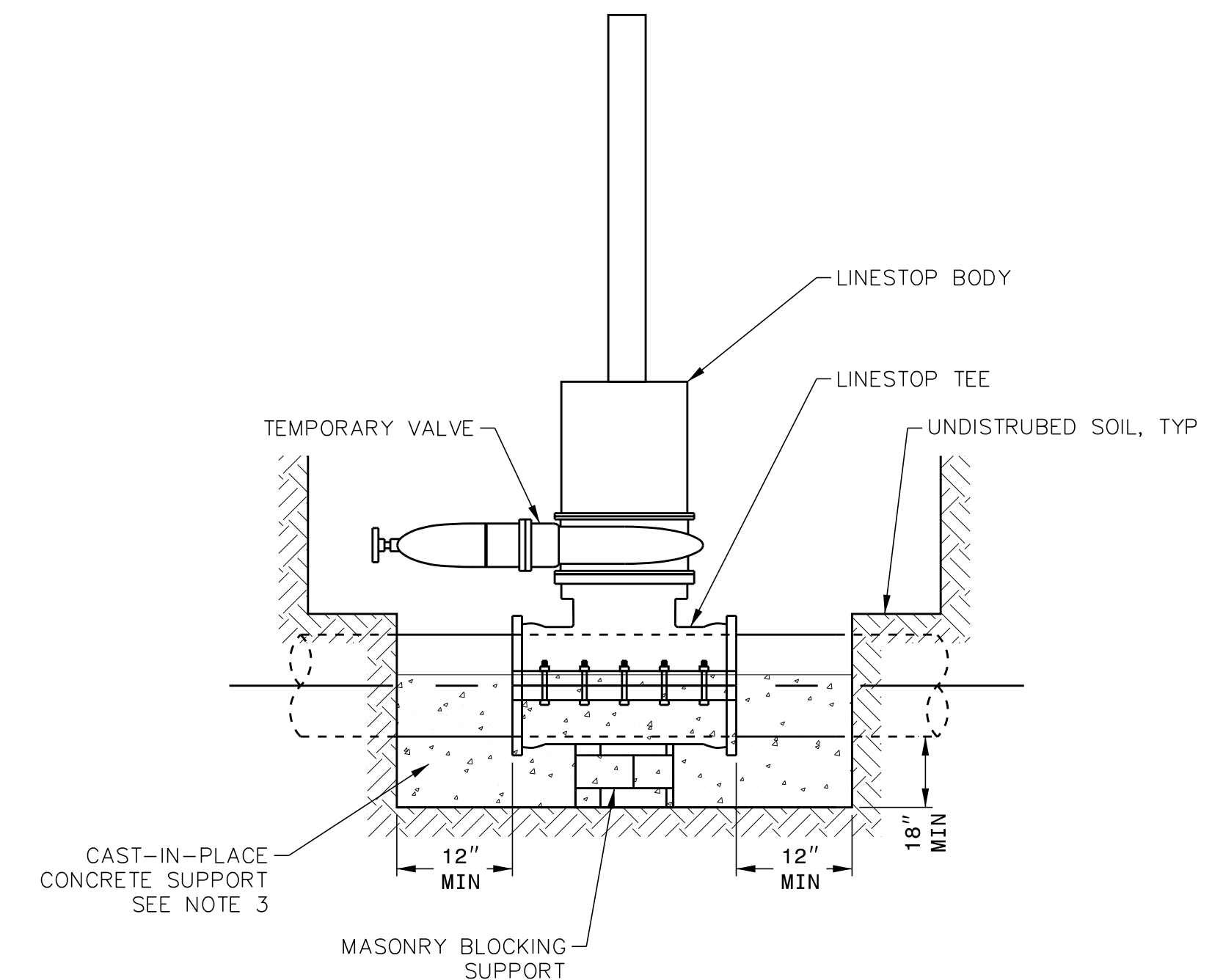


- NOTES:
1. ALL METALLIC PIPING AND HARDWARE SHALL BE STAINLESS STEEL.
 2. PROVIDE SUFFICIENT SPACING BETWEEN BALL VALVE, ARV, AND TAPPING SADDLE SUCH THAT THE BALL VALVE WILL OPERATE PROPERLY.
 3. MALE THREADED END OF ARV SHALL BE COATED WITH ANTI-SEIZE THREAD COMPOUND PRIOR TO INSTALLATION.
 4. PROVIDE BUSHINGS AND ADAPTERS AS NECESSARY TO CONNECT TO TAP.
 5. MANHOLE SHALL BE STANDARD 5' WITH CONE TOP (SLAB TOP WHEN INSTALLED OUTSIDE PAVED SURFACES) AND EXTENDED BASE.
 6. PIPE PENETRATIONS THROUGH MANHOLE SHALL BE SEALED WITH RUBBER BOOTS.

3 AIR VACUUM MANHOLE
UC-3E SCALE: N.T.S.



LINESTOP ASSEMBLY--PLAN



LINESTOP ASSEMBLY--PROFILE

- NOTES:
1. LINESTOP AND CONCRETE SUPPORT MUST BE LOCATED ENTIRELY WITHIN ONE PIPE JOINT.
 2. ISOLATE ALL METALLIC COMPONENTS OF LINE STOP FROM CONCRETE WITH POLYETHYLENE SHEETING.
 3. CAST-IN-PLACE CONCRETE SUPPORT SHALL CURE MINIMUM 7 DAYS PRIOR TO ENGAGING LINE STOP.

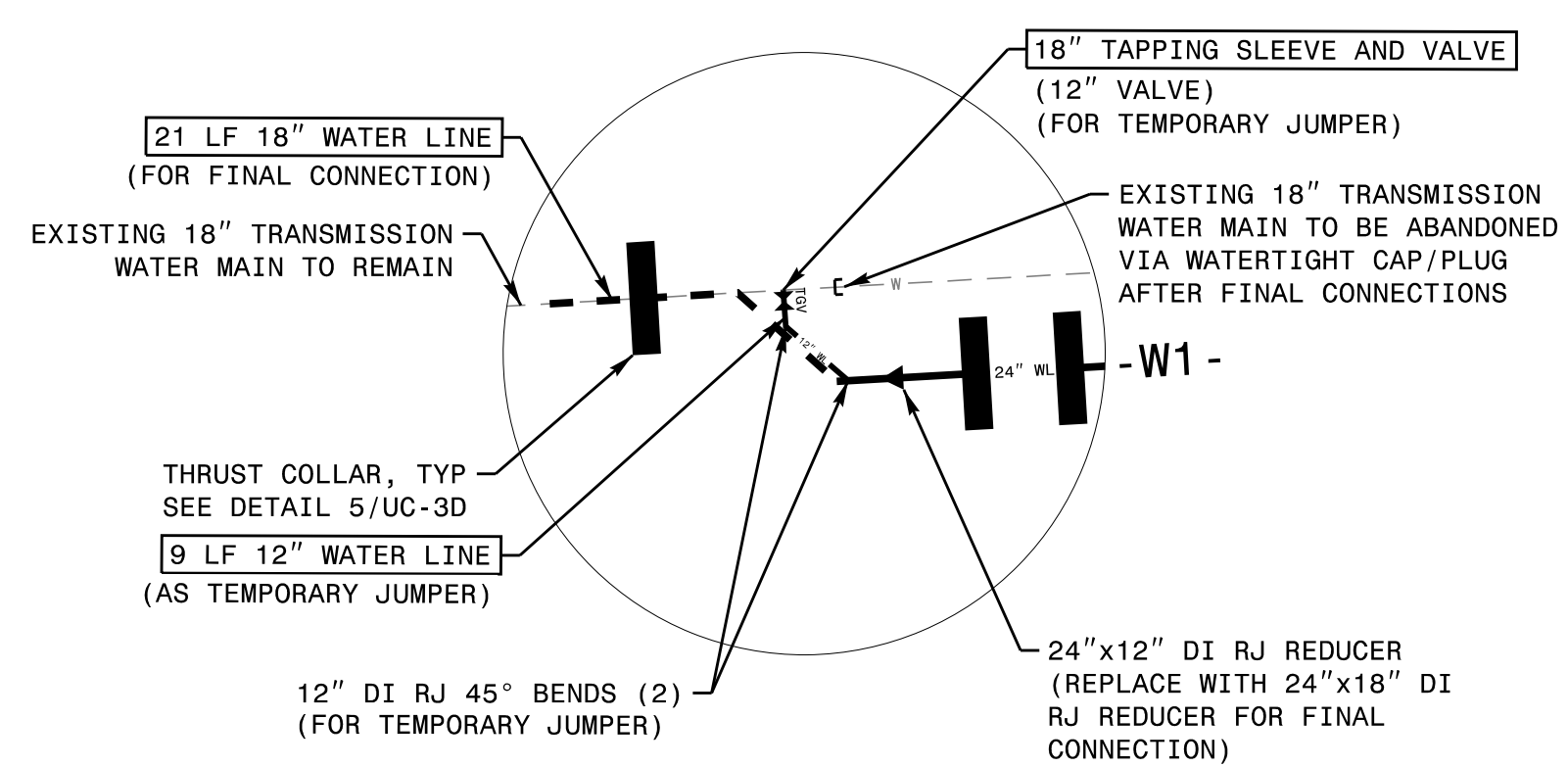
4 LINE STOP WITH BYPASS
UC-3E SCALE: N.T.S.

5/14/2022

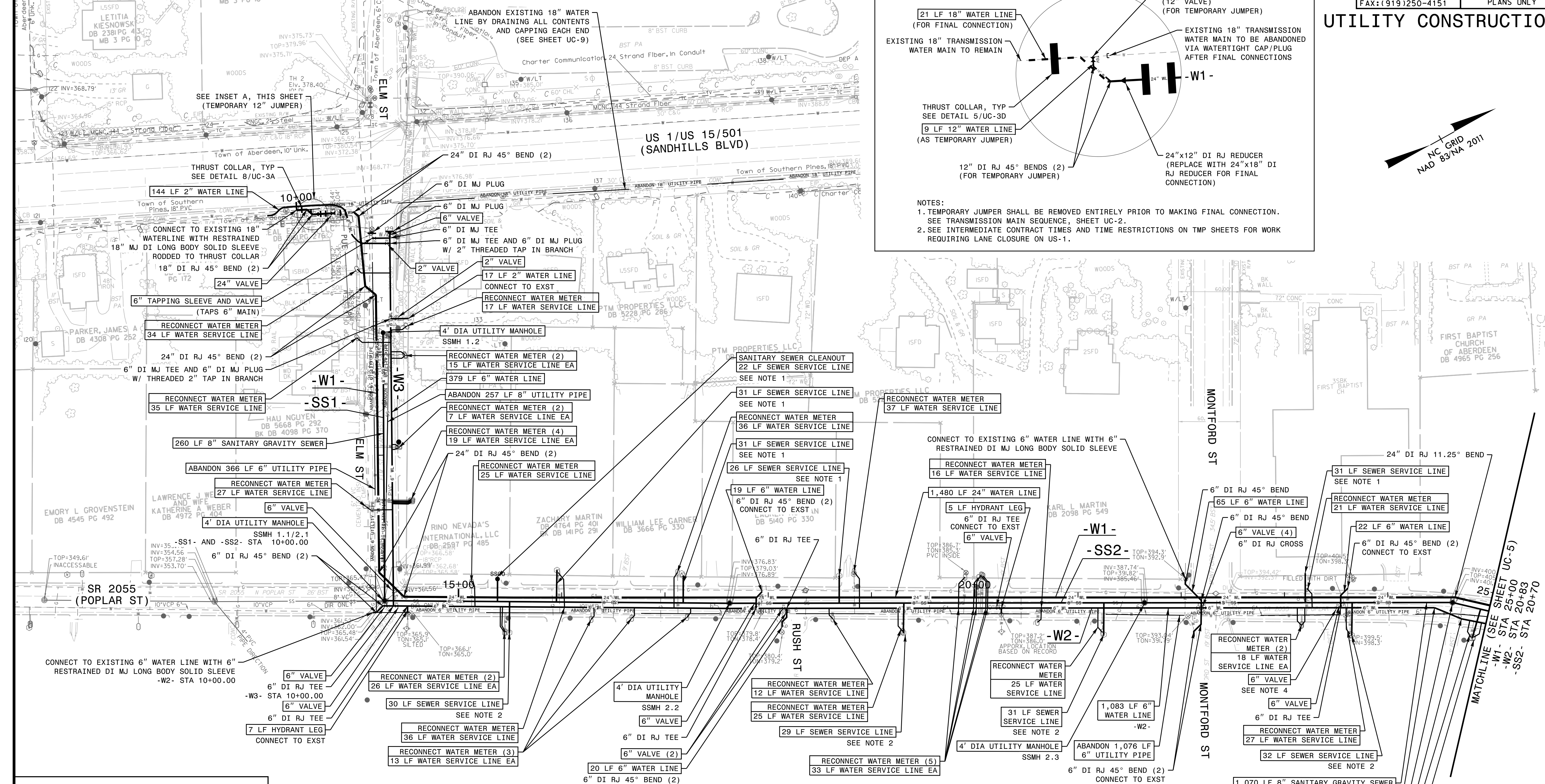
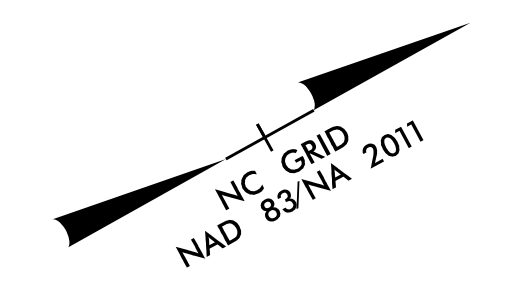
PREPARED BY:
Kimley Horn
 421 FAYETTEVILLE STREET, SUITE 600
 RALEIGH, NC 27601

PROJECT REFERENCE NO.	U-5815BA	SHEET NO.	UC-4
DESIGNED BY:	NLH		
DRAWN BY:	JNB		
CHECKED BY:	CPM		
APPROVED BY:	NLH		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	

INSET A - TEMPORARY 12" JUMPER
 N.T.S.



- NOTES:
 1. TEMPORARY JUMPER SHALL BE REMOVED ENTIRELY PRIOR TO MAKING FINAL CONNECTION. SEE TRANSMISSION MAIN SEQUENCE, SHEET UC-2.
 2. SEE INTERMEDIATE CONTRACT TIMES AND TIME RESTRICTIONS ON TMP SHEETS FOR WORK REQUIRING LANE CLOSURE ON US-1.



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "WICKS"
 WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 510807.8371(ft) EASTING: 1875435.5011(ft) ELEVATION: 436.691(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99985820
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "WICKS" TO L- STATION IS
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTE:
 THE ESTIMATED QUANTITY OF TOSP DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 7,980 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
 THE ESTIMATED QUANTITY OF TOA DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3,170 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTES:

- CONTRACTOR SHALL REPLACE ALL SANITARY SEWER SERVICE LINES THAT CONNECT TO -SS2- ON THE WEST SIDE OF N POPLAR ST, INCLUDING THOSE NOT SHOWN, FROM THE PROPOSED GRAVITY SEWER MAIN TO THE CLEANOUT AT THE RIGHT-OF-WAY LINE. IF NO CLEANOUT IS PRESENT WITHIN 2 FEET OF THE RIGHT-OF-WAY LINE, THE CONTRACTOR SHALL INSTALL A NEW CLEANOUT AT THE RIGHT-OF-WAY LINE PER DETAIL S.7/UC-3B AND RECONNECT THE SERVICE LINE.
- CONTRACTOR SHALL RECONNECT ALL SANITARY SEWER SERVICE LINES THAT CONNECT TO -SS2- ON THE EAST SIDE OF N POPLAR AND -SS1- ON BOTH SIDES OF ELM ST, INCLUDING REPLACEMENT OF TERMINAL FITTINGS AT THE PROPOSED GRAVITY SEWER MAIN AND CONNECTION TO THE EXISTING LATERAL PIPE.
- CONTRACTOR SHALL RETAIN AND PROTECT IN PLACE ALL WATER SERVICE LINES. WATER SERVICE LINES BROKEN DURING CONSTRUCTION SHALL BE REPLACED ENTIRELY FROM THE WATER MAIN TO THE WATER METER PER TOWN OF ABERDEEN DETAIL W.6. THE SERVICE LINE BETWEEN THE CORPORATION STOP AT THE WATER MAIN AND THE CURB STOP AT THE WATER METER SHALL BE ONE CONTINUOUS PIECE WITHOUT FITTINGS OR COUPLINGS.
- PROPOSED 6" LINE GATE VALVE APPROXIMATELY 95 FT NORTH OF MONTFORD STREET IS A PRESSURE ZONE BOUNDARY VALVE. CONTRACTOR SHALL COORDINATE WITH TOWN OF ABERDEEN TO ENSURE BOUNDARY VALVE IS CLOSED PRIOR TO SERVICE AND FINAL CONNECTIONS.

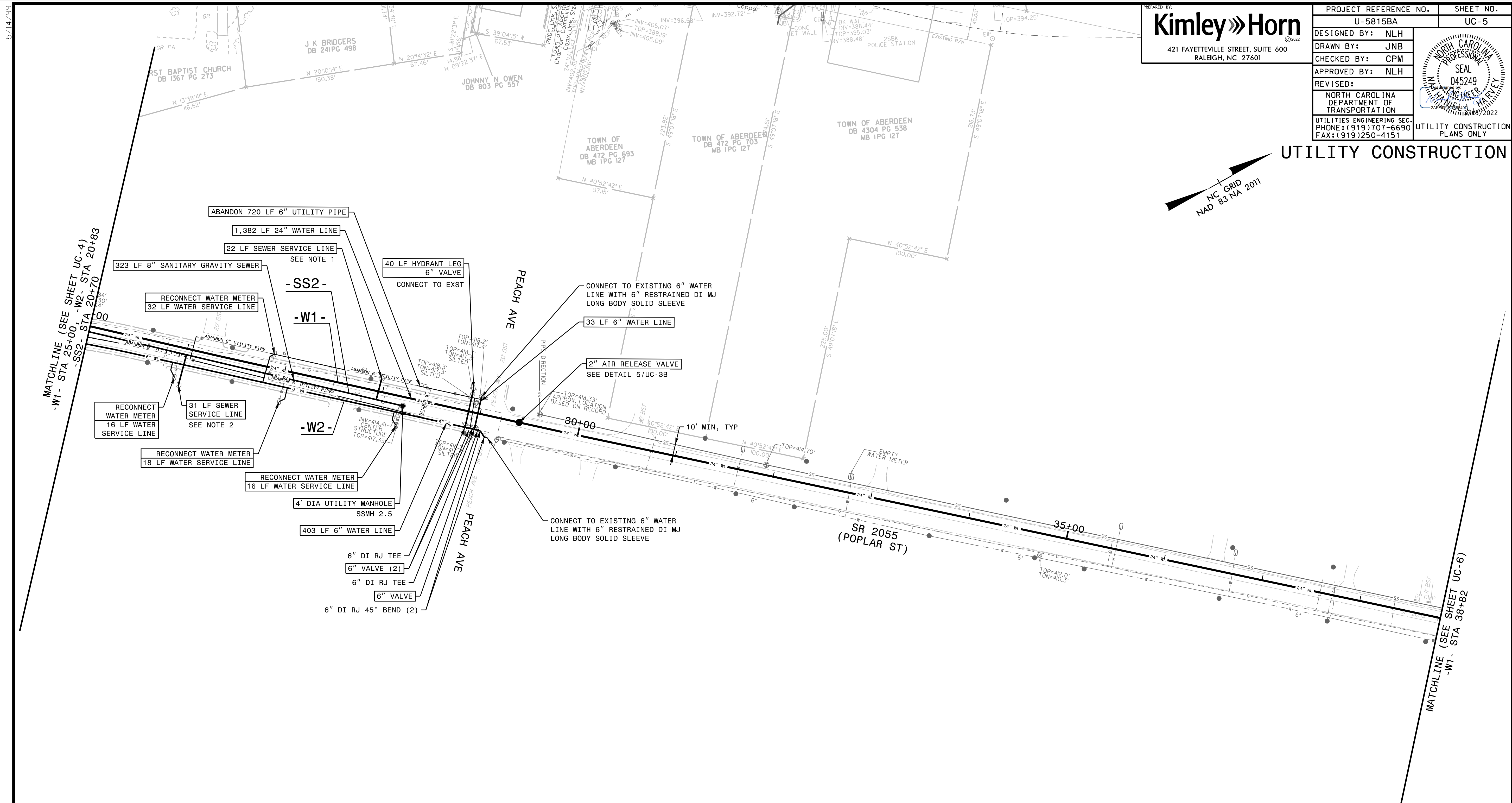
SEE SHEET UC-13 FOR -SS1- AND -SS2- PROFILES
 SEE SHEET UC-10 FOR -W1- PROFILE

3/29/2022

5/14/99

PREPARED BY:
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PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-5
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISER:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



- NOTES:
- CONTRACTOR SHALL REPLACE ALL SANITARY SEWER SERVICE LINES CONNECTING TO -SS2- ON THE WEST SIDE OF N POPLAR ST, INCLUDING THOSE NOT SHOWN, FROM THE PROPOSED GRAVITY SEWER MAIN TO THE CLEANOUT AT THE RIGHT-OF-WAY LINE. IF NO CLEANOUT IS PRESENT WITHIN 2 FEET OF THE RIGHT-OF-WAY LINE, THE CONTRACTOR SHALL INSTALL A NEW CLEANOUT AT THE RIGHT-OF-WAY LINE PER DETAIL 1/UC-3C AND RECONNECT THE SERVICE LINE.
 - CONTRACTOR SHALL RECONNECT ALL SANITARY SEWER SERVICE LINES CONNECTING TO -SS2- ON THE EAST SIDE OF N POPLAR, INCLUDING REPLACEMENT OF TERMINAL FITTINGS AT THE PROPOSED SANITARY SEWER MAIN AND CONNECTION TO THE EXISTING LATERAL PIPE.
 - CONTRACTOR SHALL RETAIN AND PROTECT IN PLACE ALL WATER SERVICE LINES AND SANITARY SEWER LATERALS NOT SPECIFIED TO BE REPLACED.
 - WATER SERVICE LINES BROKEN DURING CONSTRUCTION SHALL BE REPLACED ENTIRELY FROM THE WATER MAIN TO THE WATER METER PER TOWN OF ABERDEEN DETAIL W-6. THE SERVICE LINE BETWEEN THE CORPORATION STOP AT THE WATER MAIN AND THE CURB STOP AT THE WATER METER SHALL BE ONE CONTINUOUS PIECE WITHOUT FITTINGS OR COUPLINGS.
 - SEWER LATERALS MADE OF BITUMINOUS FIBER PIPE OR VITRIFIED CLAY PIPE THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED FROM THE SEWER MAIN TO THE NEAREST UPSTREAM UNDAUNAGED PIPE JOINT OR EXISTING CLEANOUT WITH SCH 40 PVC AND APPROVED RUBBER COUPLERS DESIGNED FOR THE INTENDED USE.

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

NOTE:
 THE ESTIMATED QUANTITY OF TOA DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 595 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEE SHEET UC-13 FOR -SS1- PROFILE
 SEE SHEET UC-10 AND UC-11 FOR -W1- PROFILE

3/15/2022

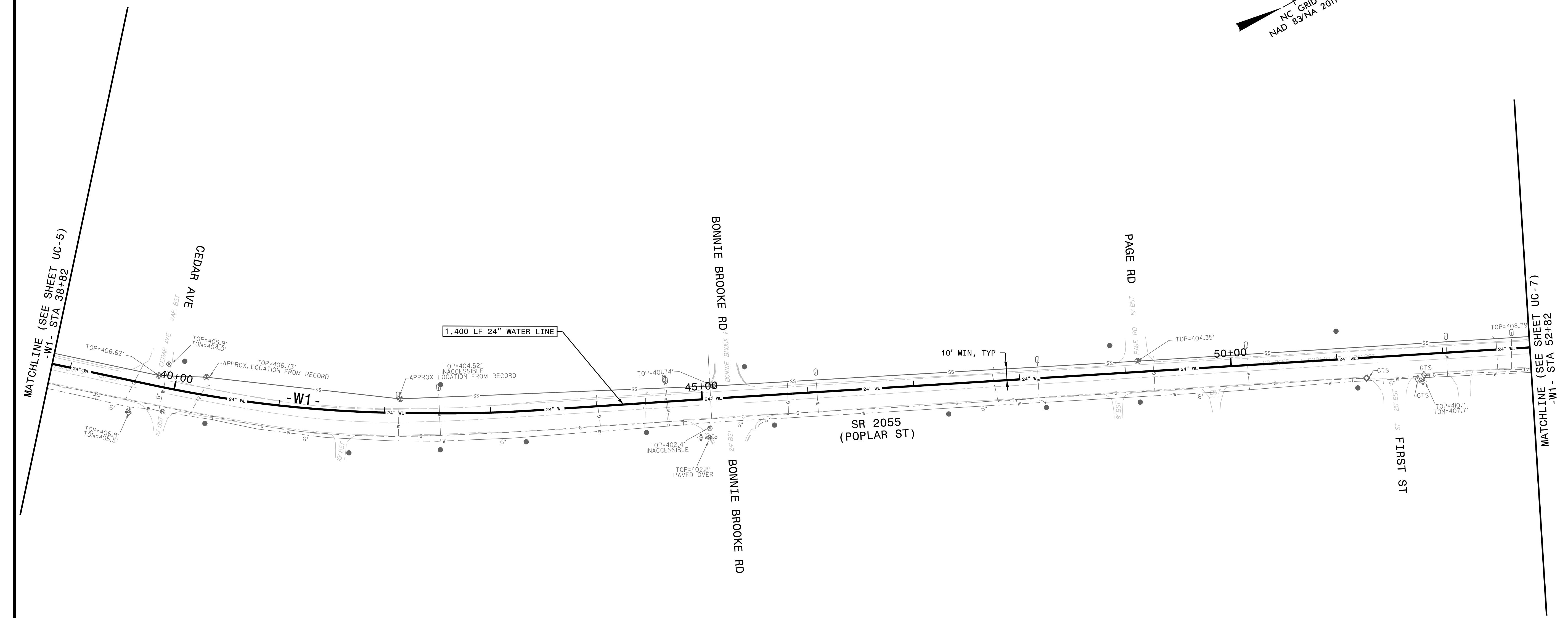
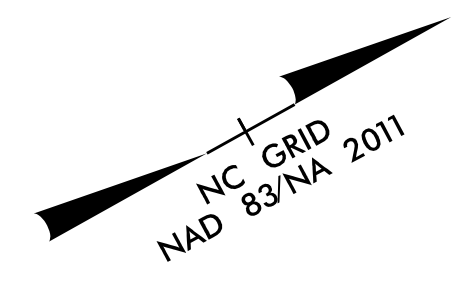
5/14/99

3/15/2022

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 RALEIGH, NC 27601

PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-6
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



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

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

- NOTES:
1. CONTRACTOR SHALL RETAIN AND PROTECT IN PLACE ALL WATER SERVICE LINES AND SANITARY SEWER LATERALS NOT SPECIFIED TO BE REPLACED.
 - A. WATER SERVICE LINES BROKEN DURING CONSTRUCTION SHALL BE REPLACED ENTIRELY FROM THE WATER MAIN TO THE WATER METER PER TOWN OF ABERDEEN DETAIL W.6. THE SERVICE LINE BETWEEN THE CORPORATION STOP AT THE WATER MAIN AND THE CURB STOP AT THE WATER METER SHALL BE ONE CONTINUOUS PIECE WITHOUT FITTINGS OR COUPLINGS.
 - B. SEWER LATERALS MADE OF BITUMINOUS FIBER PIPE OR VITRIFIED CLAY PIPE THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED FROM THE SEWER MAIN TO THE NEAREST UPSTREAM UNDAMAGED PIPE JOINT OR EXISTING CLEANOUT WITH SCH 40 PVC AND APPROVED RUBBER COUPLERS DESIGNED FOR THE INTENDED USE.

SEE SHEET UC-11 FOR -W1- PROFILE

5/14/2022

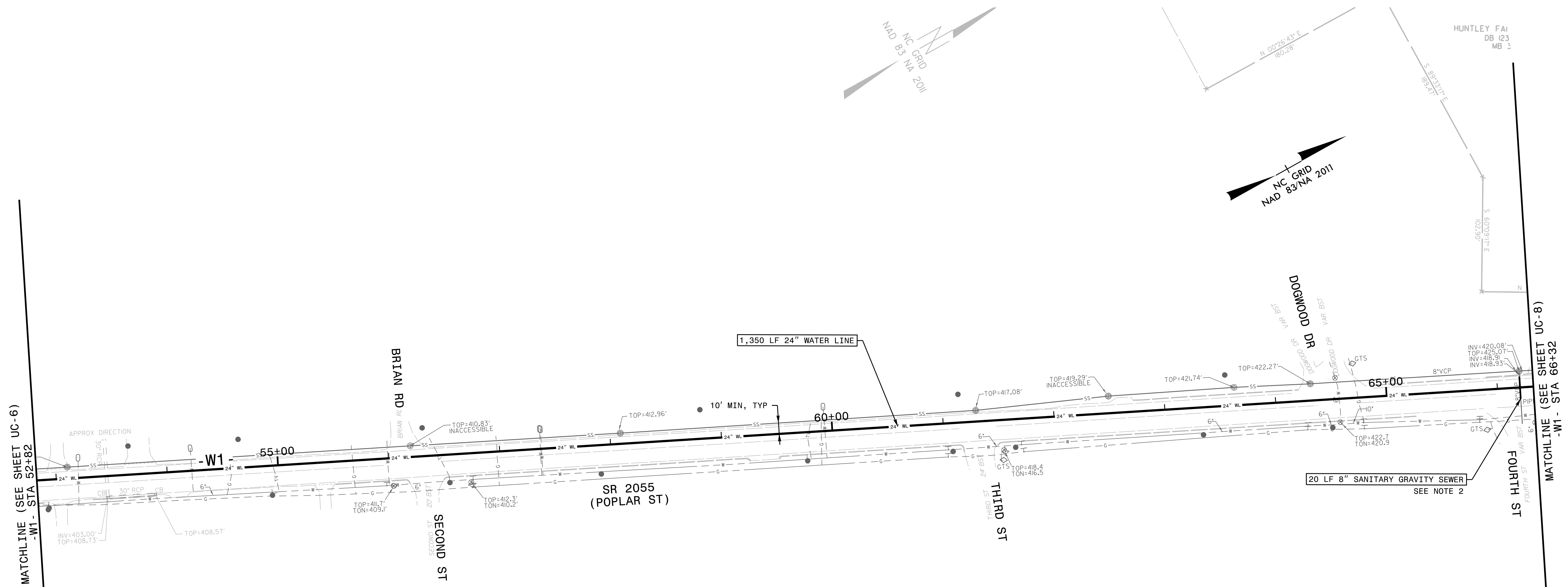
3/15/2022



421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO.	U-5815BA	SHEET NO.	UC-7
DESIGNED BY:	NLH		
DRAWN BY:	JNB		
CHECKED BY:	CPM		
APPROVED BY:	NLH		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

UTILITY CONSTRUCTION



- NOTES:**
- CONTRACTOR SHALL RETAIN AND PROTECT IN PLACE ALL WATER SERVICE LINES AND SANITARY SEWER LATERALS NOT SPECIFIED TO BE REPLACED.
 - WATER SERVICE LINES BROKEN DURING CONSTRUCTION SHALL BE REPLACED ENTIRELY FROM THE WATER MAIN TO THE WATER METER PER TOWN OF ABERDEEN DETAIL W.6. THE SERVICE LINE BETWEEN THE CORPORATION STOP AT THE WATER MAIN AND THE CURB STOP AT THE WATER METER SHALL BE ONE CONTINUOUS PIECE WITHOUT FITTINGS OR COUPLINGS.
 - SEWER LATERALS MADE OF BITUMINOUS FIBER PIPE OR VITRIFIED CLAY PIPE THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED FROM THE SEWER MAIN TO THE NEAREST UPSTREAM UNDAMAGED PIPE JOINT OR EXISTING CLEANOUT WITH SCH 40 PVC AND APPROVED RUBBER COUPLERS DESIGNED FOR THE INTENDED USE.
 - CONTRACTOR SHALL REPLACE 20 LF OF SANITARY SEWER WITH A SINGLE JOINT OF 8" DUCTILE IRON PIPE, CENTERED ON THE PROPOSED TRANSMISSION WATER MAIN, MATCHING EXISTING SLOPE. CONNECTIONS TO EXISTING SANITARY SEWER LINE SHALL BE MADE IN ACCORDANCE WITH TOWN OF ABERDEEN STANDARDS AND REQUIREMENTS.

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

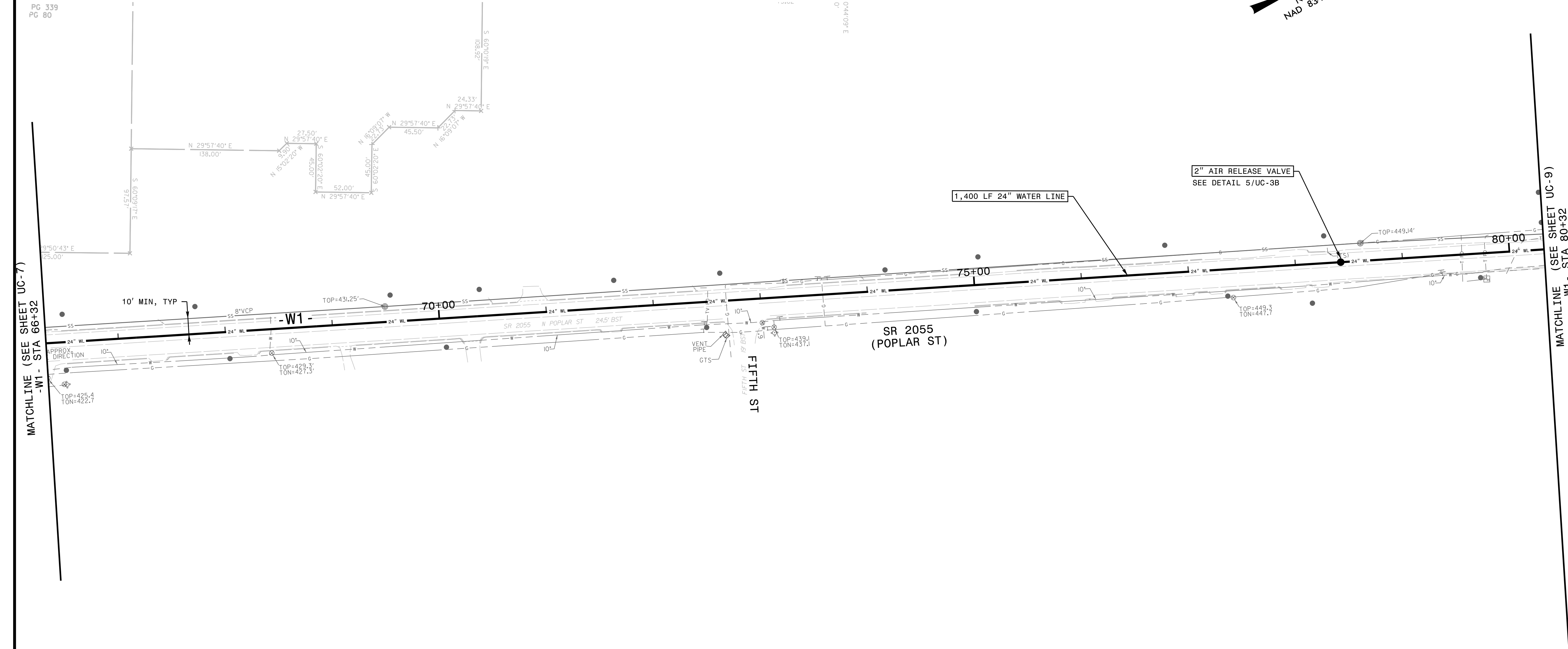
NOTE:
THE ESTIMATED QUANTITY OF TOA DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 0 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEE SHEET UC-11 AND UC-12 FOR -W1- PROFILE

5/14/2022

PREPARED BY:
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PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-8
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISIED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



- NOTES:
1. CONTRACTOR SHALL RETAIN AND PROTECT IN PLACE ALL WATER SERVICE LINES AND SANITARY SEWER LATERALS NOT SPECIFIED TO BE REPLACED.
 - A. WATER SERVICE LINES BROKEN DURING CONSTRUCTION SHALL BE REPLACED ENTIRELY FROM THE WATER MAIN TO THE WATER METER PER TOWN OF ABERDEEN DETAIL W.6. THE SERVICE LINE BETWEEN THE CORPORATION STOP AT THE WATER MAIN AND THE CURB STOP AT THE WATER METER SHALL BE ONE CONTINUOUS PIECE WITHOUT FITTINGS OR COUPLINGS.
 - B. SEWER LATERALS MADE OF BITUMINOUS FIBER PIPE OR VITRIFIED CLAY PIPE THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED FROM THE SEWER MAIN TO THE NEAREST UPSTREAM UNDAMAGED PIPE JOINT OR EXISTING CLEANOUT WITH SCH 40 PVC AND APPROVED RUBBER COUPLERS DESIGNED FOR THE INTENDED USE.

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

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

SEE SHEET UC-12 FOR -W1- PROFILE

3/15/2022

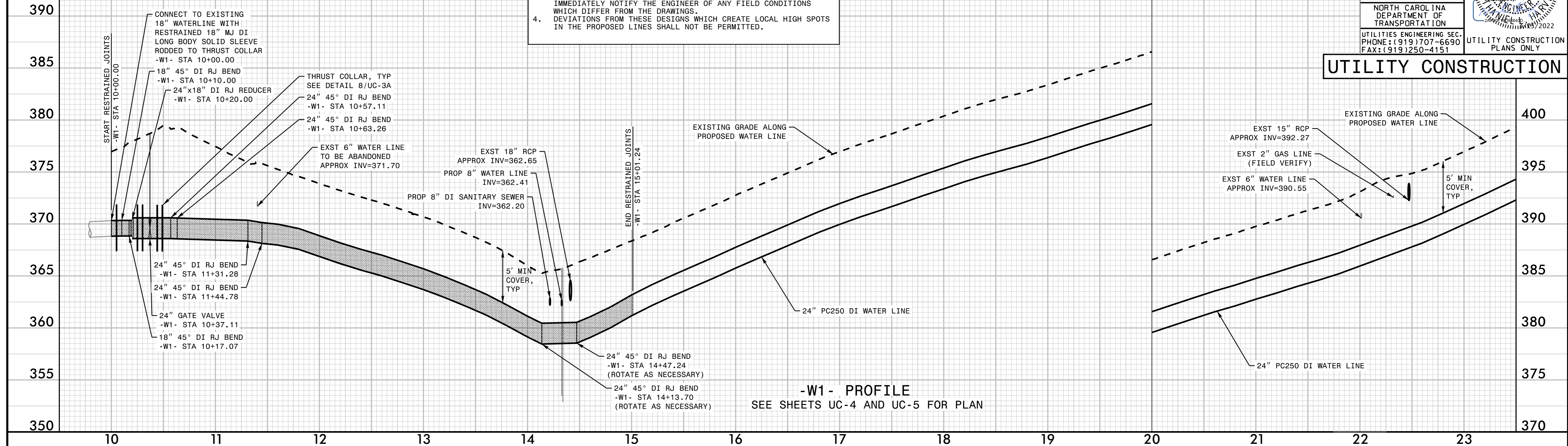
5/14/1999

- PROFILE NOTES (APPLICABLE TO ALL UTILITY PROFILE SHEETS):
1. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ELEVATION OF ALL CROSSING UTILITIES, WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.
 2. UTILITIES SPECIFICALLY IDENTIFIED AS "(FIELD VERIFY)" ARE SHOWN IN PROFILE BASED ON THE STATION AT WHICH THE UTILITY CROSSES THE PROPOSED WATER AND SEWER MAINS AND ARE SHOWN AT TYPICAL DEPTHS.
 3. CONTRACTOR SHALL VERIFY ALL EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTING THE PROPOSED UTILITIES AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY FIELD CONDITIONS WHICH DIFFER FROM THE DRAWINGS.
 4. DEVIATIONS FROM THESE DESIGNS WHICH CREATE LOCAL HIGH SPOTS IN THE PROPOSED LINES SHALL NOT BE PERMITTED.

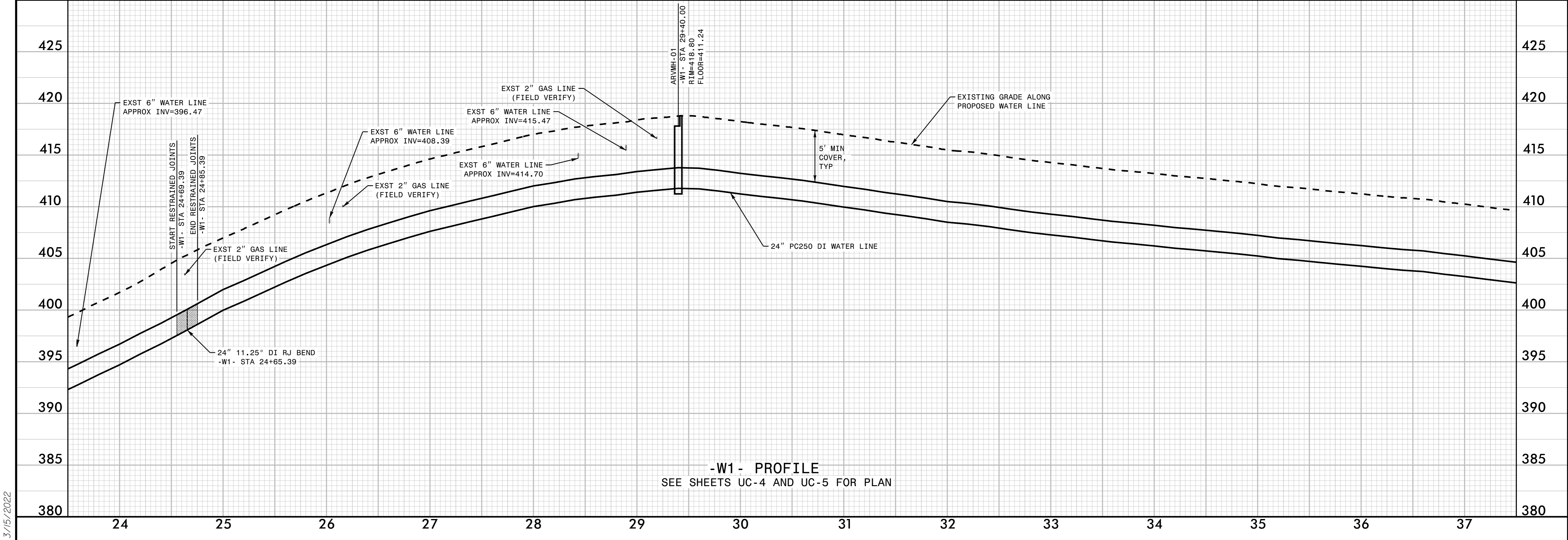
PREPARED BY: **Kimley»Horn**
 421 FAYETTEVILLE STREET, SUITE 600
 RALEIGH, NC 27601

PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-10
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-W1 - PROFILE
SEE SHEETS UC-4 AND UC-5 FOR PLAN



-W1 - PROFILE
SEE SHEETS UC-4 AND UC-5 FOR PLAN

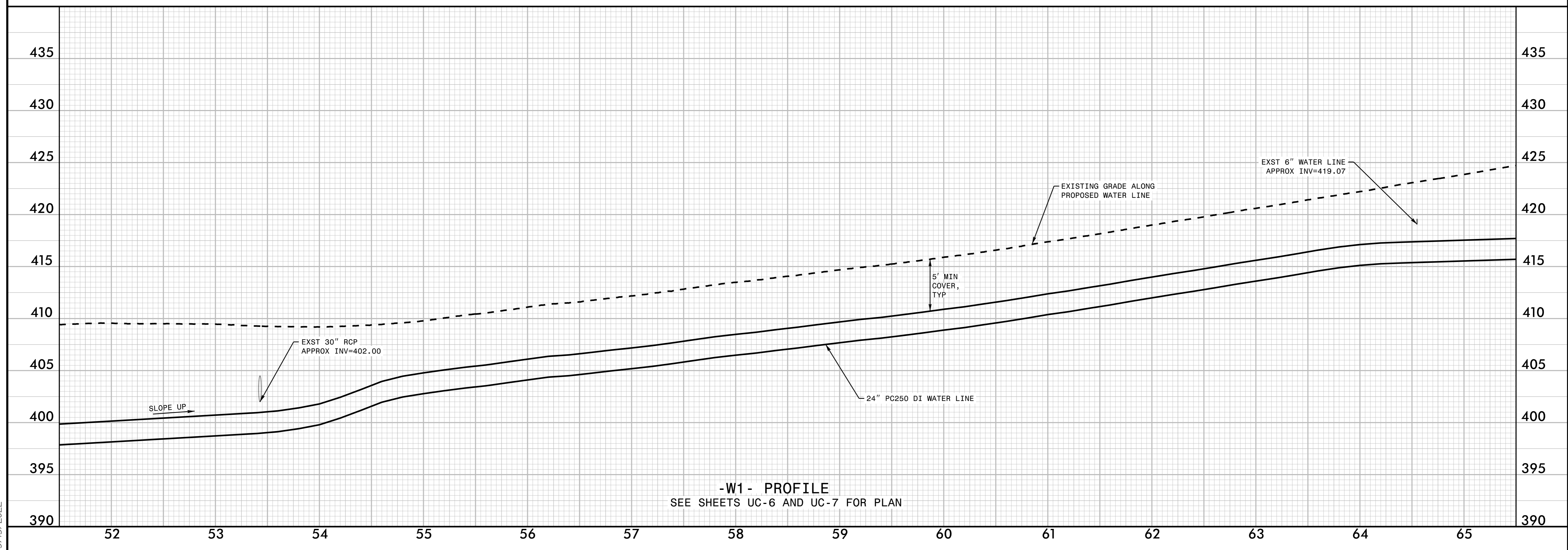
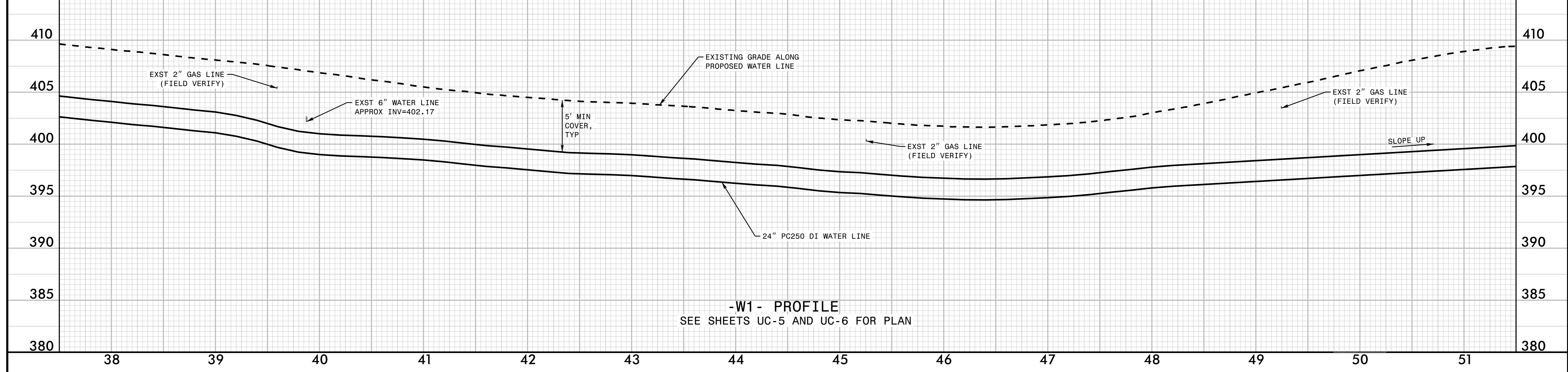
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PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-11
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
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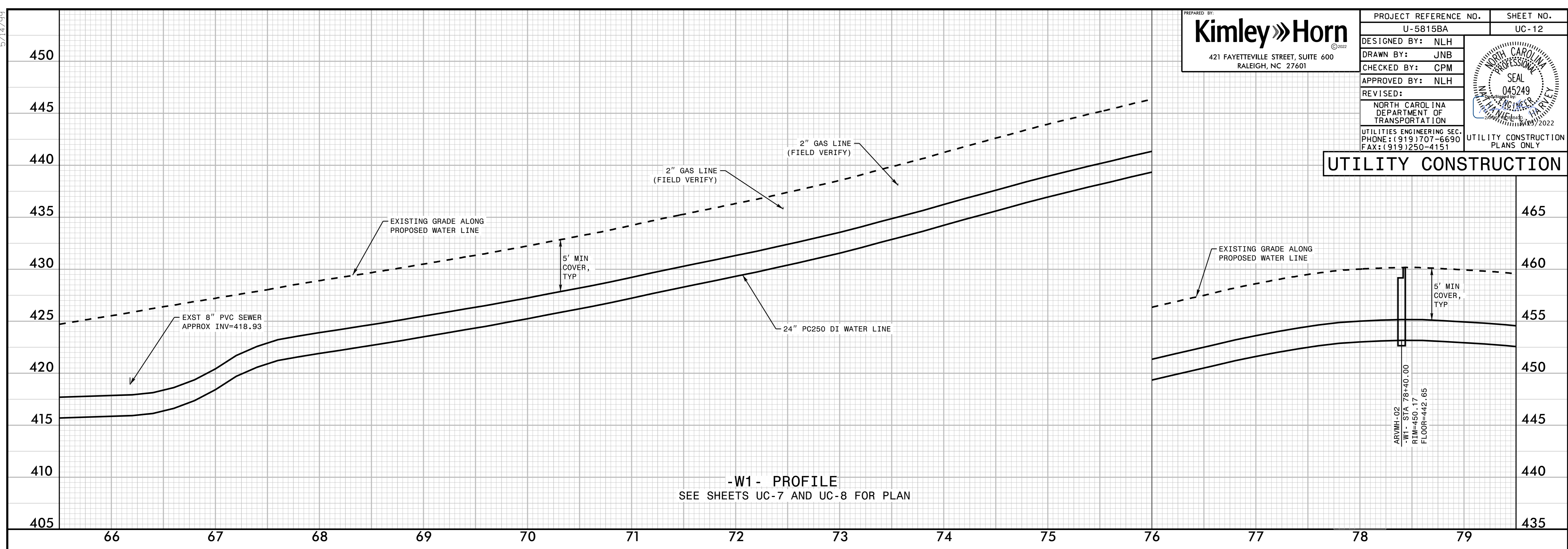
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5/14/99



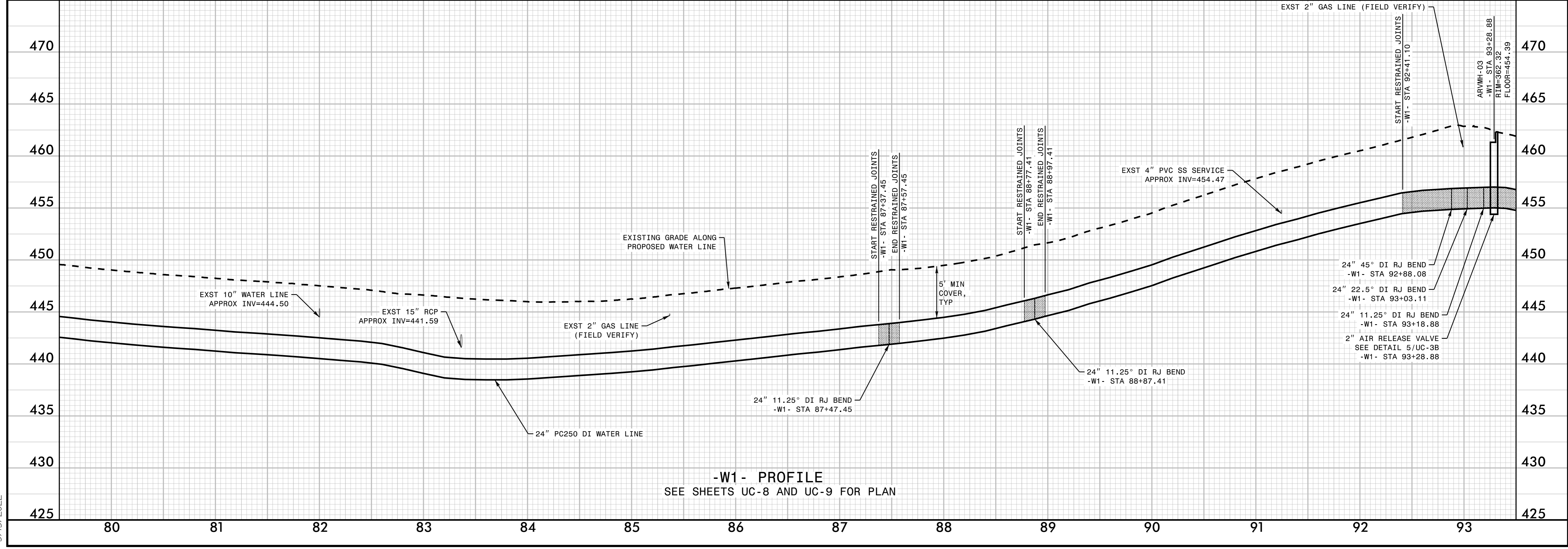
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UTILITY CONSTRUCTION



-W1- PROFILE
SEE SHEETS UC-7 AND UC-8 FOR PLAN

3/15/2022



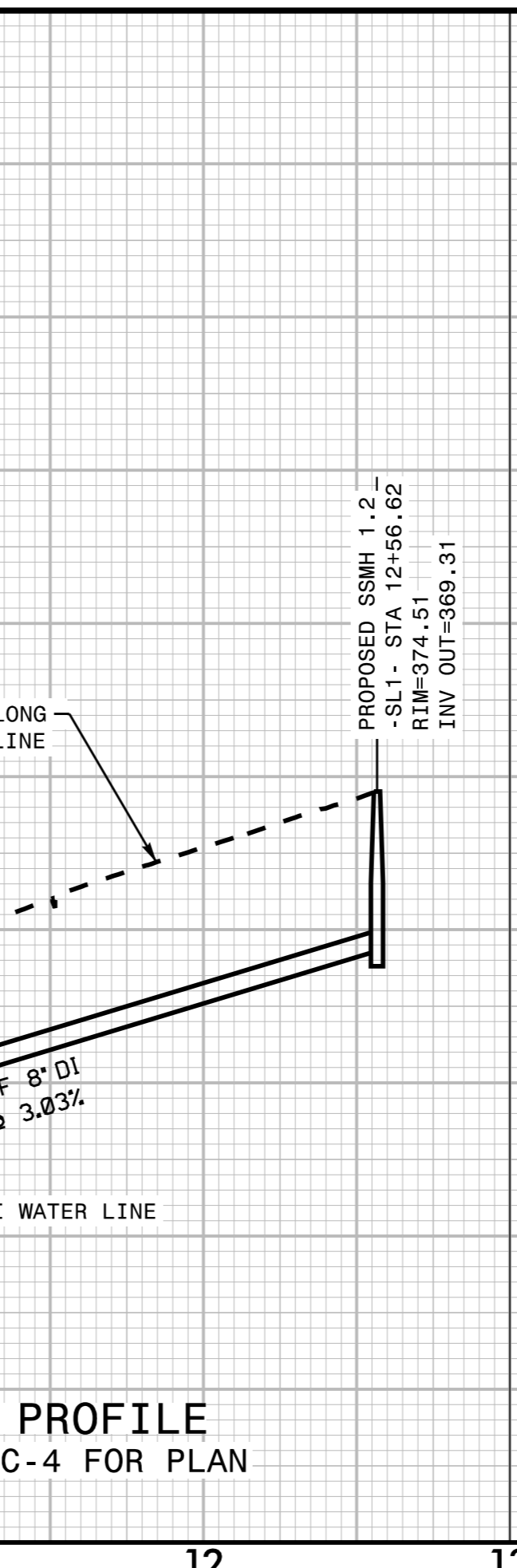
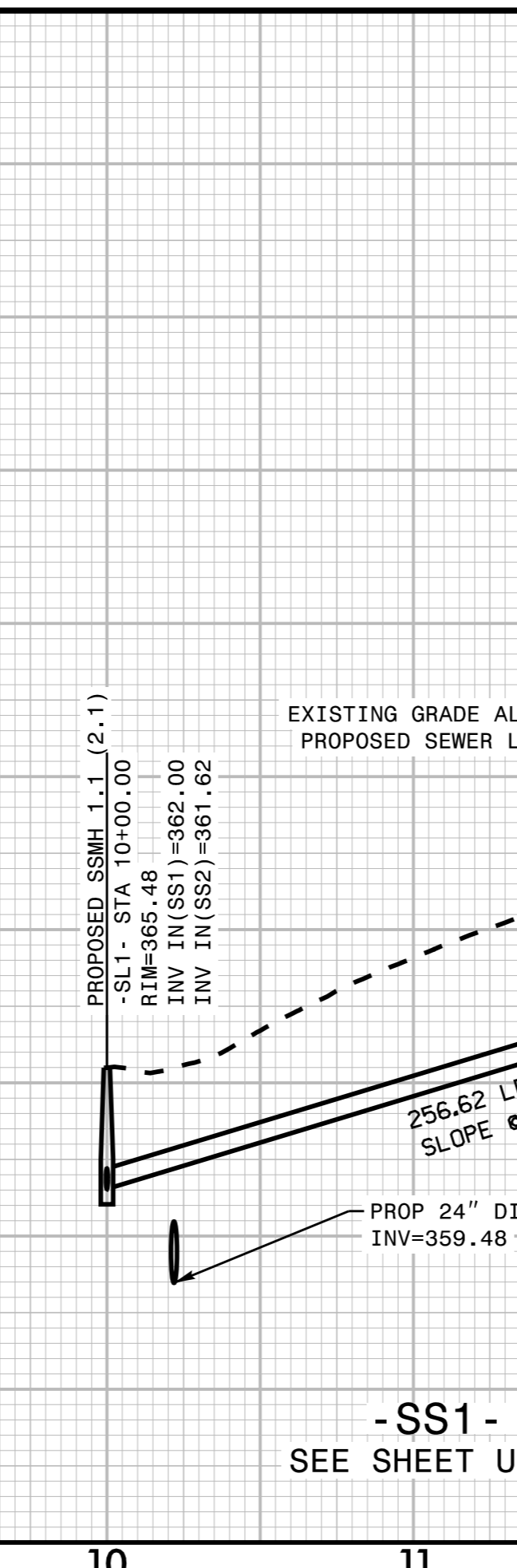
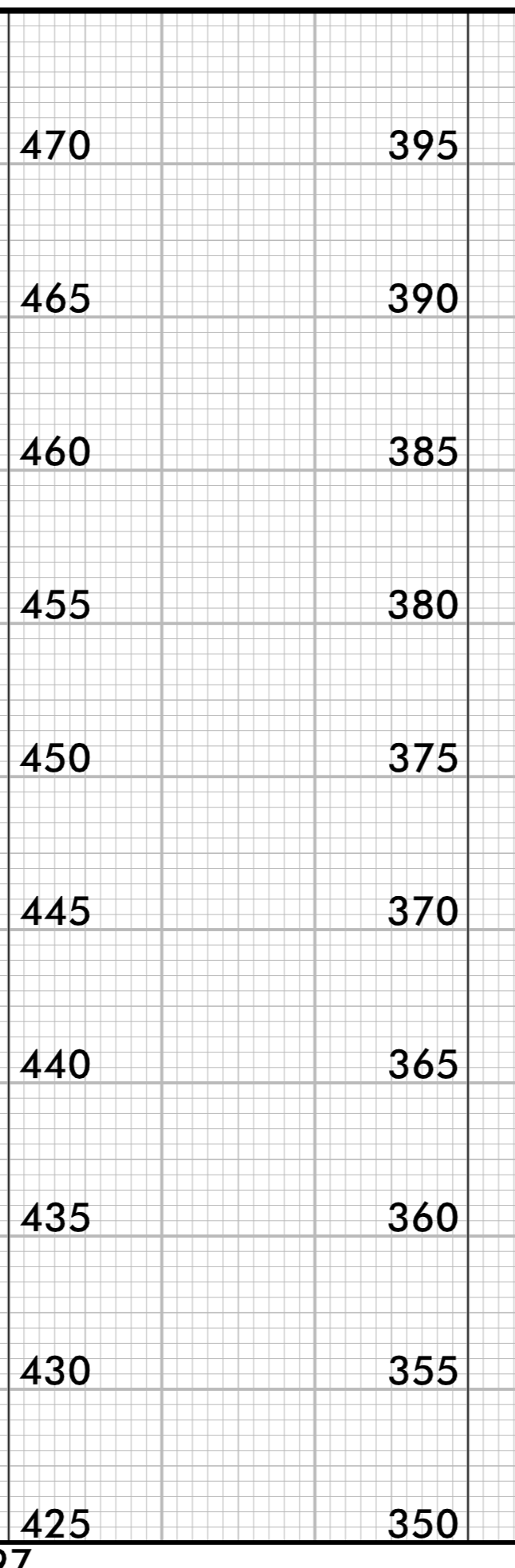
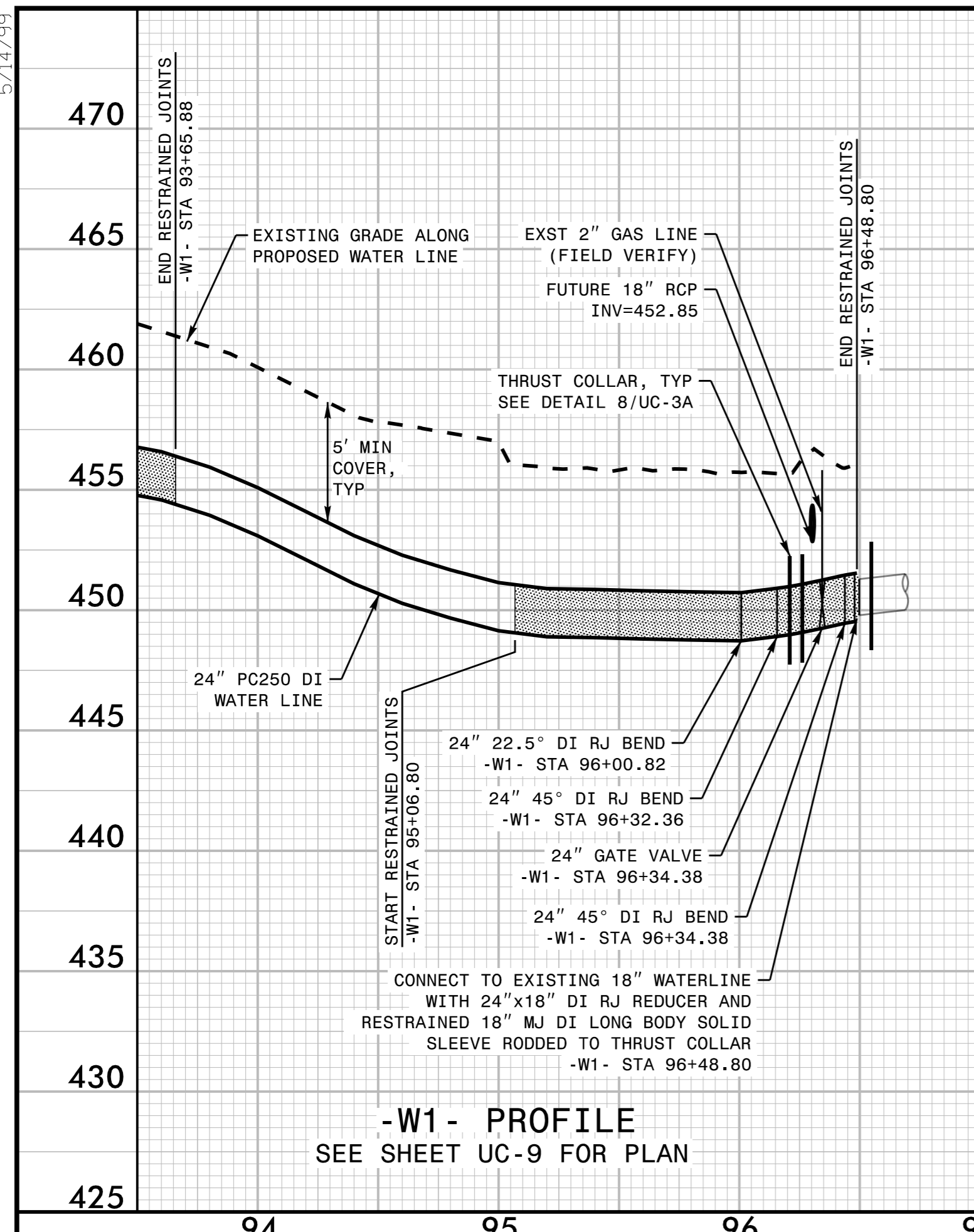
-W1- PROFILE
SEE SHEETS UC-8 AND UC-9 FOR PLAN

5/14/1999

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PROJECT REFERENCE NO.	SHEET NO.
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DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISED:	UTILITY CONSTRUCTION PLANS ONLY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

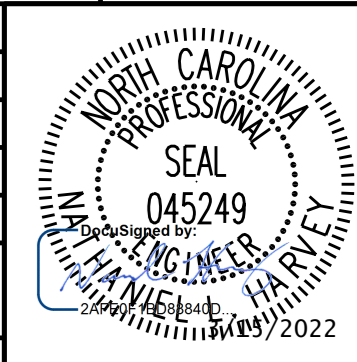
UTILITY CONSTRUCTION

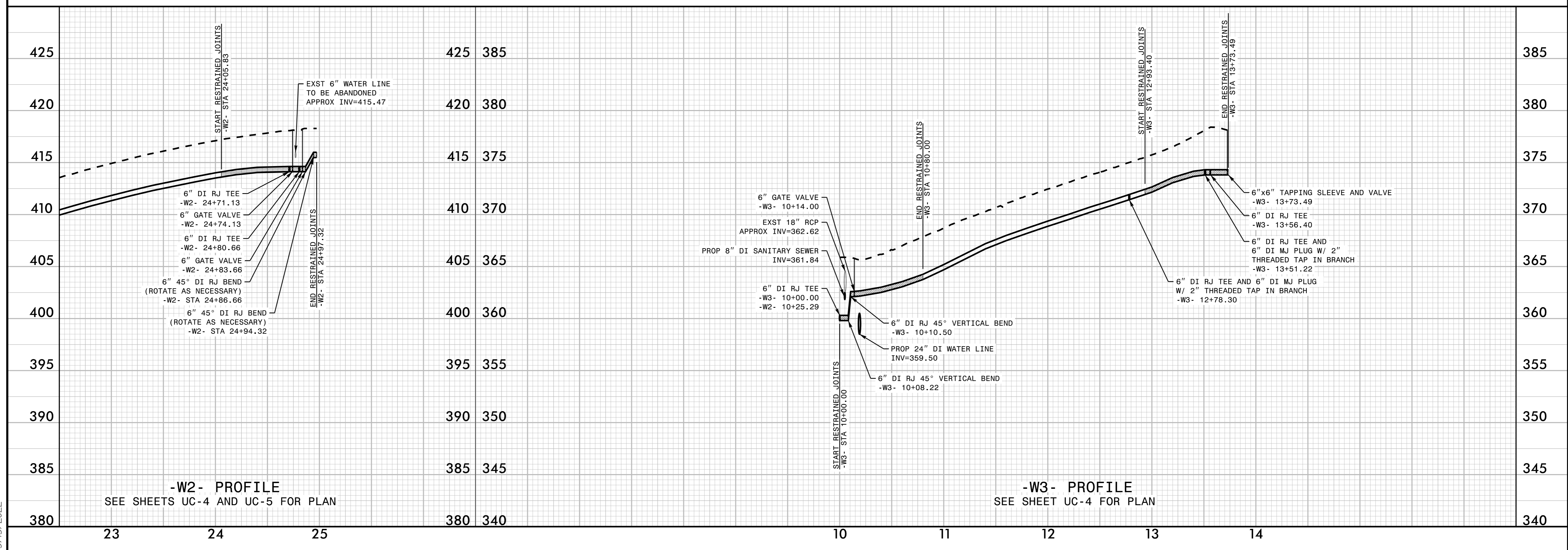
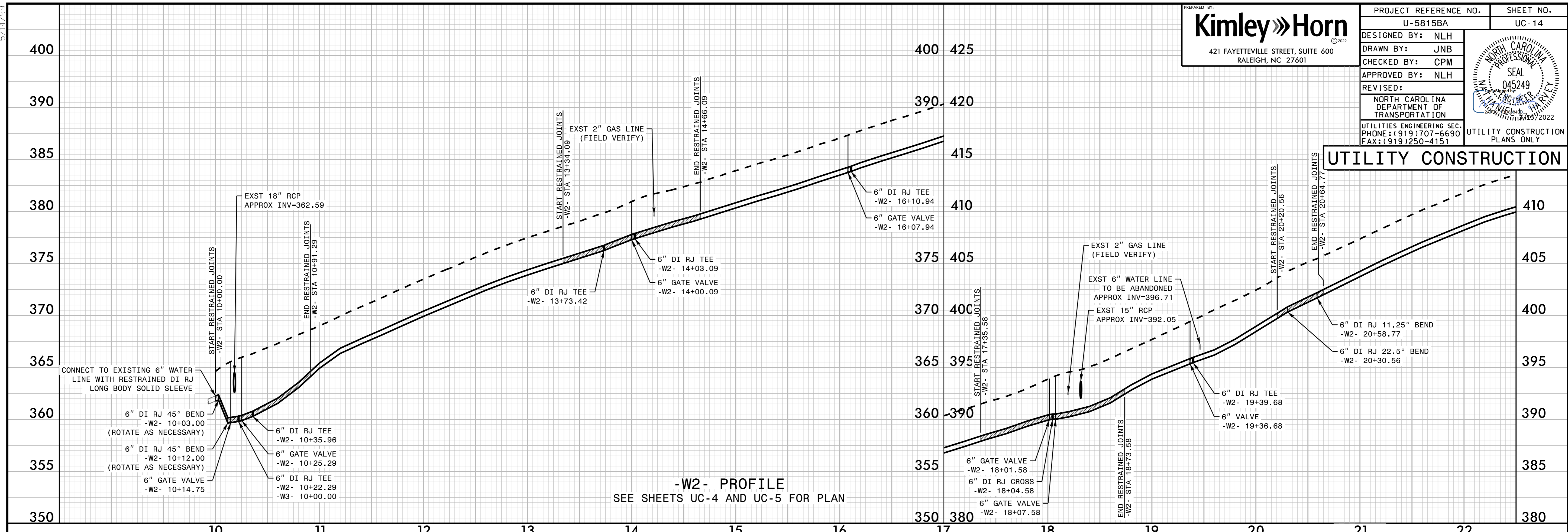


3/15/2022

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PROJECT REFERENCE NO.	SHEET NO.
U-5815BA	UC-14
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: CPM	
APPROVED BY: NLH	
REVISER:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
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3/15/2022