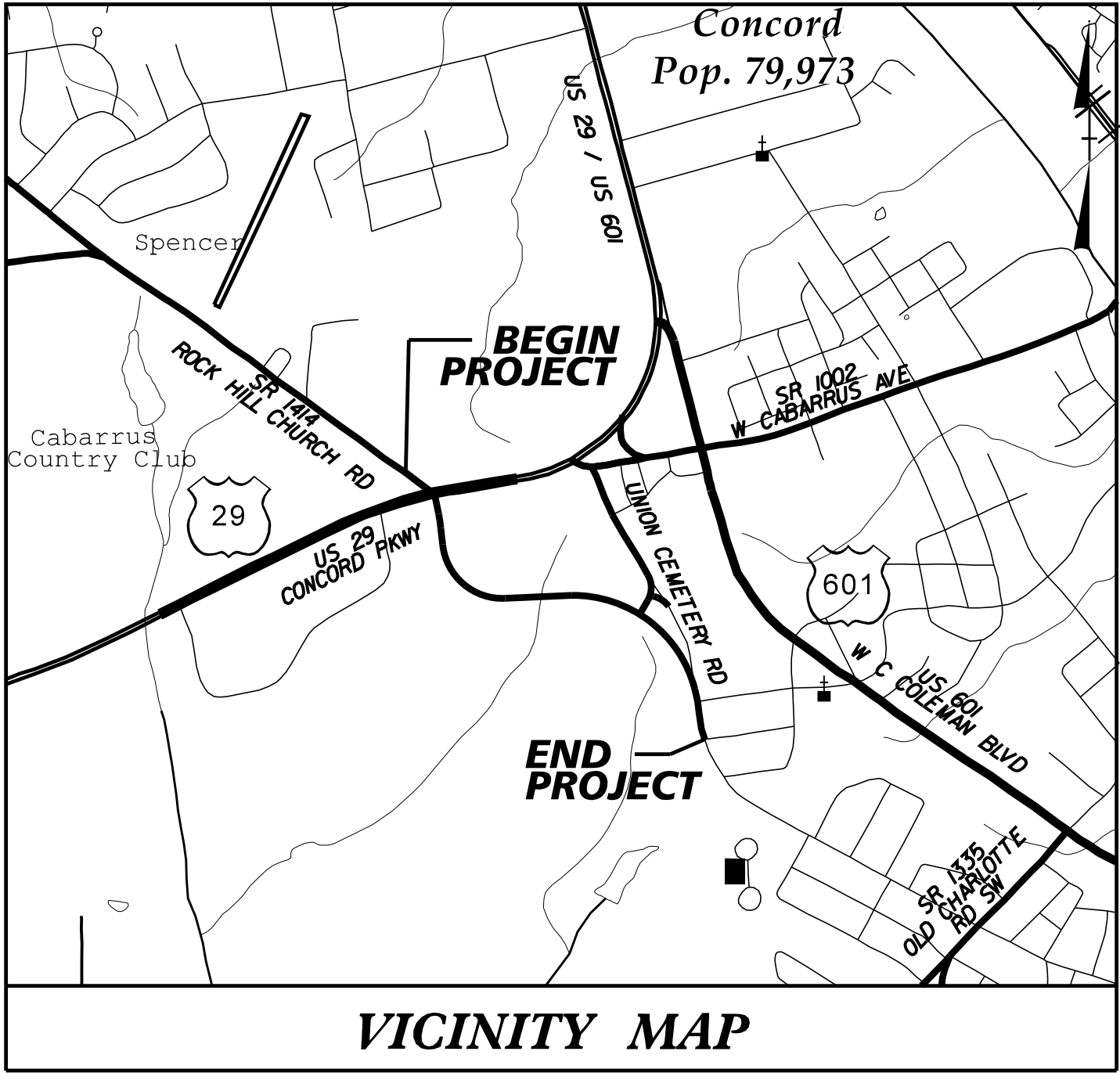


09/08/2019

TIP PROJECT: U-5956



VICINITY MAP

Note: Not to Scale

A PORTION OF THIS PROJECT IS LOCATED WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF CONCORD

A PORTION OF THIS PROJECT IS LOCATED WITHIN THE RIGHT-OF-WAY OF US-29 AND US-601

NCDOT CONTACT:
LYNN BASSINGER, P.E.
NCDOT - DIVISION 10
716 W. MAIN STREET
ALBEMARLE, NC 28001

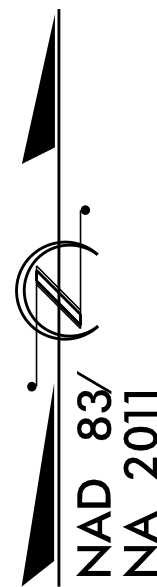
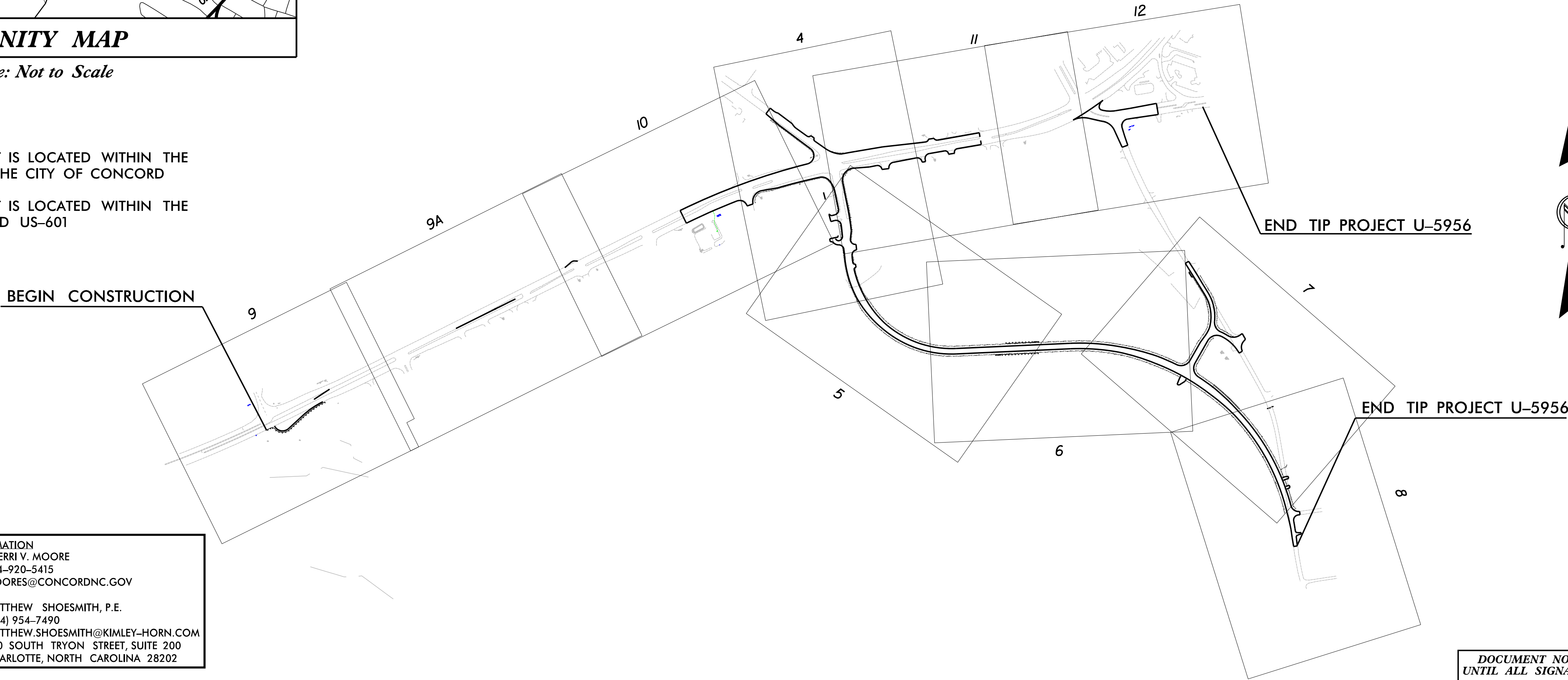
OWNER:	CONTACT INFORMATION
	SHERRI V. MOORE 704-920-5415 MOORES@CONCORDNC.GOV
PROJECT ENGINEER:	MATTHEW SHOESMITH, P.E. (704) 954-7490 MATTHEW.SHOESMITH@KIMLEY-HORN.COM
	200 SOUTH TRYON STREET, SUITE 200 CHARLOTTE, NORTH CAROLINA 28202

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

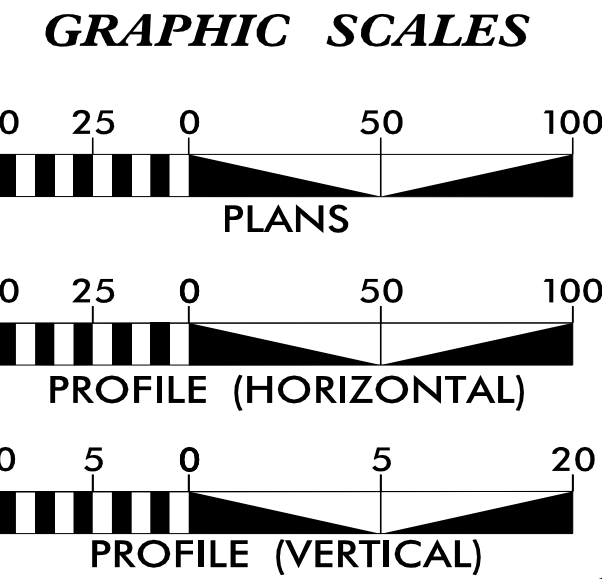
UTILITY CONSTRUCTION PLANS CITY OF CONCORD

LOCATION: UNION CEMETERY ROAD TO CABARRUS AVE W, CONCRD PKWY N
AND WARREN COLEMAN BLVD

TYPE OF WORK: POTABLE WATER AND GRAVITY SANITARY SEWER RELOCATION



DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	UTILITY NOTES
UC-3A THRU UC-3C	UTILITY DETAILS
UC-4 THRU UC-12	UTILITY CONSTRUCTION SHEETS
UC-13 THRU UC-15	UTILITY PROFILE SHEETS

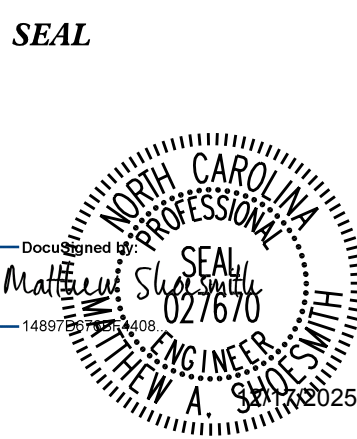
WATER AND SEWER
OWNERS ON PROJECT

(A) WATER - CITY OF CONCORD
UTILITIES
(C) SANITARY SEWER - CITY OF CONCORD
UTILITIES

PREPARED IN THE OFFICE OF

Kimley »Horn

Matthew Shoesmith, PE UTILITIES PROJECT ENGINEER
Sophie Johnston, PE UTILITIES DESIGN ENGINEER



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

Lynn Basinger UTILITIES REGIONAL ENGINEER
n/a UTILITIES ENGINEER
Amy G. Dupree UTILITIES AREA COORDINATOR
Eric Tweed UTILITIES COORDINATOR


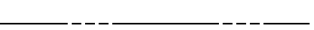








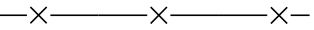
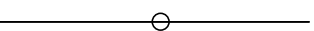
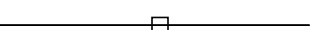






STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS











Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering





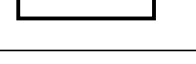
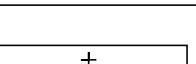





PROJECT REFERENCE NO.	SHEET NO.
U-5956	UC-02

BOUNDARIES AND PROPERTY:


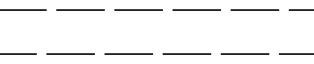
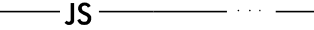
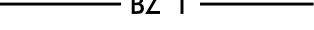
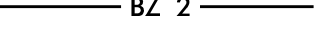






State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	

Known Contamination Area: Soil		
Potential Contamination Area: Soil		
Known Contamination Area: Water		
Potential Contamination Area: Water		
Contaminated Site: Known or Potential		

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	
Sign	
Well	
Small Mine	
Foundation	
Area Outline	
Cemetery	
Building	
School	
Church	
Dam	


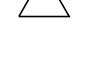






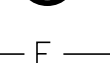








HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

RAILROADS:






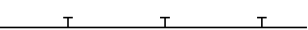





Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY:



Baseline Control Point	
Existing Right of Way Marker	
Existing Right of Way Line	
Proposed Right of Way Line	
Proposed Right of Way Line with Iron Pin and Cap Marker	
Proposed Right of Way Line with Concrete or Granite RW Marker	
Proposed Control of Access Line with Concrete C/A Marker	
Existing Control of Access	
Proposed Control of Access	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage / Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	


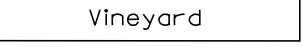
Proposed Permanent Easement with Iron Pin and Cap Marker	
--	---

ROADS AND RELATED FEATURES:


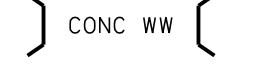
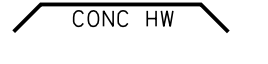


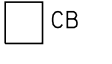



Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	

VEGETATION:



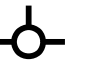

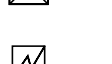

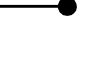

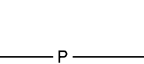



Single Tree	
Single Shrub	
Hedge	
Woods Line	

Orchard	
Vineyard	





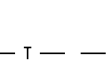
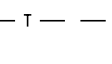

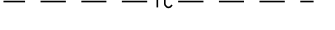
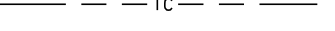
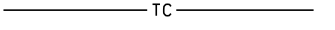





EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	



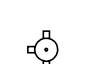
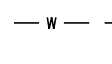


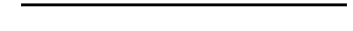

UTILITIES:

POWER:	
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	
Proposed Joint Use Pole	
Power Manhole	
Power Line Tower	
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	
U/G Power Line LOS B (S.U.E.*)	
U/G Power Line LOS C (S.U.E.*)	
U/G Power Line LOS D (S.U.E.*)	


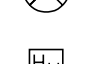
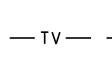
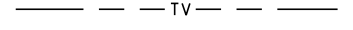



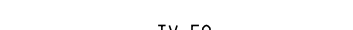

TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Cable LOS B (S.U.E.*)	
U/G Telephone Cable LOS C (S.U.E.*)	
U/G Telephone Cable LOS D (S.U.E.*)	
U/G Telephone Conduit LOS B (S.U.E.*)	
U/G Telephone Conduit LOS C (S.U.E.*)	
U/G Telephone Conduit LOS D (S.U.E.*)	
U/G Fiber Optics Cable LOS B (S.U.E.*)	
U/G Fiber Optics Cable LOS C (S.U.E.*)	
U/G Fiber Optics Cable LOS D (S.U.E.*)	







WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
U/G Water Line LOS B (S.U.E.*)	
U/G Water Line LOS C (S.U.E.*)	
U/G Water Line LOS D (S.U.E.*)	
Above Ground Water Line	







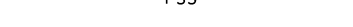
TV:

TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
U/G TV Cable LOS B (S.U.E.*)	
U/G TV Cable LOS C (S.U.E.*)	
U/G TV Cable LOS D (S.U.E.*)	
U/G Fiber Optic Cable LOS B (S.U.E.*)	
U/G Fiber Optic Cable LOS C (S.U.E.*)	
U/G Fiber Optic Cable LOS D (S.U.E.*)	




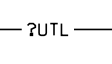

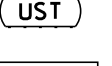




GAS:

Gas Valve	
Gas Meter	
U/G Gas Line LOS B (S.U.E.*)	
U/G Gas Line LOS C (S.U.E.*)	
U/G Gas Line LOS D (S.U.E.*)	
Above Ground Gas Line	

SANITARY SEWER:

Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Forced Main Line LOS B (S.U.E.*)	
SS Forced Main Line LOS C (S.U.E.*)	
SS Forced Main Line LOS D (S.U.E.*)	

MISCELLANEOUS:

Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line LOS B (S.U.E.*)	
U/G Tank; Water, Gas, Oil	
Underground Storage Tank, Approx. Loc.	
A/G Tank; Water, Gas, Oil	
Geoenvironmental Boring	
U/G Test Hole LOS A (S.U.E.*)	
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

5/14/99

REVISIONS

12/17/2025

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 WATER AND SEWER UTILITIES BELONG TO CITY OF CONCORD.
3. ALL WATER LINES SHALL BE INSTALLED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES SHALL BE INSTALLED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH 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 DEPARTMENTUNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. CONTRACTOR SHALL PROVIDE ACCESS FOR DEPARTMENT PERSONNEL AND 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, AND 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. CONTRACTOR SHALL MAKE INVESTIGATIONS TO DETERMINE EXACT LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND TO AVOID DAMAGE TO EXISTING FACILITIES. CONTRACTOR SHALL REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT NOR OWNER.
7. CONTRACTOR SHALL 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. CONTRACTOR SHALL 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, OR HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT SEE SECTION 01300, "SUBMITTALS" OF THE WSACC SPECIFICATIONS
10. THE CONTRACTOR SHALL NOTE THAT GRAPHICAL REPRESENTATION OF VALVE, TEE, HYDRANT, METER, ETC. LOCATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY.
11. CONTRACTOR SHALL OBTAIN THE LOCATION AND ELEVATIONS OF THE EXISTING WATER AND SEWER PIPES; AND DENOTE IN AS-BUILT AND RECORD DRAWINGS THE EXISTING MATERIAL TYPE AND LINEAR FOOTAGE REQUIREMENTS AT ALL PROPOSED CROSSINGS BETWEEN THE CITY'S PUBLIC MAINS AND ALL OTHER UTILIES, STORM SEWER, AND/OR OTHER MAINTENANCE OBSTRUCTIONS AND THE FINAL GRADE AT EACH CROSSING FOR RECORDS.
12. CONTRACTOR SHALL NOTIFY THE DESIGNATED CITY OF CONCORD CONSTRUCTION INSPECTOR AND THE PROFESSIONAL ENGINEER OF ANY UTILITY CONFLICTS WHERE THE CITY OF CONCRD'S MINIMUM GROUND COVER AND UTILITY SEPARATIONS CANNOT BE MET TO OBTAIN RESOLUTION AND/OR A FORMAL FIELD REVISION REVIEWED AND APPROVAL BY THE CITY OF CONCORD.

13. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS, RECORD DRAWINGS AND CERTIFICATION OF THE CONSTRUCTED PUBLIC WATER AND SEWER UTILITY MODIFICATION/EXTENSIONS IN COMPLIANCE WITH THE CITY OF CONCORD CODE OF ORDINANCE CHAPTER 62, ARTICLE 3, SECTION 62-85 THROUGH 62-93.
14. RELOCATED AND/OR ADJUSTED WATER SERVICES, SEWER LATERALS, BACKFLOW UNITS AND OTHER APPURTENANCES SHALL COMPLY WITH THE CITY'S STANDARDS, NC PLUMBLING CODE AND CABARRUS COUNTY BUILDING INSPECTION PERMIT REQUIREMENTS. BACKFLOW UNITS SHALL BE RECERTIFIED BY A LICENSED CERTIFIED BACKFLOW TECHNICIAN AND REPORTS SHALL BE SUBMITTED TO THE CITY THROUGH THE ONLINE REPORTING PORTAL LOCATED ON THE CITY OF CONCORD'S WATER RESOURCES BACKFLOW PREVENTION WEB PAGE.

PROJECT SPECIFIC NOTES:

1. PER CITY OF CONCORD CODE OF ORDINANCE CHAPTER 62, ARTICLE 3, SECTION 62-98 (2), ALL MATERIALS, EQUIPMENT, LABOR, AND WORKMANSHIP ASSOCIATED WITH PUBLIC WATER AND / OR SEWER EXTENSION AND/OR MODIFICATION SHALL BE IN ACCORDANCE WITH AND SUBJECT TO THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY'S STANDARD SPECIFICATIONS; THE CITY OF CONCORD'S ORDINANCES, POLICIES, AND STANDARD SEPCIFICATIONS, AND THE NORTH CAROLINA ADMINISTRATIVE CODE FOR WASTEWATER COLLECTION AND WATER DISTRIUBUTION SYSTEMS. IN THE EVENT OF CONFLICT BETWEEN THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY'S STANDARD SPECIFICATIONS; THE CITY OF CONCORD'S ORDINANCES, POLICIES, AND STANDARD SPECIFICATIONS, OR THE NORTH CAROLINA ADMINISTRATIVE CCODE, THE MORE RESTRICTIVE REQUIRMENTS SHALL APPLY.
2. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY CITY OF CONCORD REPRESENTATIVE.
3. ALL SHORING SHALL BE IN ACCORDANCE WITH OSHA TRENCHING STANDARDS PART 1926, SUBPART B, AS AMENDED TO DATE.
4. ANY NECESSARY LANE CLOSURES SHALL FOLLOW GUIDELINES OUTLINED IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
5. IF THE PROPOSED WATER AND/OR SANITARY SEWER MAIN IS INSTALLED WITHIN 12" IN ANY DIRECTION (VERTICALLY OR HORIZONTALLY) OF A GAS MAIN, THE CONTRACTOR SHALL NOTIFY PIEDMONT NATURAL GAS COMPANY (704-525-5585).
6. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS DIRECTED.
7. IF ADDITIONAL WORK SPACE IN NEEDED, AN ENCROACHMENT SHALL BE AGREED UPON BETWEEN CONTRACTOR AND PROPERTY OWNER.
8. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS IS FOR THE USE OF THE CONTRACTOR IN PROVIDING PROTECTION FOR THE UTILITIES DURING CONSTRUCTION OPERATIONS. NCDOT, DESIGN CONSULTANT, AND/OR AGENT SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF LOCATION, SIZE, DEPTH, OR COMPLETENESS OF THE INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
9. CONTRACTOR SHALL SUPPORT AND PROTECT ANY EXISTING UNDERGROUND UTILITIES ENCOUNTERED DURING TRENCH EXCAVATION AND/OR PIPE INSTALLATION.
10. CITY OF CONCORD SHALL BE NOTIFIED TWO WEEKS PRIOR TO THE BEGINNING OF WATER AND/OR SANITARY SEWER WORK. CONTACT CITY OF CONCORD AT (704) 920-5555 TO PROVIDE NOTIFICATION.
11. WATER AND SEWER LINES SHALL REMAIN ACTIVE DURING CONSTRUCTION.
12. SANITARY SEWER LATERAL LOCATIONS ARE APPROXIMATE AND SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS. ALL 4" SANITARY SEWER LATERALS SHALL HAVE A MIN. 1% SLOPE.

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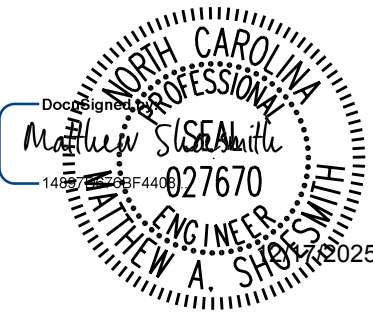
PROJECT REFERENCE NO.

U-5956

SHEET NO.

UC-03A

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13. ALL PROPOSED WATER LINES, UNLESS OTHERWISE INDICATED ON THE PLANS, SHALL BE RESTRAINED JOINT DUCTILE IRON PIPE PRESSURE CLASS 350. ALL PROPOSED SEWER LINES, UNLESS OTHERWISE INDICATED ON THE PLANS, SHALL BE CERAMIC EPOXY LINED PUSH-ON JOINT DUCTILE IRON PIPE PRESSURE CLASS 350.

14. ALL PROPOSED WATER AND SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH CITY OF CONCORD STANDARD SPECIFICATIONS.

15. CONTRACTOR SHALL MINIMIZE SHUTDOWN TIMES OF WATER AND SEWER FACILITIES, AND COORDINATE WITH CITY OF CONCORD AND THE LOCAL FIRE DEPARTMENT.

16. REVIEW AND APPROVAL OD THE PLANS DOES NOT RELIEVE THE OWNER, CONTRACTOR, OR DEVELOPER FROM MEETING THE REQUIREMENTS OF THE CITY OF CONCORD'S OR CABARRUS COUNTY ORDINANCES, POLICIES, AND STANDARD SPECIFICATIONS, (AS APPLICABLE), CONCORD WATER & SEWER POLICIES AND TECHNICAL SPECIFICATIONS, THE "STANDARD SPECIFICATION FOR WASTEWATER COLLECTION & WASTE DISTRIBUTION FOR CABARRUS COUNTY (WSACC MANUAL) AND ANY OTHER LOCAL, STATE, AND FEDERAL REGULATIONS & APPROVALS.

17. THE CONTRACTOR MUST CONTACT THE CITY OF CONCORD ENGINEERING CONSTRUCTION MANAGER AT 704-920-5425 AT LEAST 24-HOURS PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITY.

18. THE EXISTING WATER MAIN VALVE RIMS AND STEMS AND THE EXISTING SEWER MAIN MANHOLES RIMS ARE TO BE RAISED OR LOWERED TO FINAL GRADE, AS APPLICABLE AND AT LEAST 3-FT OF GROUND COVER IS TO BE MAINTAINED OVER THE EXISTING UTILITIES AT ALL TIMES PER THE CITY OF CONCORD CODE OF ORDINANCE CHAPTER 62, ARTICLE 3, SECTION 62-98.

19. PER THE CITY OF CONCORD CODE OF ORDINANCE CHAPTER 62, ARTICLE 3, SECTION 62-98- THE FOLLOWING MINIMUM SEPARATIONS MUST BE MAINTAINED, UNLESS OTHERWISE APPROVED BY THE CITY.

A. A MINIMUM HORIZONTAL SEPARATION OF FIVE FEET SHALL BE MAINTAINED BETWEEN ANY TYPE FO MAINTENANCE OBSTRUCTION AND THE CITY'S WATER DISTRIBUTION LINES, WASTEWATER COLLECTION LINES, AND ASSOCIATED APPURTENANCES, UNLESS AN EXCEPTION IS GRANTED. GREATER SEPARATION DISTANCES MAY BE REQUIRED AS SPECIFIED BY FEDERAL, STATE, OR LOCAL REGULATIONS.

B. A MINIMUM VERTICAL SEPARATION OF TWO FEET SHALL BE MAINTAINED BETWEEN ANY TYPE OF MAINTENANCE OBSTRUCTION, INCLUDING BUT NOT LIMITED TO ANY OTHER UTILITY PROVIDER'S LINES OR EQUIPMENT, AND THE CITY WATER DISTRIBUTION LINES, WASTEWATER COLLECTION LINES, AND ASSOCIATED APPURTENANCES, UNLESS AN EXCEPTION IS GRANTED. IF AN XCEPTION IS GRANTED, A MINIMUM VERTICAL SEPARATION OF ONE FOOT MUST BE MAINTAINED AND THE CITY WATER DISTRIBUTION LINES, WASTEWATER COLLECTION LINES, AND ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE OR AN APPROVED FERROUS MATERIAL WITH JOINTS THAT ARE EQUIVALENT TO POTABLE WATER MAIN STANDARDS FOR A DISTANCE OF TEN FEET ON EITHER SIDE OF THE POINT OF CROSSING. GREATER SEPARATION DISTANCES MAY BE REQUIRED AS SPECIFIED BY FEDERAL, STATE, OR LOCAL REGULATIONS.

C. A MINIMUM HORIZONTAL SEPARATION OF TEN FEET SHALL BE MAINTAINED BETWEEN THE CITY WATER DISTRIBUTION SYSTEM AND WASTEWATER COLLECTION LINES, AND ASSOCIATED APPURTENANCES, UNLESS AN EXCEPTION IS GRANTED.

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UTILITY RELOCATION SPECIAL PROVISIONS:

1.

PRIOR TO UTILITY INSTALLATION, THE CONTRACTOR MUST ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF CONCORD ENGINEERING STAFF, AND THE CITY OF CONCORD CONSTRUCTION INSPECTION STAFF.
2.

THE CONTRACTOR MUST ATTEND AN ON-SITE MEETING WITH THE CITY OF CONCORD PERSONNEL TO COORDINATE AND REVIEW THE BYPASS PUMPING PLAN AND EQUIPMENT. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE CITY OF CONCORD PERSONNEL WITH A DETAILED BYPASS PUMPING PLAN FOR THE PURPOSES OF RELOCATING THE EXISTING 8-INCH SEWER MAIN. THIS DETAILED BYPASS PUMPING PLAN WILL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

A.

TYPE/SIZE/DESIGN PARAMTERS OF PUMPS THAT WILL BE UTILIZED, INCLUDING THE SUPPLIER'S NAME AND CONTACT INFORMATION (NOTE: REDUNDANT PUMPS ARE REQUIRED); PROJECTED INITIAL FLOW AND PEAK SEWER FLOW (SEE ATTACHED BYPASS PUMP OPERATION CONTINGENCY ACTION PLAN FOR ADDITIONAL INFORMATION).

B.

GENERAL WORK PLAN HIGH LIGHTING THE DIFFERENT STEPS REQUIRED TO COMPLETE THE BYPASS PUMPING OPERATION TASK (I.E. SUCTION/ DISCHRG MANHOLE LOCATIONS, A LIST OF MATERIALS/EQUIPMENT TO BE USED, ESTIMATED NUMBER OF WORKERS AND THEIR CORRESPONDING JOB CLASSIFICATIONS, PROJECTED TIME FRAME OF OPERATION, SUMMARY OF TYPICAL ROUTINE INSPECTIONS REGARDING BYPASS PUMP SYSTEM, EMERGENCY PLAN IF NEEDED, ETC.)
3.

THE CONTRACTOR SHOULD PROVIDE THE CITY OF CONCORD PERSONNEL WITH A SEQUENCE OF CONSTRUCTION OPERATIONS AND PROJECTED TIMELINES FOR PROPOSED UTILITY WORK REQUIRED ON THE PROJECT (ELECTRIC, WATER, SEWER). THIS SEQUENCE OF OPERATIONS SHOULD INCLUDE A SUMMARY OF HOW EXISTING UTILITIES WILL BE PROTECTED DURING CONSTRUCTION OPERATIONS.
4.

THE CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS/CATALOG CUTS THAT RELATE TO PROPOSED SEWER FACILITIES THAT WILL BE OPERATE AND MAINTAIN BY THE CITY (I.E. PIPING, MANHOLES, COUPLINGS, END CONNECTIONS, ETC.) TO CITY OF CONCORD CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
5.

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND/OR ALL ASSOCIATED COSTS, FINES, FEES OR LEVIES, INCLUDING BUT NOT LIMITED TO: CITY'S LABOR, EQUIPMENT, ADMINISTRATIVE COSTS, AND/OR LEGAL FEES; FINES IMPOSED BY ANY REGULATORY AGENCIES; AND/OR ANY THIRD PARTY CLAIMS WHICH MIGHT BE RESULTANT OF SANITARY SEWER OVERFLOWS AND/OR SUBSEQUENT ENVIRONMENTAL IMPACTS CAUSED BY THE CONTRACTOR DURING THE PERFORMANCE OF THE CONSTRUCTION ACTIVITIES WITHIN THIS CONTRACT.
6.

ALL EXCAVATION IS CONSIDERED UNCLASSIFIED. ANY PRELIMINARY GEOTECHNICAL INFORMATION SHOULD NOT BE CONSIDERED EXHAUSTIVE, AND THE CONTRACTOR SHOULD PERFORM ITS OWN INVESTIGATION BEFORE BIDDING THE JOB.
7.

FOR PAVEMENT REPAIR SPECIFICATIONS SHALL BE TO NCDOT MINIMUM STANDARDS OR SHALL MATCH THE EXISTING CONDITIONS, HOWEVER, THE MOST RESTRICTIVE REQUIREMENT SHALL APPLY.
8.

NO EXCAVATION SUBJECT TO VEHICULAR AND PEDESTRIAN TRAFFIC SHALL REMAIN OPEN OVERNIGHT OR UNSUPERVISED FOR ANY REASON, THE SITE AND MATERIALS MUST BE SECURE AT THE END OF EACH DAY.

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.

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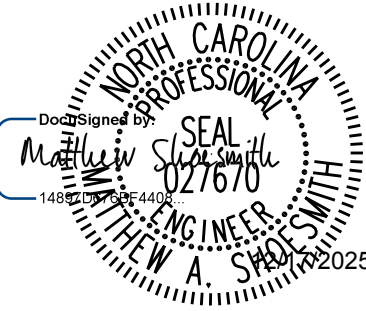
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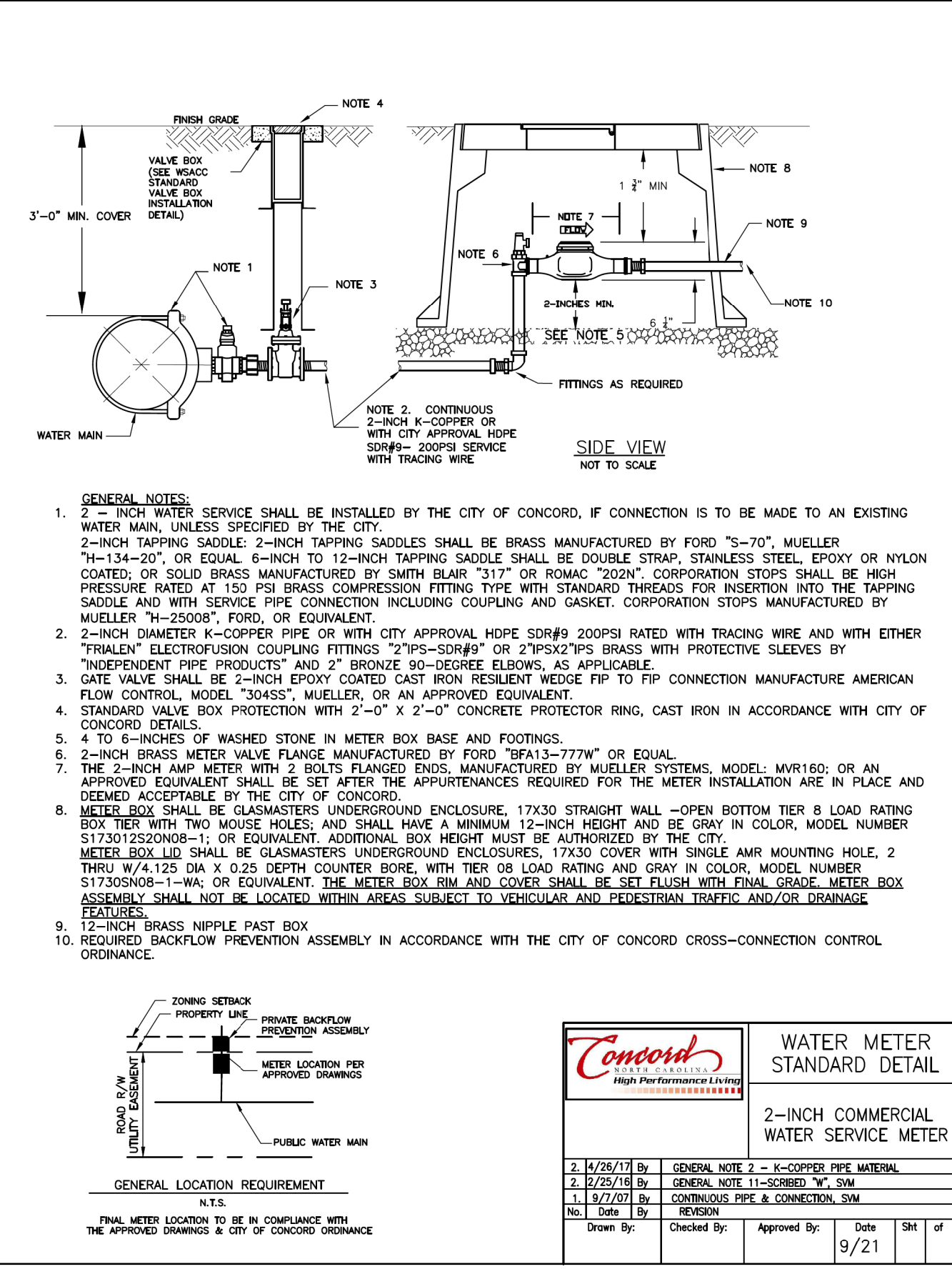
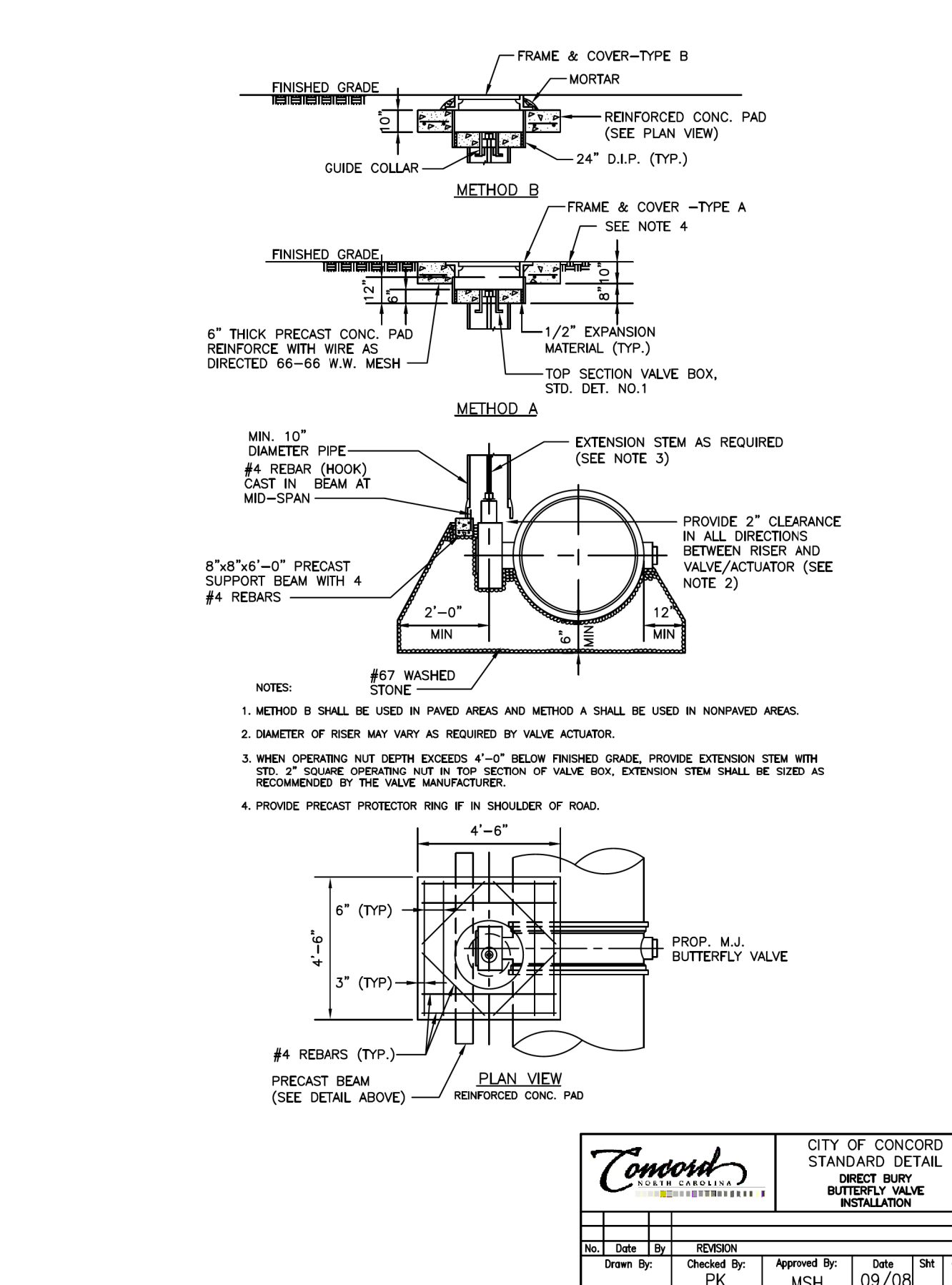
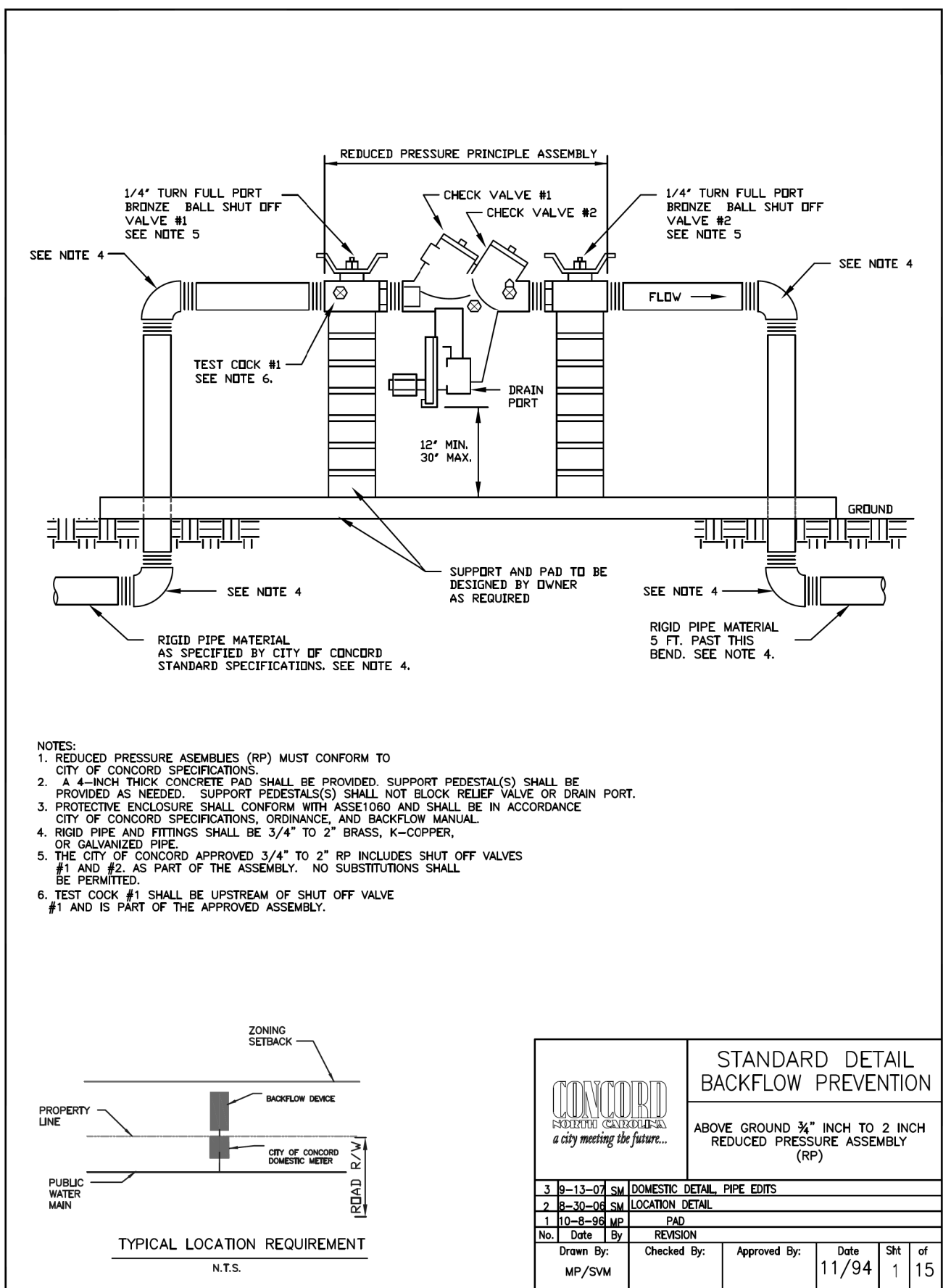
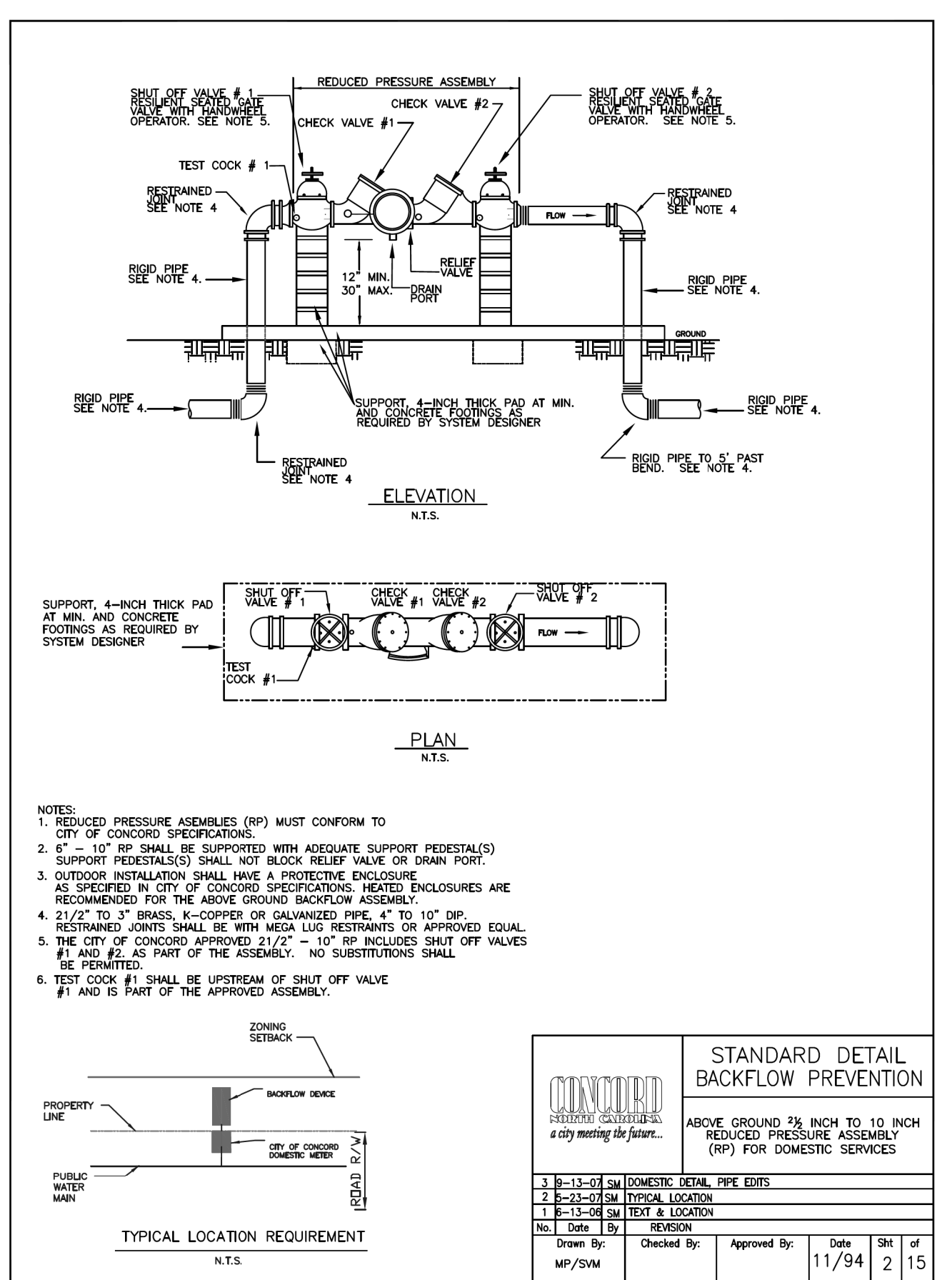
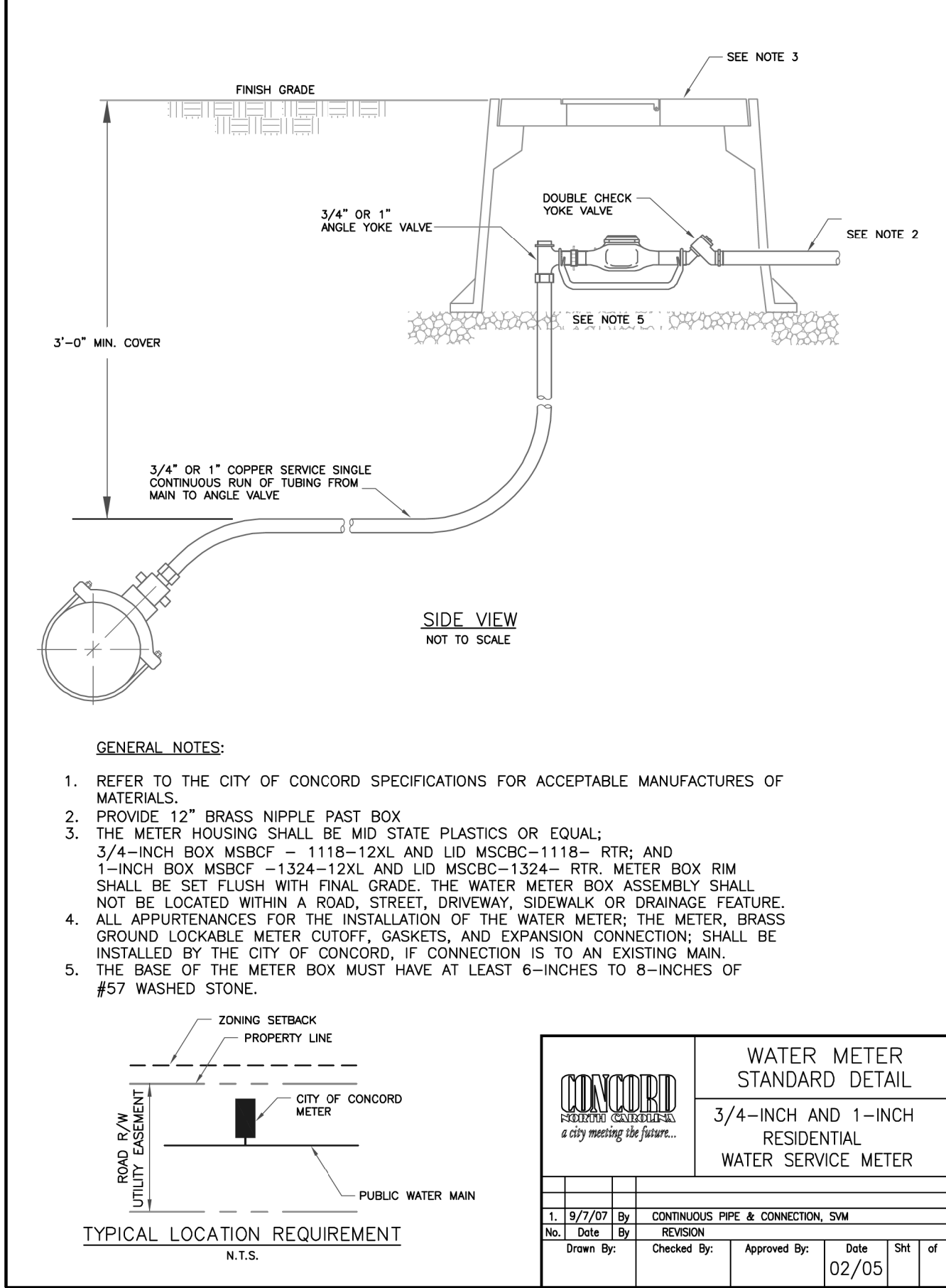
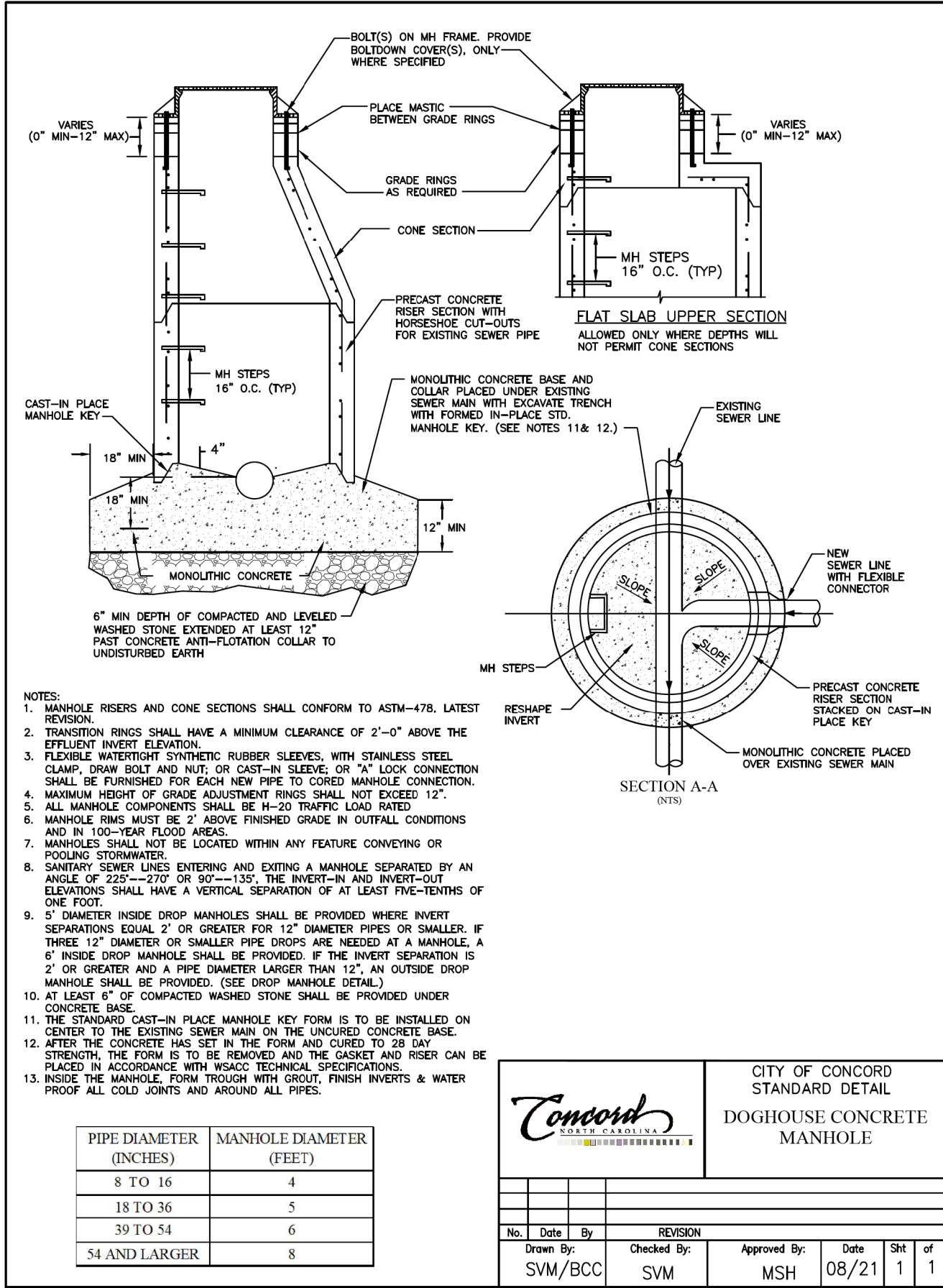
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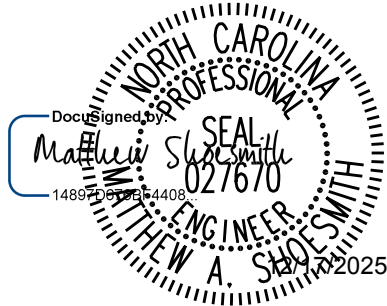
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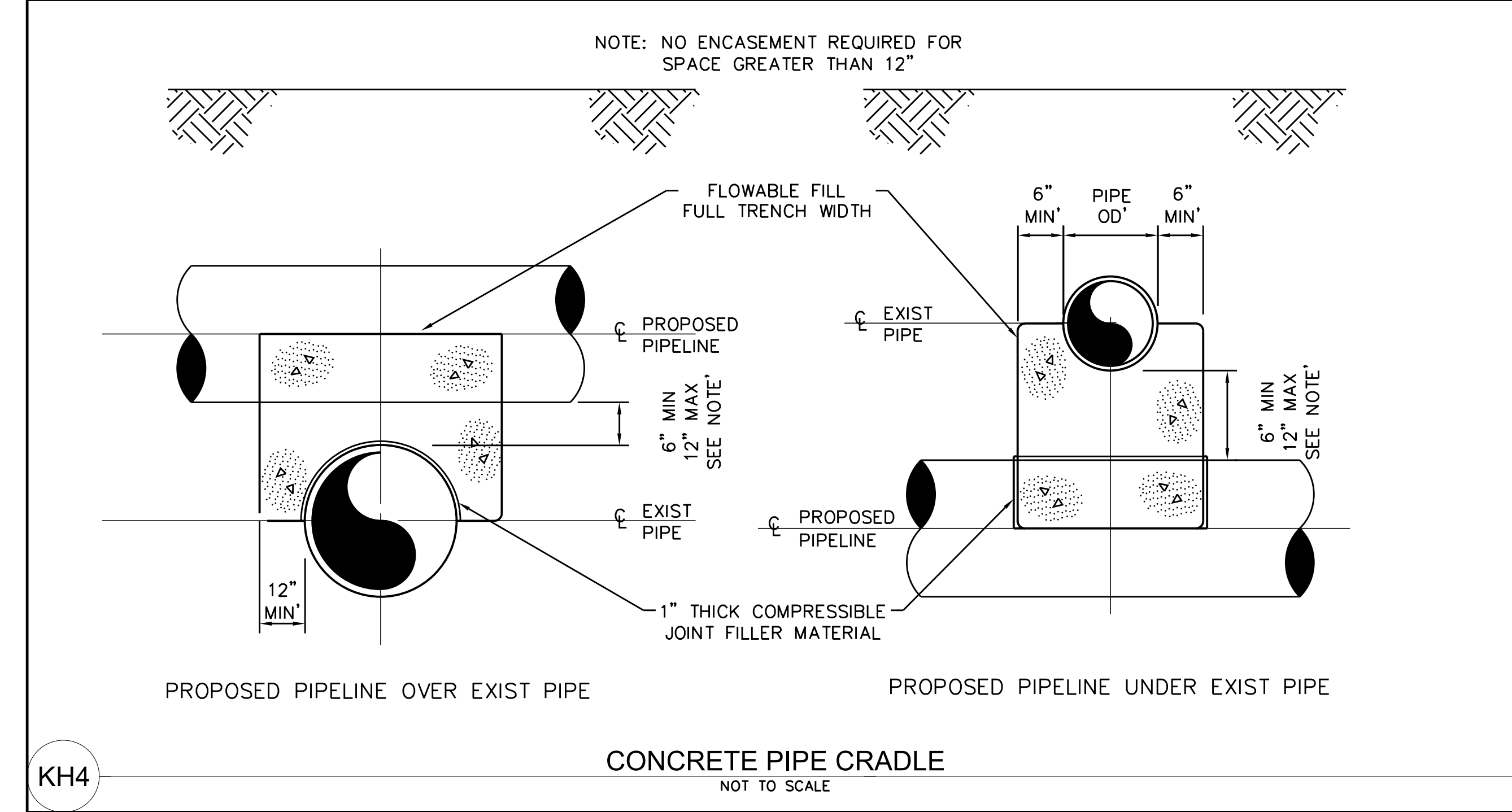
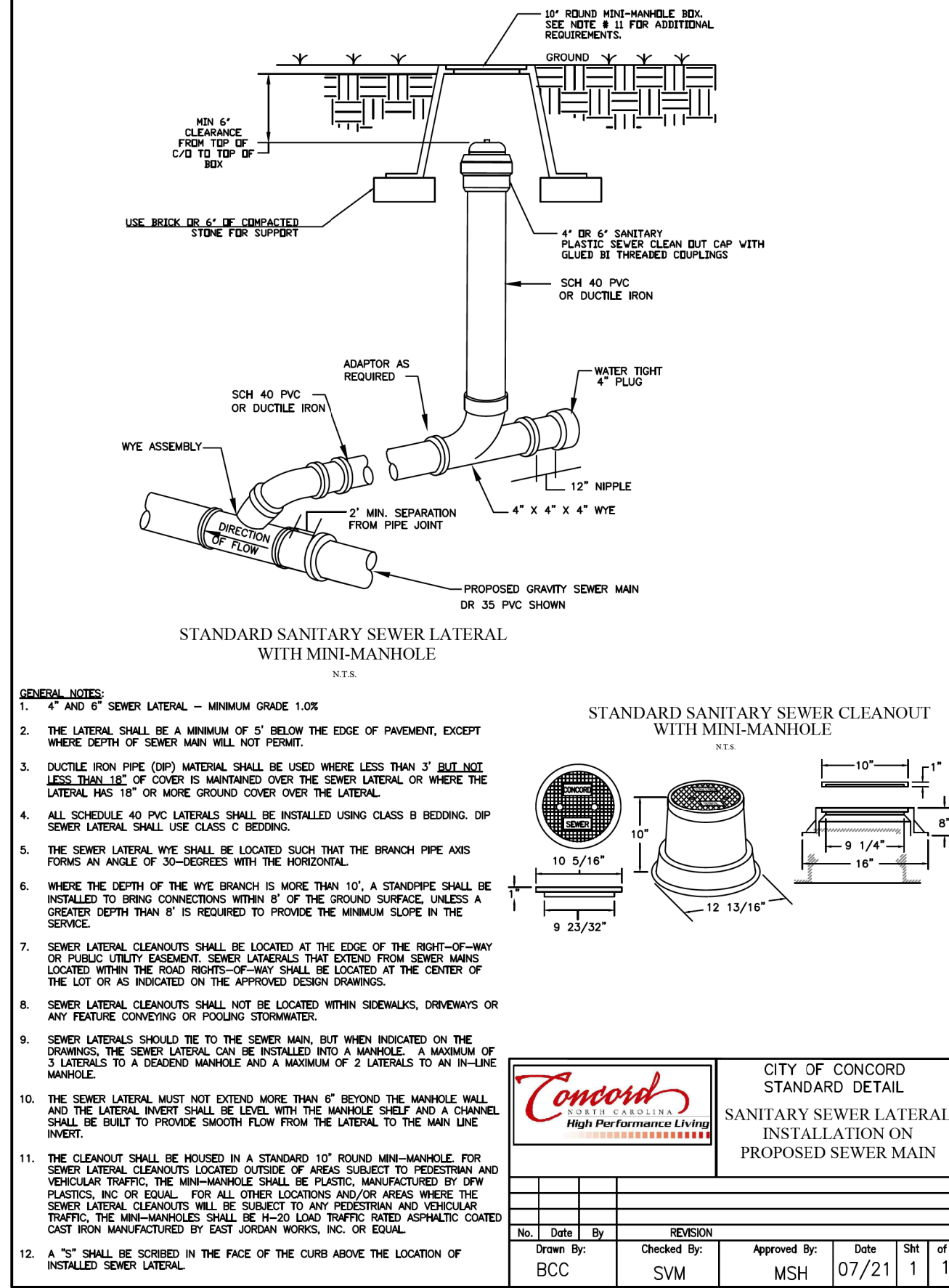
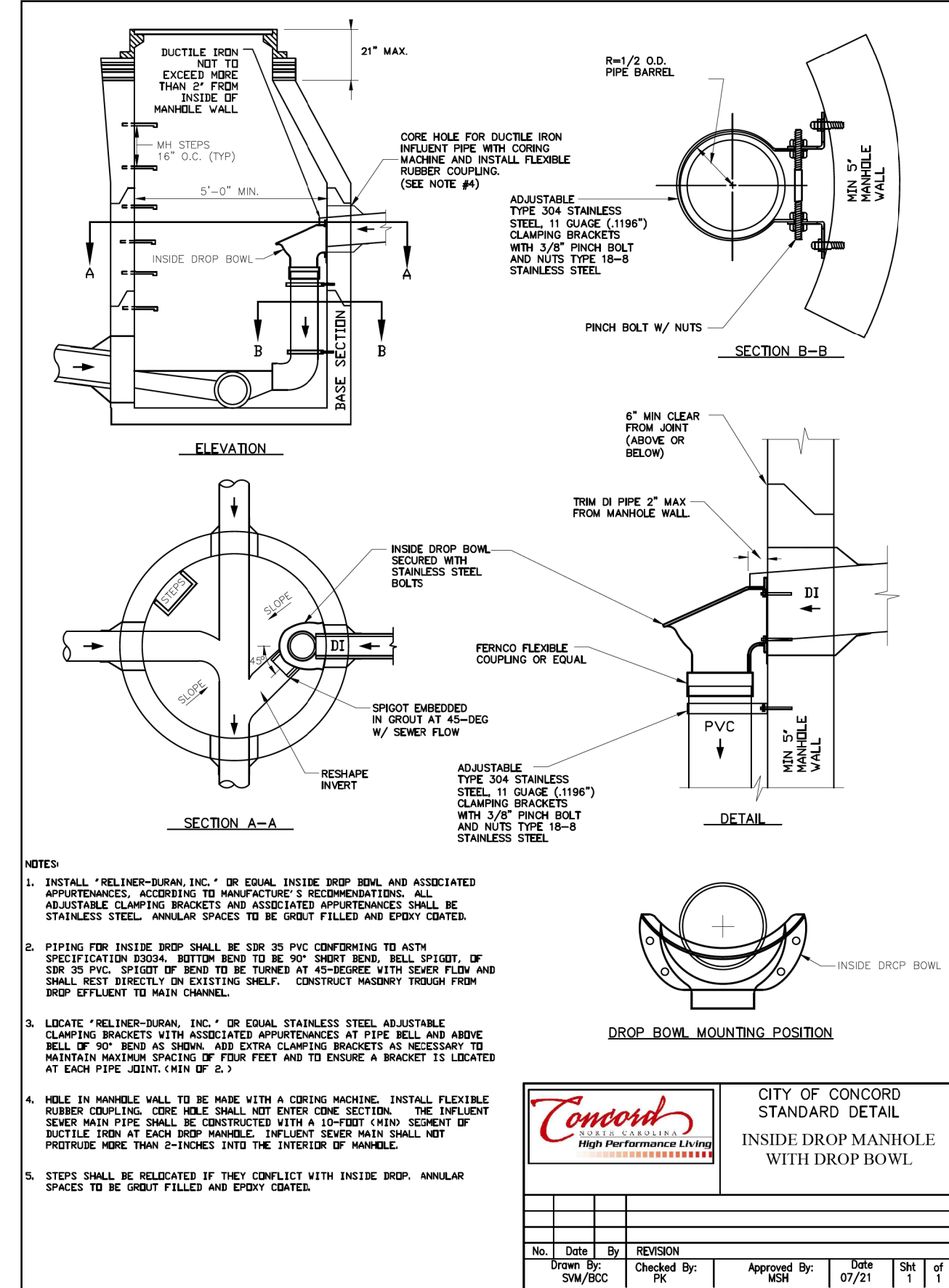
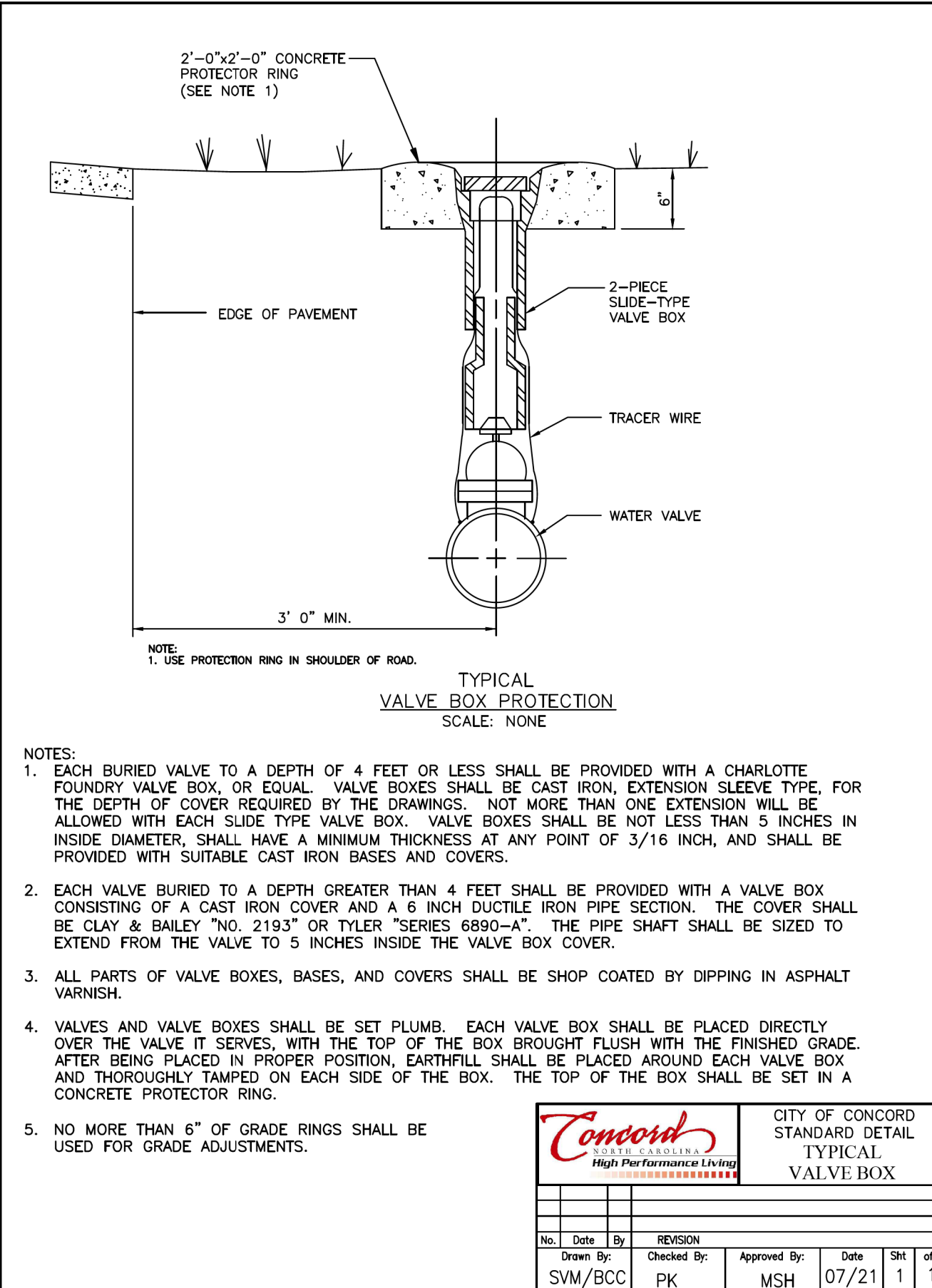
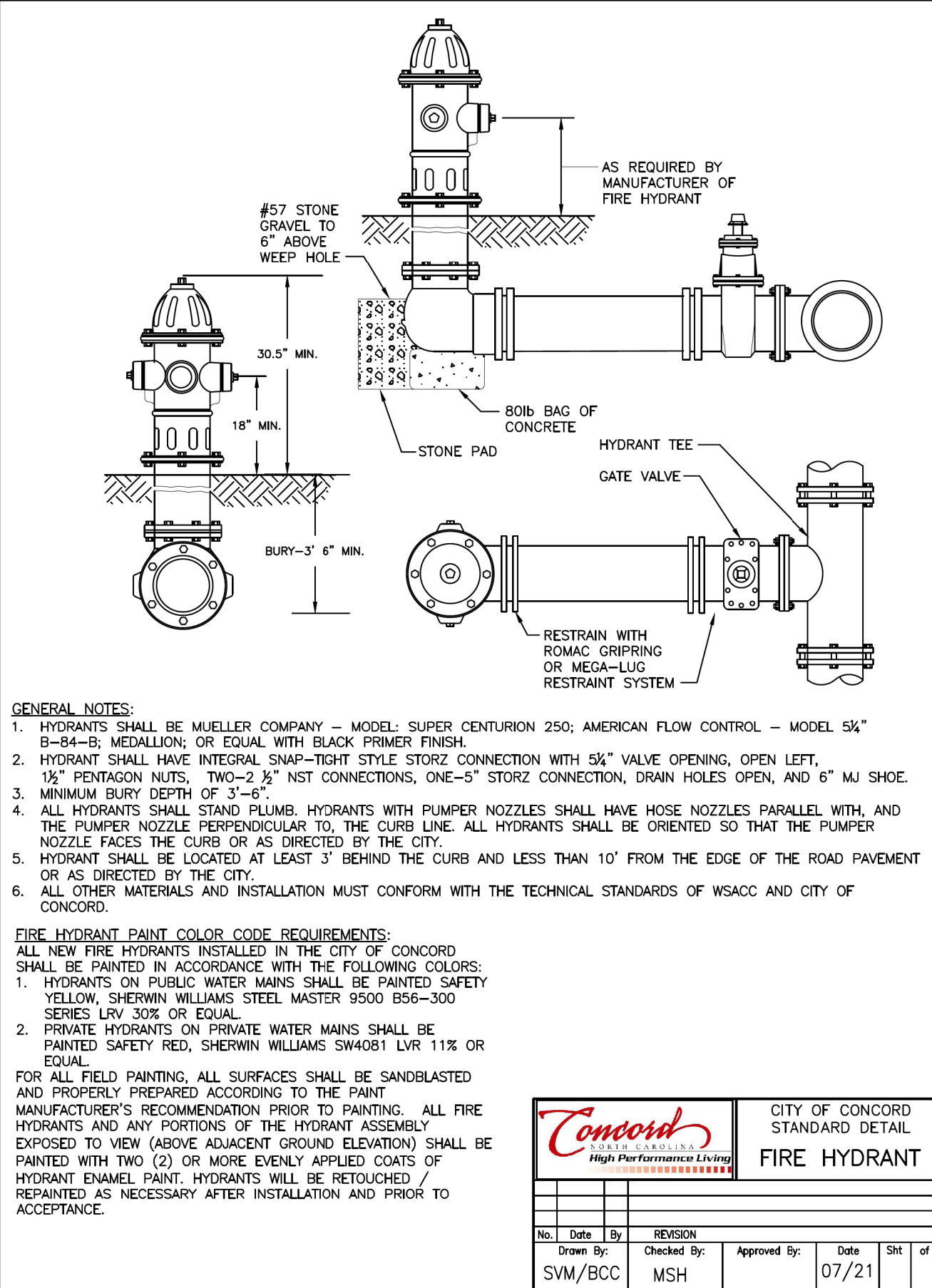
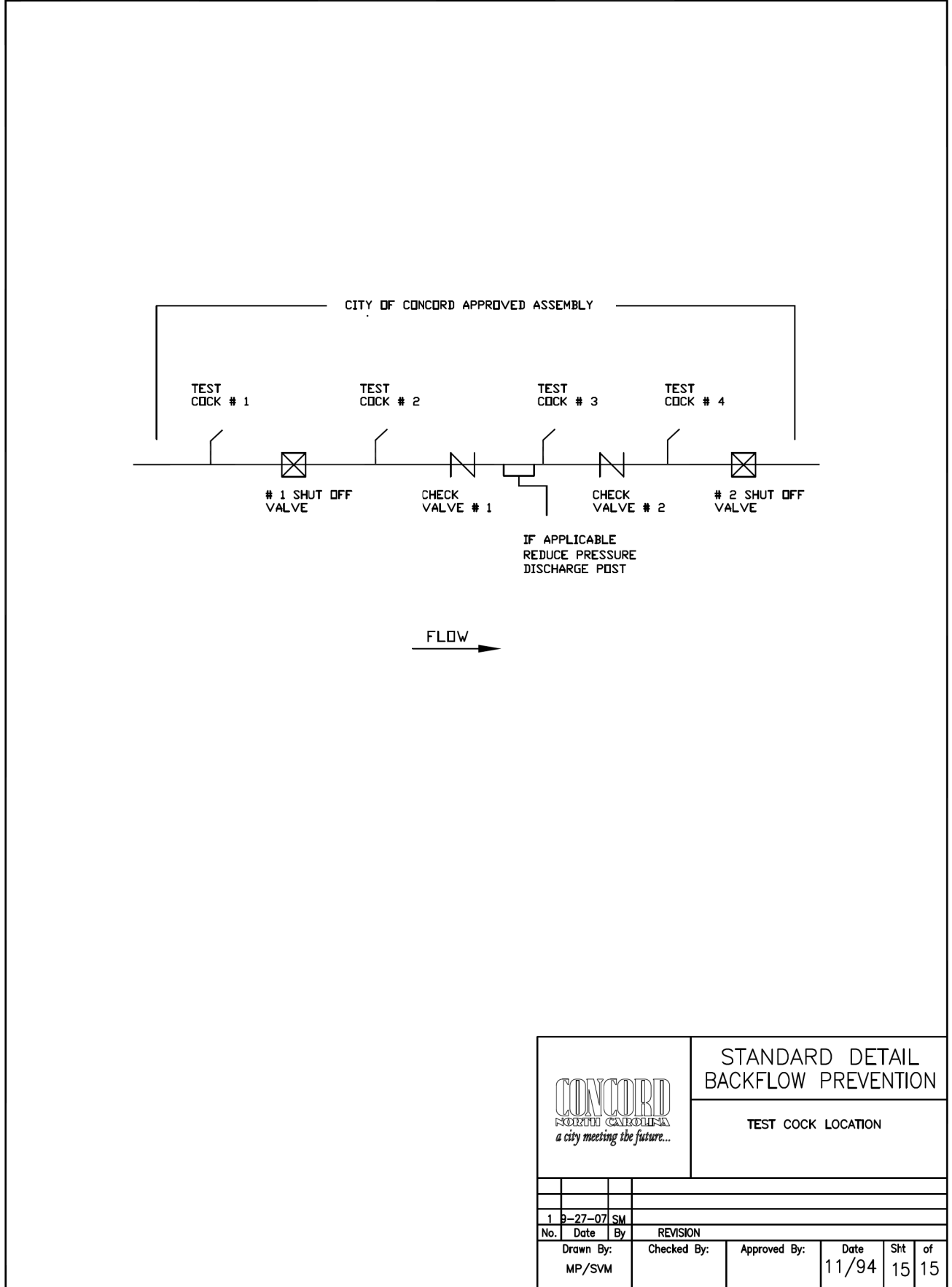


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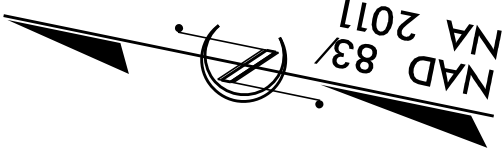
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DESIGNED BY: Matthew S. Smith
SEAL: 027670
DATE: 07/2025
NEW A. SMOCK

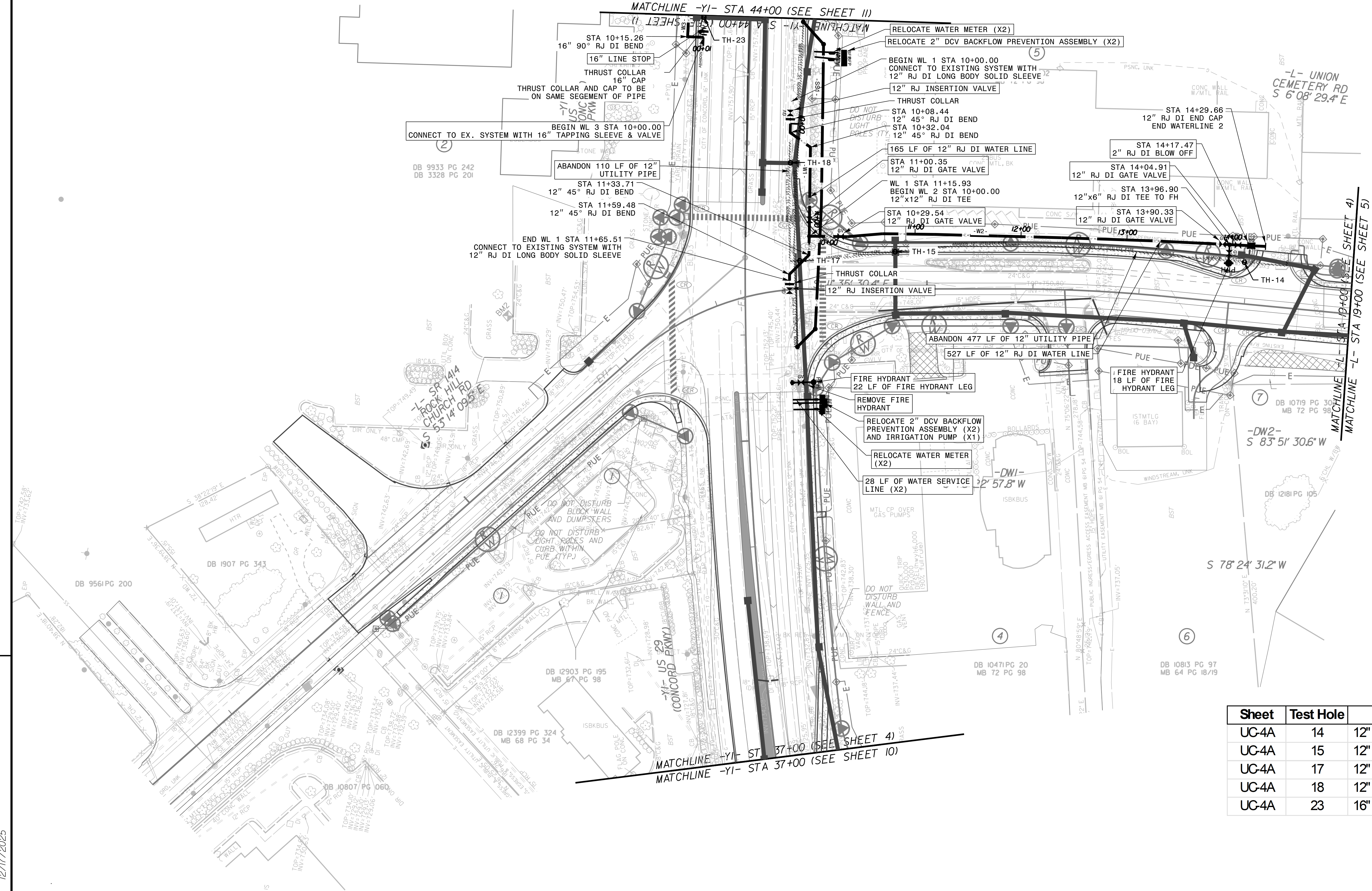
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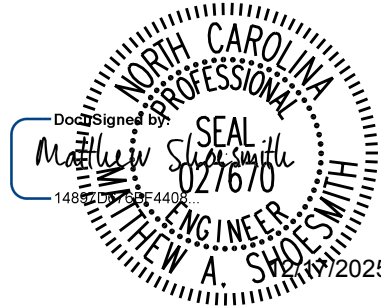
PROJECT NOTES:
THRUST COLLAR TO BE CURED BEFORE INSTALLATION OF INSTERTION VALVE OR LINE STOP.
THRUST COLLAR TO BE ON SAME STRING OF PIPE AS LONG BODY SLEEVE.

REVISIONS

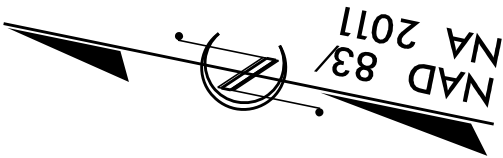


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UC-4A	17	12" METAL WATERMAIN	3.02	752.25
UC-4A	18	12" METAL WATERMAIN	3.6	754.52
UC-4A	23	16" METAL WATERMAIN	5.09	756.8





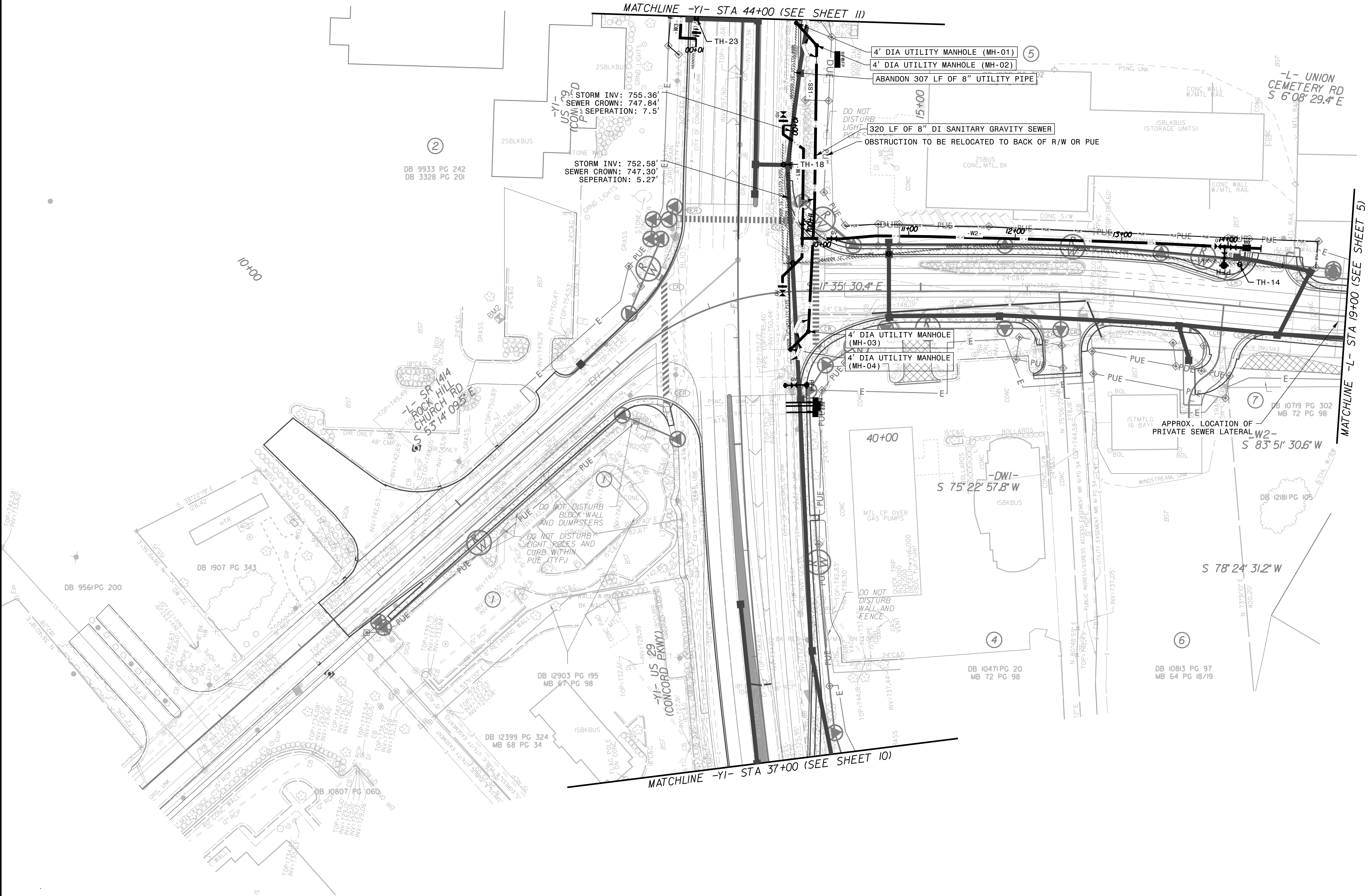
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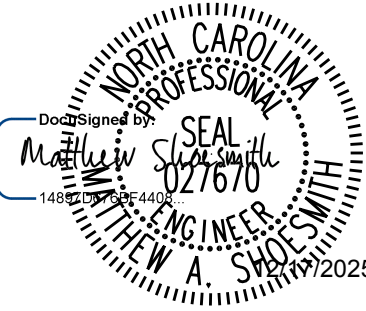
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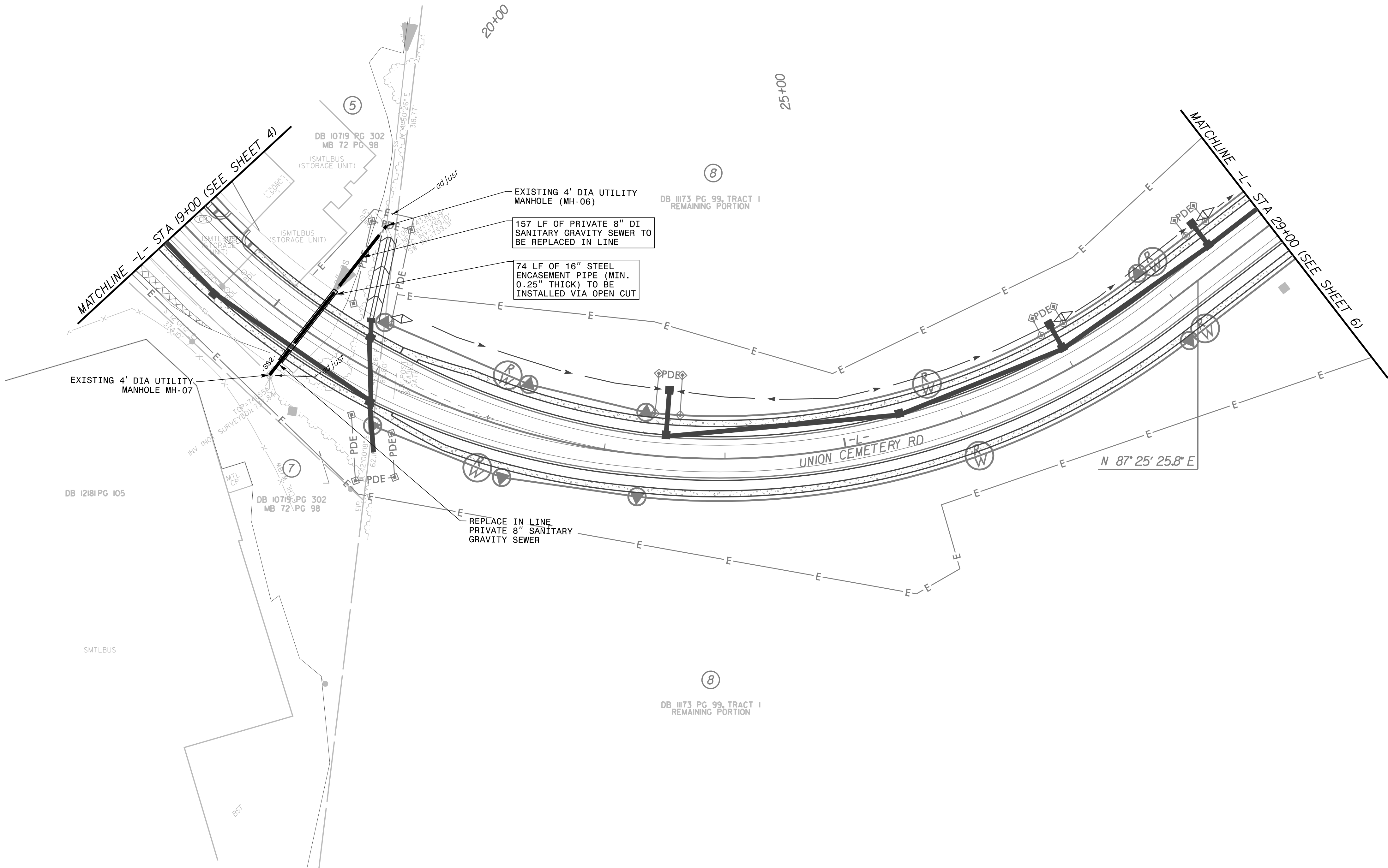
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UC-07	26	12" METAL WATER MAIN	3.23	757.65
UC-07	29	12" METAL WATER MAIN	3.46	754.81
UC-07	30	12" METAL WATER MAIN	3.43	749.05
UC-07	31	12" METAL WATER MAIN	2.74	745.07
UC-07	32	12" METAL WATER MAIN	3.16	746.45



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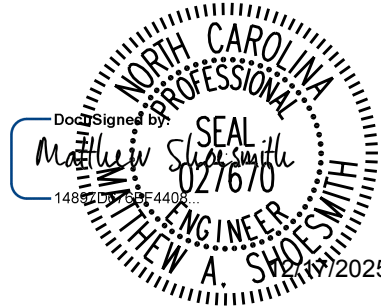
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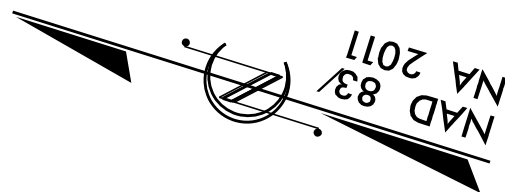
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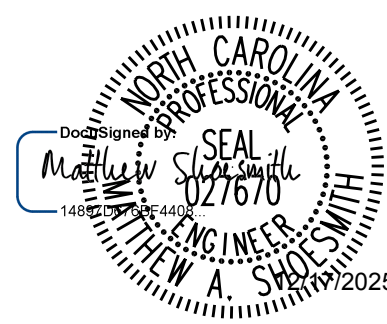
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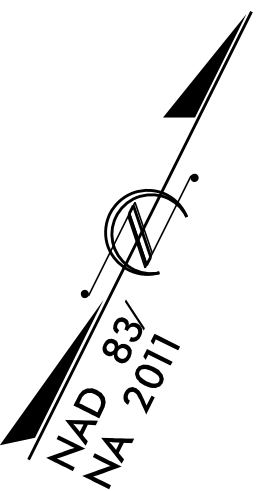
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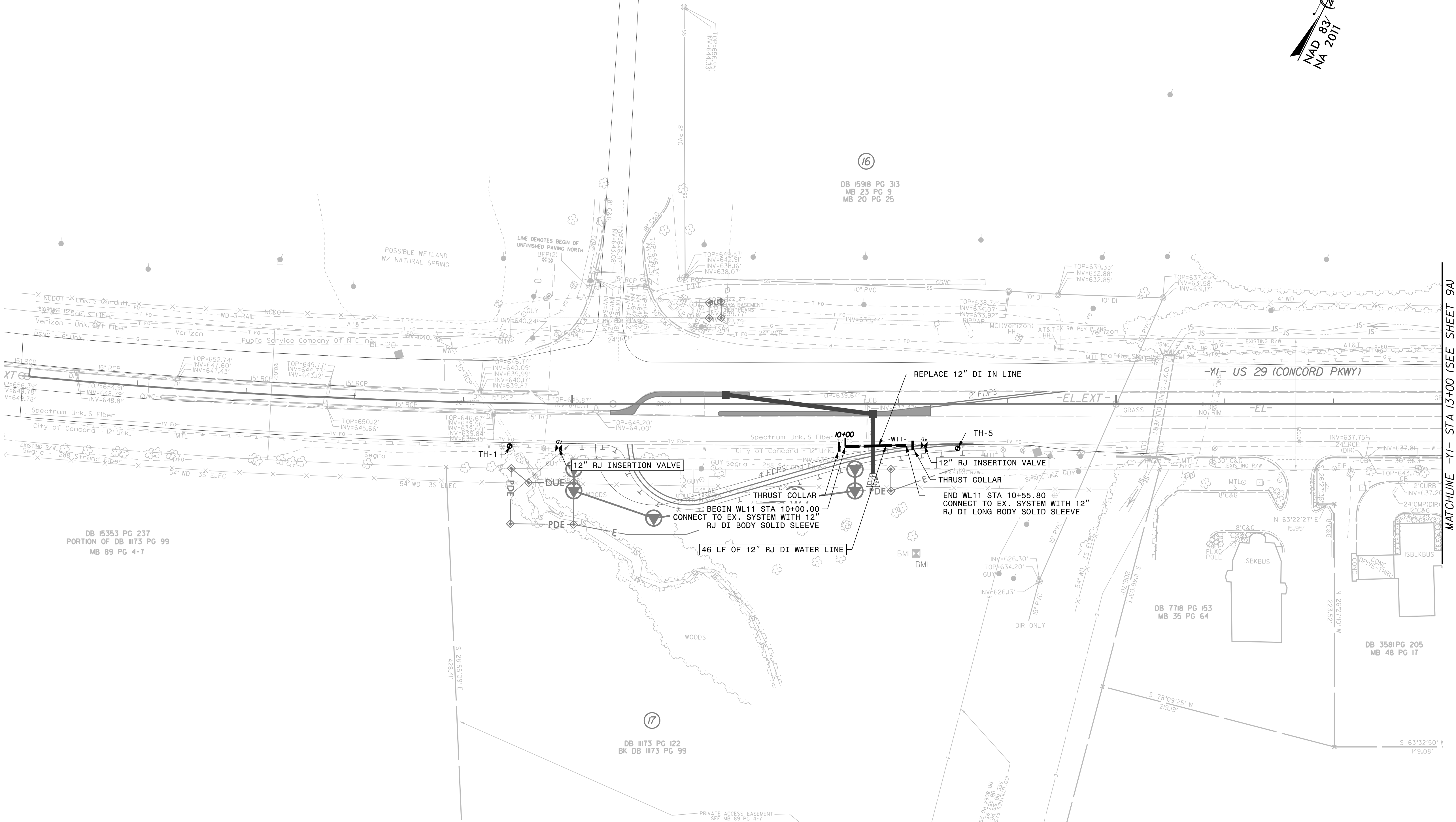
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PROJECT NOTES:
THRUST COLLAR TO BE CURED BEFORE INSTALLATION OF INSERTION VALVE OR LINE STOP.
THRUST COLLAR TO BE ON SAME STRING OF PIPE AS LONG BODY SLEEVE.



Sheet	Test Hole	Type	Cover	Top Elev
UC-09	1	12" DIP WATERMAIN	3.38	642.49
UC-09	5	12" DIP WATERMAIN	3.73	638.27





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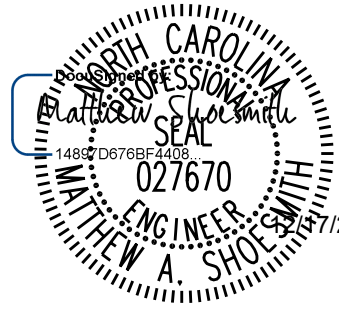
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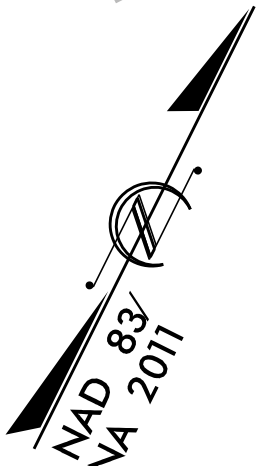
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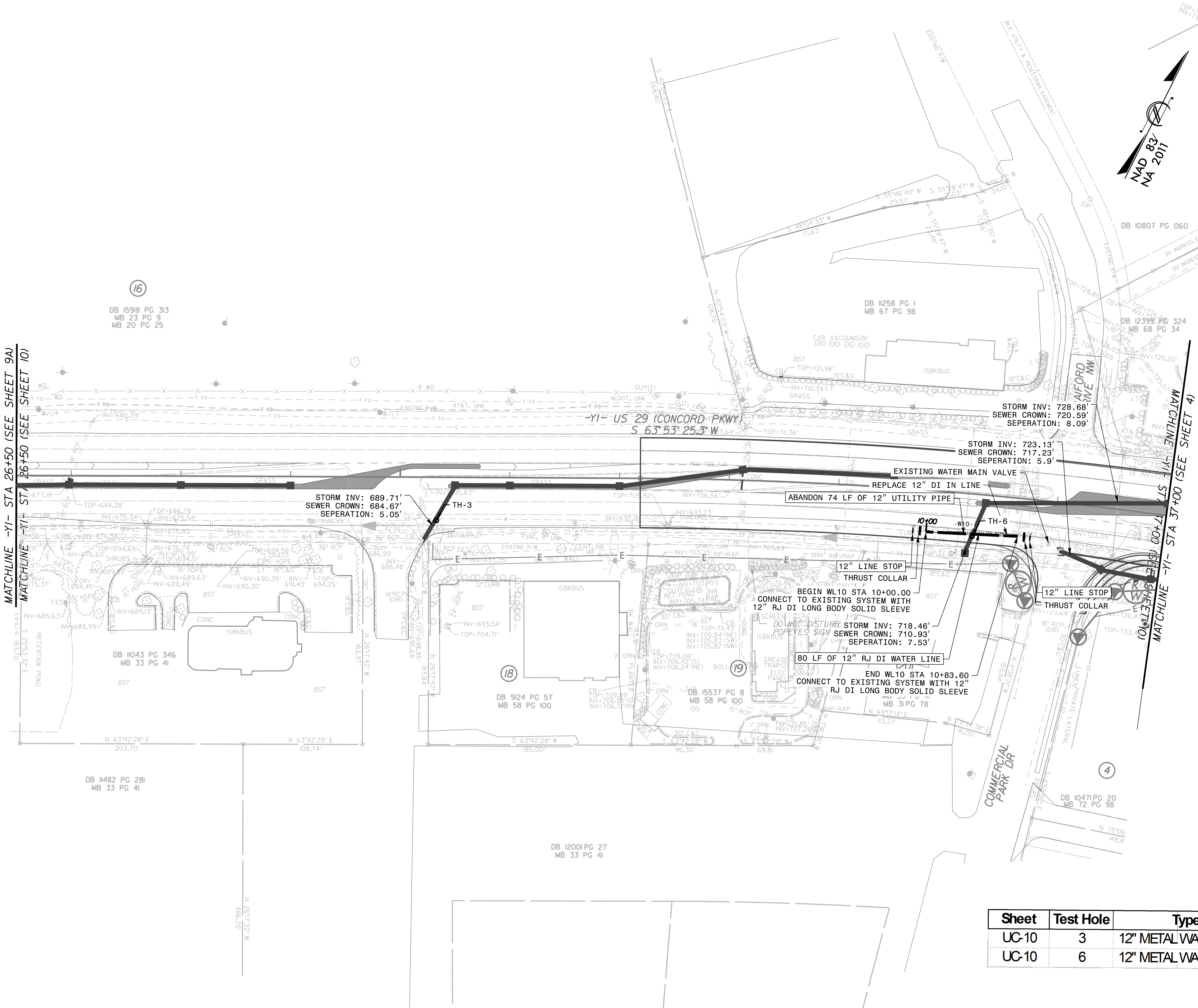
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Sheet	Test Hole	Type	Cover	Top Elev
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UC-10	6	12" METAL WATERMAIN	4.71	718.69

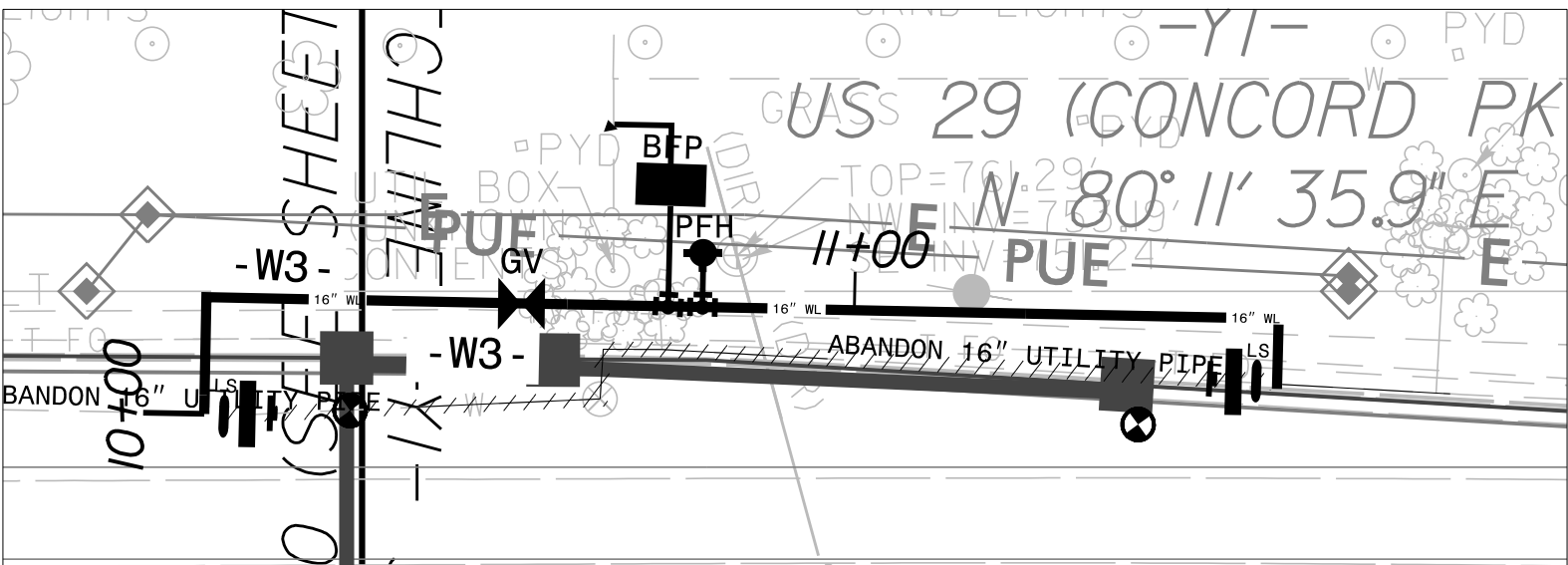


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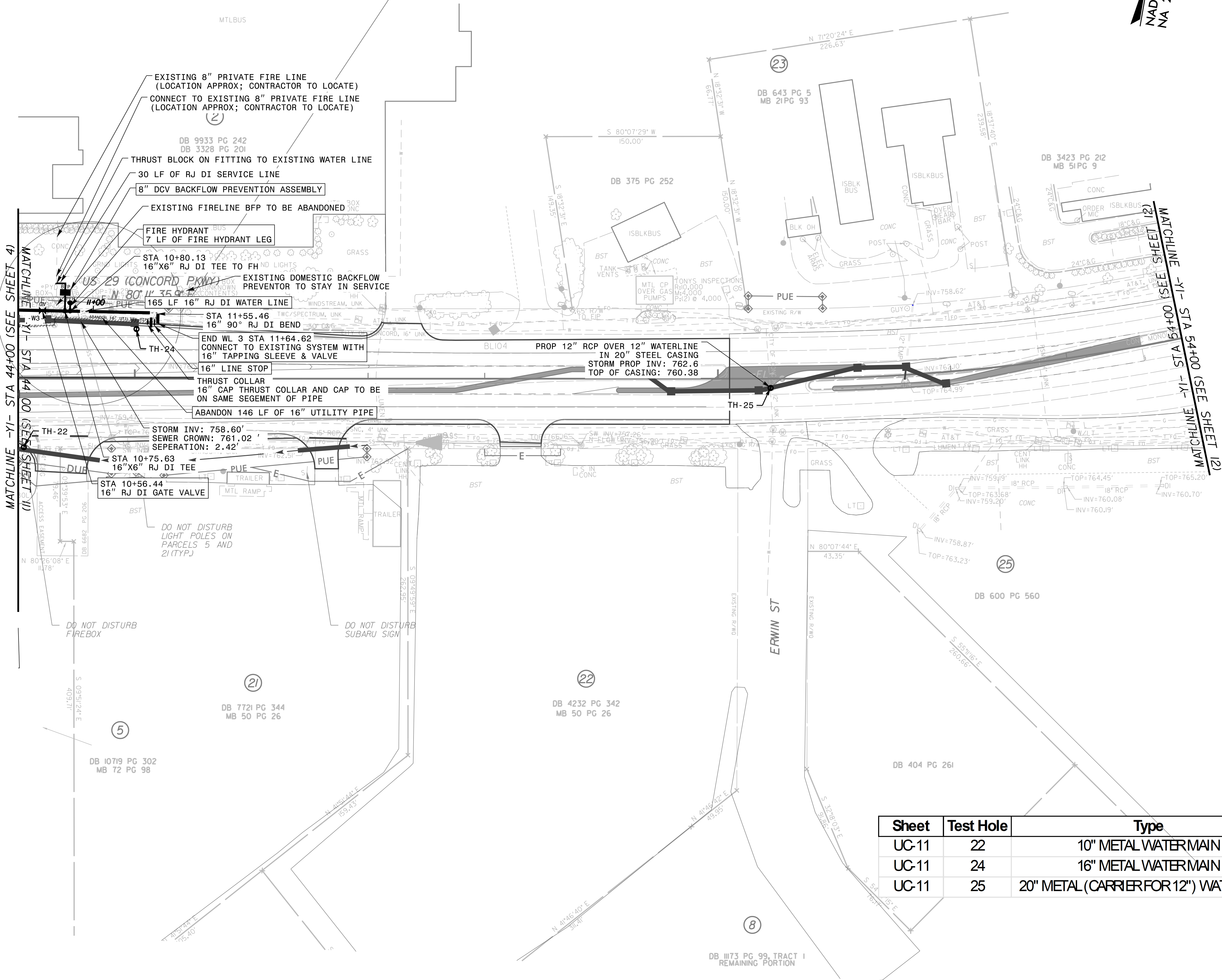
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DETAIL A: RELOCATION OF WATERLINE W3



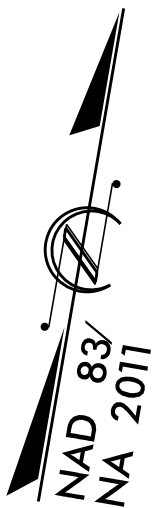
- NOTES:
1. EXISTING BACKFLOW PREVENTION ASSEMBLIES AND ASSOCIATED SERVICE CONNECTIONS SHALL REMAIN IN SERVICE AT ALL TIMES. A SINGLE SHUTDOWN SHALL BE PERMITTED ON A DAY AND TIME ACCEPTABLE TO BOTH THE UTILITY OWNER AND THE USER TO RECONNECT THE SERVICE AND RELOCATE THE BACKFLOW PREVENTION ASSEMBLY.
 2. EXISTING FDC SHALL BE RELOCATED AND PLACED IN SERVICE WITH THE 8" DCV BACKFLOW PREVENTOR. FDC RELOCATION SHALL BE CONSIDERED INCIDENTAL TO THE RELOCATION OF THE 8" DCV BACKFLOW PREVENTOR.
 3. CONTRACTOR TO VERIFY STATUS AND CONFIGURATIONS OF EXISTING SERVICE CONNECTIONS WITH UTILITY OWNER AND USER PRIOR TO SETTING TEES OR MAKING TAPS FOR SERVICE OR BRANCH CONNECTIONS.

PROJECT NOTES:
THRUST COLLAR TO BE CURED BEFORE INSTALLATION OF INSERTION VALVE OR LINE STOP.
THRUST COLLAR TO BE ON SAME STRING OF PIPE AS LONG BODY SLEEVE.

Kimley»Horn

200 S TYRON STREET, SUITE 200
CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.
CONST. REV.



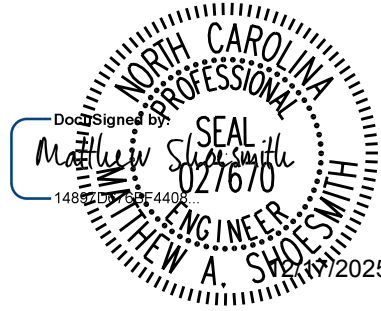
PROJECT REFERENCE NO.	SHEET NO.
U-5956	UC-11
UTILITY DESIGN ENGINEER	

Seal of Matthew S. Smith, Professional Engineer, No. 027670, State of North Carolina, expires 12/31/2025.

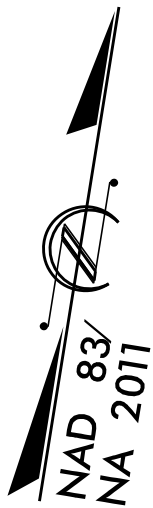
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Sheet	Test Hole	Type	Cover	Top Elev
UC-11	22	10" METAL WATERMAIN	4.01	756.1
UC-11	24	16" METAL WATERMAIN	4.78	758.12
UC-11	25	20" METAL (CARRIER FOR 12") WATERMAIN	5.51	760.38





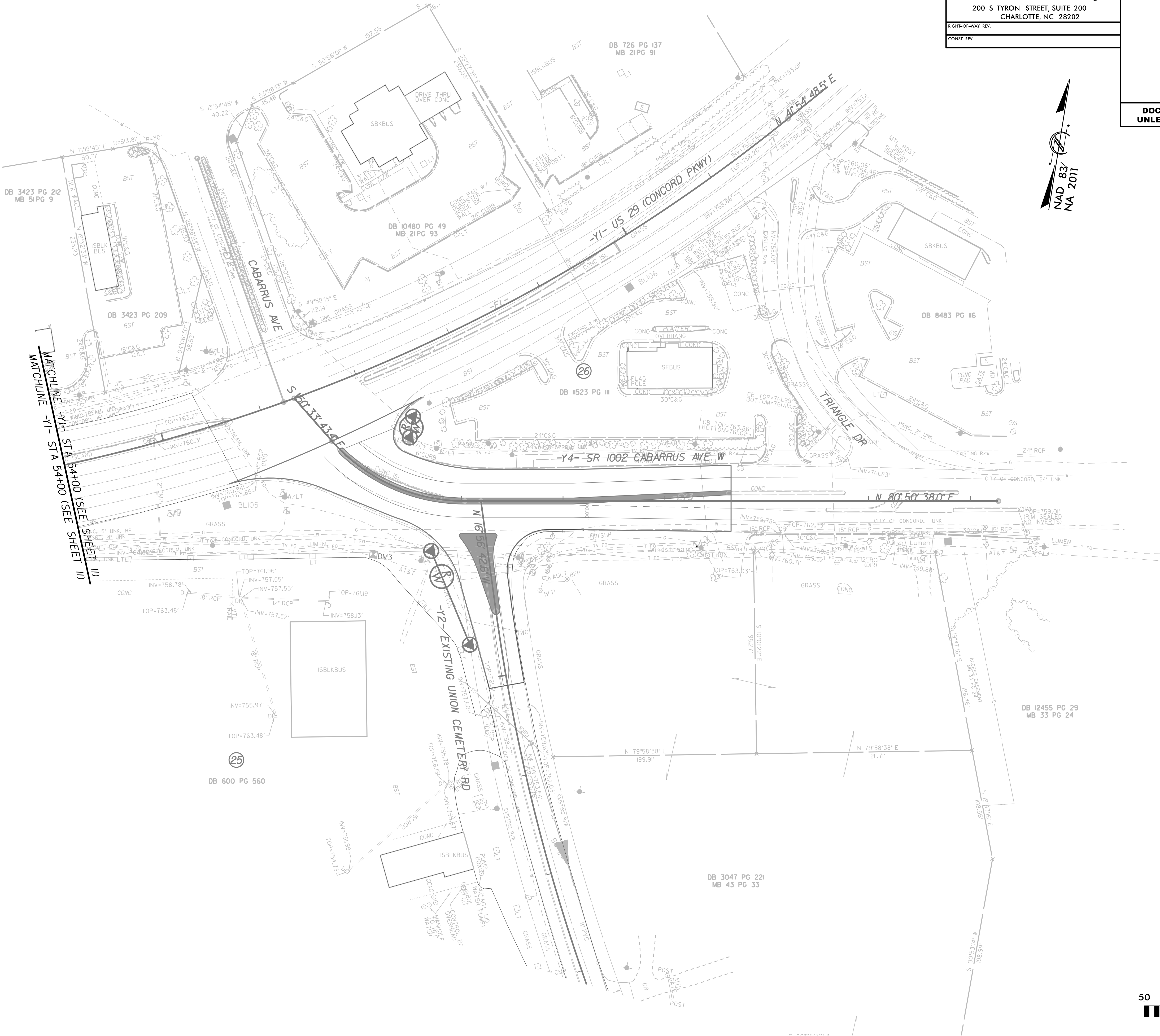
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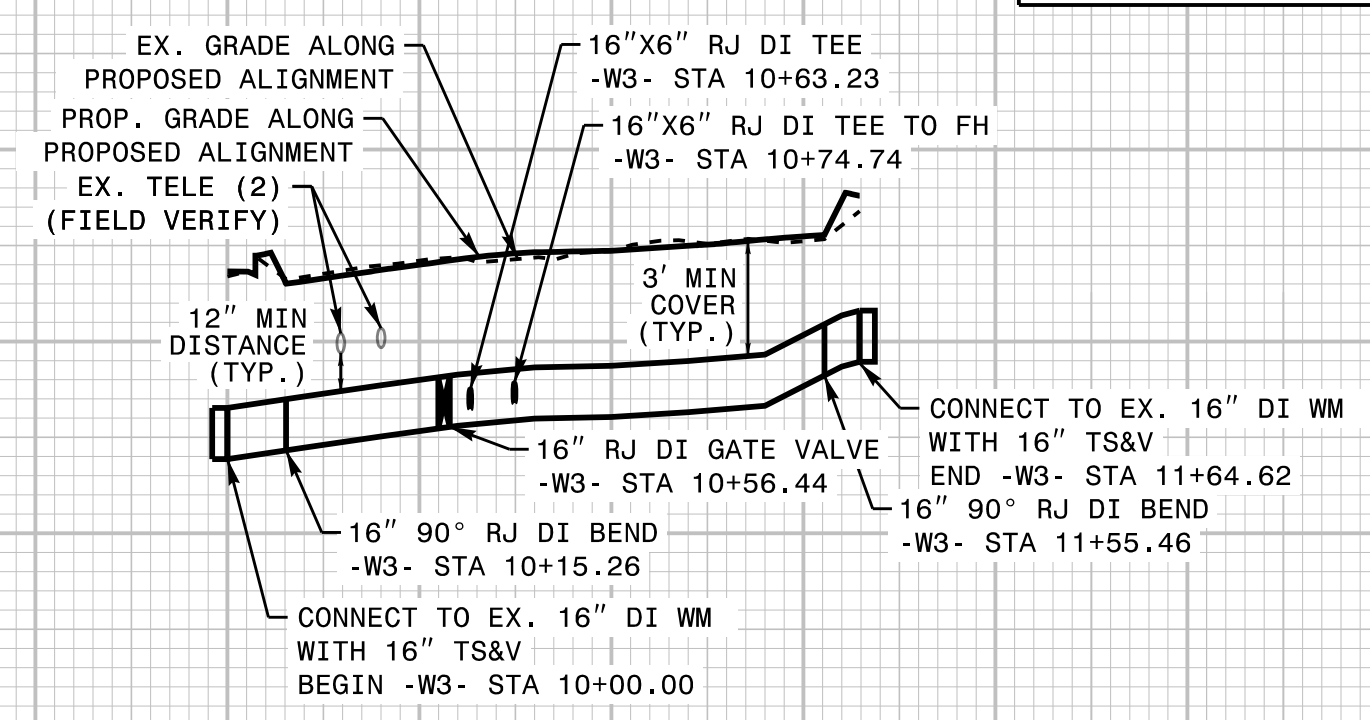


REVISIONS

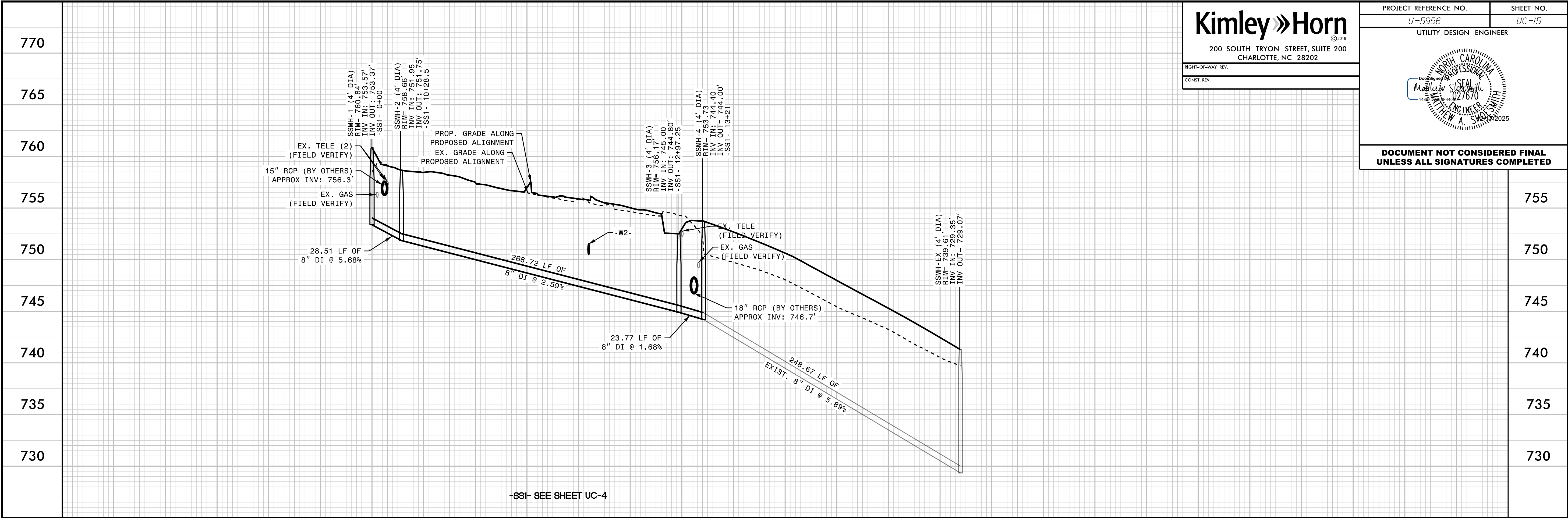
5/14/2019

12/17/2025





5/14/99



Kimley»Horn
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CHARLOTTE, NC 28202

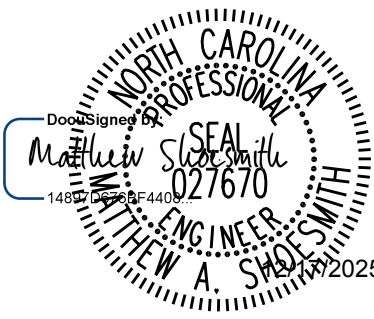
RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.
U-5956

SHEET NO.
UC-15

UTILITY DESIGN ENGINEER



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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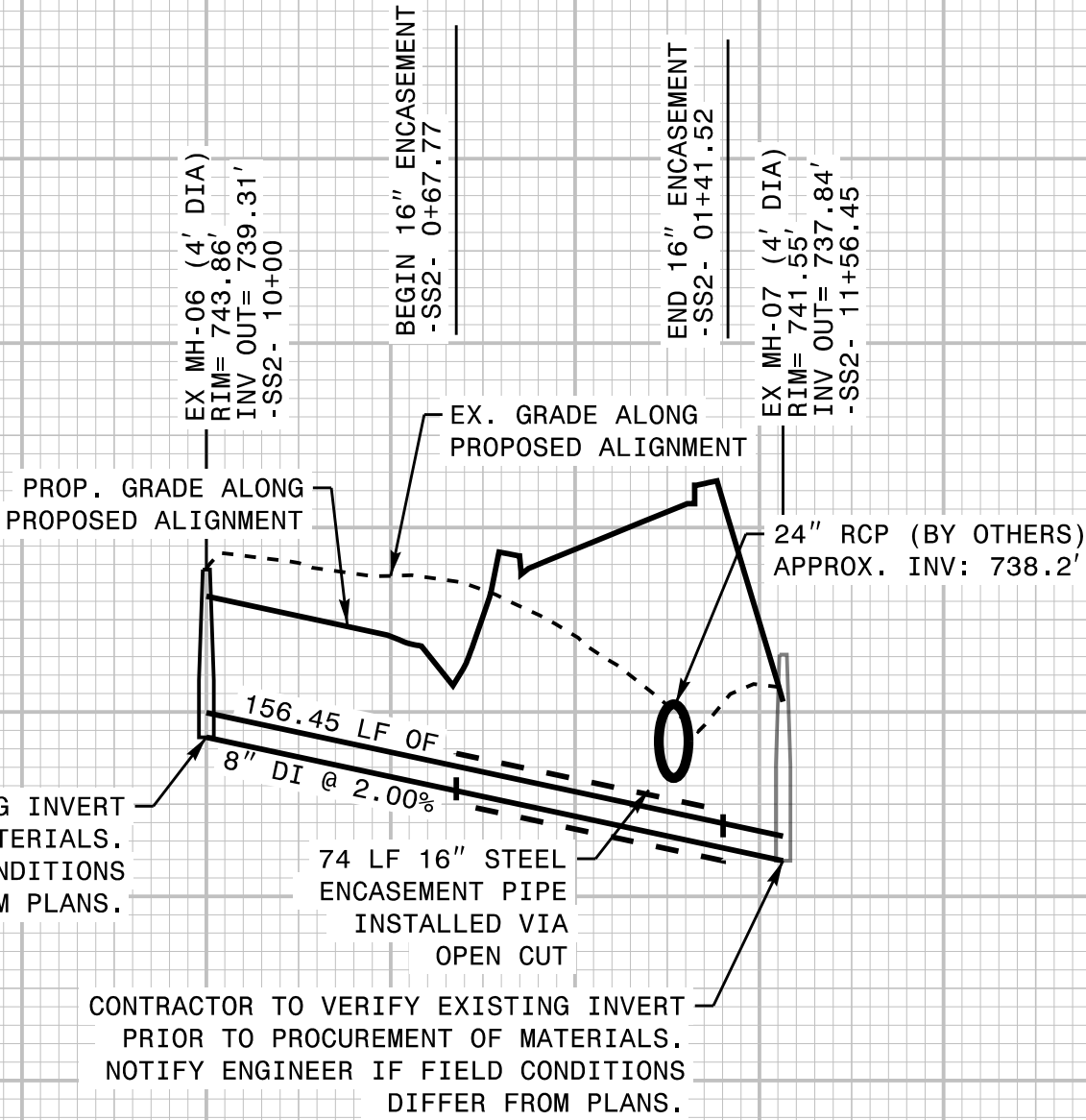
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12/17/2025