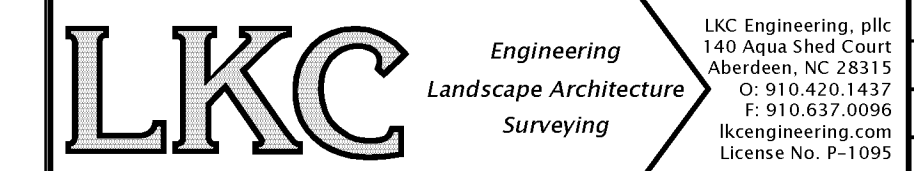


REVISIONS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-2
DESIGNED BY: LJP	
DRAWN BY: AGP	
CHECKED BY: BGL	
APPROVED BY: -	
REVISER: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	_____
11¼ Degree Bend	_____++
22½ Degree Bend	_____+X
45 Degree Bend	_____+X
90 Degree Bend	_____++
Plug	_____█
Tee	_____+
Cross	_____+
Reducer	_____▶
Gate Valve	_____GV
Butterfly Valve	_____BV
Tapping Valve	_____TV
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	_____PMM
Relocate Water Meter	_____RWM
Remove Water Meter	_____REM WM
Water Pump Station	_____PS(W)
RPZ Backflow Preventer	_____PRPZ
DCV Backflow Preventer	_____PBFP
Relocate RPZ Backflow Preventer	_____RRPZ
Relocate DCV Backflow Preventer	_____RBFEP

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	_____
Force Main Sewer Line (Sized as Shown)	_____
Manhole (Sized per Note)	_____○
Sewer Pump Station	_____PS(SS)

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

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

Thrust Block	_____█
Air Release Valve	_____AR
Utility Vault	_____UV
Concrete Pier	_____CP
Steel Pier	_____SP
Plan Note	_____↖ 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.●.I.

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

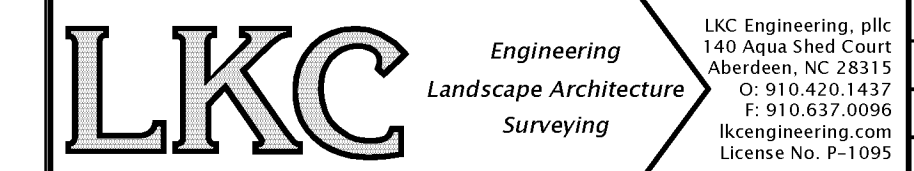
*For Existing Utilities
 Utility Line Drawn from Record _____
 (Type as Shown)
 Designated Utility Line _____
 (Type as Shown)

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L:\HoCo--21.01 -- R--5709 NC211 Widening Utility Relocation\800 -- Drawings\610 Design Drawings\Hoke County Utility Construction Notes.dwg. Last Saved By: RGAZD, 9/9/2024 4:32:49 PM; Utility Construction Notes. Plotted By: Robert Corzo, 09/10/24 02:30:35 PM

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-3.1
DESIGNED BY: LJP	
DRAWN BY: AGP	
CHECKED BY: BGL	
APPROVED BY: -	
REVISIONS:	-
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

UTILITY CONSTRUCTION HOKE COUNTY

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL CONTACT THE POWER CO., GAS CO., AND TELEPHONE CO. FOR THE EXACT LOCATION OF ALL UNDERGROUND MAINS, CABLES, OR LINES BEFORE CONSTRUCTION BEGINS.
- PIPE SEPARATION: THE FOLLOWING MINIMUM PIPE SEPARATION WILL BE MAINTAINED: 18 INCHES VERTICAL SEPARATION BETWEEN CROSSING OF SANITARY SEWER AND STORM SEWERS, 18 INCHES VERTICAL SEPARATION BETWEEN CROSSING OF SEWER (INCLUDING FORCE MAINS) AND WATER MAINS, OR 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY SEWER (INCLUDING FORCE MAINS) AND WATER MAINS. IF THESE SEPARATIONS CANNOT BE MAINTAINED, DUCTILE IRON PIPE WILL BE USED 10 FEET EITHER SIDE OF CROSSING AND ALONG ENTIRE LENGTH OF LINE LESS THAN 10 HORIZONTAL FEET FROM WATER MAINS. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER IN THE FIELD BEFORE PAYMENT WILL BE MADE AT DUCTILE IRON PRICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING WATER SERVICE CONNECTIONS DURING CONSTRUCTION. ANY DAMAGE WHICH OCCURS AS A RESULT OF THE CONSTRUCTION SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. IN THE EVENT OF A TEMPORARY SERVICE INTERRUPTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND BEGIN REPAIRS.
- ALL PIPING FOR PRESSURE MAINS SHALL BE PRESSURE TESTED, GRAVITY LINES SHALL BE AIR TESTED, AND MANHOLES SHALL BE VACUUM TESTED, ALL IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS AND SPECIAL PROVISIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS IN ADVANCE OF ALL SCHEDULED TESTING.
- ALL WORK PERFORMED WITHIN NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE NCDOT CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL OR UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE WORK AND ADHERING TO THE RIGHT-OF-WAY ENCROACHMENT CONTRACT SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNER TO ACCURATELY DETERMINE THE LOCATION OF EXISTING WATER MAINS AND SEWER LINES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL TAKE ADDITIONAL CAUTION IN EXCAVATING AROUND THE SERVICE LINES AND MAINS WHILE WORKING WITHIN THIS PROJECT. ANY DAMAGE TO THE MAINS OR SERVICE LINES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE AND REPLACE EXISTING CULVERTS AND DRAINAGE STRUCTURES AS NECESSARY DURING THE CONSTRUCTION OF THE UTILITY LINES. ANY DAMAGE TO THE CULVERTS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. SPECIAL CIRCUMSTANCES (I.E. UNREINFORCED CONCRETE PIPE) SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY IN ORDER TO RECEIVE ANY NECESSARY.
- THE CONTRACTOR IS INSTRUCTED TO CONTROL SEDIMENTATION RUNOFF BY METHODS APPROVED BY THE ENGINEERS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS REMINDED THAT ALL WORK SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE RULES AND REGULATIONS OF EROSION AND SEDIMENT CONTROL AS PUBLISHED BY THE DEPARTMENT OF NC ENVIRONMENTAL QUALITY.
- THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS INDICATING THE ACTUAL AS-BUILT CONDITION OF THE PROJECT AT COMPLETION. AS-BUILTS WILL BE FURNISHED AT OR PRIOR TO FINAL INSPECTION BY THE ENGINEER. AS-BUILTS WILL BE REVIEWED BY THE ENGINEERS REPRESENTATIVE PRIOR TO APPROVAL OF MONTHLY PROGRESS PAYMENTS. MARK-UP COPIES OF THE DRAWINGS INDICATING ALL DIMENSIONS AND ELEVATIONS ARE ACCEPTABLE AS AS-BUILT DRAWINGS.

GENERAL NOTES:

- 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.
- THE EXISTING UTILITIES BELONG TO HOKE COUNTY.
- ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
- THE UTILITY OWNER OWNS EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
- PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION, NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNER'S REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
- THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
- 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.
- MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.

PROJECT SPECIFIC NOTES:

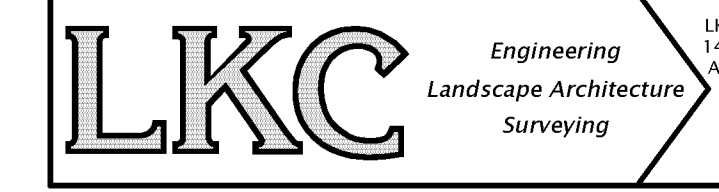
- ALL PROPOSED WATER LINE TO BE SDR21 PVC UNLESS NOTED OTHERWISE ON PLANS. ALL DUCTILE IRON PIPE SHALL BE PC350. AND DUCTILE IRON FORCE MAIN SHALL HAVE AN EPOXY INTERIOR LINING.
- WELL IN ADVANCE OF BEGINNING UTILITY WORK, SOFT DIGS SHALL BE PERFORMED BY CONTRACTOR TO VERIFY ACTUAL WATER LINE DEPTH AND MATERIAL AT PROPOSED TIE-IN LOCATIONS.
- LAY PIPE STRAIGHT IN ALIGNMENT AND GRADIENT OR FOLLOW TRUE CURVES AS NEARLY AS POSSIBLE. DO NOT DEFLECT ANY JOINT MORE THAN THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
- LKC, HOKE COUNTY, AND NCDOT TO REVIEW/ APPROVE RELEVANT SUBMITTALS.
- ANY SERVICE INTERRUPTIONS SHALL BE SCHEDULED FOR MINIMAL IMPACT TO CUSTOMERS AND APPROVED BY LKC, AND HOKE COUNTY.
- THE CONTRACTOR SHALL NOTIFY LKC, AND HOKE COUNTY IN ADVANCE OF THE FOLLOWING ACTIVITIES:
 - START OF UTILITY CONSTRUCTION- 48 HOURS
 - MAIN LINE SERVICE INTERRUPTIONS- 96 HOURS
 - PRESSURE TESTING- 24 HOURS
 - DISINFECTION- 24 HOURS
- LKC, HOKE COUNTY, AND NCDOT HAVE RIGHT-OF-ENTRY TO THE PROJECT SITE.
- THE PROPOSED PIPELINE SHALL BE INSTALLED AT THE DEPTHS SHOWN IN THE PROFILE TO AVOID HIGH POINTS THAT CAN TRAP AIR. ALL COST FOR INSTALLATION IN DEEPER CUTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHOULD BE INCLUDED IN THE PRICE FOR FORCE MAIN AND WATER MAIN INSTALLATION.

LAST SAVED: 08/28/2024

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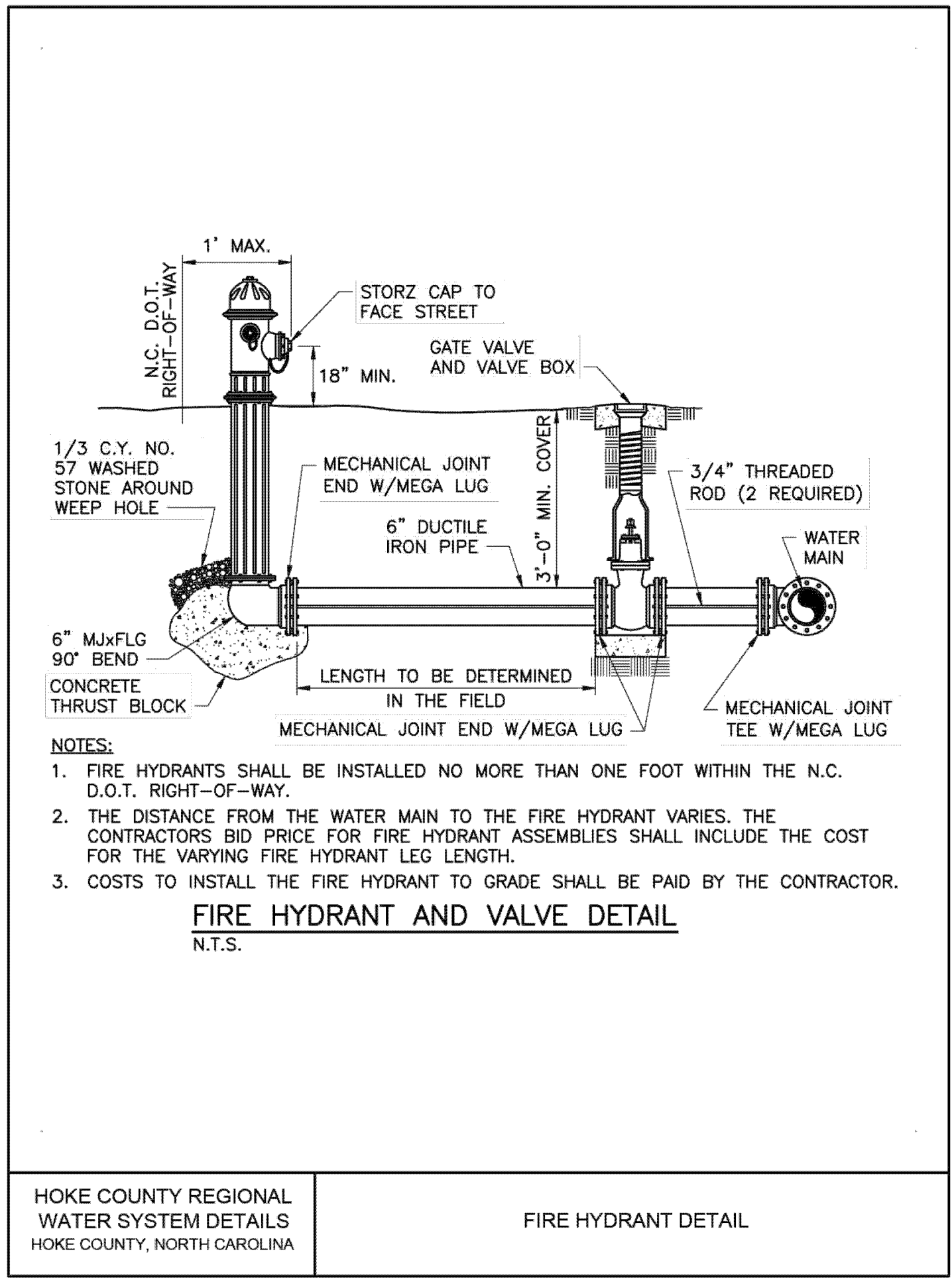
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REVISIONS

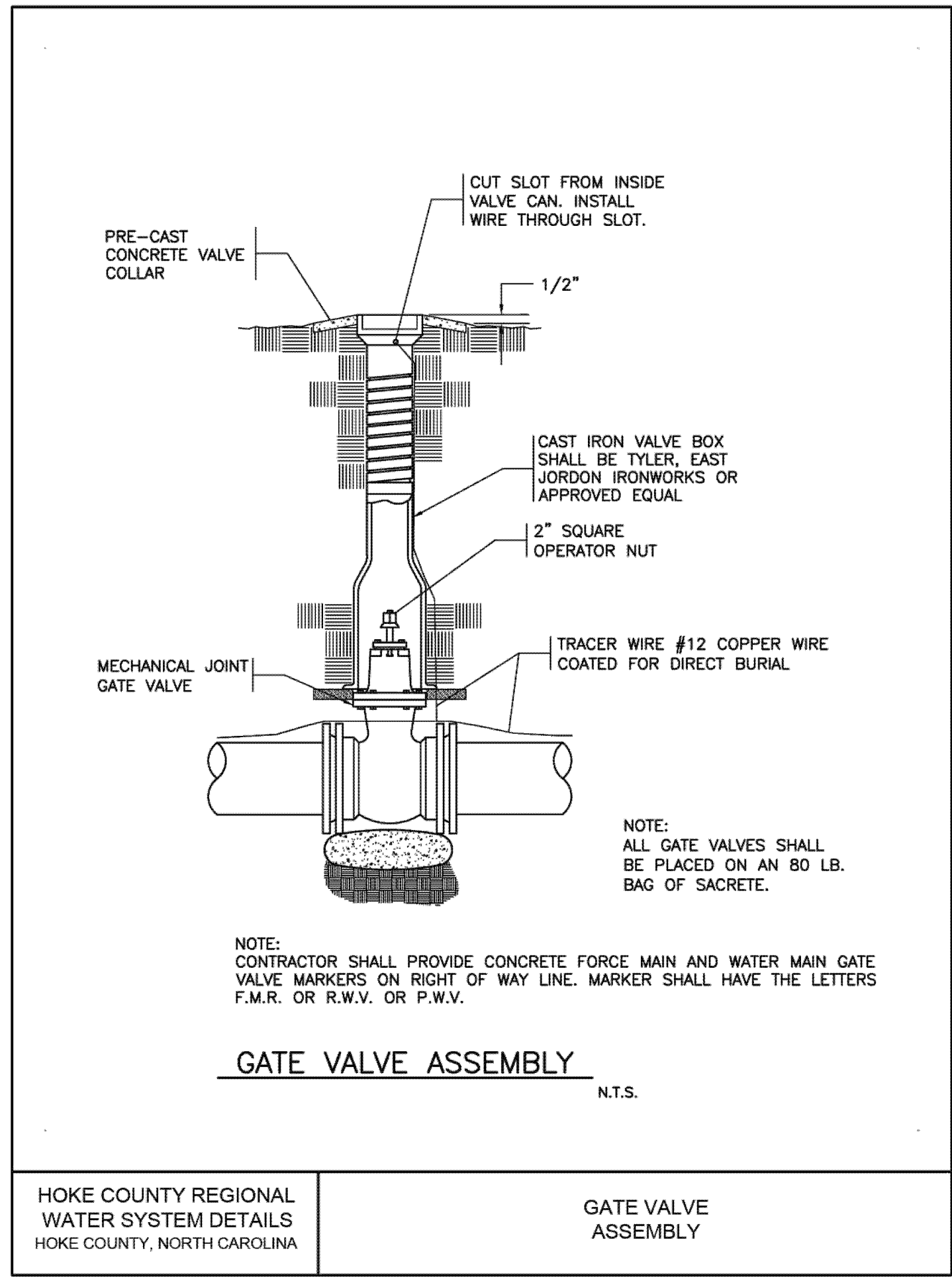


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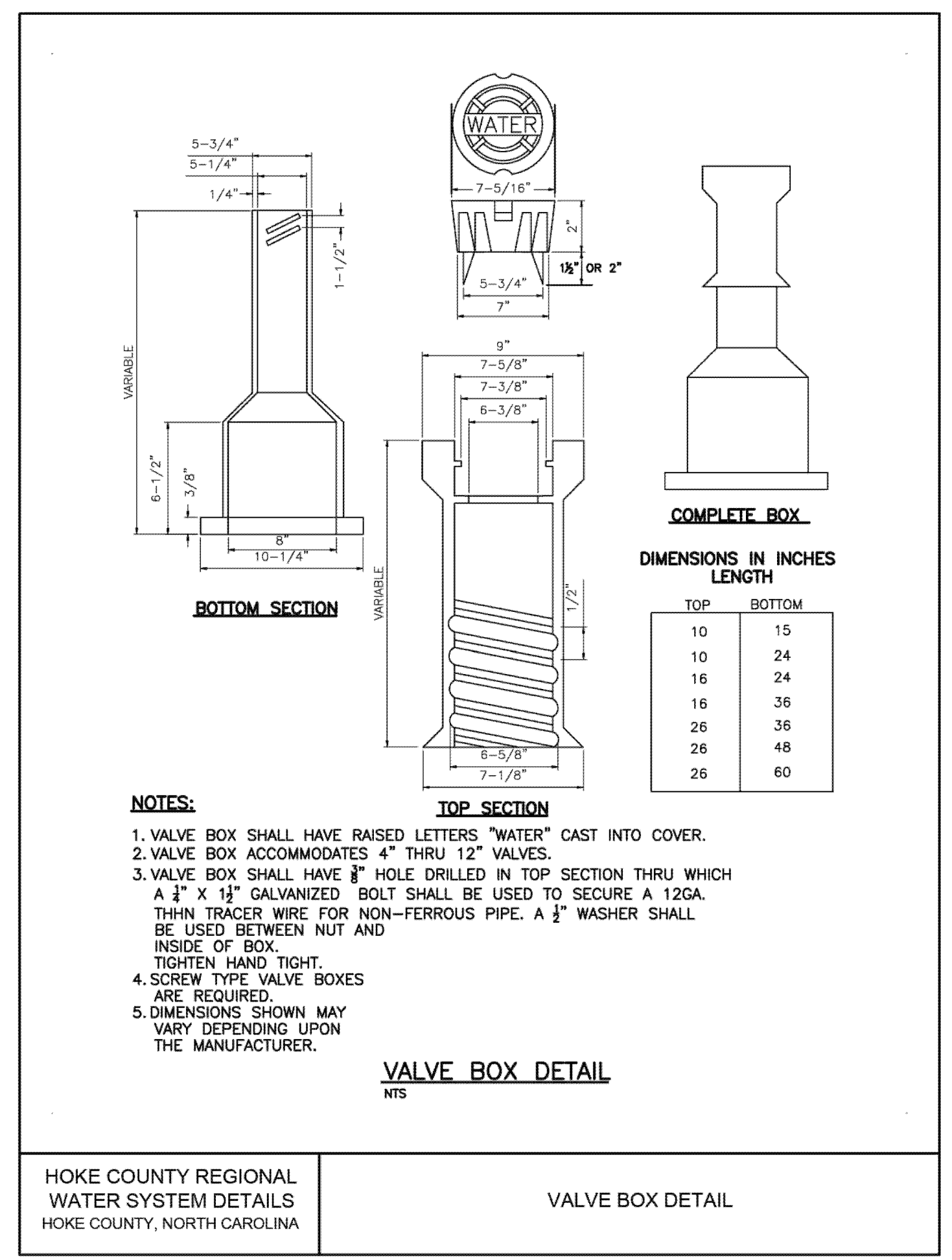
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-3.2
DESIGNED BY: BGL	
DRAWN BY: AGP	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



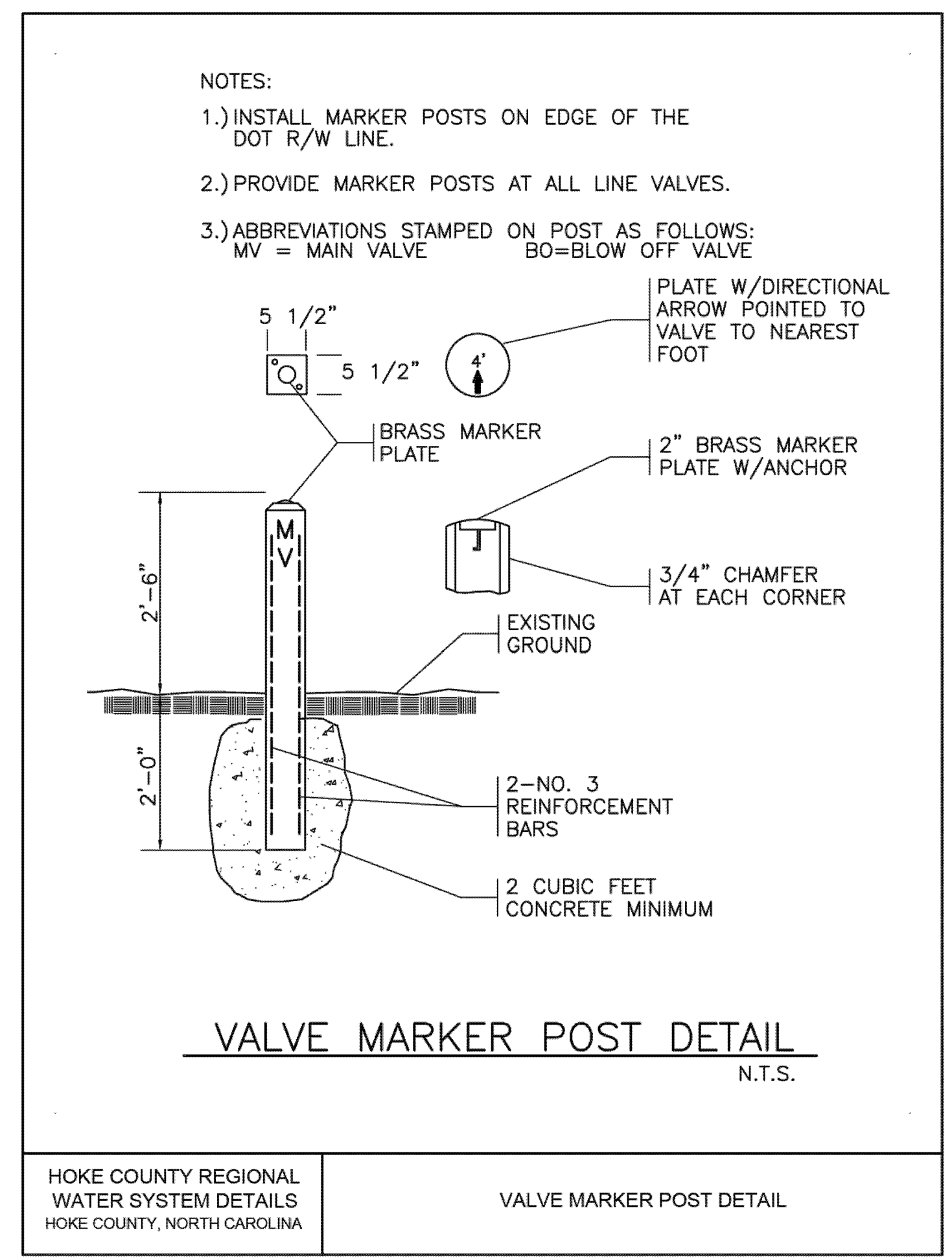
HOKE COUNTY REGIONAL WATER SYSTEM DETAILS HOKE COUNTY, NORTH CAROLINA	FIRE HYDRANT DETAIL
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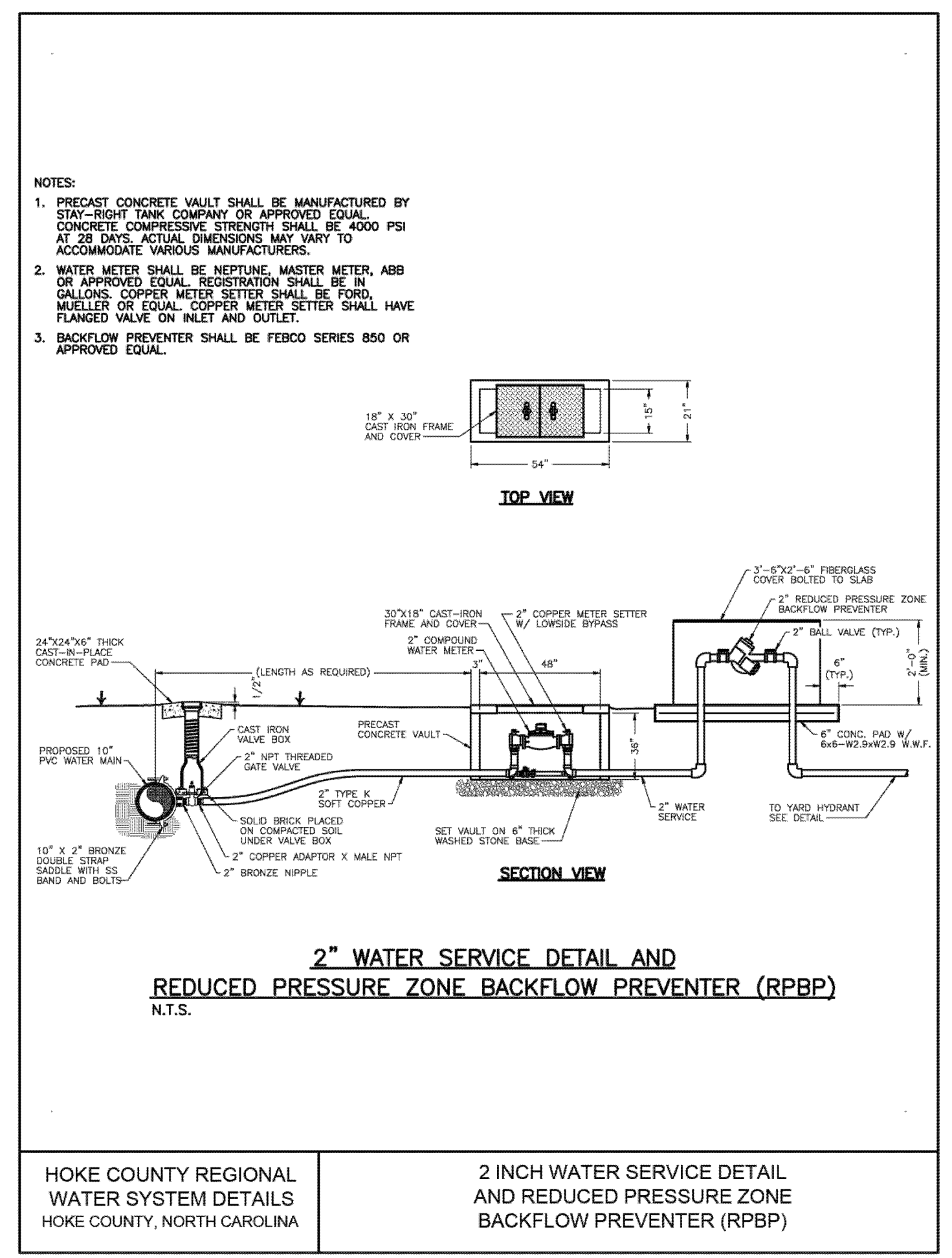
HOKE COUNTY REGIONAL WATER SYSTEM DETAILS HOKE COUNTY, NORTH CAROLINA	GATE VALVE ASSEMBLY
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HOKE COUNTY REGIONAL WATER SYSTEM DETAILS HOKE COUNTY, NORTH CAROLINA	VALVE BOX DETAIL
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HOKE COUNTY REGIONAL WATER SYSTEM DETAILS HOKE COUNTY, NORTH CAROLINA	VALVE MARKER POST DETAIL
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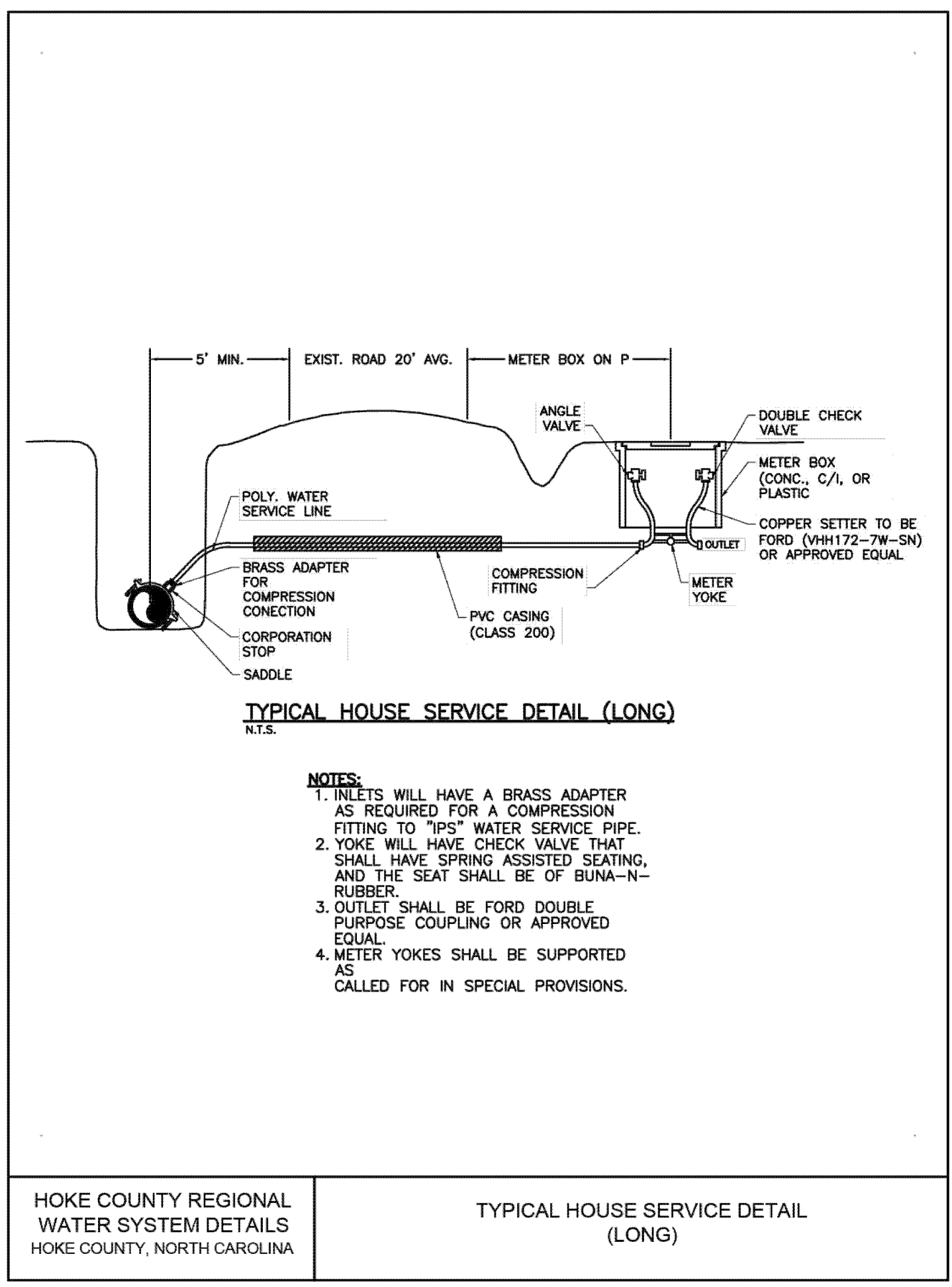


HOKE COUNTY REGIONAL WATER SYSTEM DETAILS HOKE COUNTY, NORTH CAROLINA	2 INCH WATER SERVICE DETAIL AND REDUCED PRESSURE ZONE BACKFLOW PREVENTER (RPBP)
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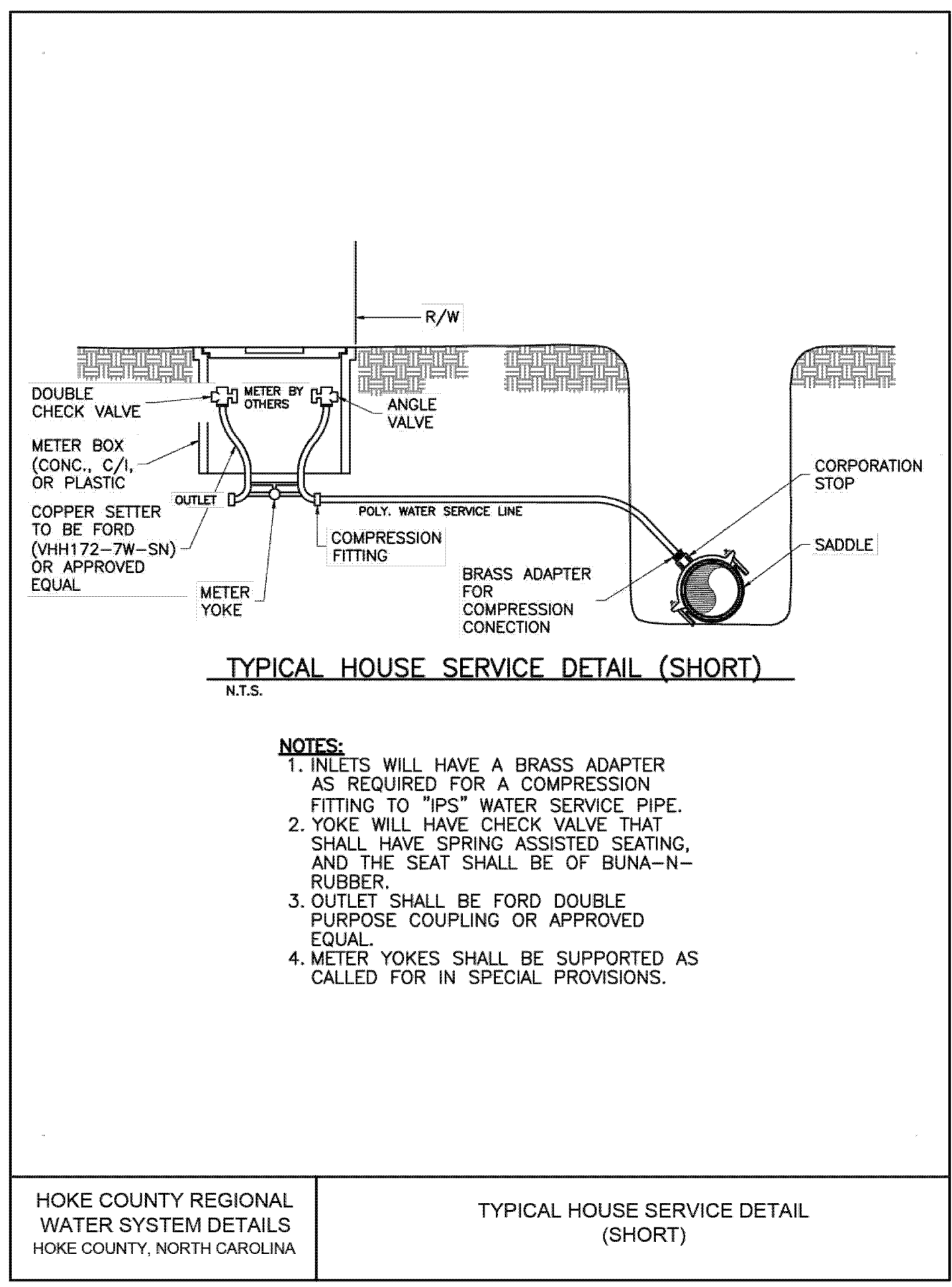
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 REVISIONS



HOKE COUNTY REGIONAL WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

TYPICAL HOUSE SERVICE DETAIL (LONG)



HOKE COUNTY REGIONAL WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

TYPICAL HOUSE SERVICE DETAIL (SHORT)

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PROJECT REFERENCE NO.
R-5709C

SHEET NO.
UC-3.3

DESIGNED BY: BGL

DRAWN BY: AGP

CHECKED BY: LJP

APPROVED BY: -

REVISED: -

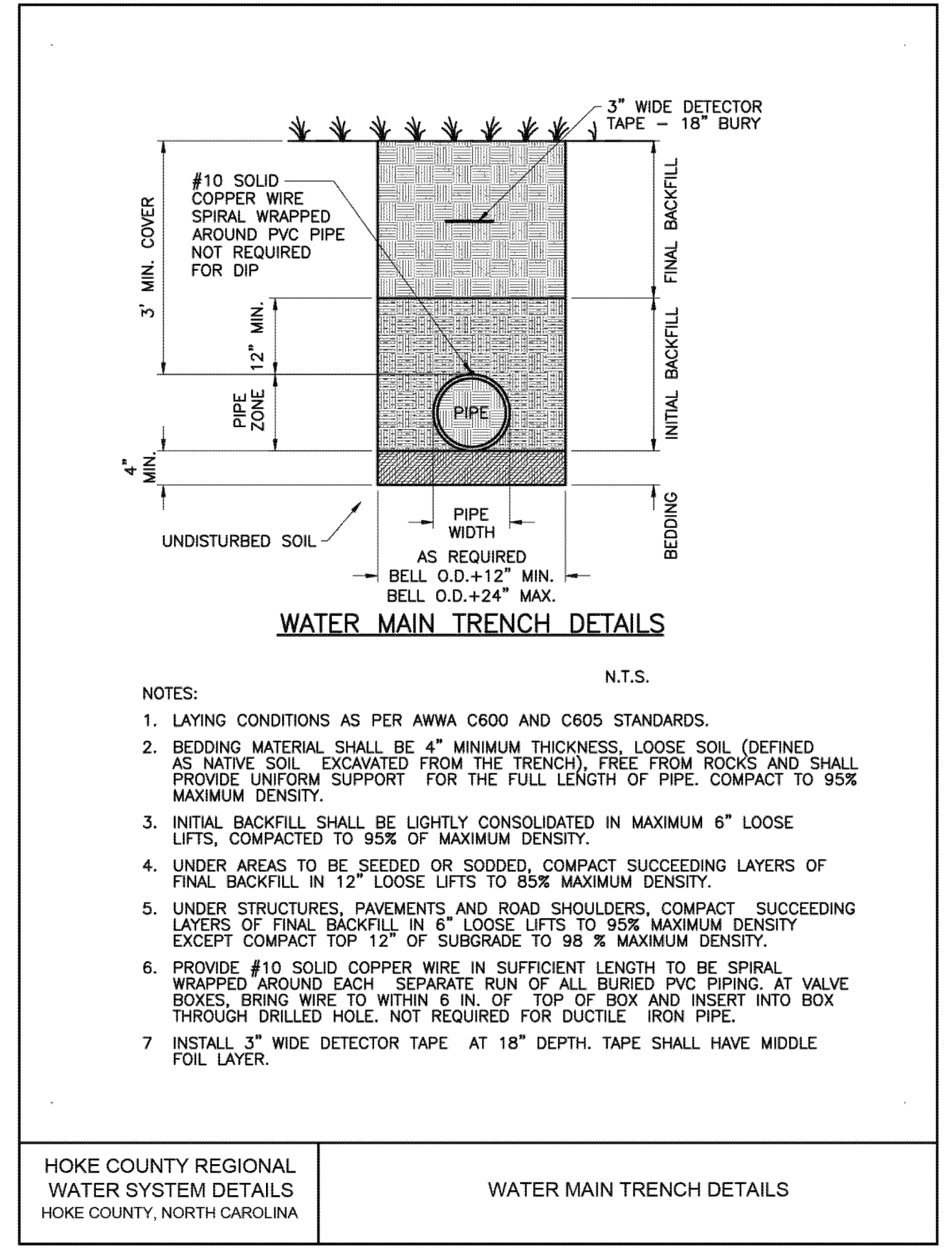
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

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

UTILITY CONSTRUCTION

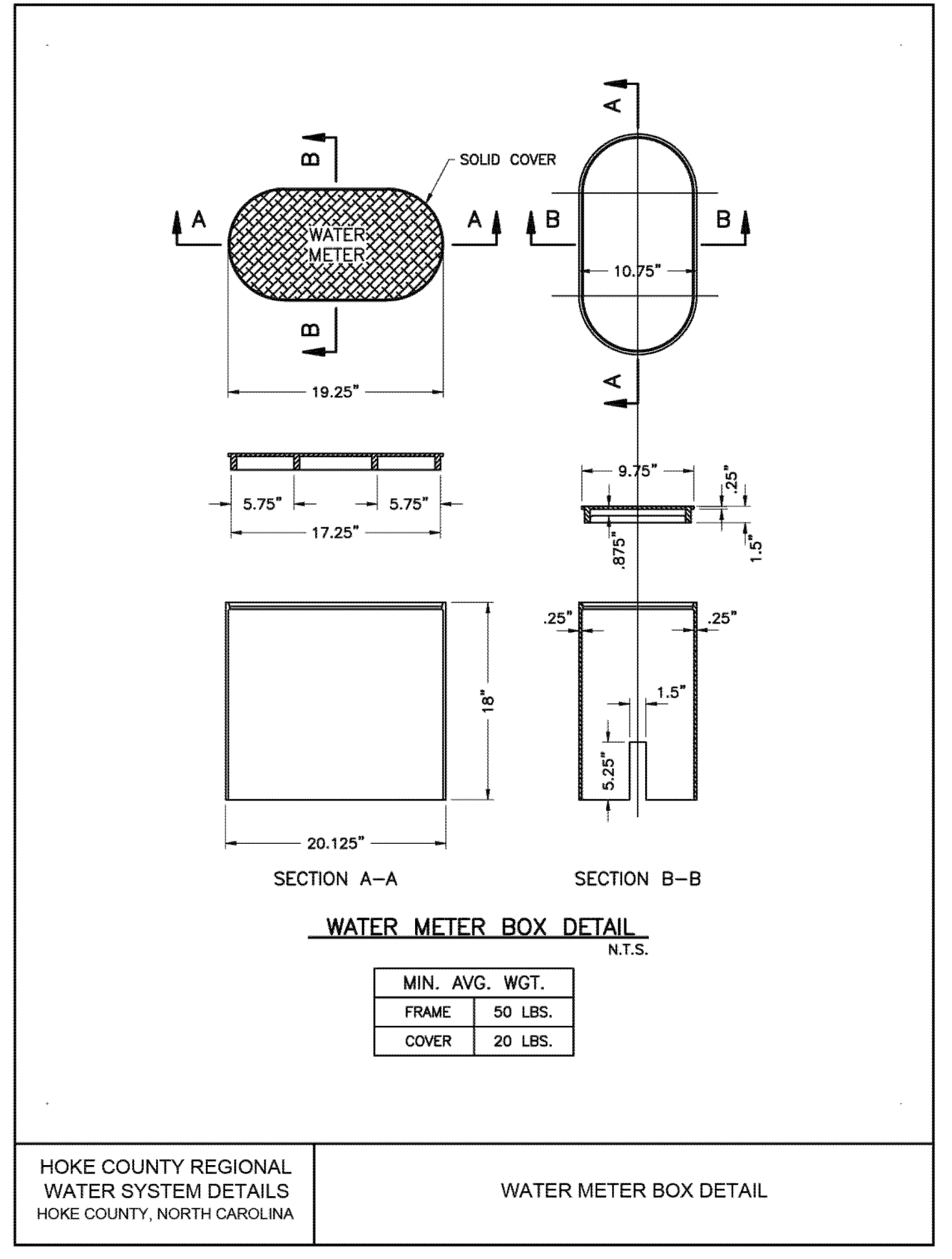
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DocuSigned by:
Logan Parsons
9/10/2024



HOKE COUNTY REGIONAL WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

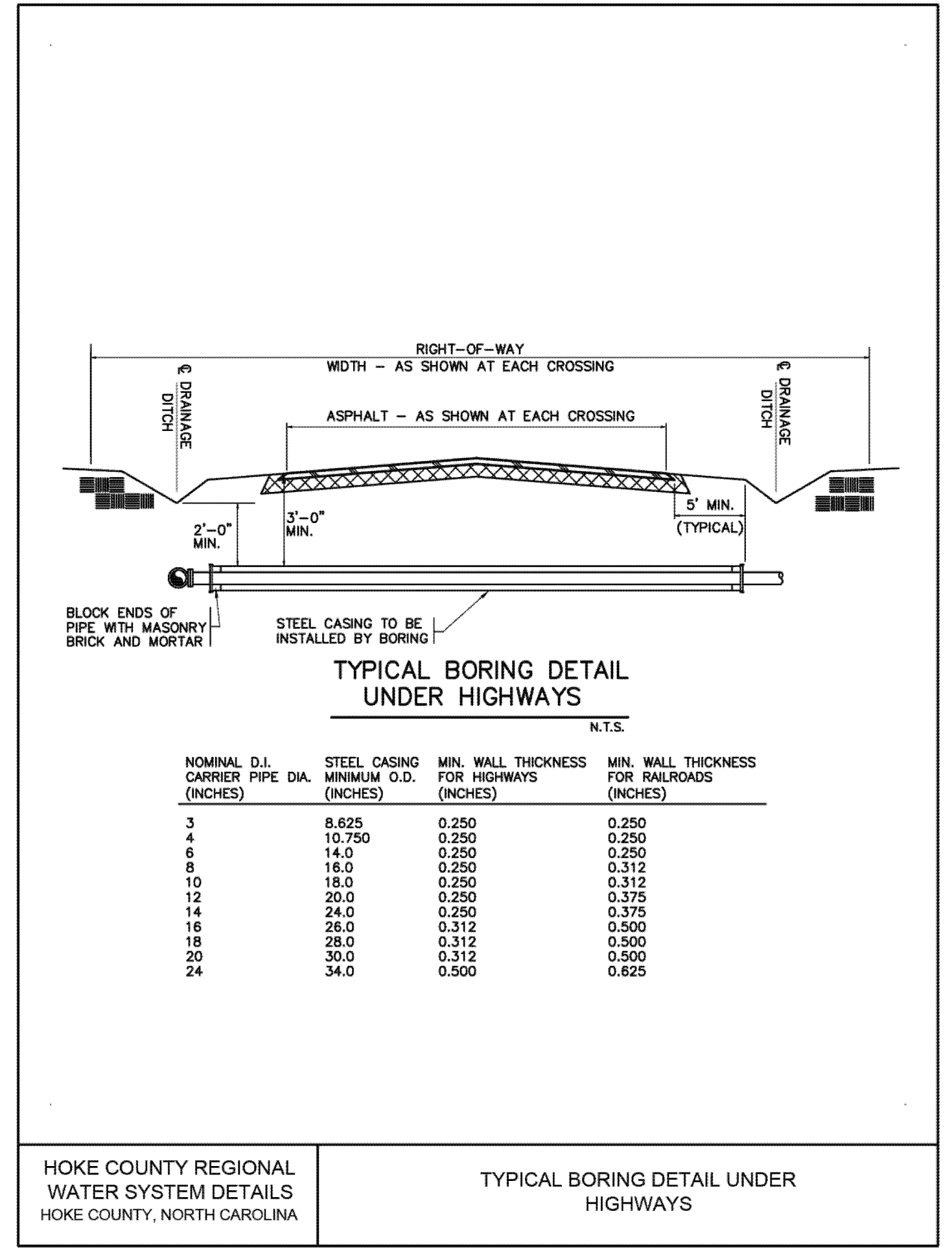
WATER MAIN TRENCH DETAILS



HOKE COUNTY REGIONAL WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

WATER METER BOX DETAIL

MIN. AVG. WGT.	
FRAME	50 LBS.
COVER	20 LBS.



HOKE COUNTY REGIONAL WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

TYPICAL BORING DETAIL UNDER HIGHWAYS

NOMINAL D.I. CARRIER PIPE DIA. (INCHES)	STEEL CASING MINIMUM O.D. (INCHES)	MIN. WALL THICKNESS FOR HIGHWAYS (INCHES)	MIN. WALL THICKNESS FOR RAILROADS (INCHES)
3	8.625	0.250	0.250
4	10.750	0.250	0.250
6	14.0	0.250	0.250
8	16.0	0.250	0.312
10	18.0	0.250	0.312
12	20.0	0.250	0.375
14	24.0	0.250	0.375
16	26.0	0.312	0.500
18	28.0	0.312	0.500
20	30.0	0.312	0.500
24	34.0	0.500	0.625

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PRESSURE REDUCING VALVE ASSEMBLY

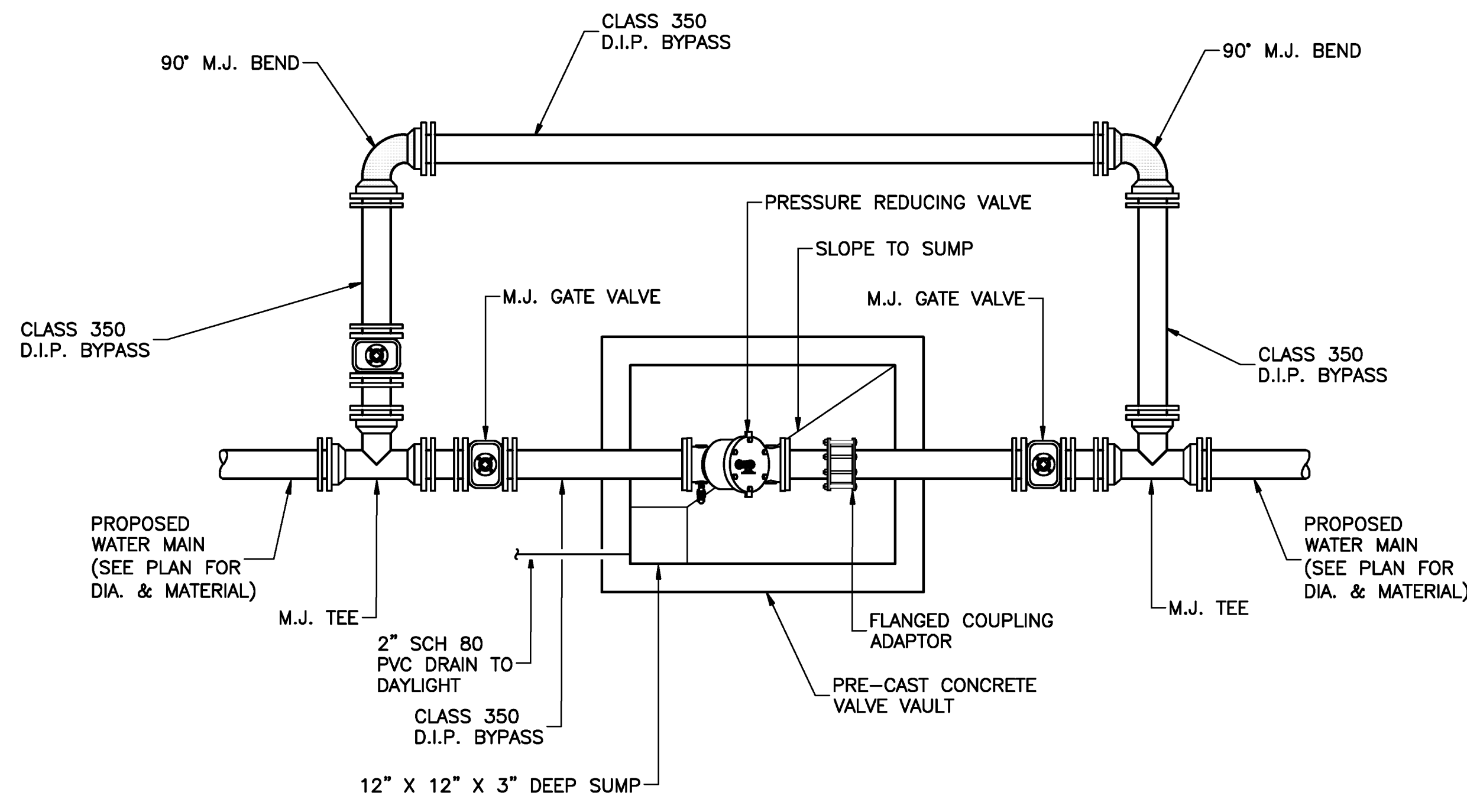
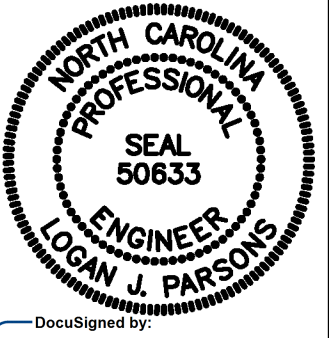
SIZE MAY VARY - SEE PLAN SHEET FOR DIAMETER

ALL ITEMS UNLESS EXPLICITLY CALLED OUT, ARE INCLUDED IN THE PAY ITEM FOR PRESSURE REDUCING VALVE ASSEMBLY FOUND ON PAGE UC-5A OF THE SPECIAL PROVISIONS

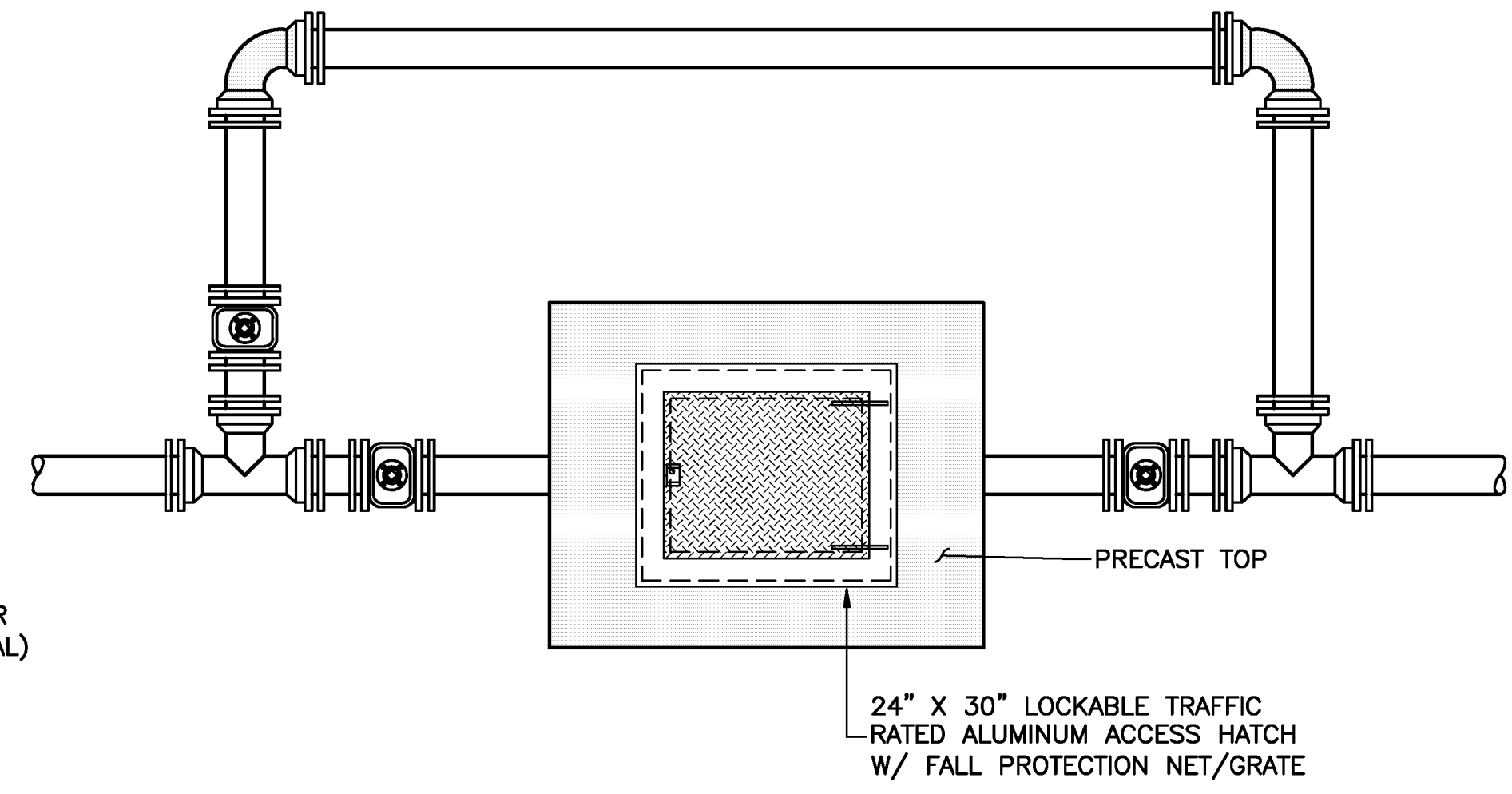
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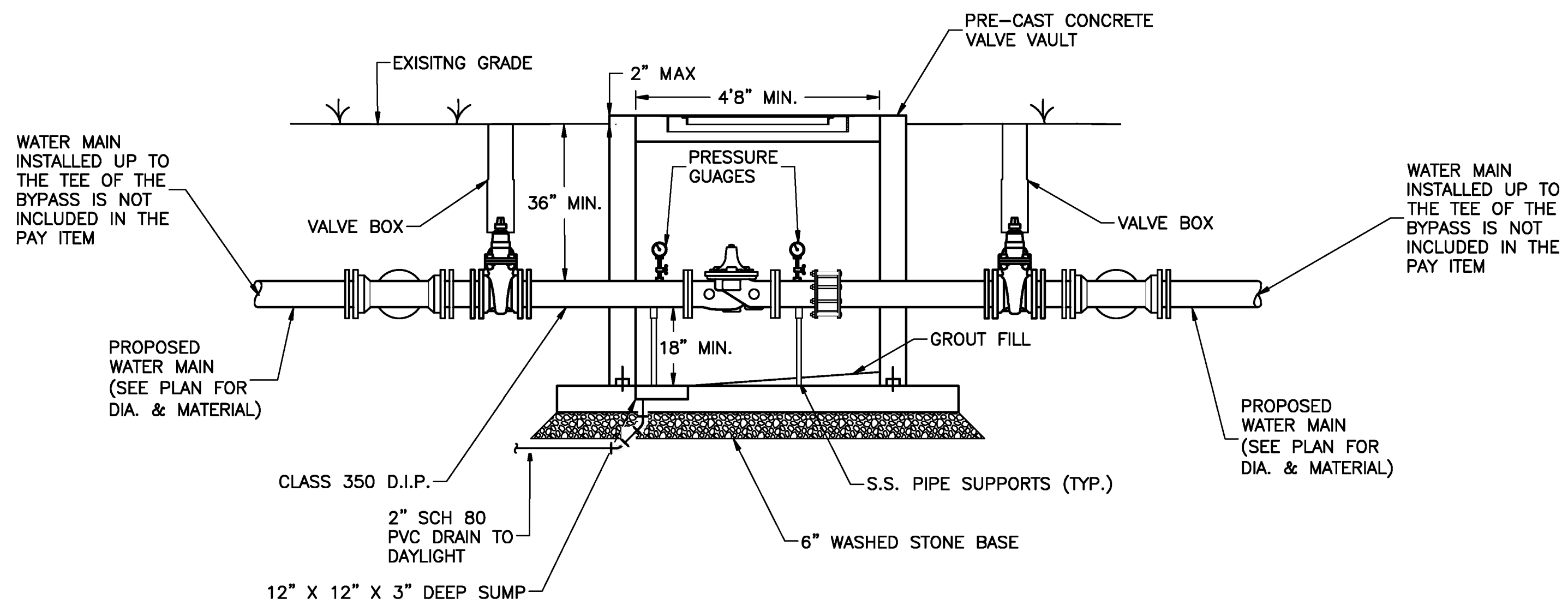
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-3.5
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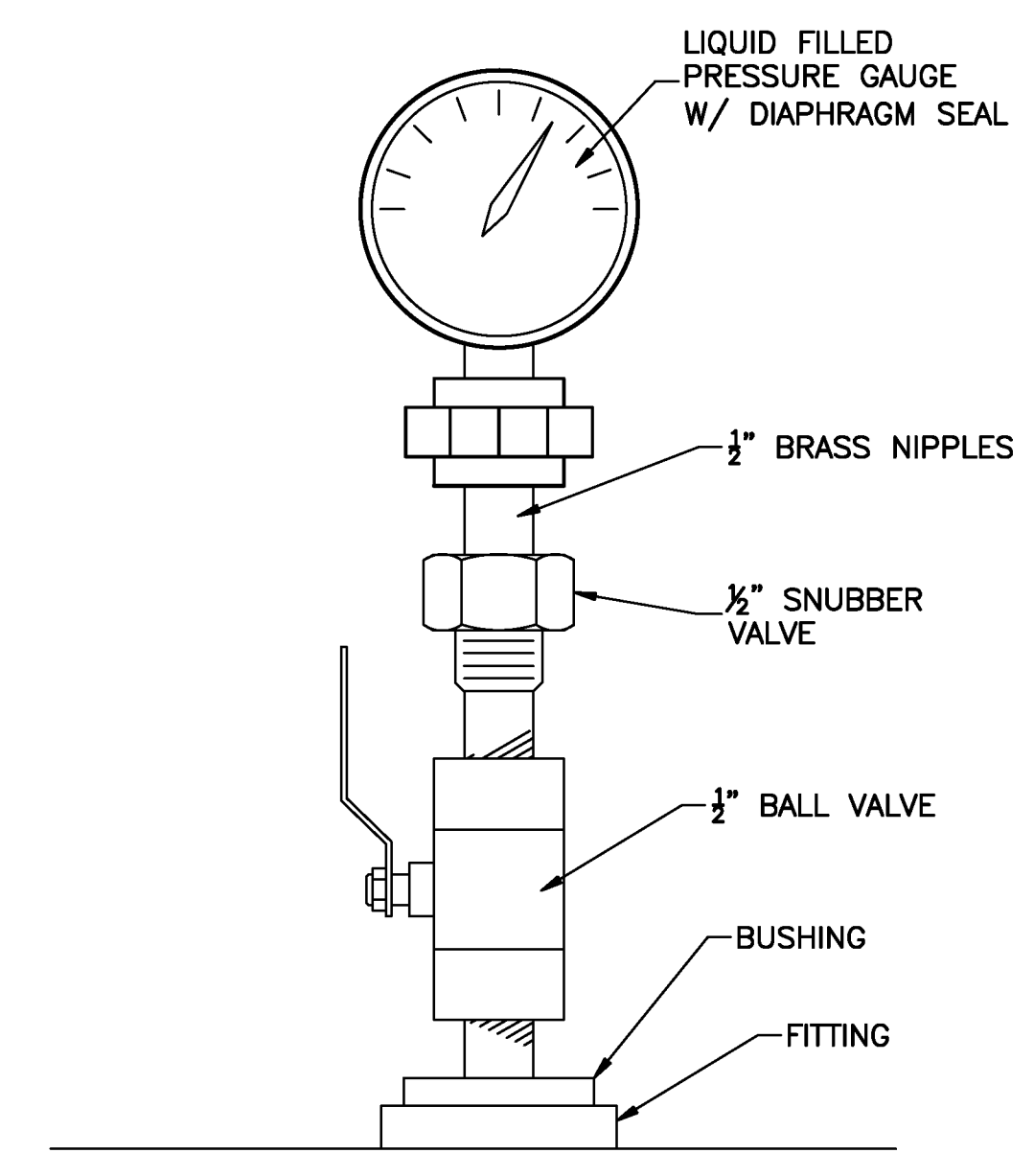
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PRV VAULT COVER
NOT TO SCALE



PRV PIPING PROFILE VIEW
NOT TO SCALE



GAUGE ASSEMBLY DETAIL
N.T.S.

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UTILITY CONSTRUCTION CITY OF RAEFORD

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL CONTACT THE POWER CO., GAS CO., AND TELEPHONE CO. FOR THE EXACT LOCATION OF ALL UNDERGROUND MAINS, CABLES, OR LINES BEFORE CONSTRUCTION BEGINS.
2. PIPE SEPARATION: THE FOLLOWING MINIMUM PIPE SEPARATION WILL BE MAINTAINED: 18 INCHES VERTICAL SEPARATION BETWEEN CROSSING OF SANITARY SEWER AND STORM SEWERS, 18 INCHES VERTICAL SEPARATION BETWEEN CROSSING OF SEWER (INCLUDING FORCE MAINS) AND WATER MAINS, OR 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY SEWER (INCLUDING FORCE MAINS) AND WATER MAINS. IF THESE SEPARATIONS CANNOT BE MAINTAINED, DUCTILE IRON PIPE WILL BE USED 10 FEET EITHER SIDE OF CROSSING AND ALONG ENTIRE LENGTH OF LINE LESS THAN 10 HORIZONTAL FEET FROM WATER MAINS. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER IN THE FIELD BEFORE PAYMENT WILL BE MADE AT DUCTILE IRON PRICES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING WATER SERVICE CONNECTIONS DURING CONSTRUCTION. ANY DAMAGE WHICH OCCURS AS A RESULT OF THE CONSTRUCTION SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. IN THE EVENT OF A TEMPORARY SERVICE INTERRUPTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND BEGIN REPAIRS.
4. ALL PIPING FOR PRESSURE MAINS SHALL BE PRESSURE TESTED, GRAVITY LINES SHALL BE AIR TESTED, AND MANHOLES SHALL BE VACUUM TESTED, ALL IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS AND SPECIAL PROVISIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS IN ADVANCE OF ALL SCHEDULED TESTING.
5. ALL WORK PERFORMED WITHIN NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE NCDOT CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL OR UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE WORK AND ADHERING TO THE RIGHT-OF-WAY ENCROACHMENT CONTRACT SPECIAL PROVISIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNER TO ACCURATELY DETERMINE THE LOCATION OF EXISTING WATER MAINS AND SEWER LINES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL TAKE ADDITIONAL CAUTION IN EXCAVATING AROUND THE SERVICE LINES AND MAINS WHILE WORKING WITHIN THIS PROJECT. ANY DAMAGE TO THE MAINS OR SERVICE LINES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR SHALL REMOVE AND REPLACE EXISTING CULVERTS AND DRAINAGE STRUCTURES AS NECESSARY DURING THE CONSTRUCTION OF THE UTILITY LINES. ANY DAMAGE TO THE CULVERTS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. SPECIAL CIRCUMSTANCES (I.E. UNREINFORCED CONCRETE PIPE) SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY IN ORDER TO RECEIVE ANY NECESSARY.
8. THE CONTRACTOR IS INSTRUCTED TO CONTROL SEDIMENTATION RUNOFF BY METHODS APPROVED BY THE ENGINEERS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS REMINDED THAT ALL WORK SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE RULES AND REGULATIONS OF EROSION AND SEDIMENT CONTROL AS PUBLISHED BY THE DEPARTMENT OF NC ENVIRONMENTAL QUALITY.
9. THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS INDICATING THE ACTUAL AS-BUILT CONDITION OF THE PROJECT AT COMPLETION. AS-BUILTS WILL BE FURNISHED AT OR PRIOR TO FINAL INSPECTION BY THE ENGINEER. AS-BUILTS WILL BE REVIEWED BY THE ENGINEERS REPRESENTATIVE PRIOR TO APPROVAL OF MONTHLY PROGRESS PAYMENTS. MARK-UP COPIES OF THE DRAWINGS INDICATING ALL DIMENSIONS AND ELEVATIONS ARE ACCEPTABLE AS AS-BUILT DRAWINGS.

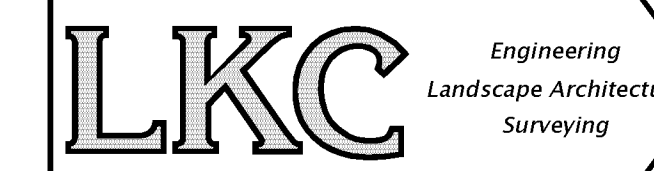
GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2024.
2. THE EXISTING UTILITIES BELONG TO CITY OF RAEFORD.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION, NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNER'S REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.

PROJECT SPECIFIC NOTES:

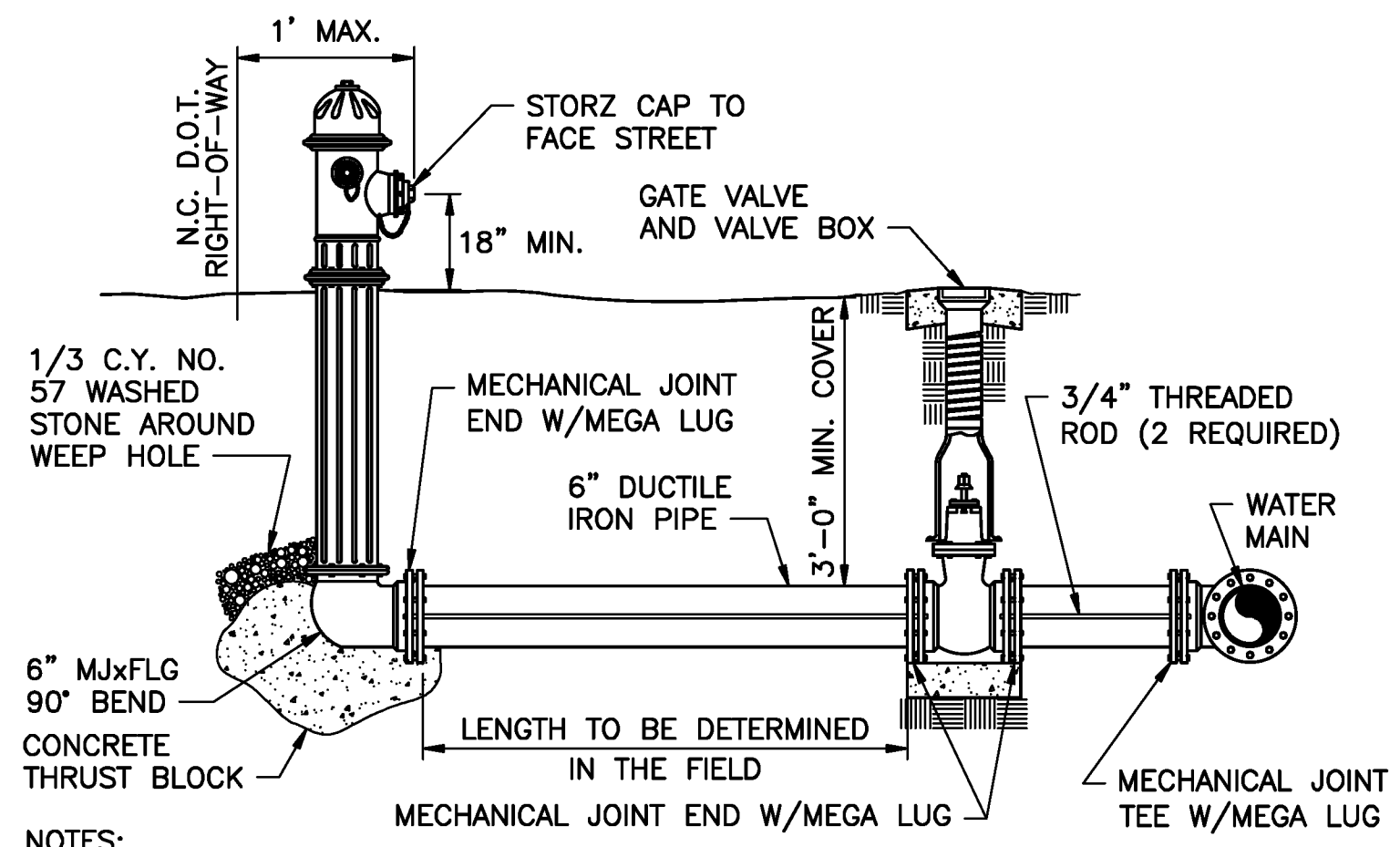
1. ALL PROPOSED WATER LINE TO BE SDR21 PVC UNLESS NOTED OTHERWISE ON PLANS. ALL DUCTILE IRON PIPE SHALL BE PC350. AND DUCTILE IRON FORCE MAIN SHALL HAVE AN EPOXY INTERIOR LINING.
2. WELL IN ADVANCE OF BEGINNING UTILITY WORK, SOFT DIGS SHALL BE PERFORMED BY CONTRACTOR TO VERIFY ACTUAL WATER LINE DEPTH AND MATERIAL AT PROPOSED TIE-IN LOCATIONS.
3. LAY PIPE STRAIGHT IN ALIGNMENT AND GRADIENT OR FOLLOW TRUE CURVES AS NEARLY AS POSSIBLE. DO NOT DEFLECT ANY JOINT MORE THAN THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
4. LKC, CITY OF RAEFORD, AND NCDOT TO REVIEW/ APPROVE RELEVANT SUBMITTALS.
5. ANY SERVICE INTERRUPTIONS SHALL BE SCHEDULED FOR MINIMAL IMPACT TO CUSTOMERS AND APPROVED BY LKC, AND CITY OF RAEFORD.
6. THE CONTRACTOR SHALL NOTIFY LKC AND CITY OF RAEFORD IN ADVANCE OF THE FOLLOWING ACTIVITIES:
 - a. START OF UTILITY CONSTRUCTION- 48 HOURS
 - b. MAIN LINE SERVICE INTERRUPTIONS- 96 HOURS
 - c. PRESSURE TESTING- 24 HOURS
 - d. DISINFECTION- 24 HOURS
7. LKC, CITY OF RAEFORD, AND NCDOT HAVE RIGHT-OF-ENTRY TO THE PROJECT SITE.
8. THE PROPOSED PIPELINE SHALL BE INSTALLED AT THE DEPTHS SHOWN IN THE PROFILE TO AVOID HIGH POINTS THAT CAN TRAP AIR. ALL COST FOR INSTALLATION IN DEEPER CUTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHOULD BE INCLUDED IN THE PRICE FOR FORCE MAIN AND WATER MAIN INSTALLATION.

LAST SAVED: 08/28/2024



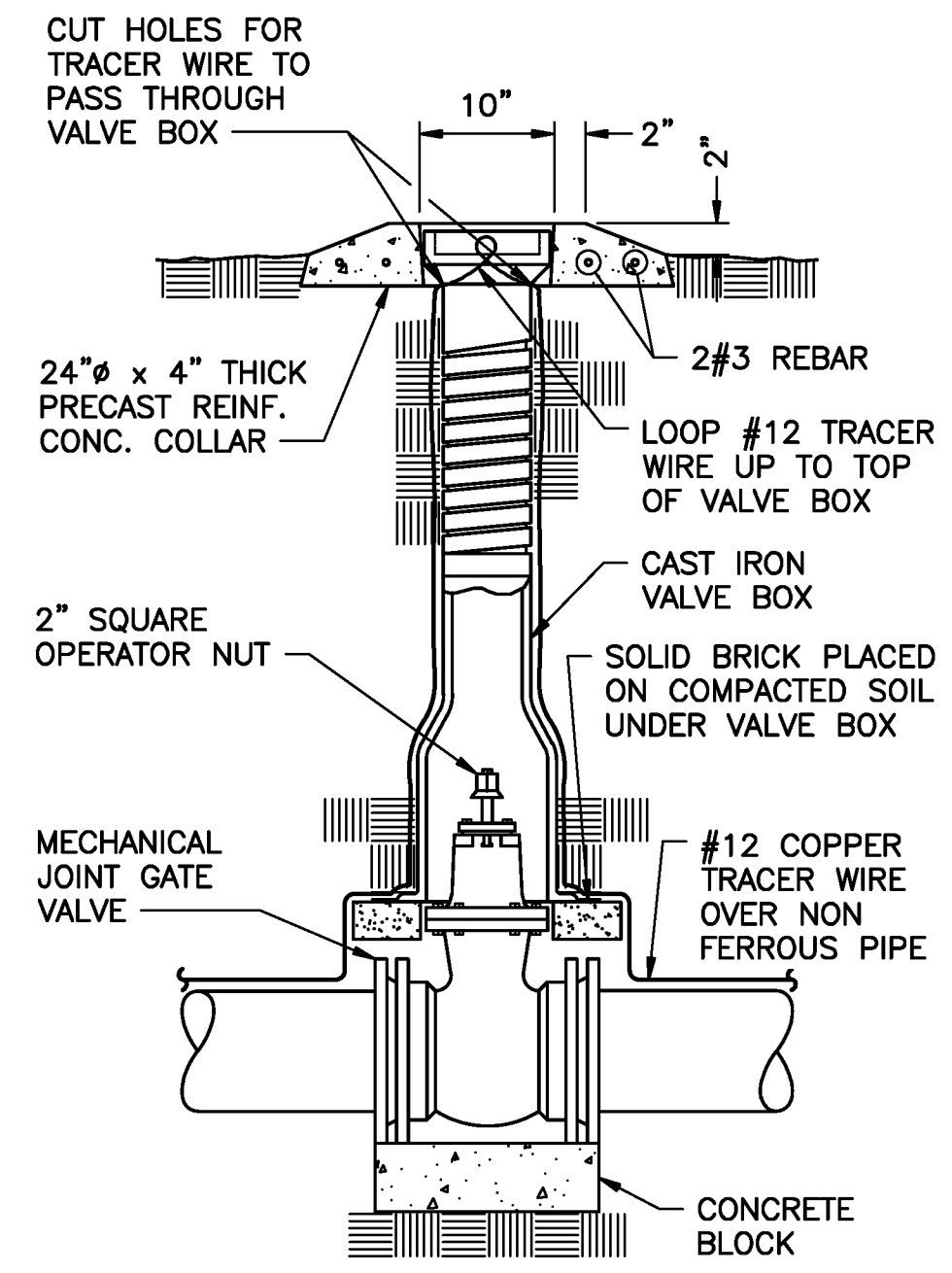
Engineering
Landscape Architecture
Surveying

PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-3.8
DESIGNED BY: JRM	
DRAWN BY: BCS	
CHECKED BY: JRM	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

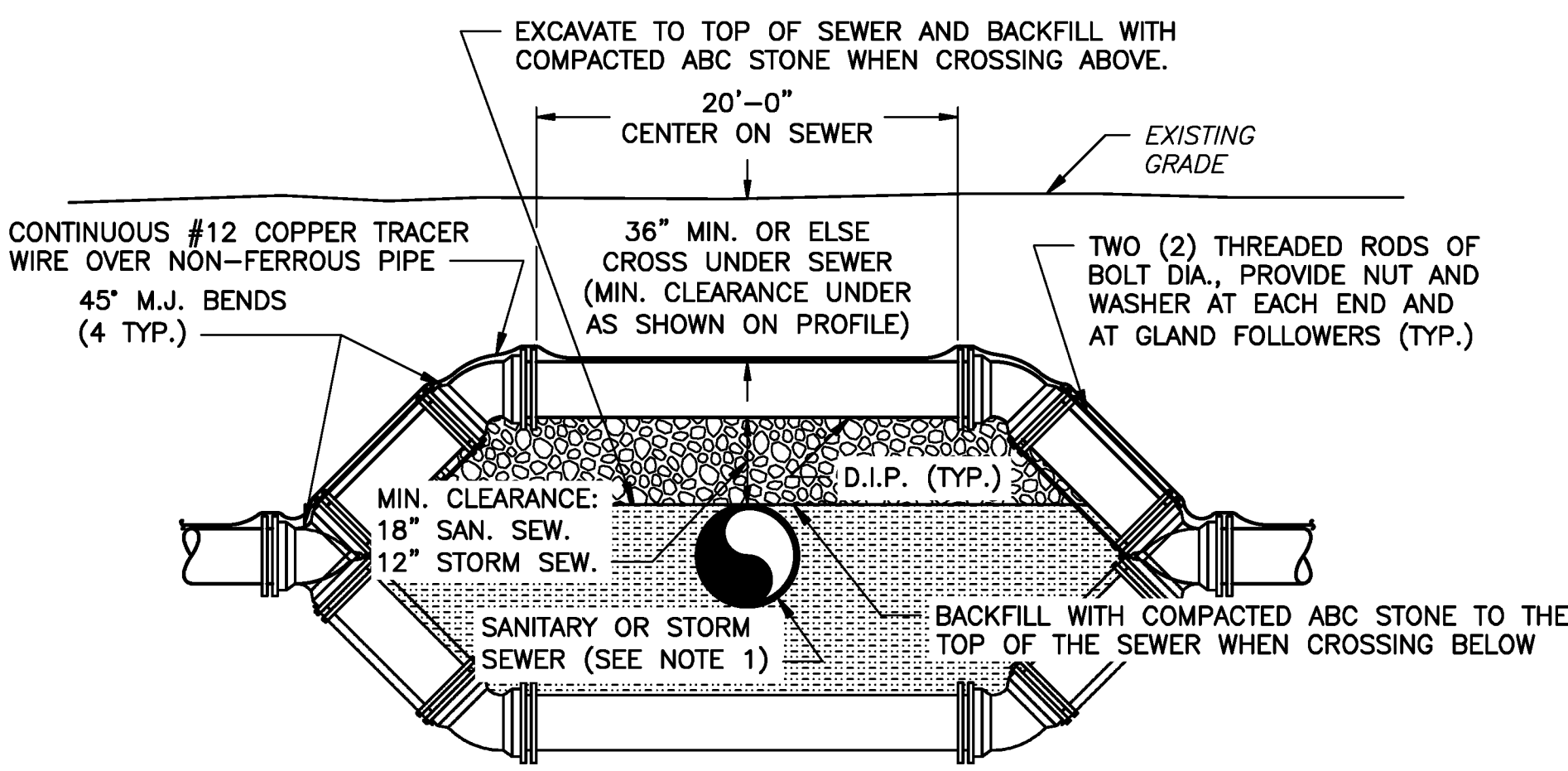


- NOTES:**
1. FIRE HYDRANTS SHALL BE INSTALLED NO MORE THAN ONE FOOT WITHIN THE N.C. D.O.T. RIGHT-OF-WAY.
 2. THE DISTANCE FROM THE WATER MAIN TO THE FIRE HYDRANT VARIES. THE CONTRACTORS BID PRICE FOR FIRE HYDRANT ASSEMBLIES SHALL INCLUDE THE COST FOR THE VARYING FIRE HYDRANT LEG LENGTH.
 3. COSTS TO INSTALL THE FIRE HYDRANT TO GRADE SHALL BE PAID BY THE CONTRACTOR.

FIRE HYDRANT AND VALVE DETAIL

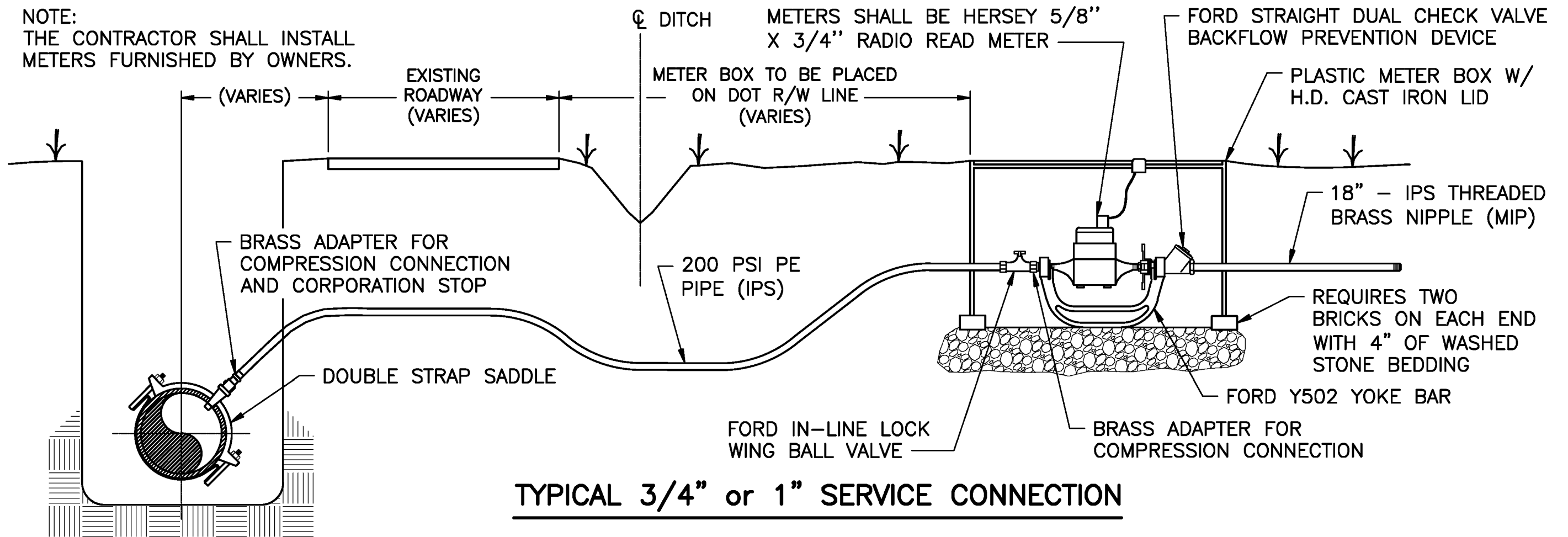


GATE VALVE ASSEMBLY

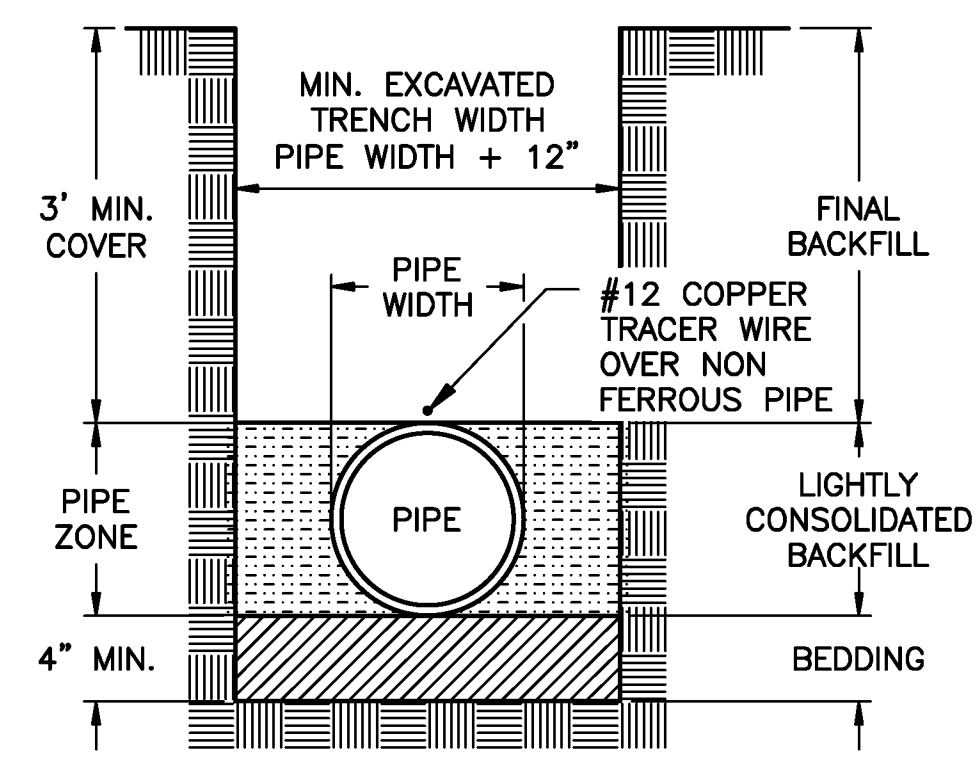


- NOTES:**
1. WHEN IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
 2. ALLOWABLE PIPE AND/OR JOINT DEFLECTIONS MAY BE USED IN LIEU OF BENDS TO ACHIEVE REQUIRED CLEARANCE OVER OR UNDER SEWER.

SANITARY AND STORM SEWER CROSSING DETAIL
N.T.S.

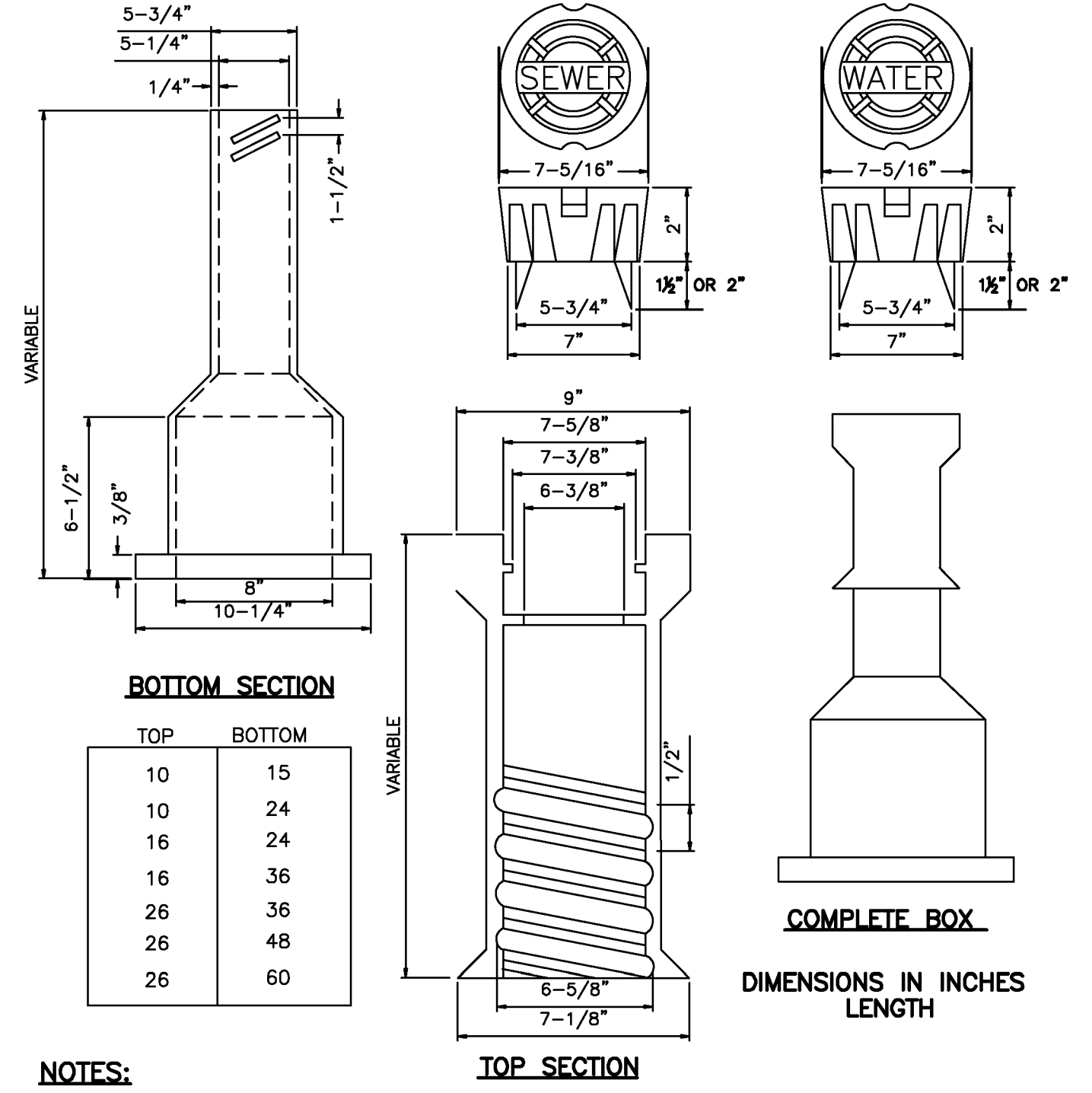


TYPICAL 3/4" or 1" SERVICE CONNECTION



- NOTES:**
1. BEDDING SHALL BE 4" MINIMUM LOOSE SOIL, FREE FROM ROCKS, AND SHALL PROVIDE UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.
 2. BACKFILL PER NCDOT STANDARDS.

TRENCH DETAIL
TYPE 3 LAYING CONDITIONS

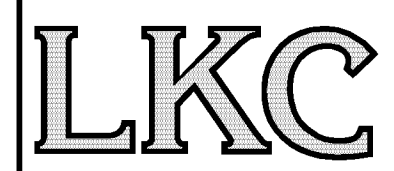


- NOTES:**
1. VALVE BOX SHALL HAVE RAISED LETTERS "SEWER" CAST INTO COVER.
 2. VALVE BOX ACCOMMODATES 4" THRU 12" VALVES.
 3. VALVE BOX SHALL HAVE 3/8" HOLE DRILLED IN TOP SECTION THRU WHICH A 1/2" X 1 1/2" GALVANIZED BOLT SHALL BE USED TO SECURE A 12GA. THHN TRACER WIRE FOR NON-FERROUS PIPE. A 1/2" WASHER SHALL BE USED BETWEEN NUT AND INSIDE OF BOX. TIGHTEN HAND TIGHT.
 4. SCREW TYPE VALVE BOXES ARE REQUIRED.
 5. DIMENSIONS SHOWN MAY VARY DEPENDING UPON THE MANUFACTURER.

VALVE BOX DETAIL
N.T.S.

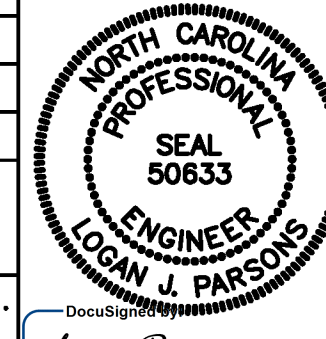
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XREFs: LKC-NCDOT-9000001, Water Piping And Trench Details, IMAE: No Images

REVISIONS

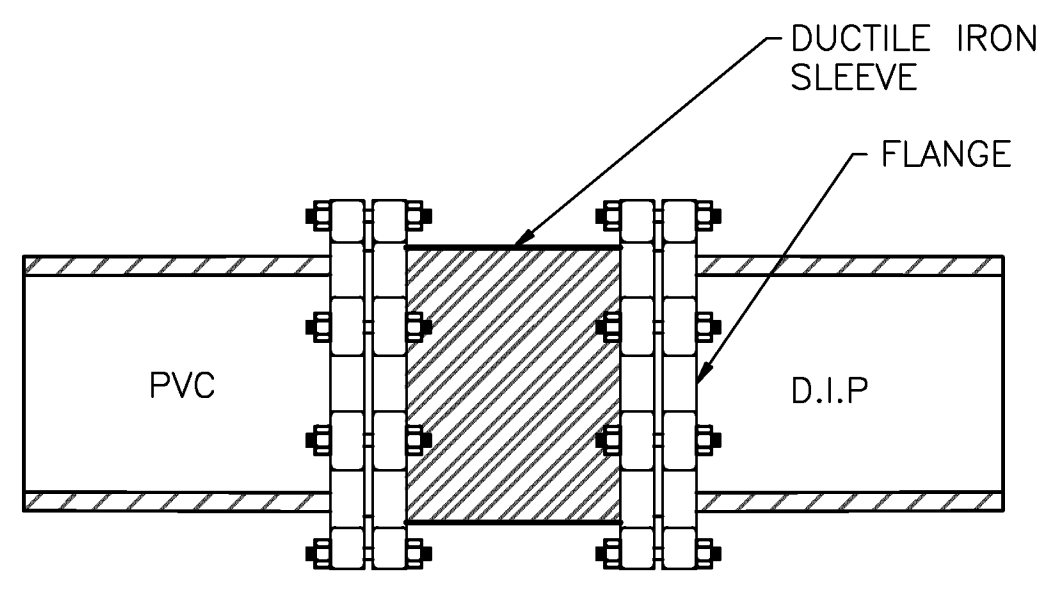


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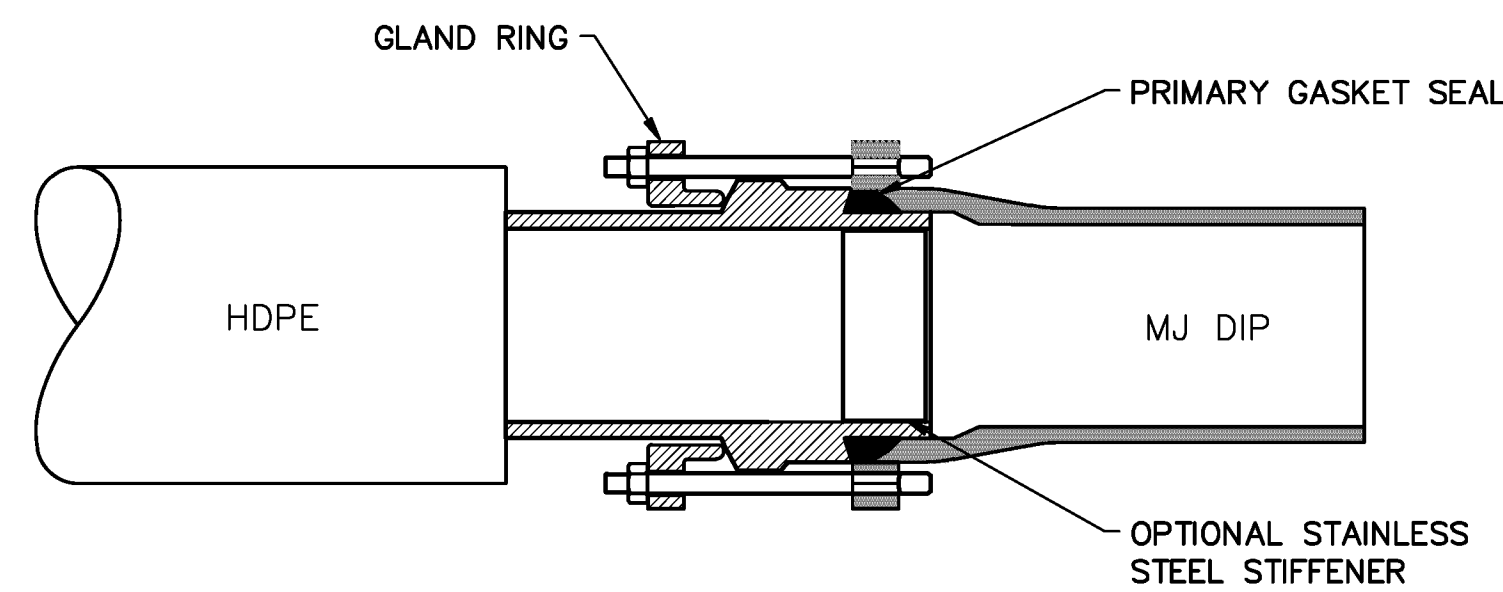
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-3.9
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
APPROVED BY: -	
REVISIONS: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

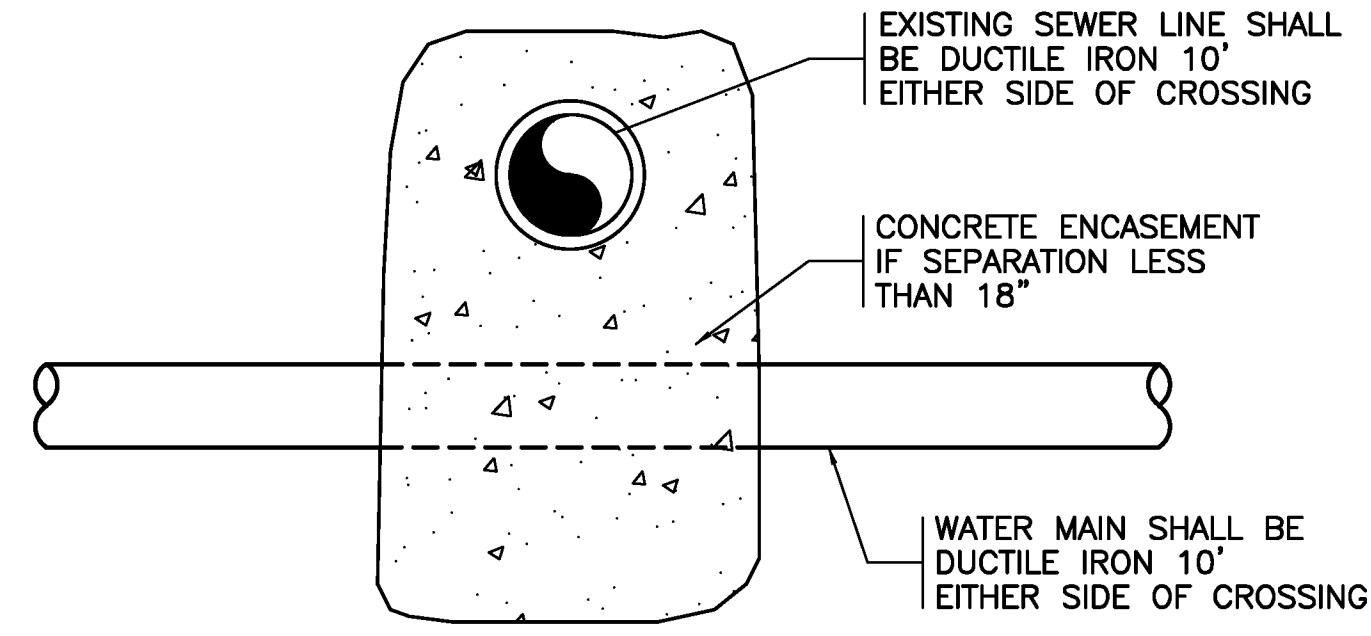
PROJECT TYPICAL DETAILS



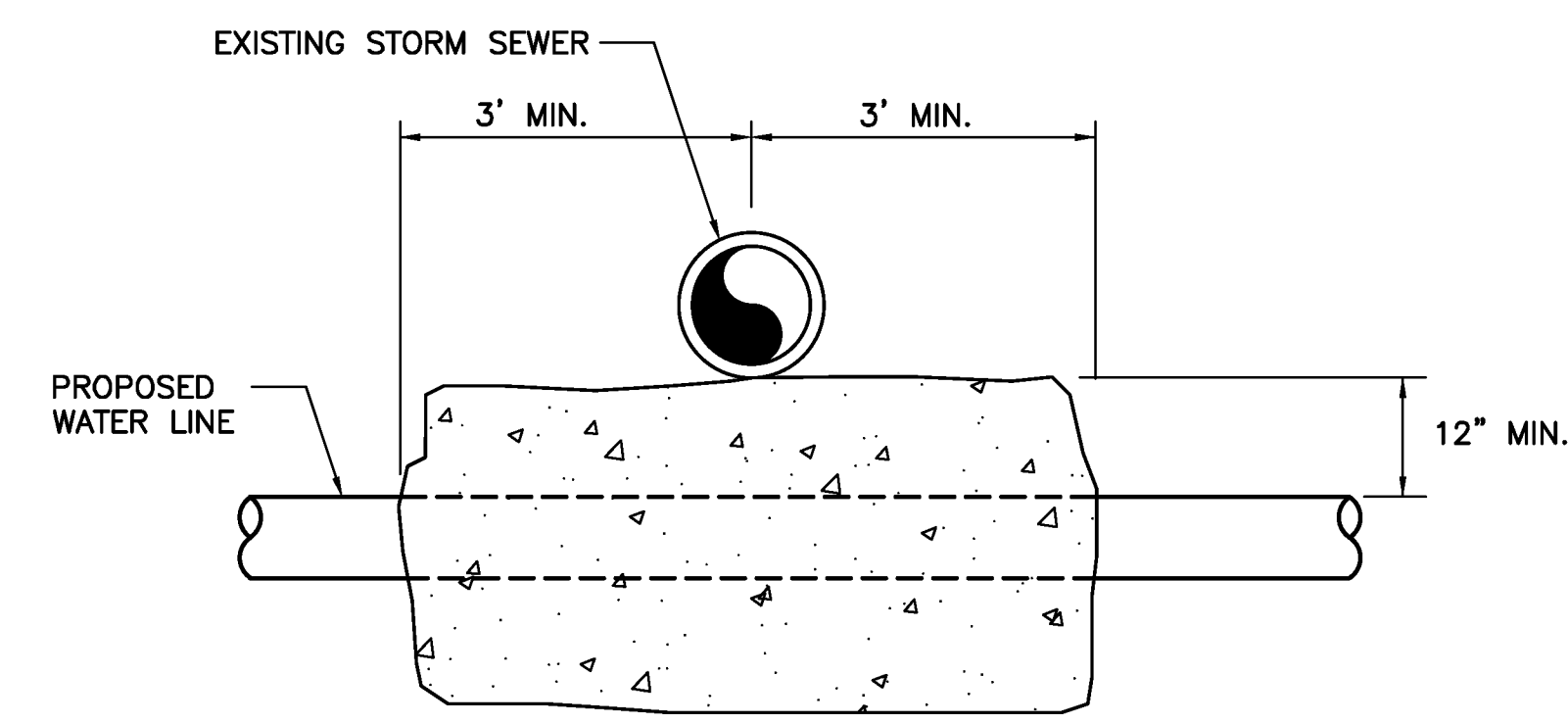
DIP/PVC TRANSITION ASSEMBLY
N.T.S.



HDPE TO MECHANICAL JOINT ADAPTER
N.T.S.

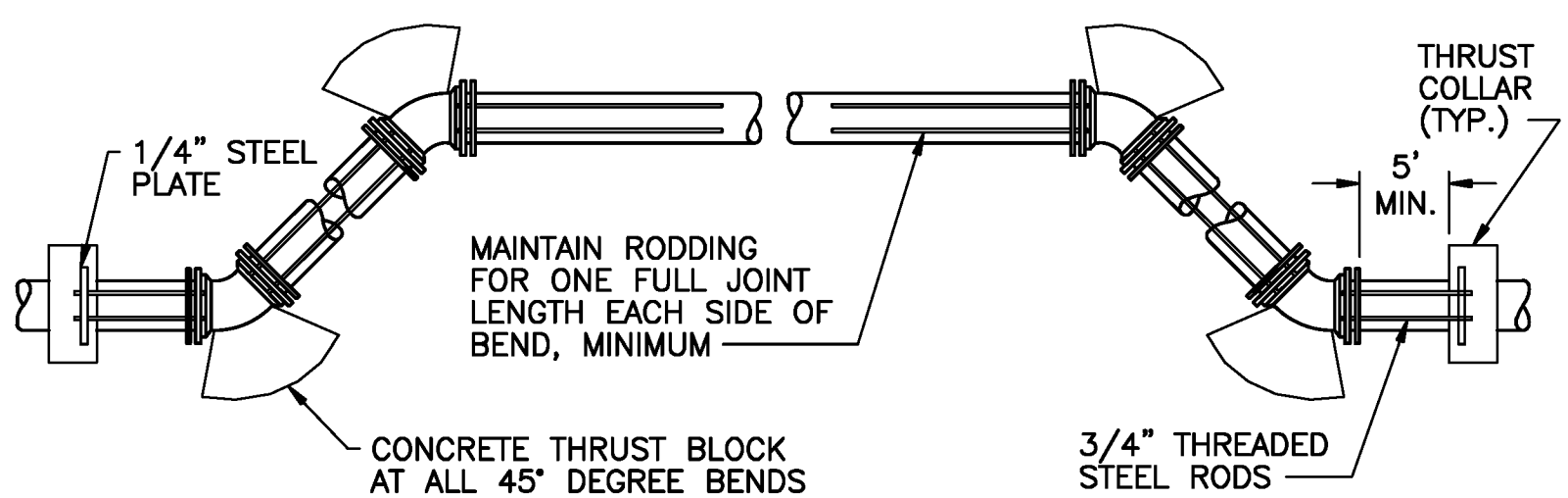


SEWER AND WATER CROSSING
N.T.S.



STORM SEWER CROSSING
N.T.S.

NOTE:
12" CONC. ENCASEMENT ALL AROUND PROPOSED WATER LINE AND POURED TO THE BOTTOM OF THE EXISTING PIPE.



STATIC THRUST SIZE OF 45° BEND	NUMBER OF IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	4
16"	30,779	4
20"	48,091	6
24"	69,252	8

- NOTES:
- ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL RECEIVE 2 COATS OF BITUMINOUS MATERIAL OR SHALL BE GALVANIZED.
 - CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

VERTICAL BENDS
N.T.S.

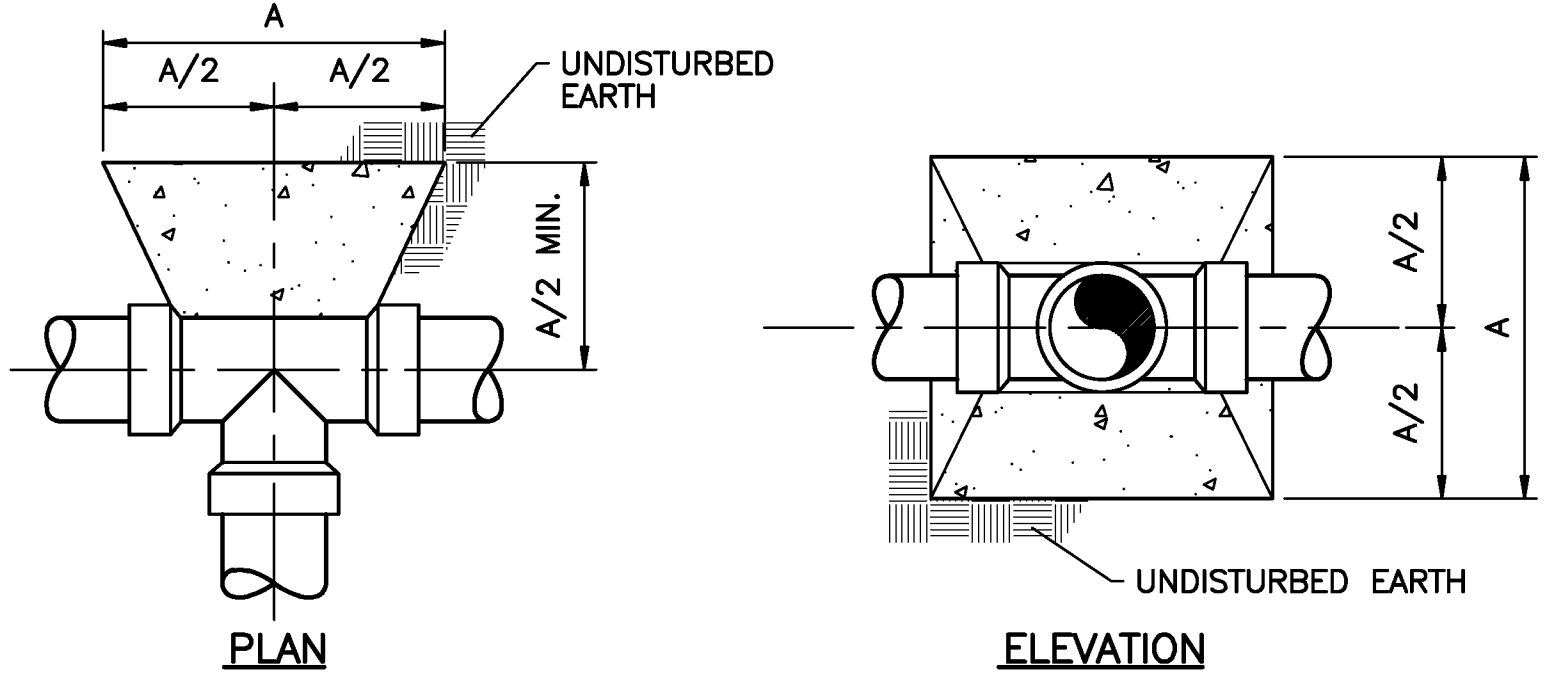
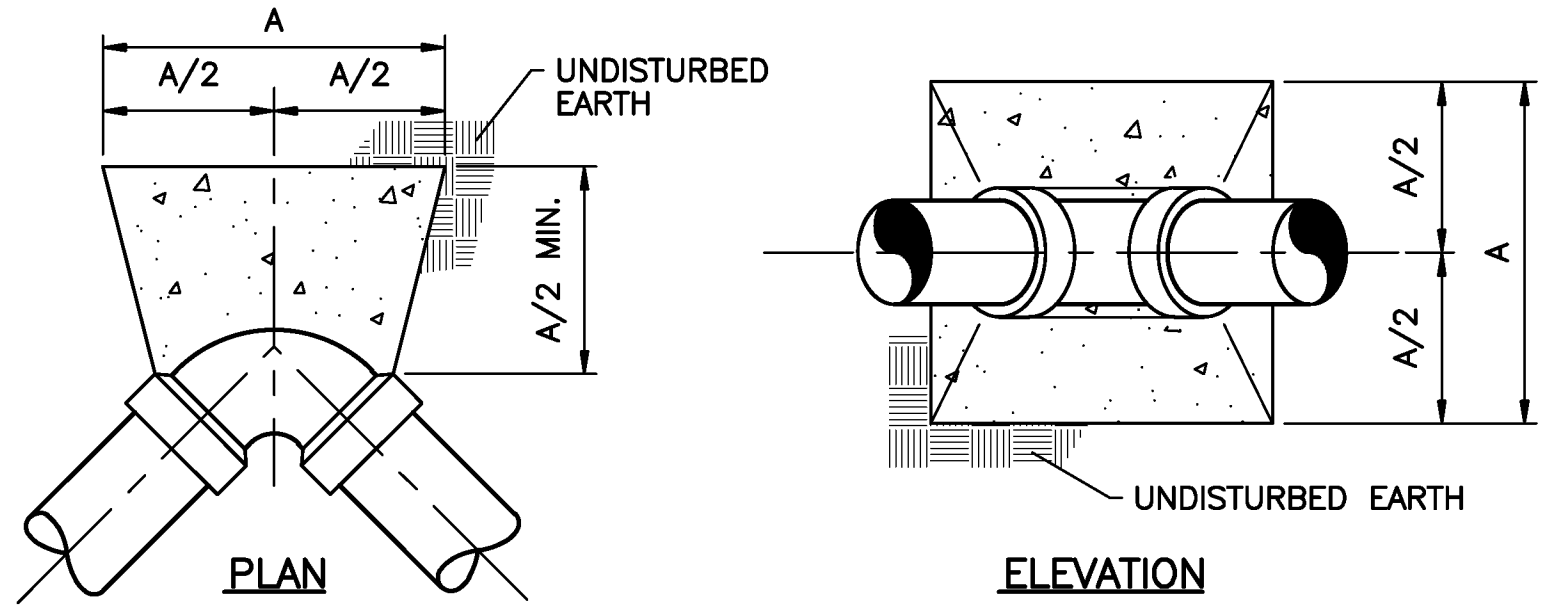
LAST SAVED: 08/28/2024

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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-3.10
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
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FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL	
UNLESS ALL SIGNATURES COMPLETED	

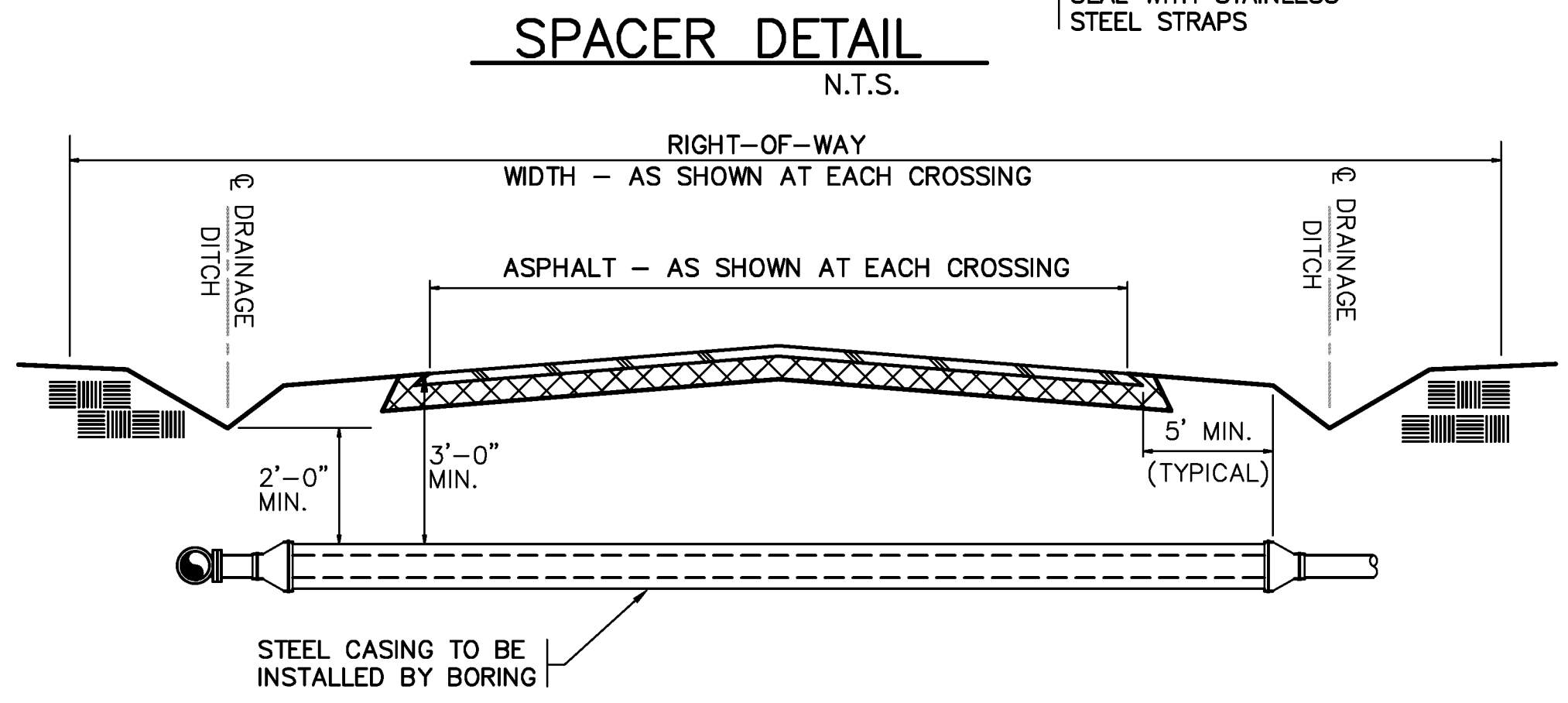
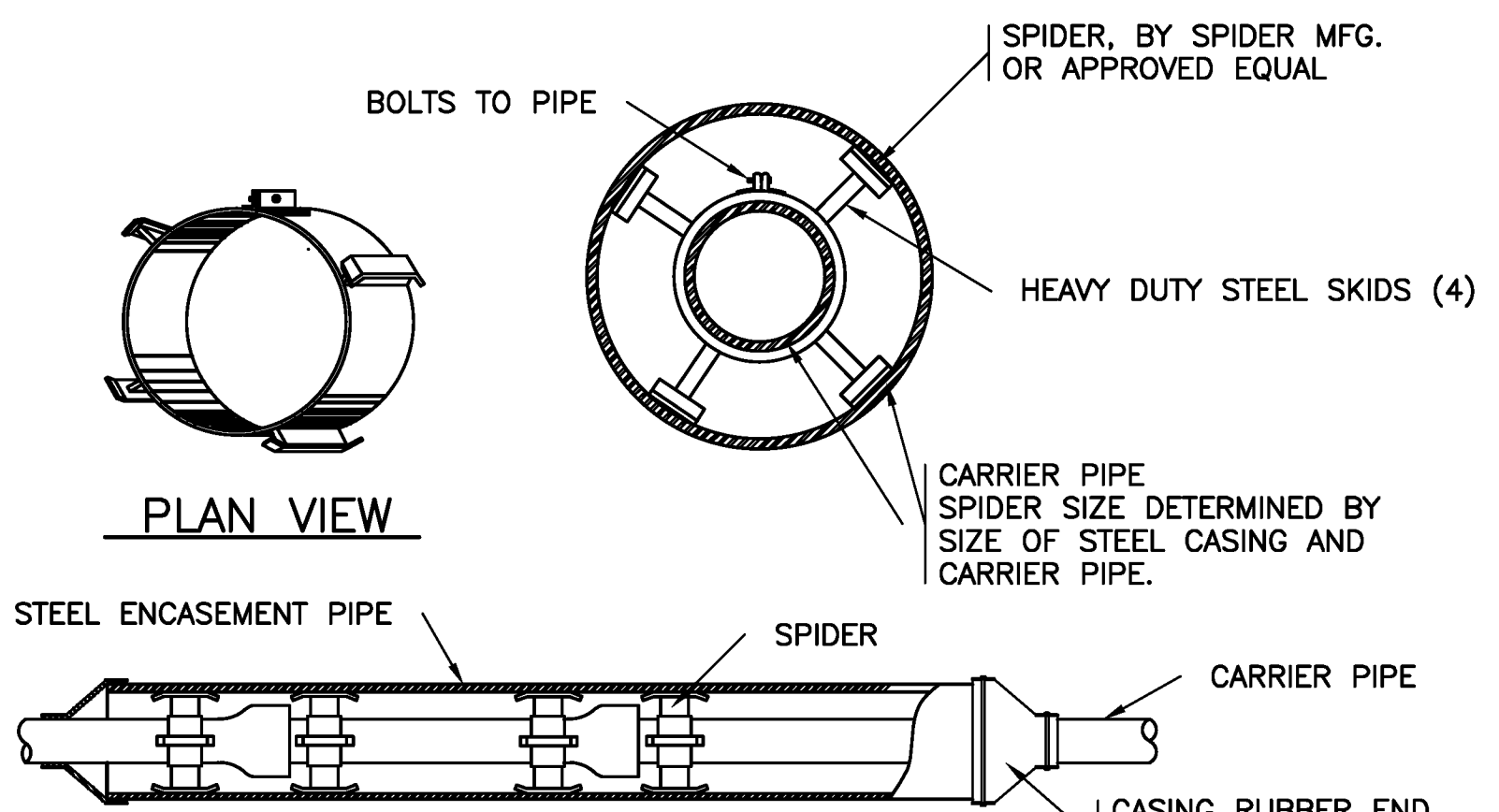
PROJECT TYPICAL DETAILS



NOTES:
 1. THRUST BLOCKS SHALL BE CONSTRUCTED OF 2500 P.S.I. CONCRETE.
 2. INSTALL TAR PAPER AROUND BEND OR FITTING TO PREVENT BONDING OF CONCRETE.

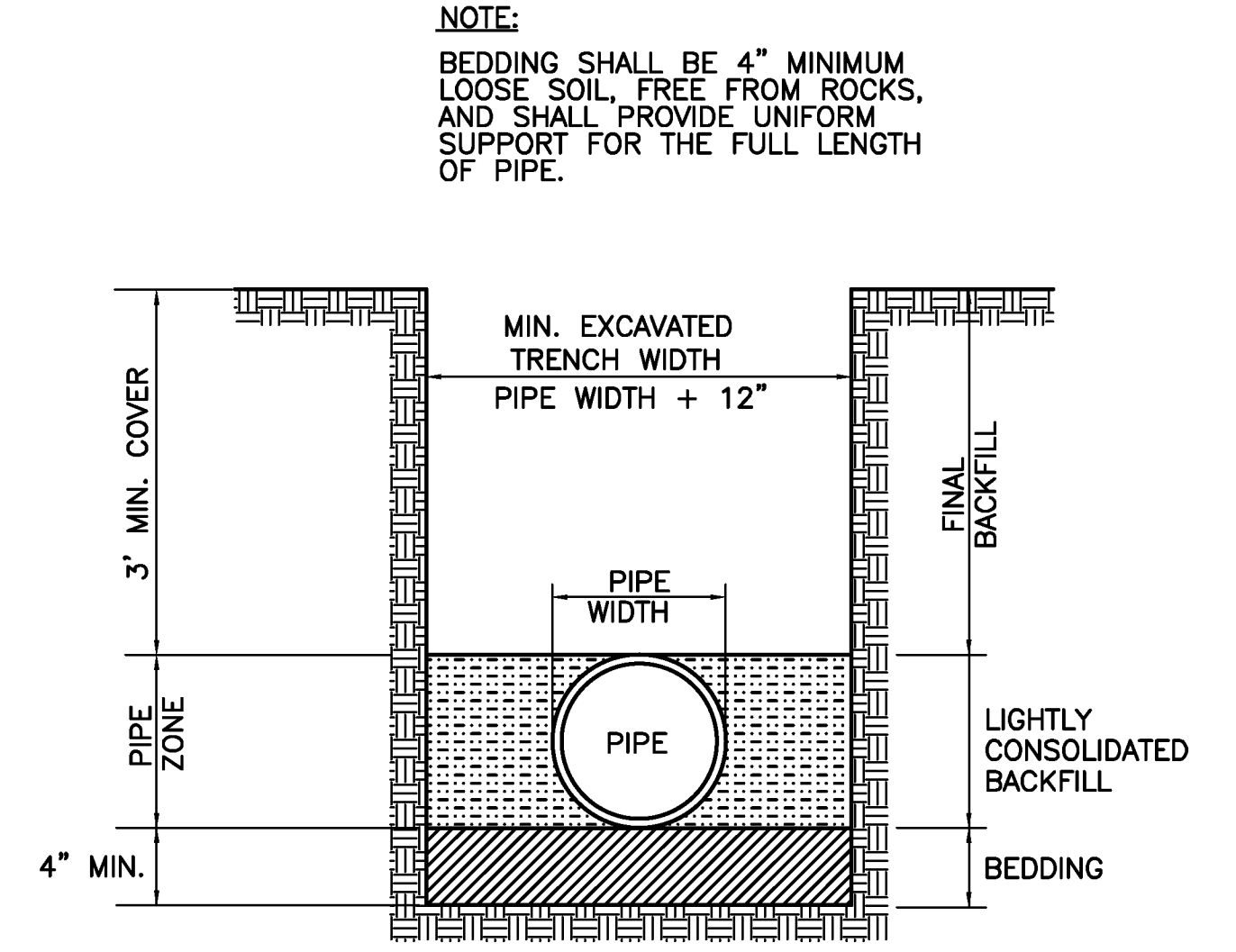
BEND / FITTING	DIMENSION A (FEET)								
	PIPE SIZE (NOM. DIA. IN INCHES)								
	4	6	8	10	12	16	18	20	24
90° BEND	1.4	2.0	2.7	3.4	4.0	5.4	6.0	6.7	8.0
45° BEND	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0	5.9
22 1/2° BEND	0.8	1.1	1.5	1.8	2.2	2.9	3.2	3.6	4.3
11 1/4° BEND	0.5	0.8	1.0	1.3	1.5	2.0	2.3	2.5	3.0
TEE BRANCH/DEAD END	1.2	1.7	2.3	2.9	3.4	4.5	5.1	5.7	6.8

CONCRETE THRUST BLOCK DETAIL FOR PRESSURE MAIN HORIZONTAL BENDS AND TEES
 N.T.S.



TYPICAL BORING DETAIL UNDER HIGHWAYS
 N.T.S.

NOMINAL D.I. CARRIER PIPE DIA. (INCHES)	STEEL CASING MINIMUM O.D. (INCHES)	MIN. WALL THICKNESS FOR HIGHWAYS (INCHES)	MIN. WALL THICKNESS FOR RAILROADS (INCHES)
3	8.625	0.250	0.250
4	10.750	0.250	0.250
6	14.0	0.250	0.250
8	16.0	0.250	0.312
10	18.0	0.250	0.312
12	20.0	0.250	0.375
14	24.0	0.250	0.375
16	26.0	0.312	0.500
18	28.0	0.312	0.500
20	30.0	0.312	0.500
24	34.0	0.500	0.625



TRENCH DETAIL TYPE 3 LAYING CONDITIONS
 N.T.S.

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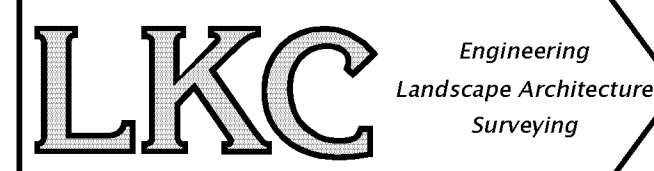
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 REVISIONS

DRAWING NO. 810 DESIGN DRAWINGS

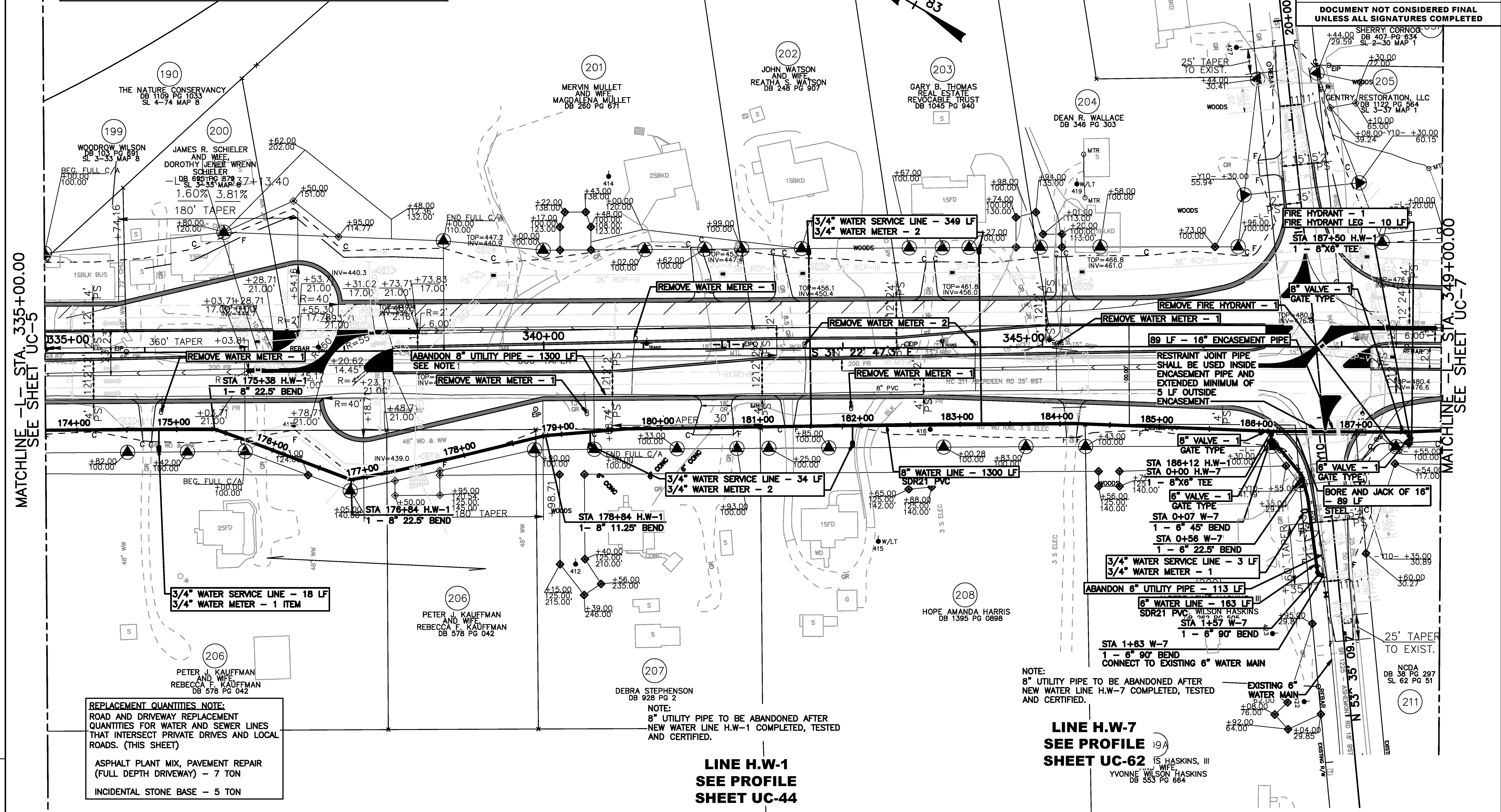
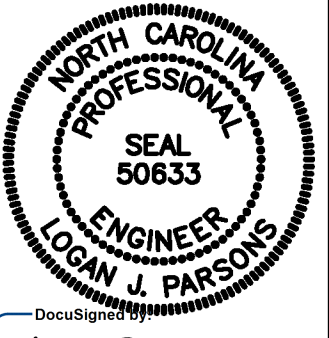
LAST SAVED: 09/10/2024

CASING PIPE INSTALLATION NOTES:

1. PORTIONS OF CASING MAY BE INSTALLED BY OPEN TRENCH METHOD WHERE APPROVED BY THE ENGINEER AND NC DOT.
2. LOCATIONS OF BORE AND RECEIVING PITS OTHER THAN AS SHOWN ON PLANS SHALL BE APPROVED BY THE ENGINEER AND NC DOT PRIOR TO THEIR EXCAVATION.
3. CASING UNDER EXISTING ROADWAY MUST BE INSTALLED BY BORE AND JACK UNLESS OTHERWISE NOTED.
4. SITE GRADING WILL CHANGE OVER THE LIFE OF THE PROJECT AND MAY REQUIRE FULL LENGTH BORE AND JACK DEPENDING UPON THE TIMING OF CASING PLACEMENT.
5. ABUTTING CASING PIPES SHALL BE JOINED WITH A CIRCUMFERENTIAL FULL PENETRATION BUTT WELD TO MAKE THEM A SINGLE WATER TIGHT CASING. WELDS MUST NOT OBSTRUCT CARRIER PIPE SPIDERS. SEE TYPICAL BORING DETAIL UNDER HIGHWAYS, SHEET UC-3.26



PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-6
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
APPROVED BY: -	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REPLACEMENT QUANTITIES NOTE:
ROAD AND DRIVEWAY REPLACEMENT QUANTITIES FOR WATER AND SEWER LINES THAT INTERSECT PRIVATE DRIVES AND LOCAL ROADS. (THIS SHEET)

ASPHALT PLANT MIX, PAVEMENT REPAIR (FULL DEPTH DRIVEWAY) - 7 TON
INCIDENTAL STONE BASE - 5 TON

THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTING ON THIS PLAN SHEET IS 1,000 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

**LINE H.W-1
SEE PROFILE
SHEET UC-44**

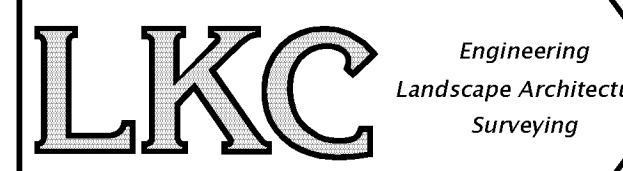
**LINE H.W-7
SEE PROFILE
SHEET UC-62**

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REVISIONS

MATCHLINE - L - STA. 335+00.00
SEE SHEET UC-5

MATCHLINE - R - STA. 349+00.00
SEE SHEET UC-7

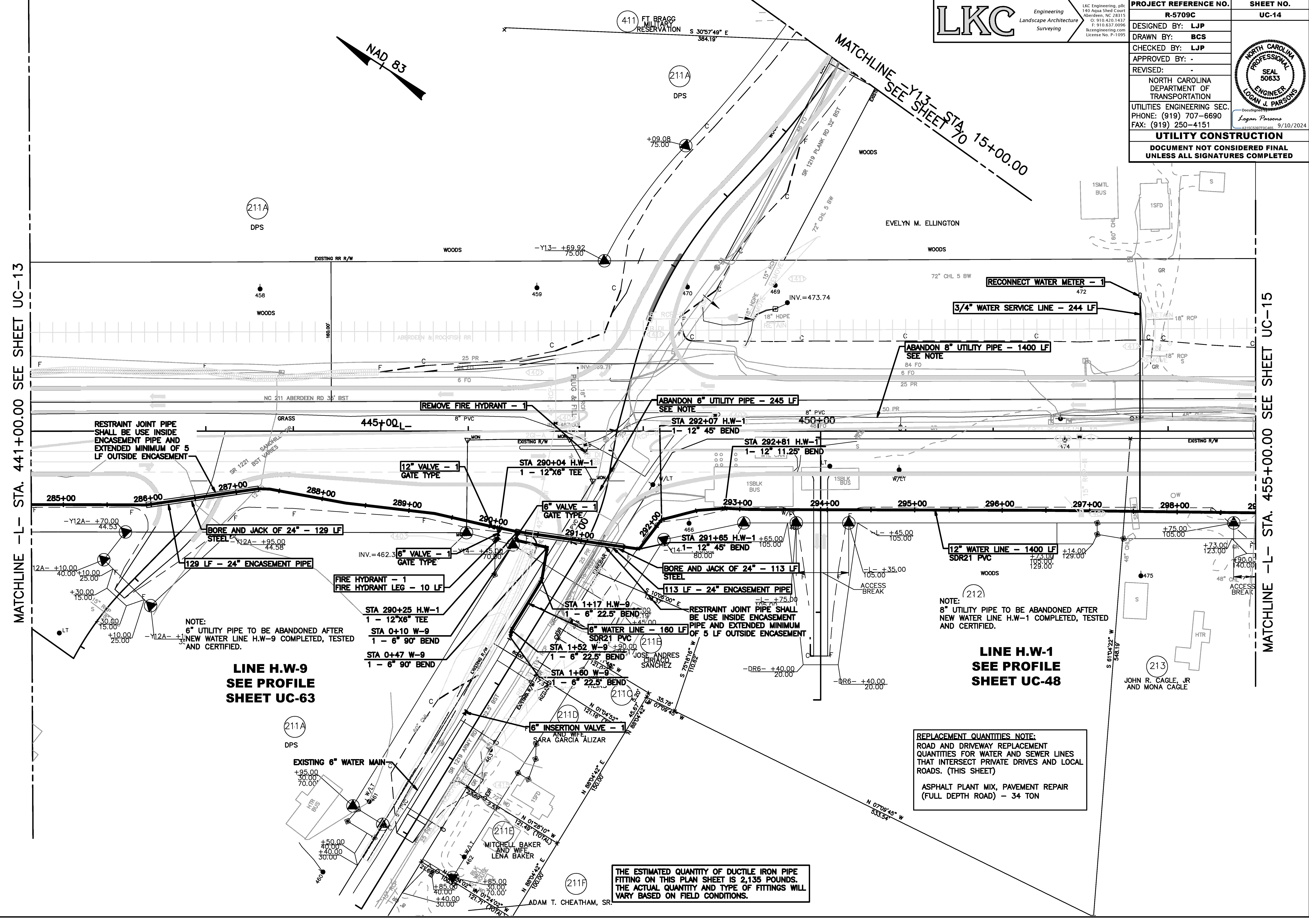
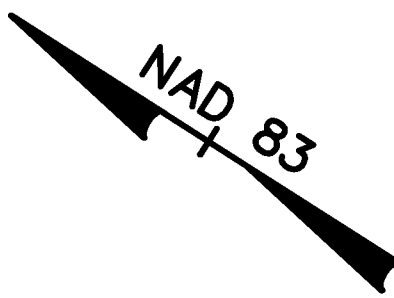


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Landscape Architecture
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PROJECT REFERENCE NO.	R-5709C	SHEET NO.	UC-14
DESIGNED BY:	LJP		
CHECKED BY:	LJP		
APPROVED BY:	-		
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
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UTILITY CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



Logan Parsons
9/10/2024



MATCHLINE -L- STA. 441+00.00 SEE SHEET UC-13

MATCHLINE -L- STA. 455+00.00 SEE SHEET UC-15

RESTRAINT JOINT PIPE SHALL BE USE INSIDE ENCASEMENT PIPE AND EXTENDED MINIMUM OF 5 LF OUTSIDE ENCASEMENT

NOTE:
6" UTILITY PIPE TO BE ABANDONED AFTER NEW WATER LINE H.W-9 COMPLETED, TESTED AND CERTIFIED.

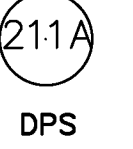
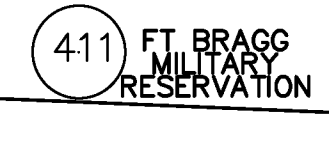
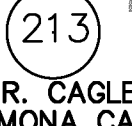
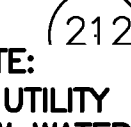
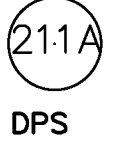
**LINE H.W-9
SEE PROFILE
SHEET UC-63**

NOTE:
8" UTILITY PIPE TO BE ABANDONED AFTER NEW WATER LINE H.W-1 COMPLETED, TESTED AND CERTIFIED.

**LINE H.W-1
SEE PROFILE
SHEET UC-48**

REPLACEMENT QUANTITIES NOTE:
ROAD AND DRIVEWAY REPLACEMENT QUANTITIES FOR WATER AND SEWER LINES THAT INTERSECT PRIVATE DRIVES AND LOCAL ROADS. (THIS SHEET)
ASPHALT PLANT MIX, PAVEMENT REPAIR (FULL DEPTH ROAD) - 34 TON

THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTING ON THIS PLAN SHEET IS 2,135 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

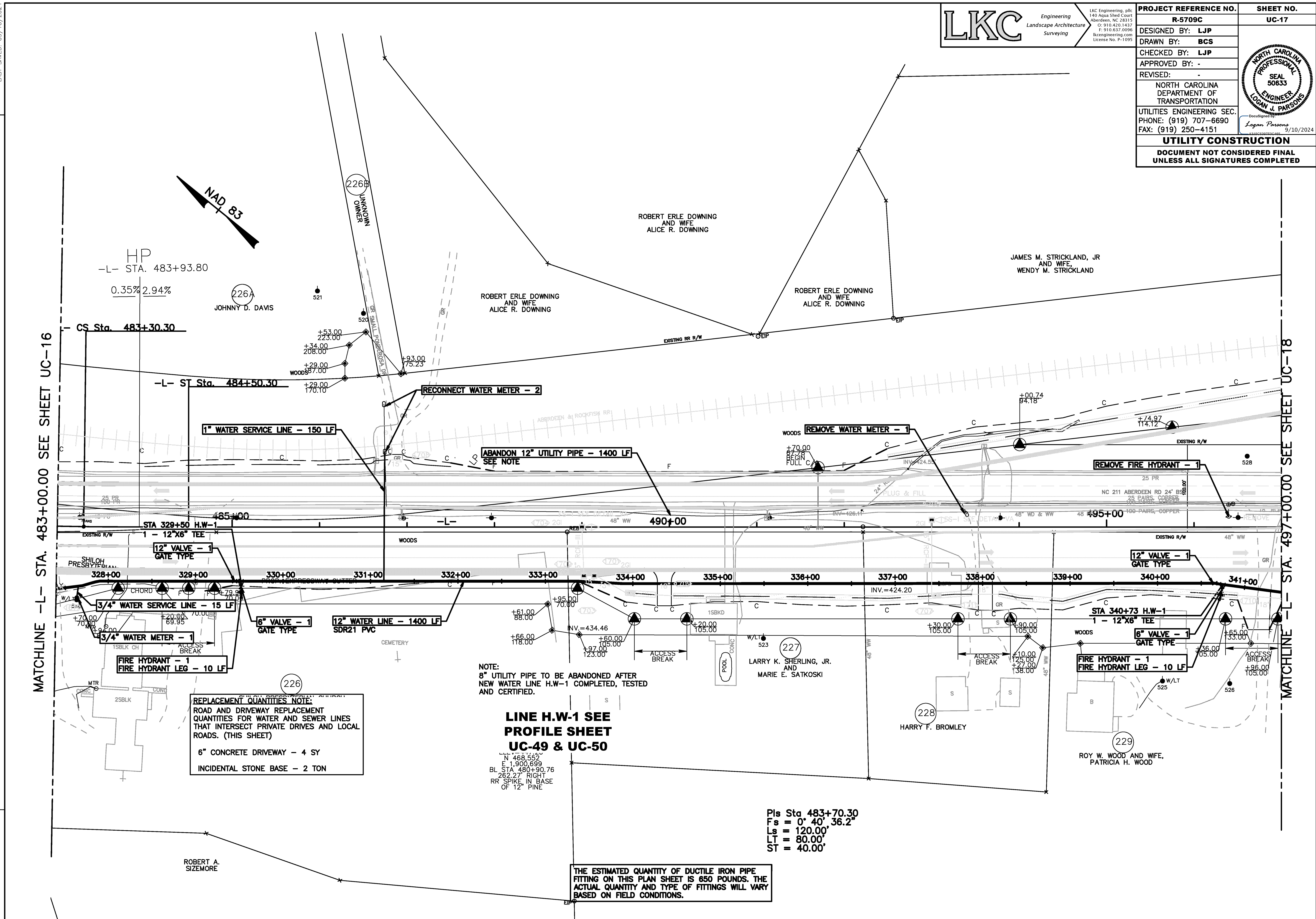


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 LAST SAVED: 09/10/2024

LKC
Engineering
Landscape Architecture
Surveying

LKC Engineering, PLLC
 140 Aqua Shed Court
 Aberdeen, NC 28315
 P: 910.637.0096
 F: 910.637.0096
 lkcengineering.com
 License No. P-1095

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-17
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA PROFESSIONAL SEAL 50633 ENGINEER LOGAN J. PARSONS <small>DocuSign Envelope ID: 51AFC520204E</small> 9/10/2024	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS
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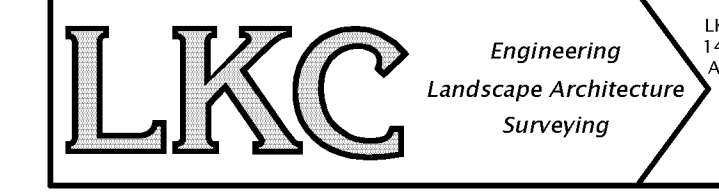
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MATCHLINE -L- STA. 497+00.00 SEE SHEET UC-18

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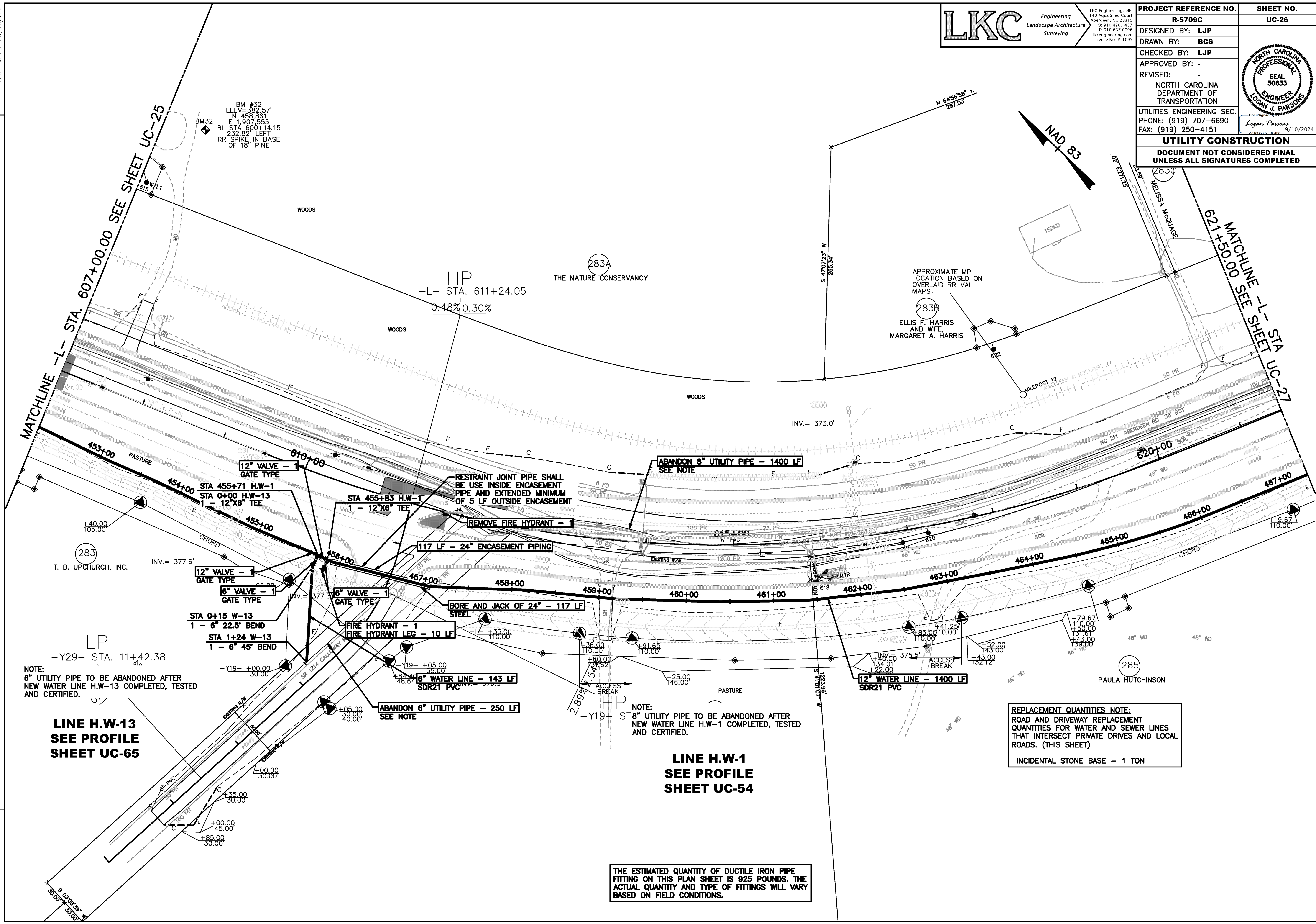
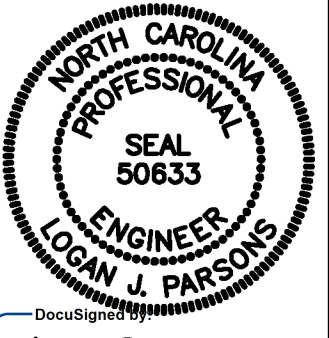
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Landscape Architecture
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-26
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NOTE:
6" UTILITY PIPE TO BE ABANDONED AFTER
NEW WATER LINE H.W-13 COMPLETED, TESTED
AND CERTIFIED.

**LINE H.W-13
SEE PROFILE
SHEET UC-65**

NOTE:
8" UTILITY PIPE TO BE ABANDONED AFTER
NEW WATER LINE H.W-1 COMPLETED, TESTED
AND CERTIFIED.

**LINE H.W-1
SEE PROFILE
SHEET UC-54**

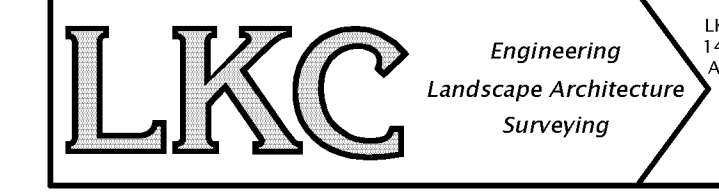
REPLACEMENT QUANTITIES NOTE:
ROAD AND DRIVEWAY REPLACEMENT
QUANTITIES FOR WATER AND SEWER LINES
THAT INTERSECT PRIVATE DRIVES AND LOCAL
ROADS. (THIS SHEET)
INCIDENTAL STONE BASE - 1 TON

THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE
FITTING ON THIS PLAN SHEET IS 925 POUNDS. THE
ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY
BASED ON FIELD CONDITIONS.

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IMAGE: \\\...[+more]

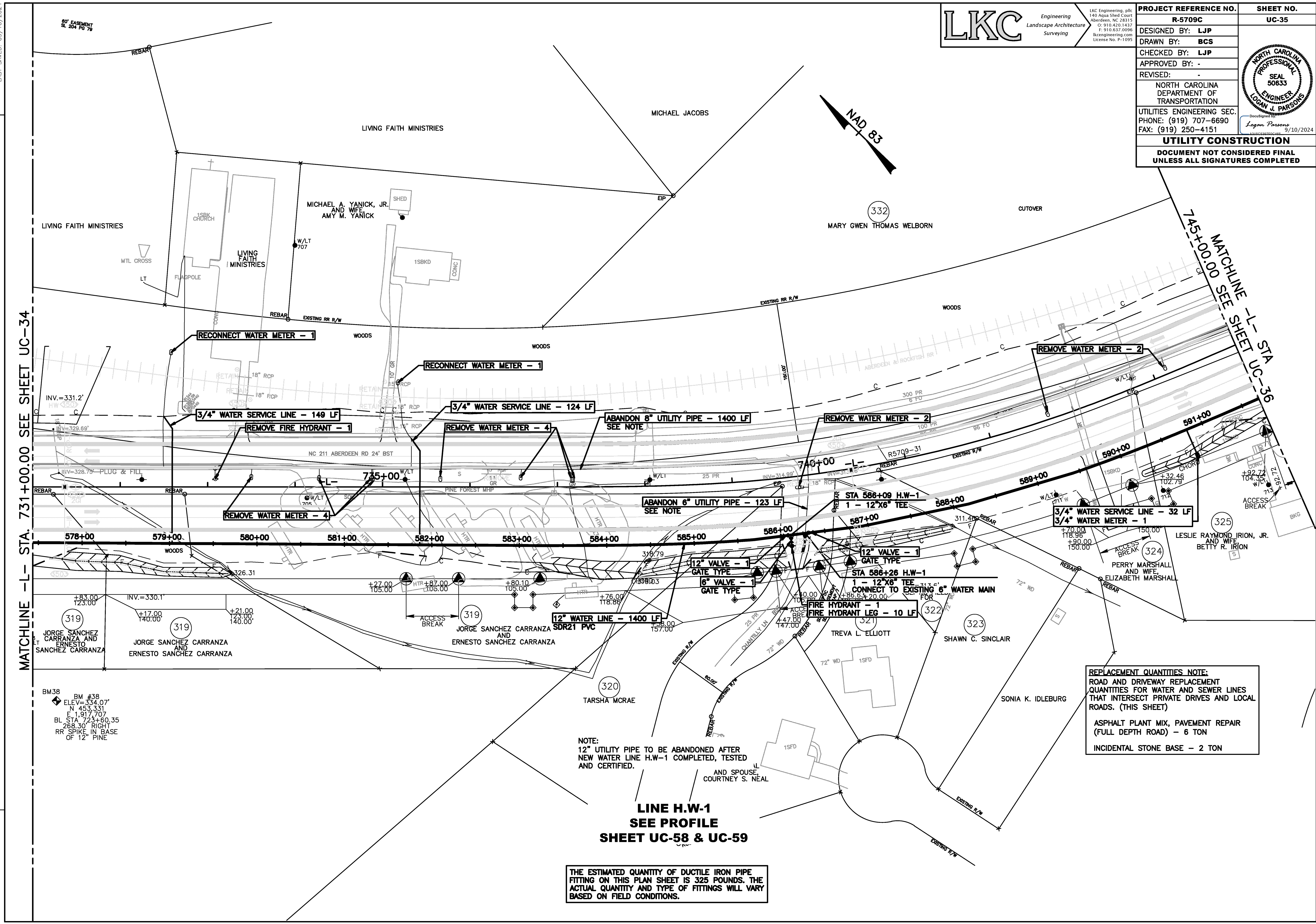
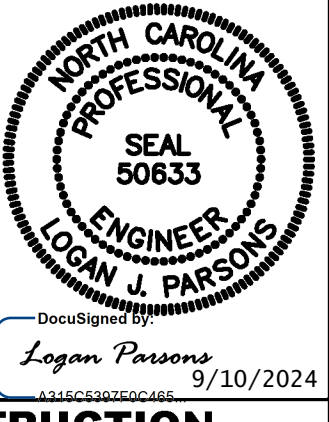
LAST SAVED: 09/10/2024

REVISIONS



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Aberdeen, NC 28315
P: 910.637.0096
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lkcengineering.com
License No. P-1095

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-35
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE - L- STA. 731+00.00 SEE SHEET UC-34

MATCHLINE - L- STA 591+00.00 SEE SHEET UC-36

NOTE:
12" UTILITY PIPE TO BE ABANDONED AFTER NEW WATER LINE H.W-1 COMPLETED, TESTED AND CERTIFIED.

**LINE H.W-1
SEE PROFILE
SHEET UC-58 & UC-59**

THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTING ON THIS PLAN SHEET IS 325 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

REPLACEMENT QUANTITIES NOTE:
ROAD AND DRIVEWAY REPLACEMENT QUANTITIES FOR WATER AND SEWER LINES THAT INTERSECT PRIVATE DRIVES AND LOCAL ROADS. (THIS SHEET)
ASPHALT PLANT MIX, PAVEMENT REPAIR (FULL DEPTH ROAD) - 6 TON
INCIDENTAL STONE BASE - 2 TON

BM38
BM #38
ELEV=334.07'
N 453.331
E 1317.707
BL STA 723+60.35
268.30' RIGHT
RR SPIKE IN BASE OF 12" PINE

JORGE SANCHEZ CARRANZA AND ERNESTO SANCHEZ CARRANZA
JORGE SANCHEZ CARRANZA AND ERNESTO SANCHEZ CARRANZA
JORGE SANCHEZ CARRANZA AND ERNESTO SANCHEZ CARRANZA

JORGE SANCHEZ CARRANZA AND ERNESTO SANCHEZ CARRANZA

TREVA L. ELLIOTT
SHAWN C. SINCLAIR

SONIA K. IDLEBURG

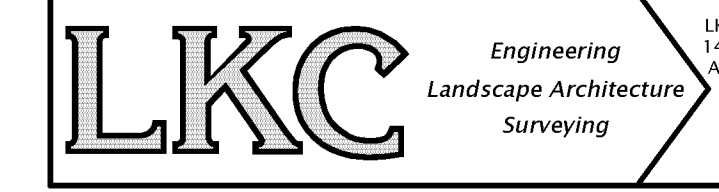
LESLIE RAYMOND IRON, JR. AND WIFE BETTY R. IRON
PERRY MARSHALL AND WIFE, ELIZABETH MARSHALL

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LAST SAVED: 09/10/2024

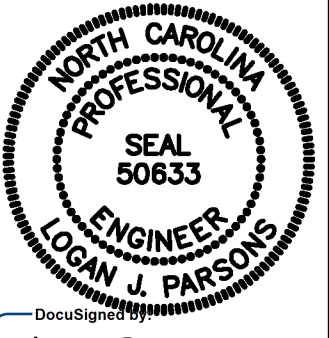
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REVISIONS



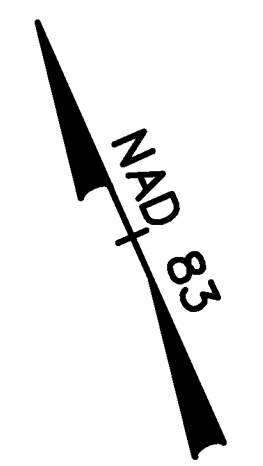
Engineering
Landscape Architecture
Surveying

PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-36
DESIGNED BY: LJP	
DRAWN BY: BCS	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



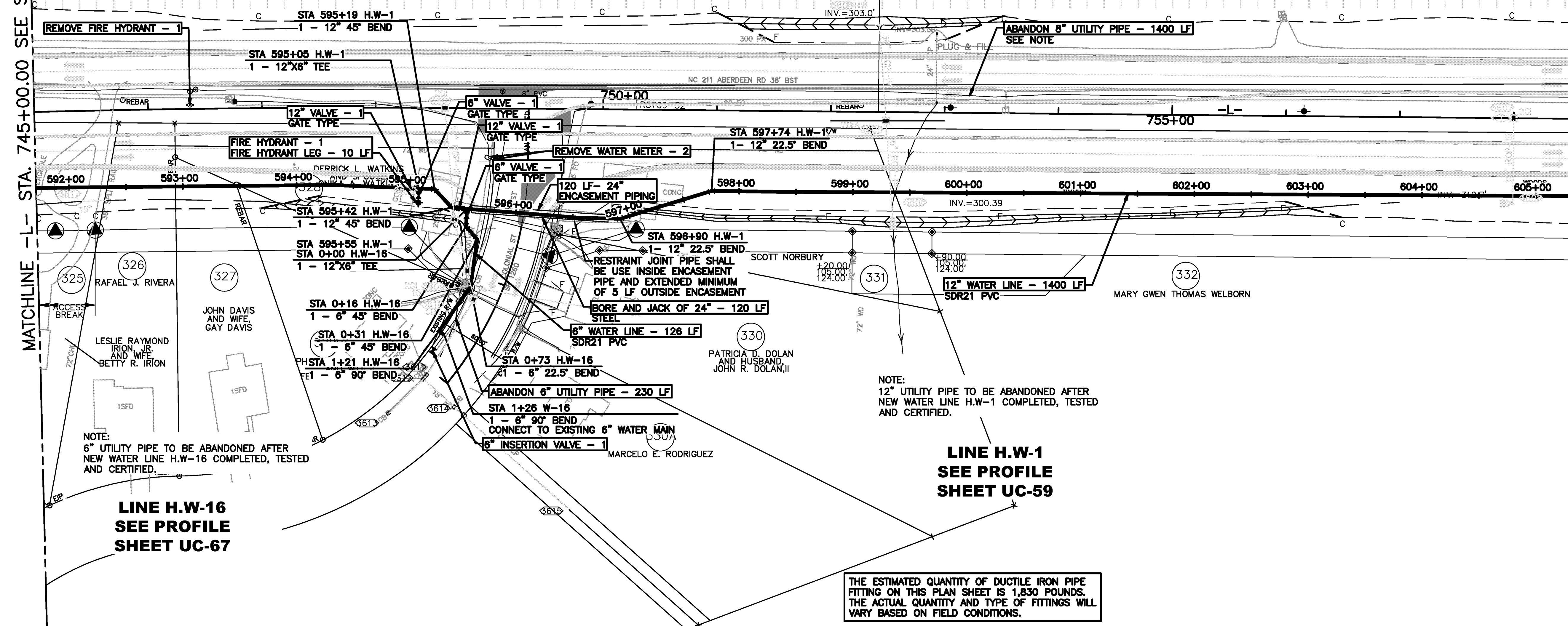
332
MARY GWEN THOMAS WELBORN

BM39
LP
-L- STA. 752+41.82
0.78% 1.64%



MATCHLINE -L- STA. 745+00.00 SEE SHEET UC-35

MATCHLINE -L- STA. 759+00.00 SEE SHEET UC-37



NOTE:
6" UTILITY PIPE TO BE ABANDONED AFTER
NEW WATER LINE H.W-16 COMPLETED, TESTED
AND CERTIFIED.

NOTE:
12" UTILITY PIPE TO BE ABANDONED AFTER
NEW WATER LINE H.W-1 COMPLETED, TESTED
AND CERTIFIED.

**LINE H.W-16
SEE PROFILE
SHEET UC-67**

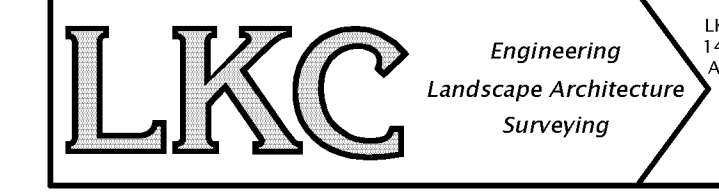
**LINE H.W-1
SEE PROFILE
SHEET UC-59**

THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE
FITTING ON THIS PLAN SHEET IS 1,830 POUNDS.
THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL
VARY BASED ON FIELD CONDITIONS.

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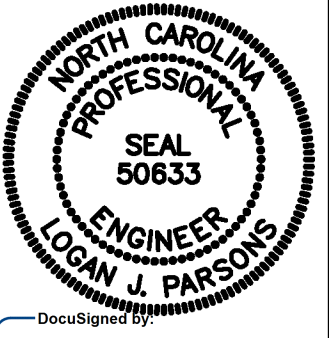
LAST SAVED: 09/10/2024

REVISIONS
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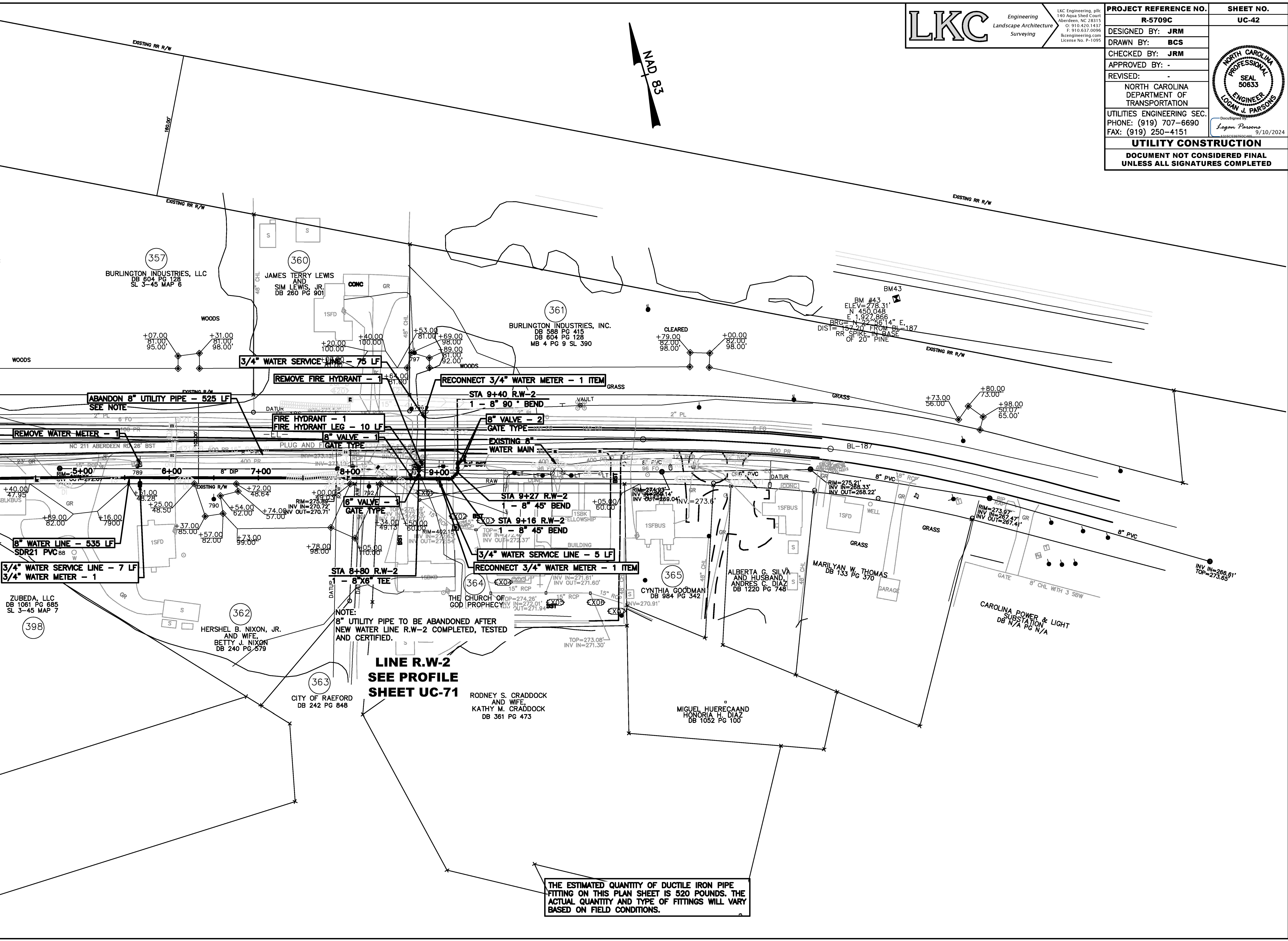


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Aberdeen, NC 28315
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F: 910.637.0096
lkceengineering.com
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-42
DESIGNED BY: JRM	
DRAWN BY: BCS	
CHECKED BY: JRM	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 828+00.00 SEE SHEET UC-41

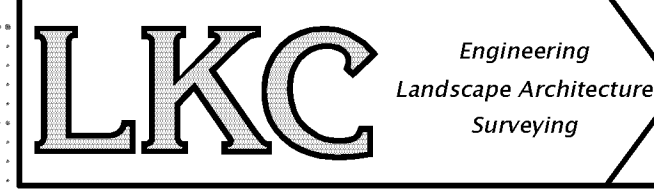
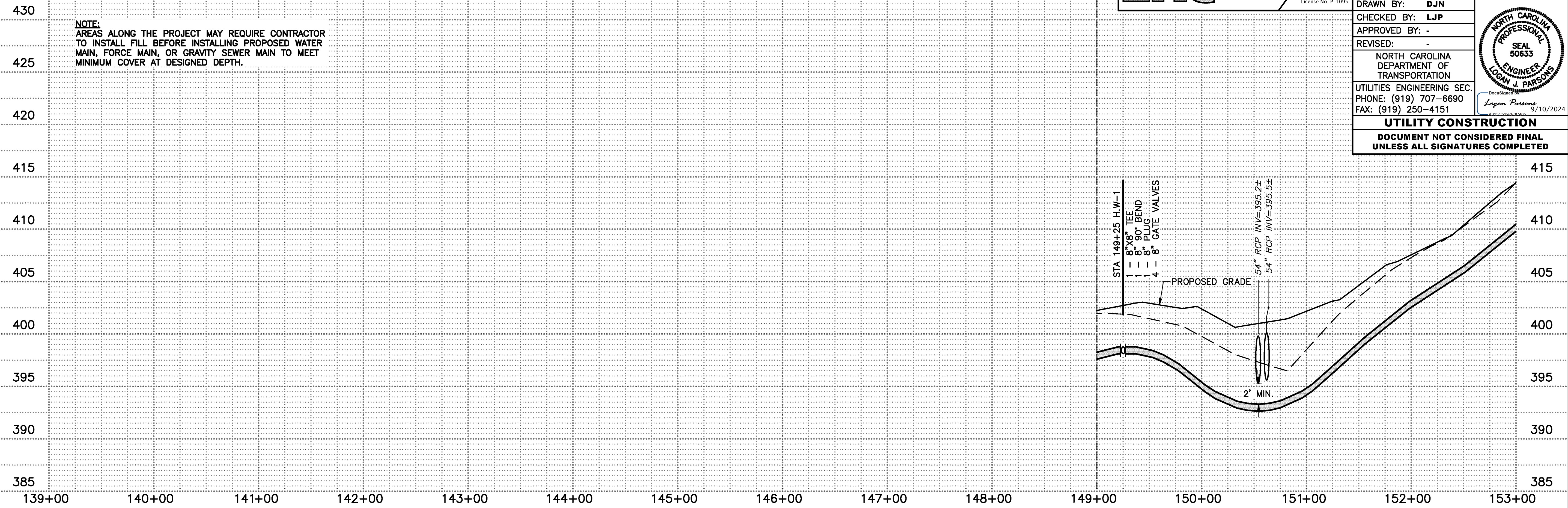


**LINE R.W.-2
SEE PROFILE
SHEET UC-71**

THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTING ON THIS PLAN SHEET IS 520 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

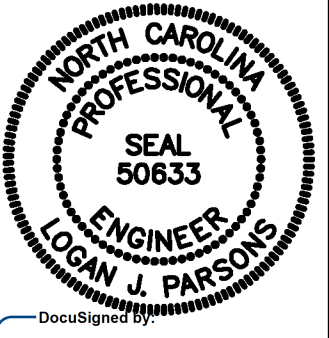
LAST SAVED: 09/10/2024

LINE H.W-1 SEE PLAN SHEET UC-4



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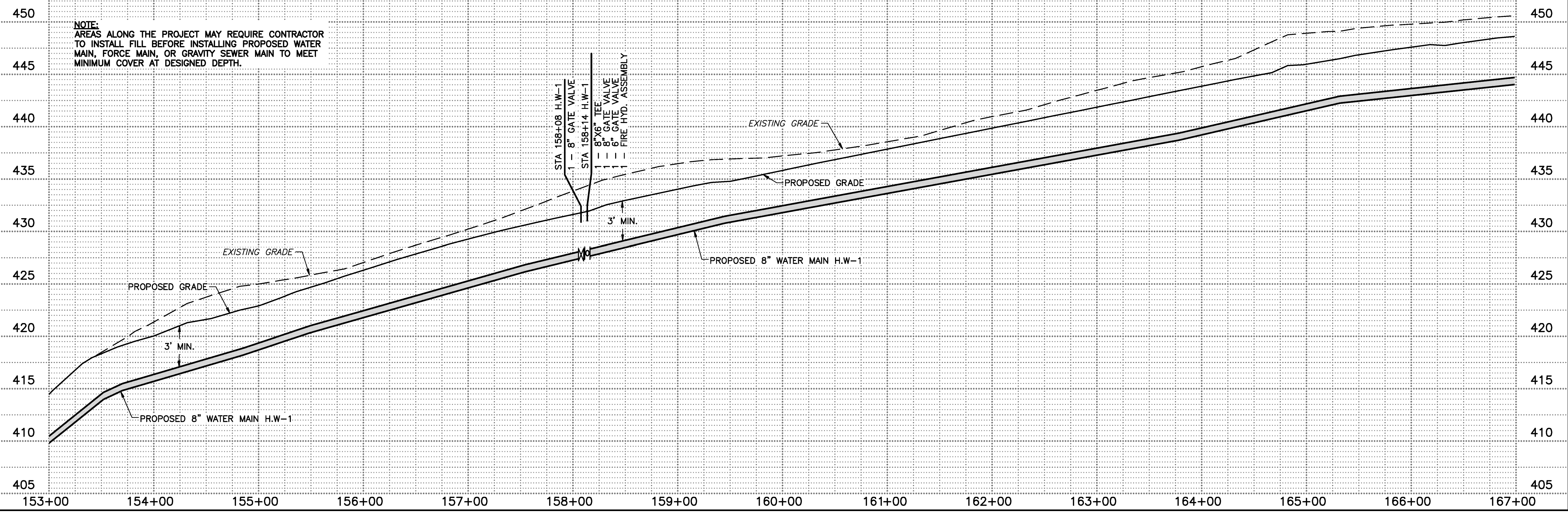
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-43
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL	
UNLESS ALL SIGNATURES COMPLETED	



Logan Parsons
Professional Engineer
9/10/2024

REVISIONS

LINE H.W-1 SEE PLAN SHEET UC-4 & UC-5

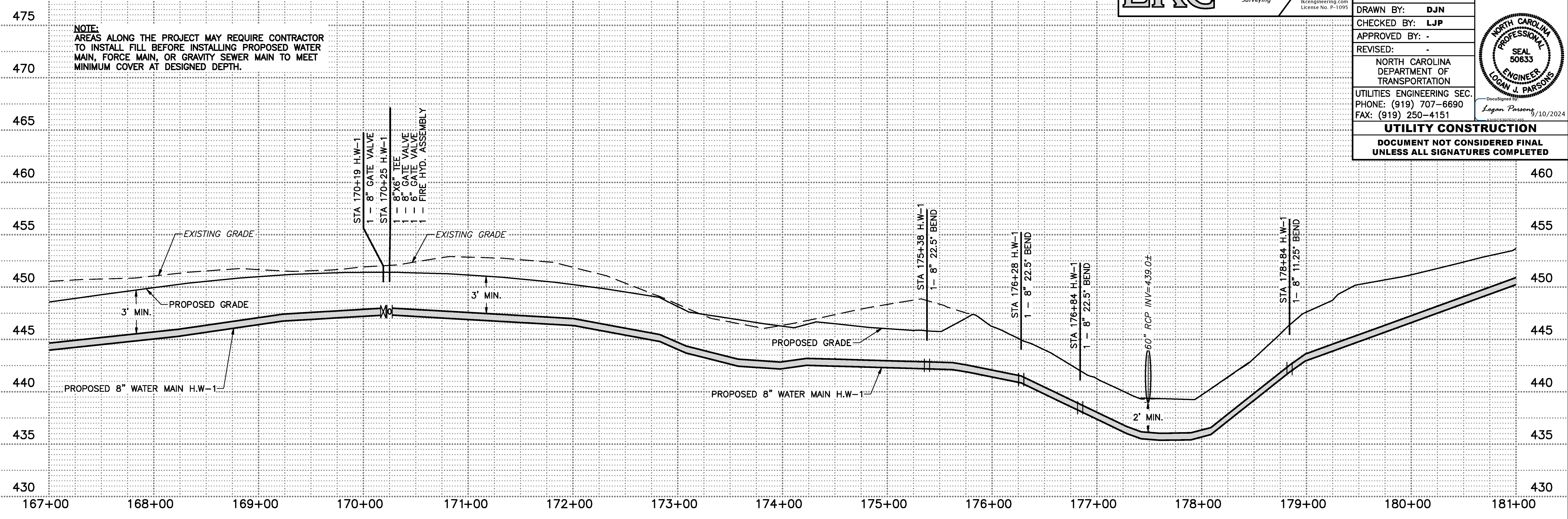


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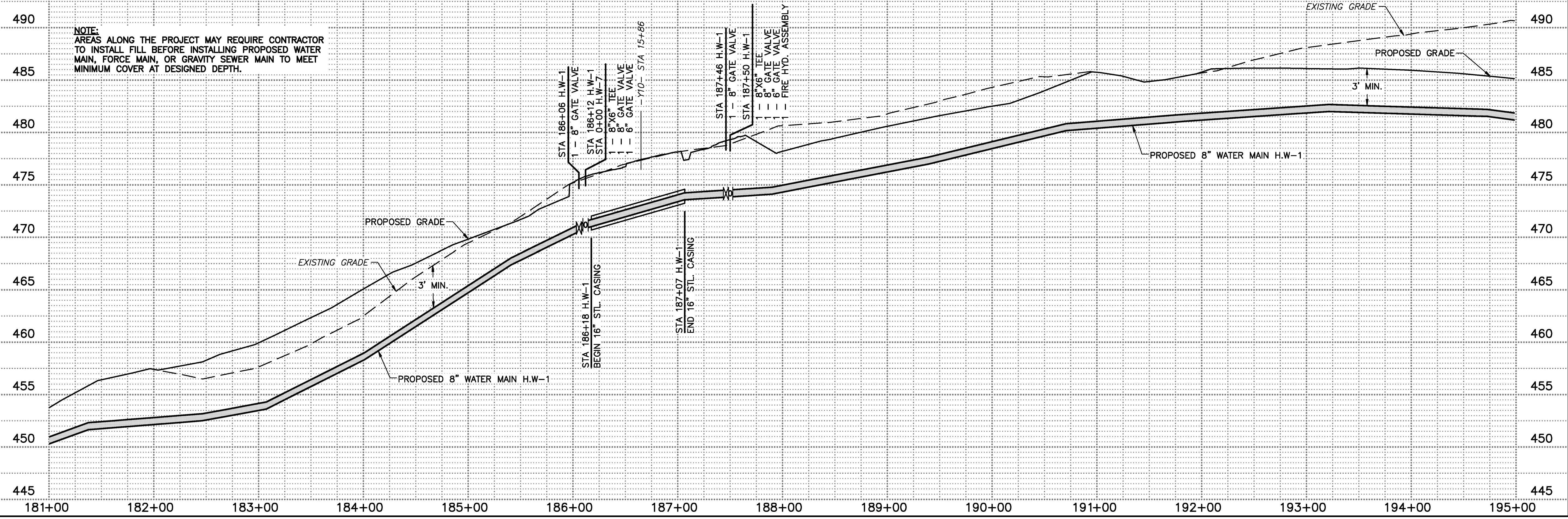
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LAST SAVED: 09/10/2024

LINE H.W-1 SEE PLAN SHEET UC-5 & UC-6

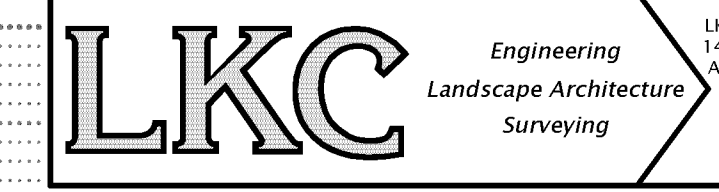


LINE H.W-1 SEE PLAN SHEET UC-6 & UC-7



NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



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Aberdeen, NC 28315
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-44
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Logan Parsons
9/10/2024

L:\HoCo-21.01 - R-5709 NC211 Widening Utility Relocation\800 - Drawings\810 Design Drawings\HoCo-21.01 Profile H.W-1.7.dwg; Last Saved By: RGAZD, 9/10/2024, 1:06:04 PM; Line H.W-1.7; Plotted By: Robert Corzo, 09/10/24 02:02:33 PM

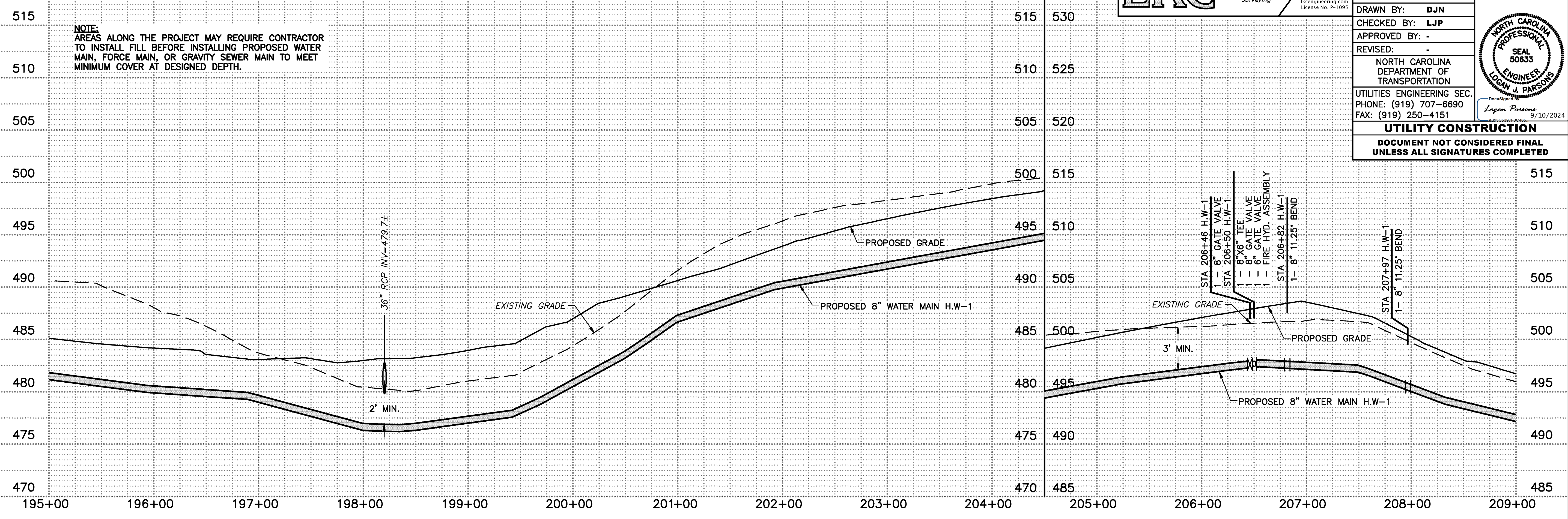
REVISIONS

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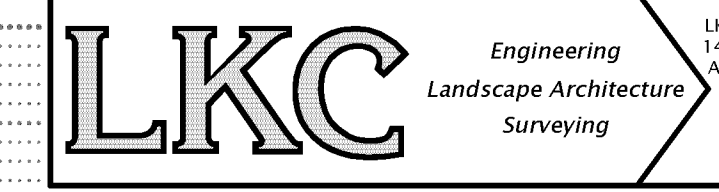
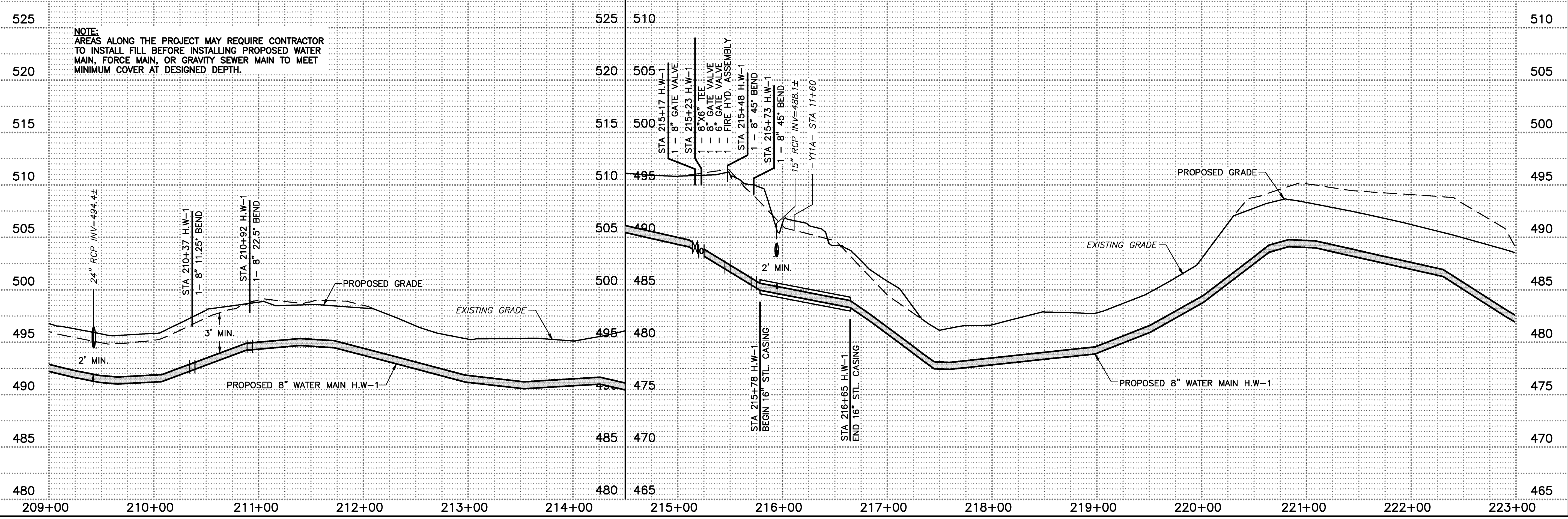
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LAST SAVED: 09/10/2024

LINE H.W-1 SEE PLAN SHEET UC-7 & UC-8

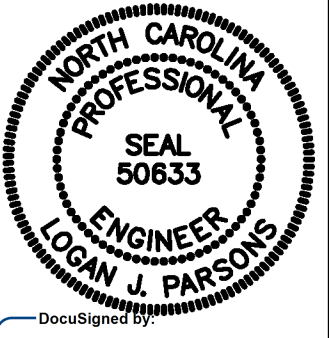


LINE H.W-1 SEE PLAN SHEET UC-8 & UC-9



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License No. P-1095

PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-45
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

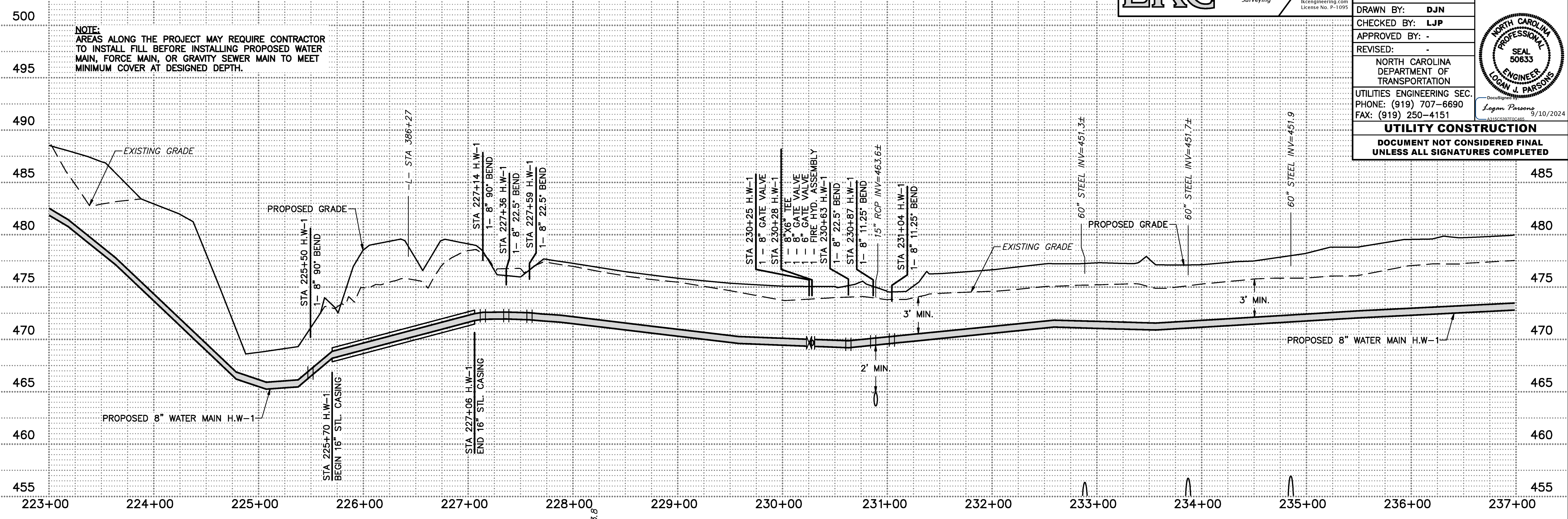


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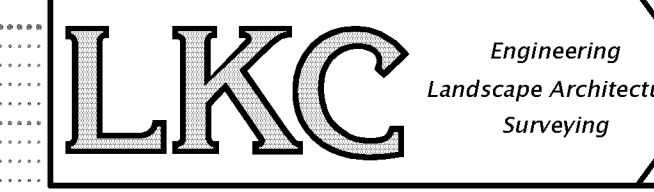
REVISIONS

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LINE H.W-1 SEE PLAN SHEET UC-9 & UC-10

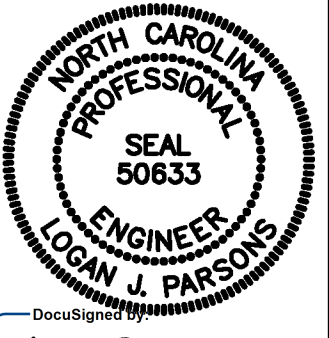


NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



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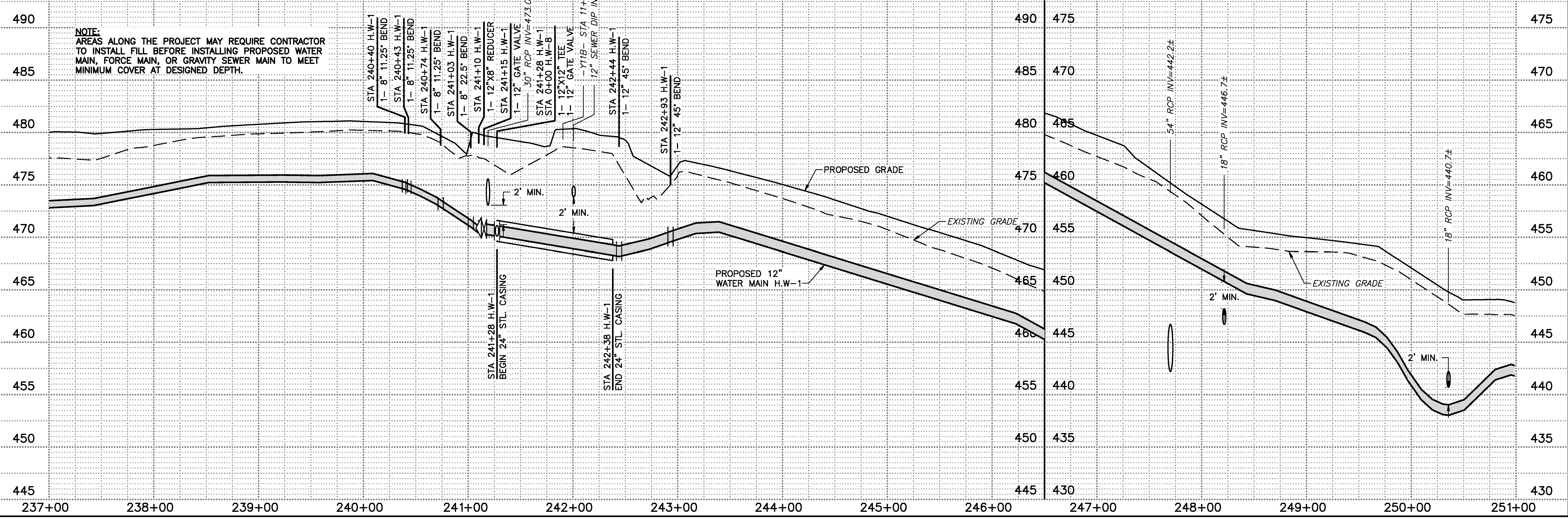
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R-5709C	UC-46
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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LINE H.W-1 SEE PLAN SHEET UC-10 & UC-11

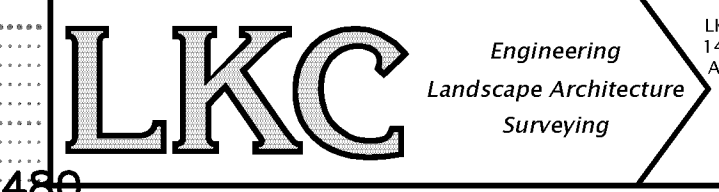
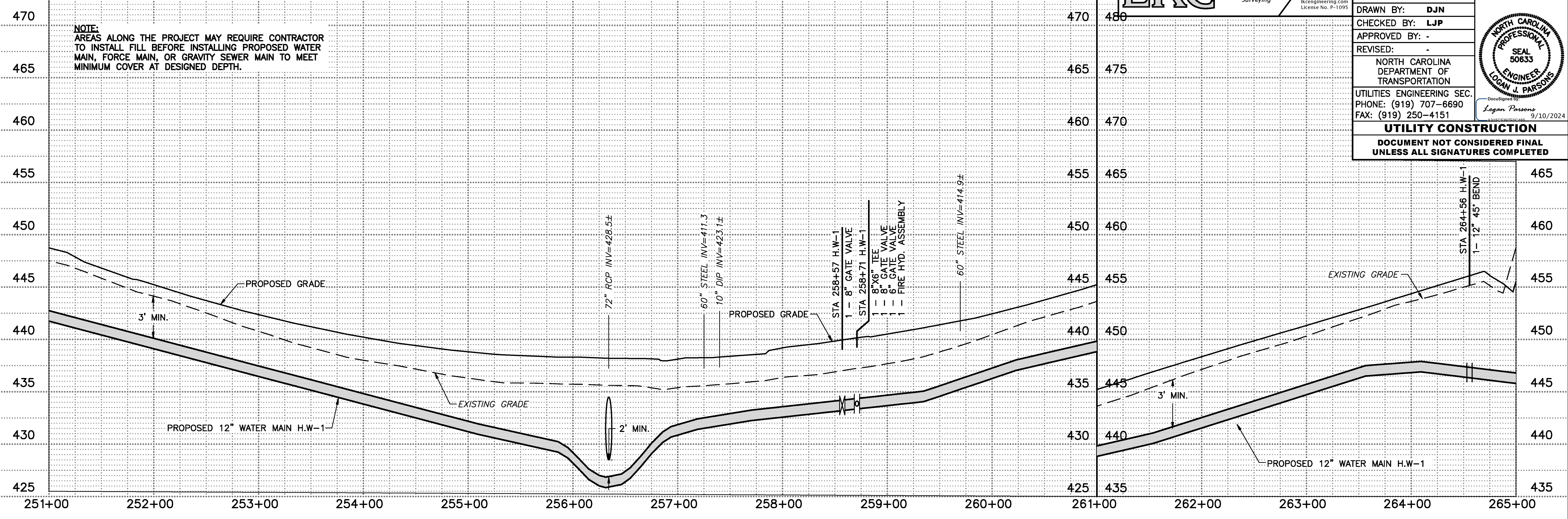


NOTE:
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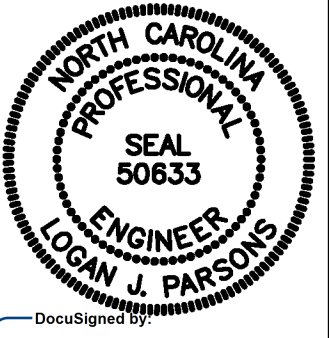
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LINE H.W-1 SEE PLAN SHEET UC-11 & UC-12



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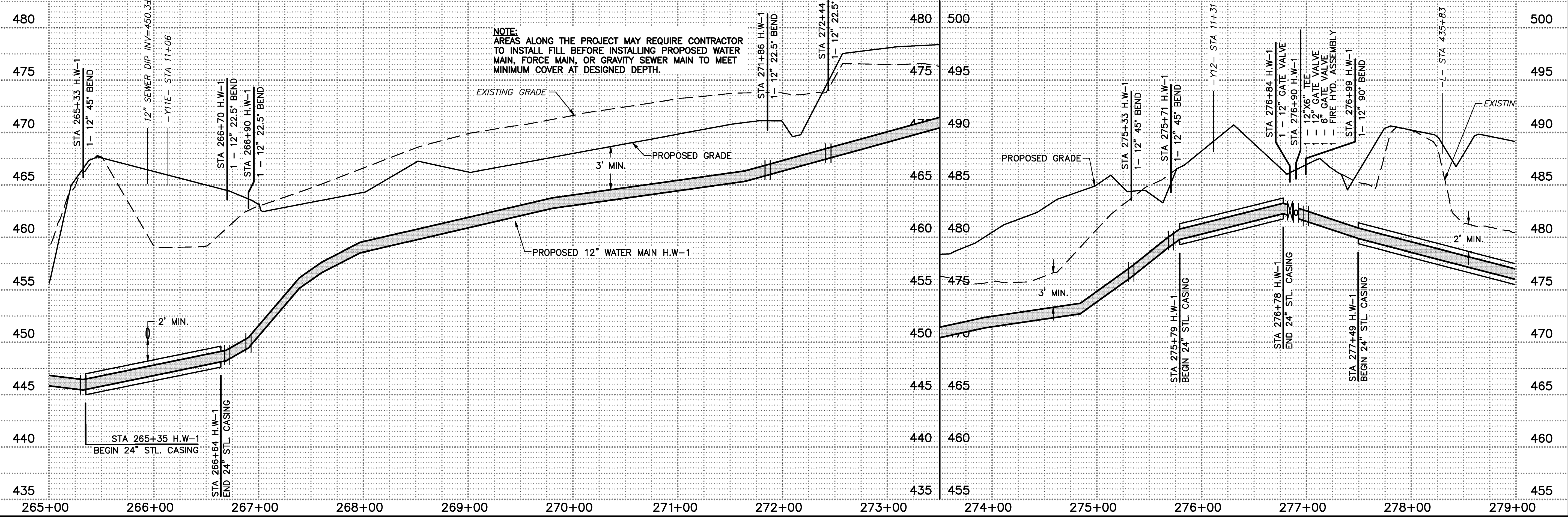
PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-47
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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LINE H.W-1 SEE PLAN SHEET UC-12 & UC-13



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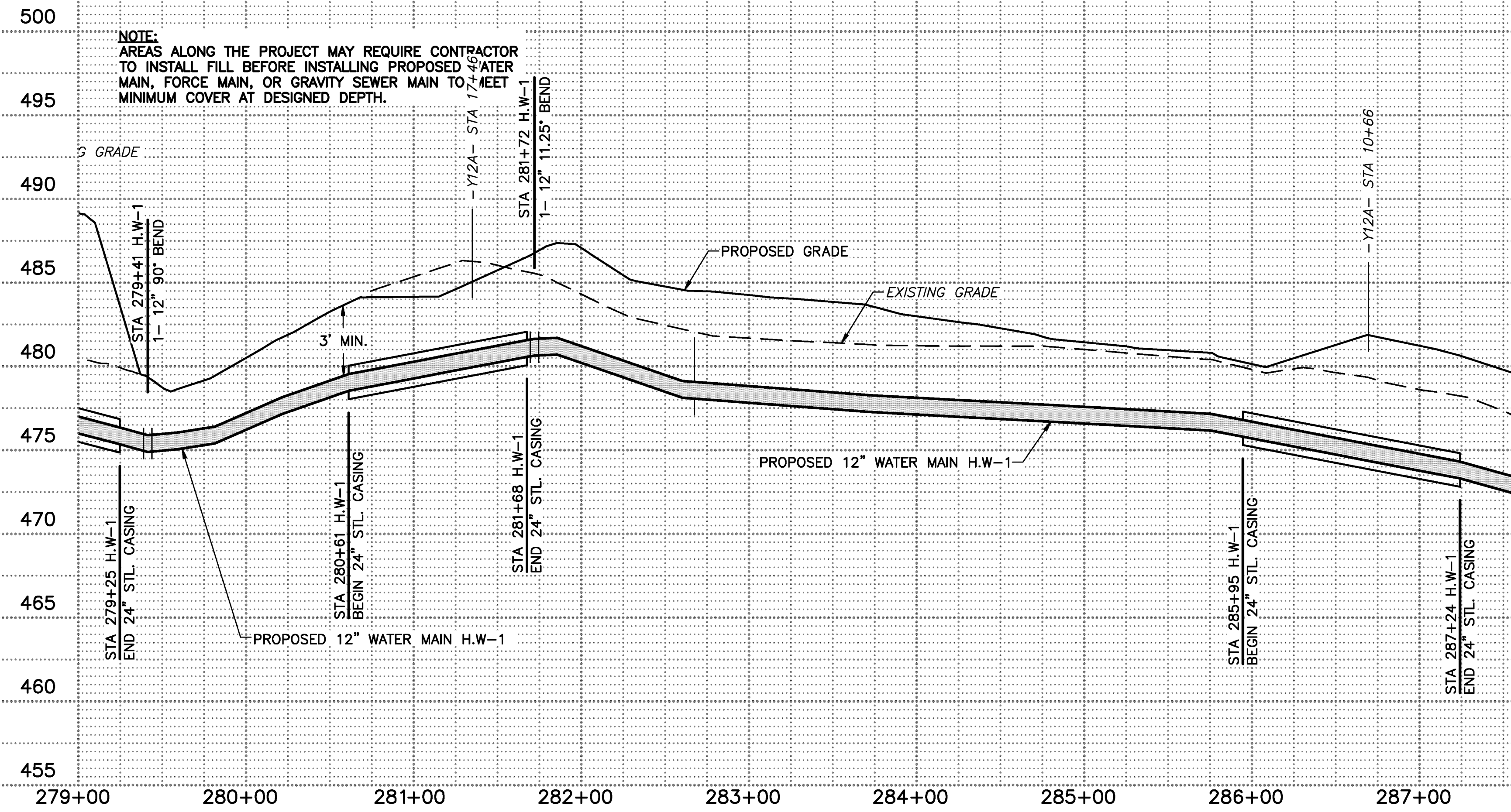
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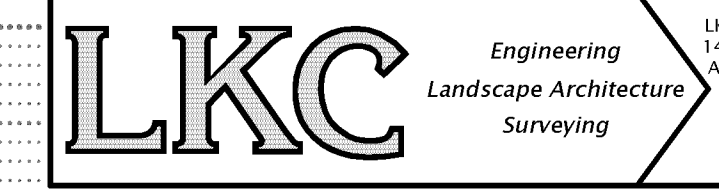
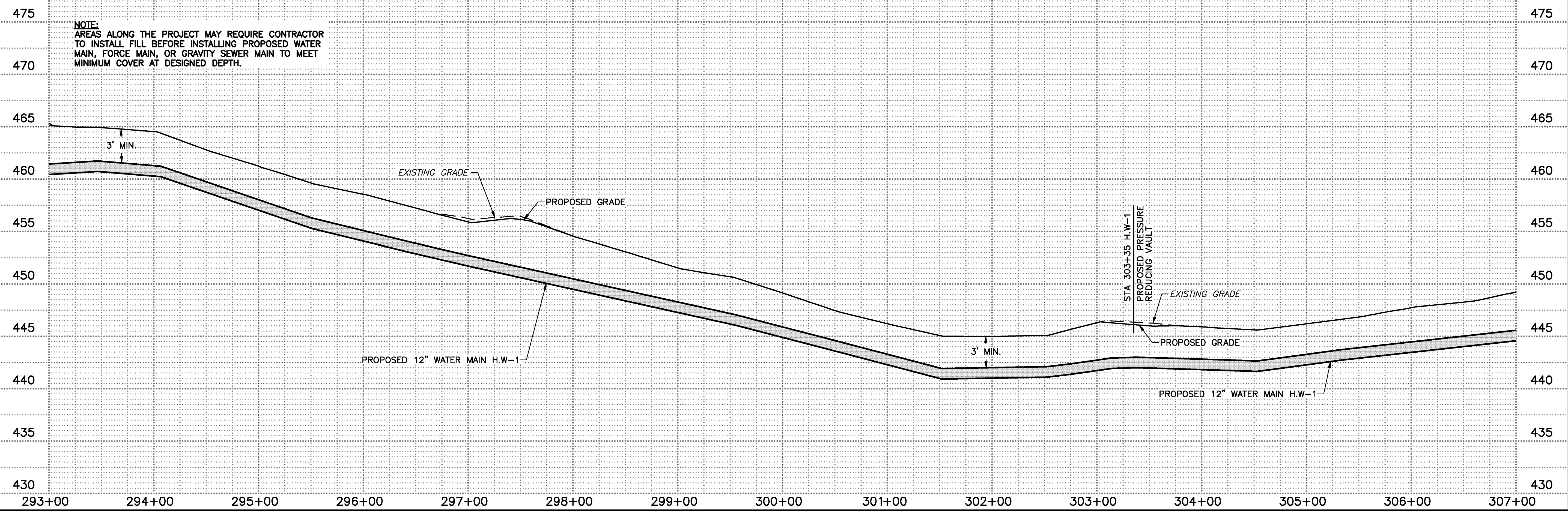
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LINE H.W-1 SEE PLAN SHEET UC-13 & UC-14

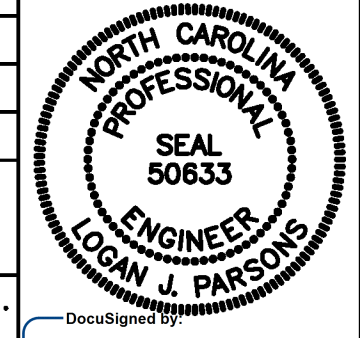


LINE H.W-1 SEE PLAN SHEET UC-14 & UC-15



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140 Aqua Shed Court
Aberdeen, NC 28315
P: 910.420.1437
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PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-48
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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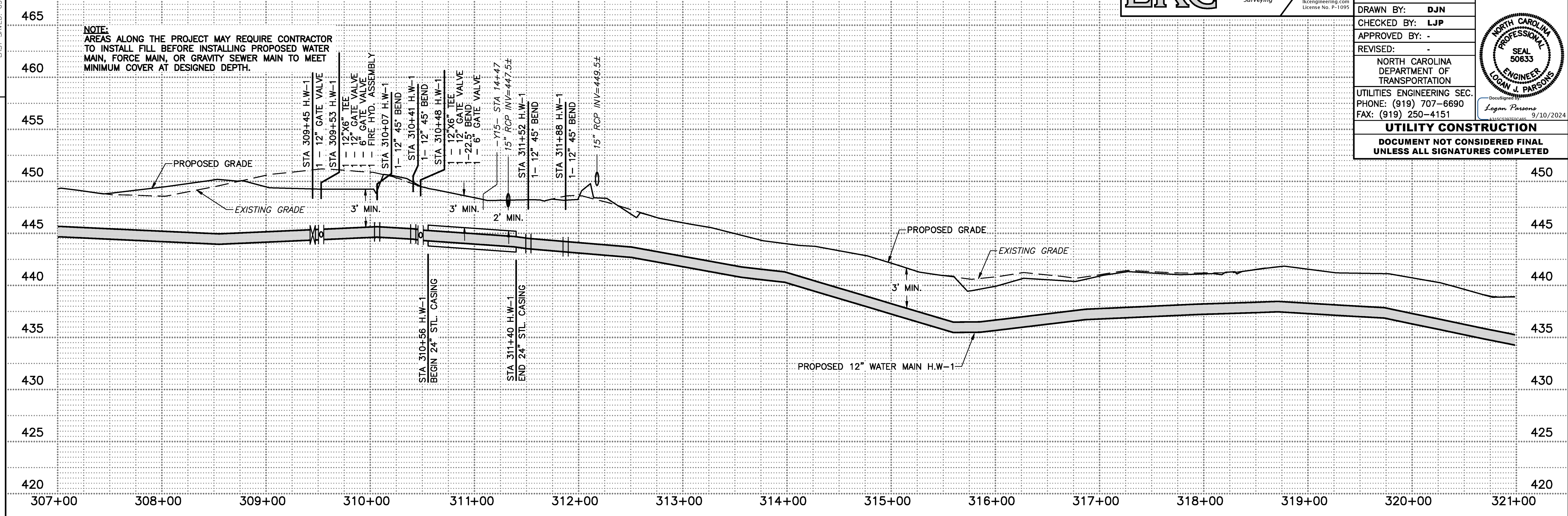
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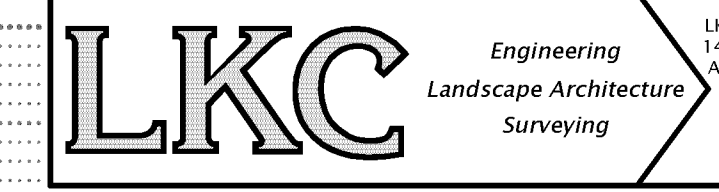
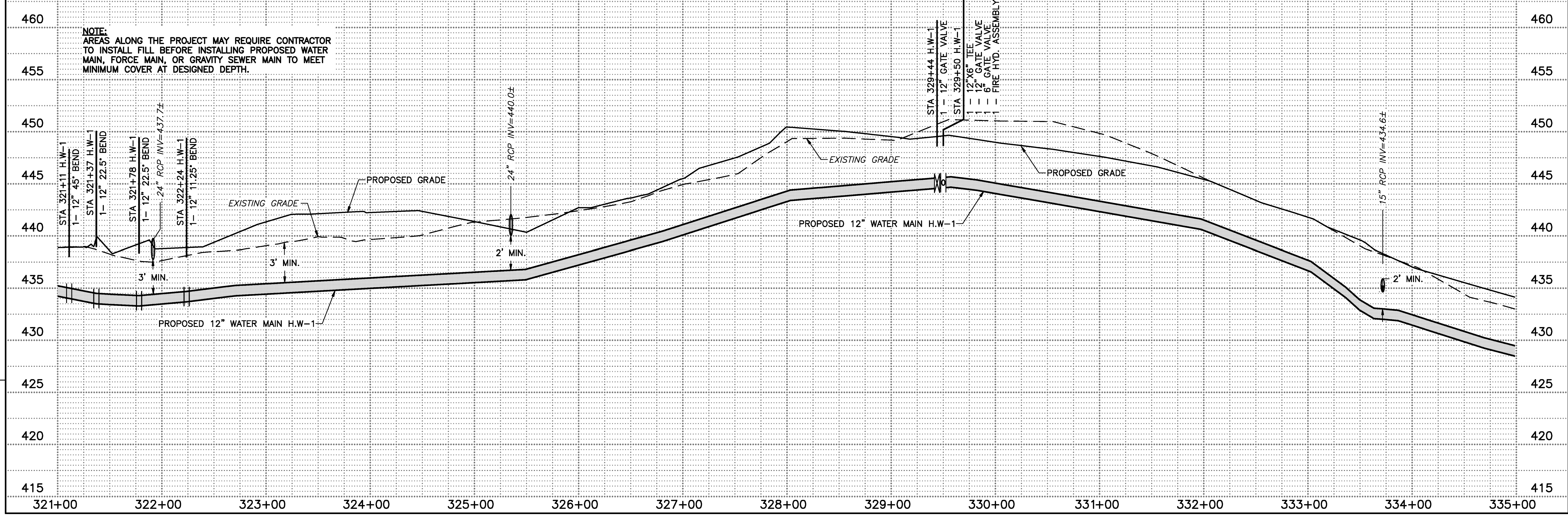
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LINE H.W-1 SEE PLAN SHEET UC-15 & UC-16

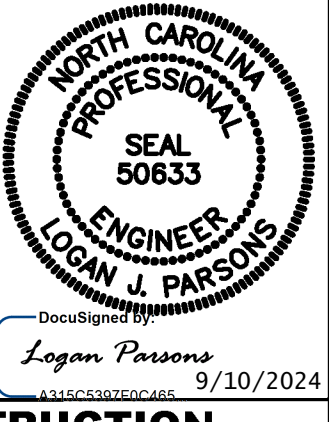


LINE H.W-1 SEE PLAN SHEET UC-16 & UC-17



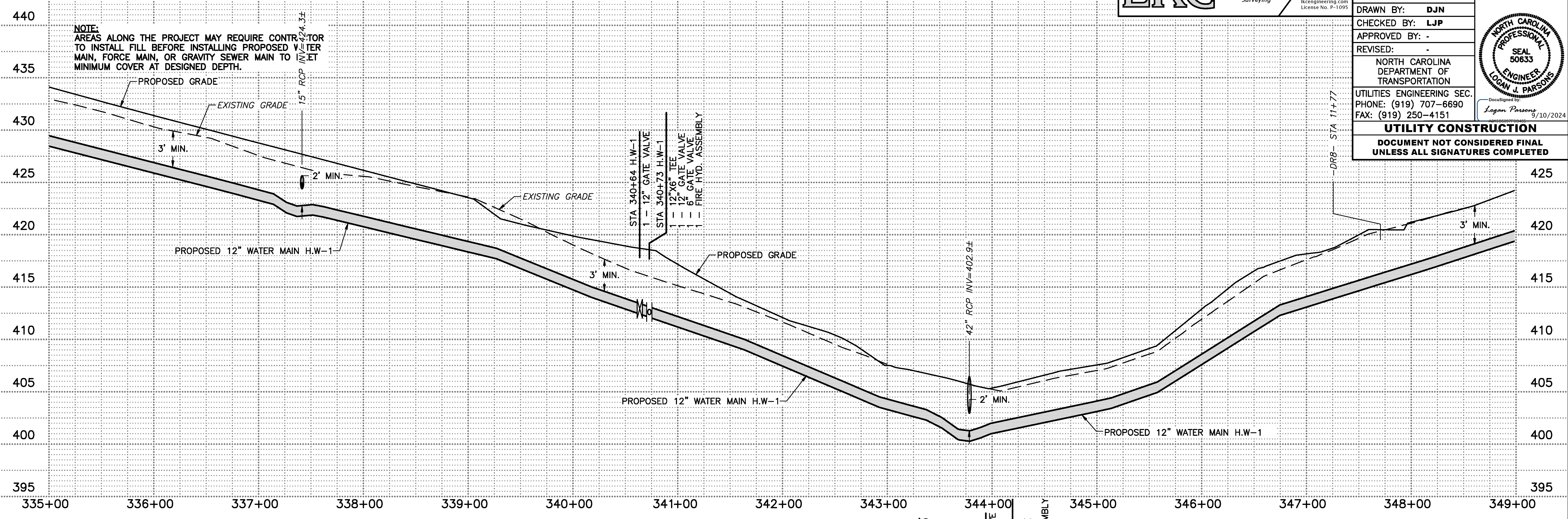
LKC Engineering, PLLC
140 Aqua Shed Court
Aberdeen, NC 28315
P: 910.637.0096
F: 910.637.0096
lkcengineering.com
License No. P-1095

PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-49
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

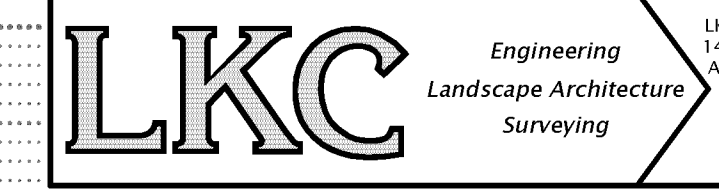
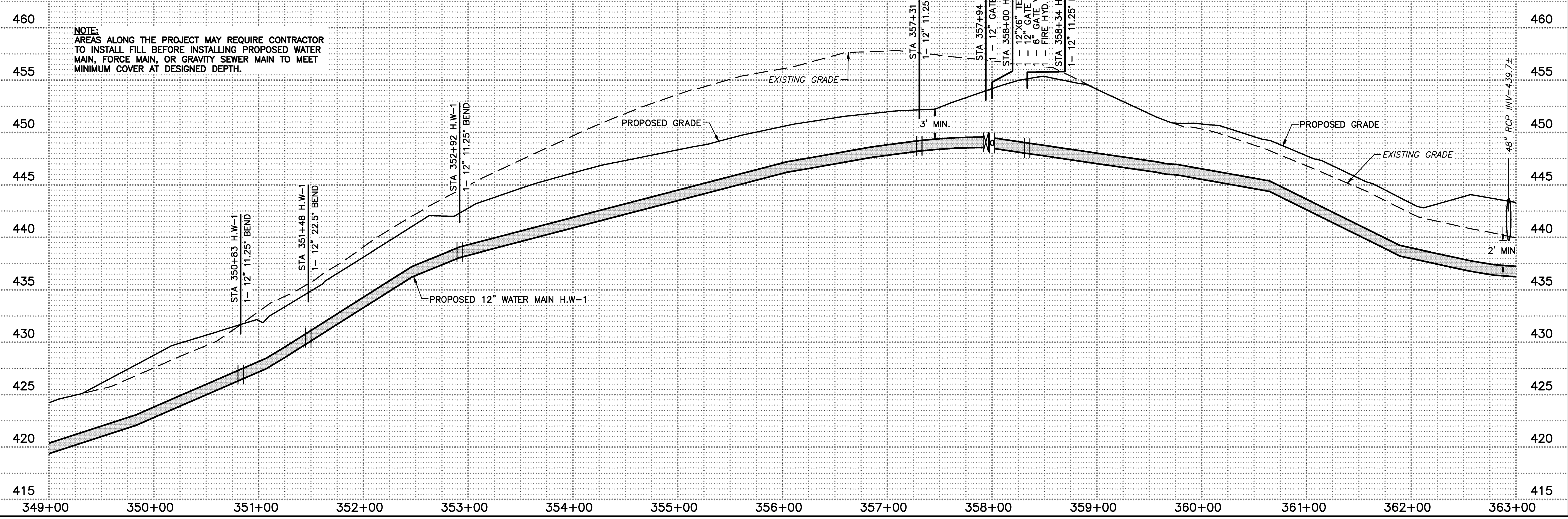


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LINE H.W-1 SEE PLAN SHEET UC-17 & UC-18

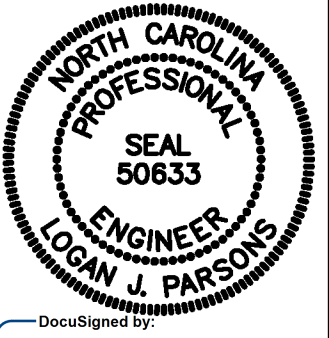


LINE H.W-1 SEE PLAN SHEET UC-18 & UC-19



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 Aberdeen, NC 28315
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 F: 910.637.0098
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-50
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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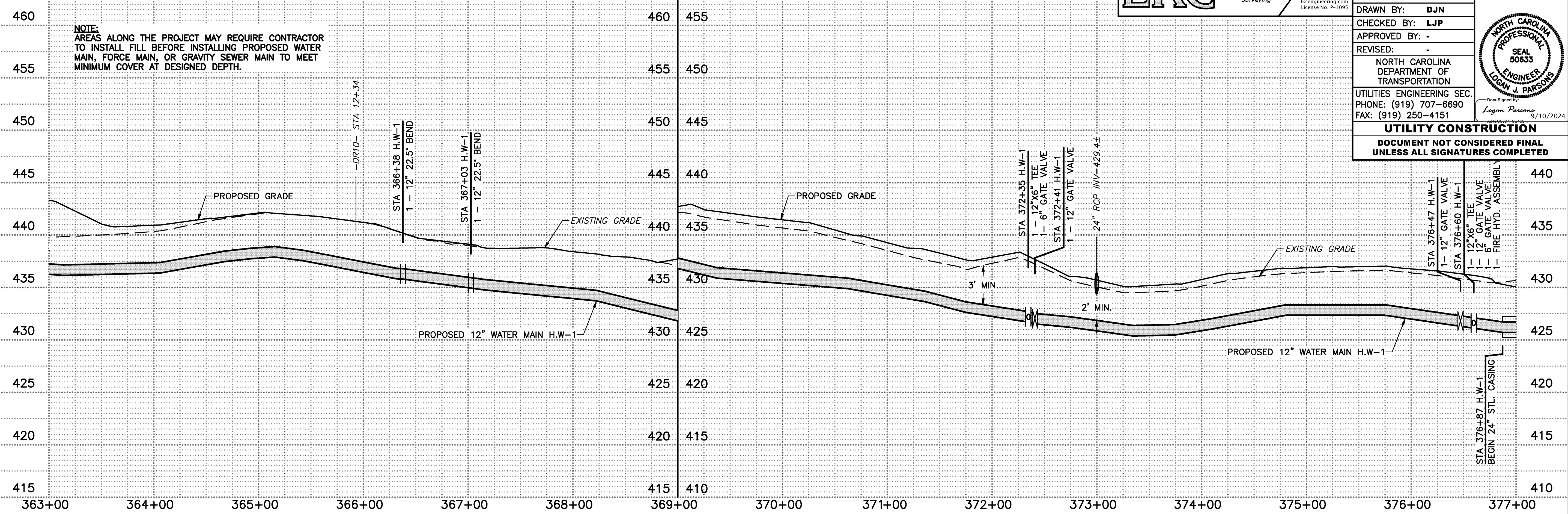
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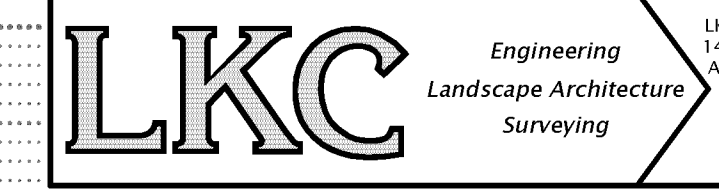
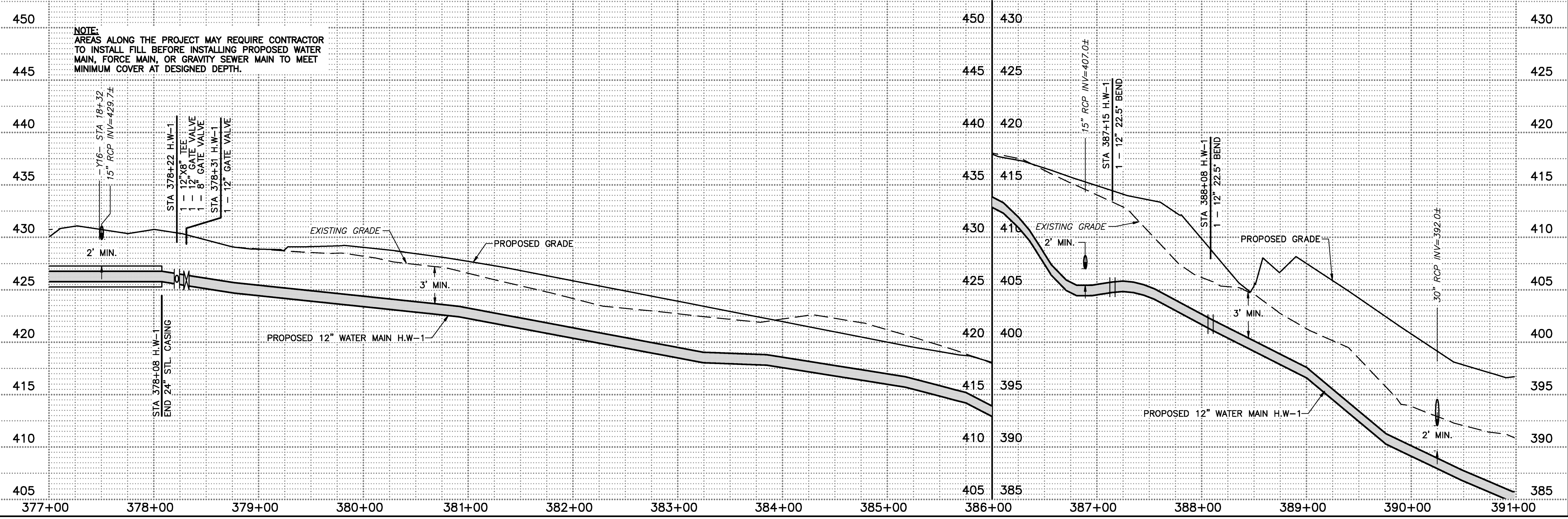
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LINE H.W-1 SEE PLAN SHEET UC-19 & UC-20

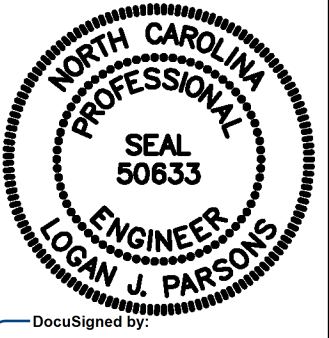


LINE H.W-1 SEE PLAN SHEET UC-20 & UC-21



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-51
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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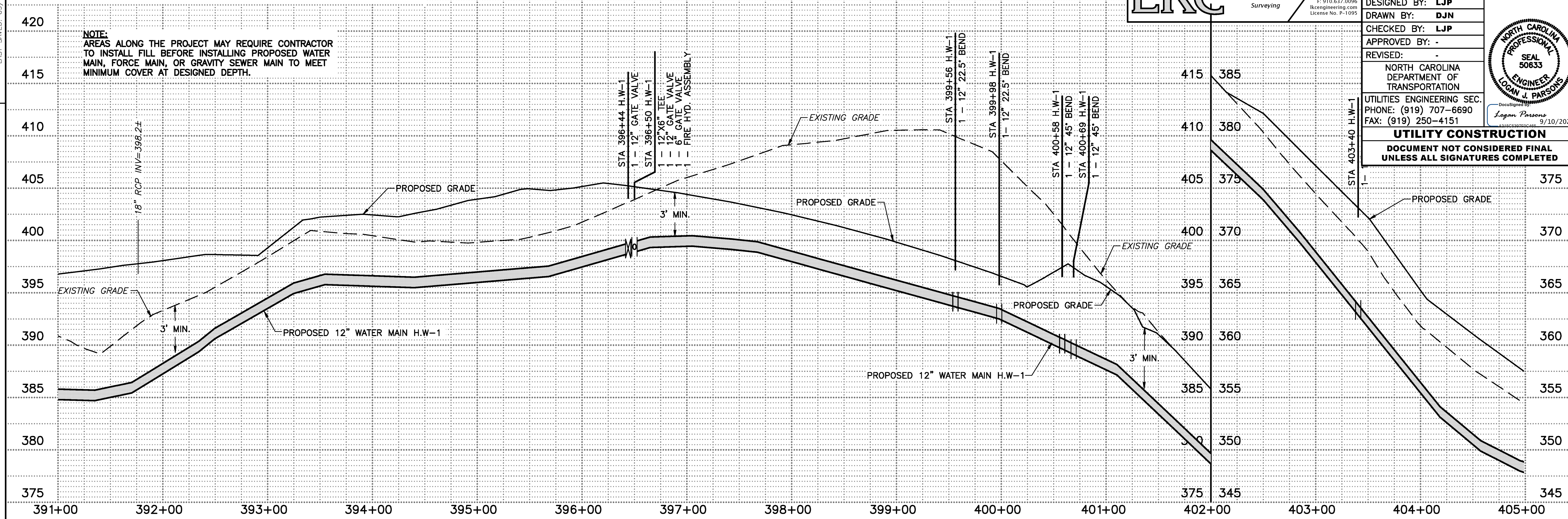
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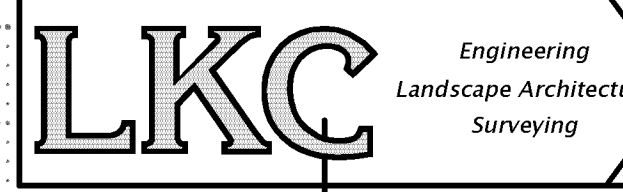
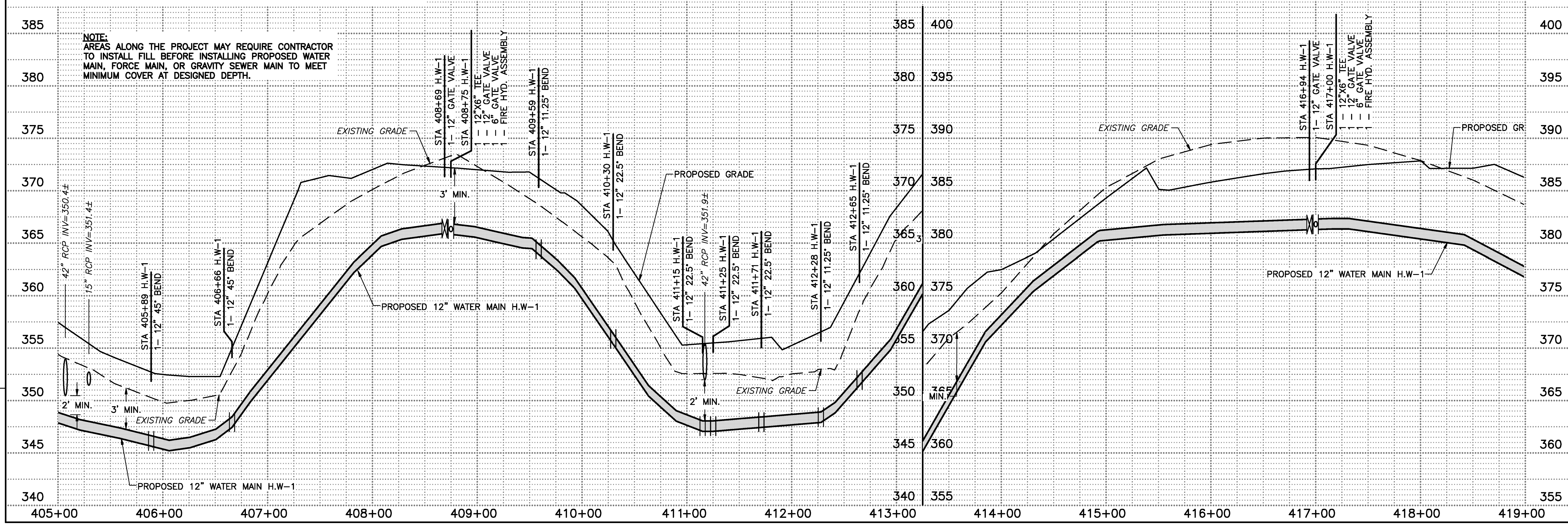
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LINE H.W-1 SEE PLAN SHEET UC-21 & UC-22

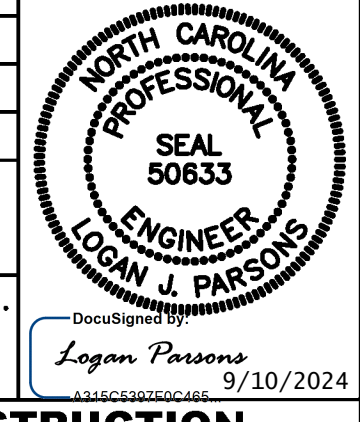


LINE H.W-1 SEE PLAN SHEET UC-22 & UC-23



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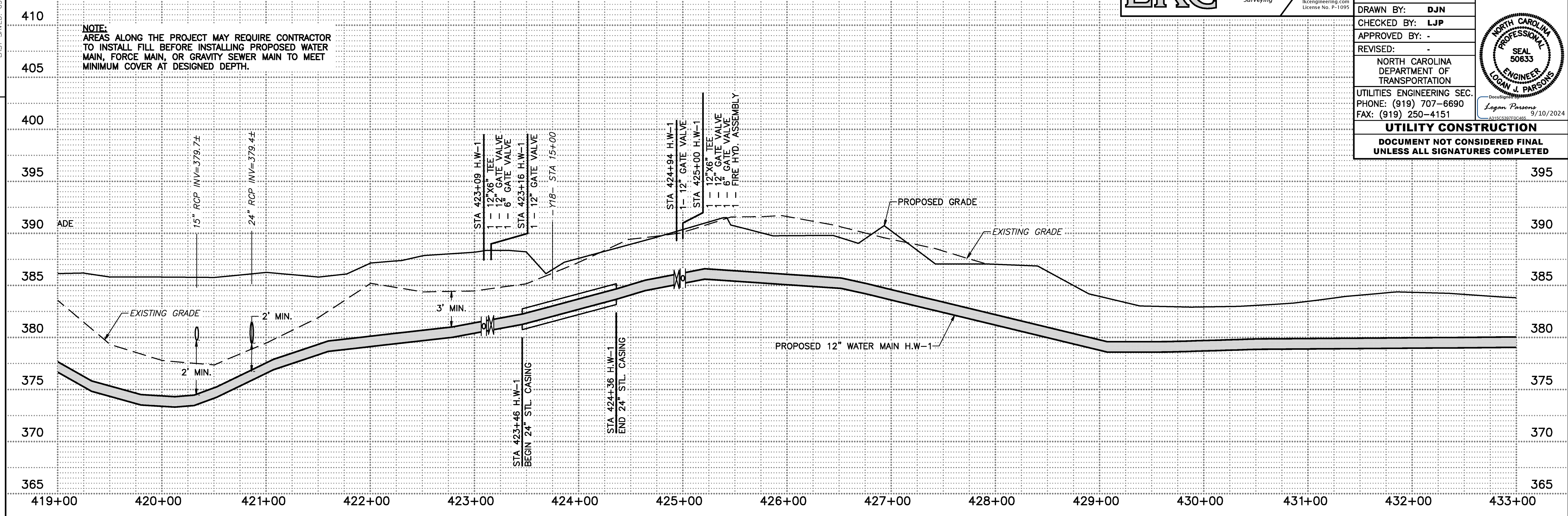
PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-52
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



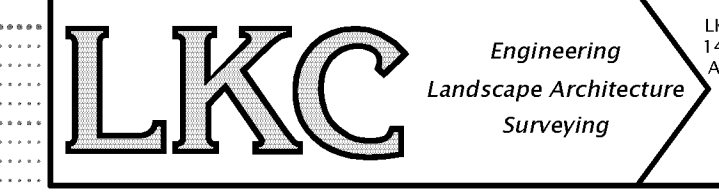
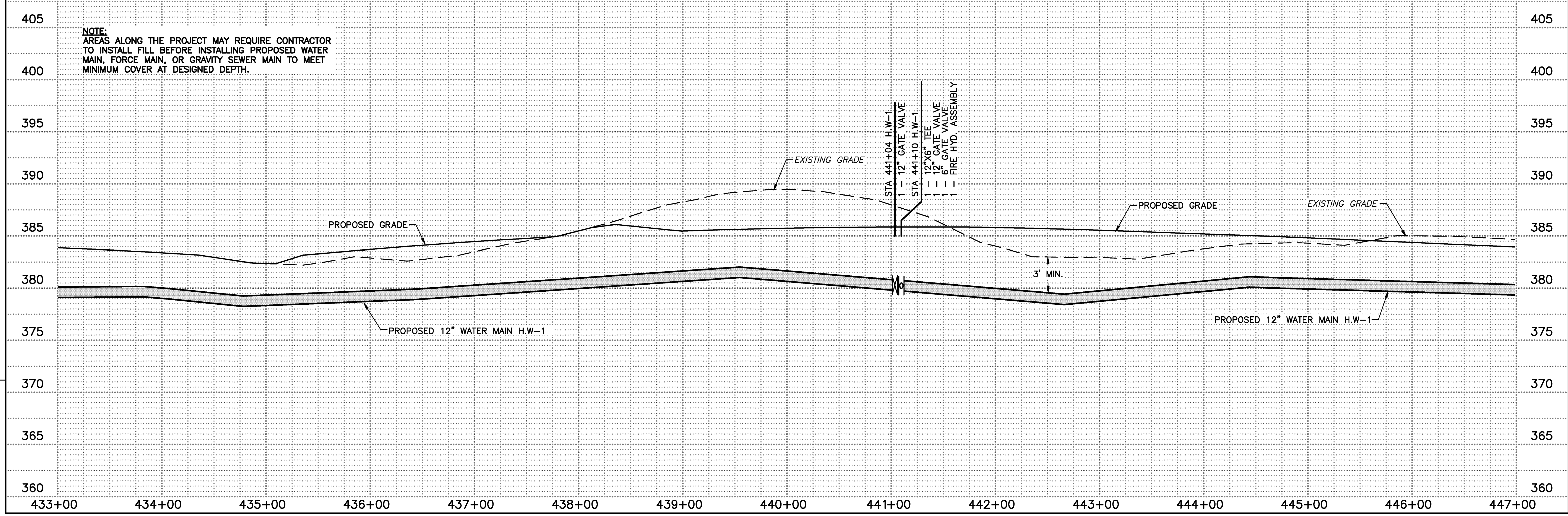
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LINE H.W-1 SEE PLAN SHEET UC-23 & UC-24

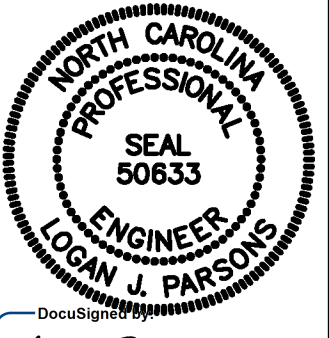


LINE H.W-1 SEE PLAN SHEET UC-24 & UC-25



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-53
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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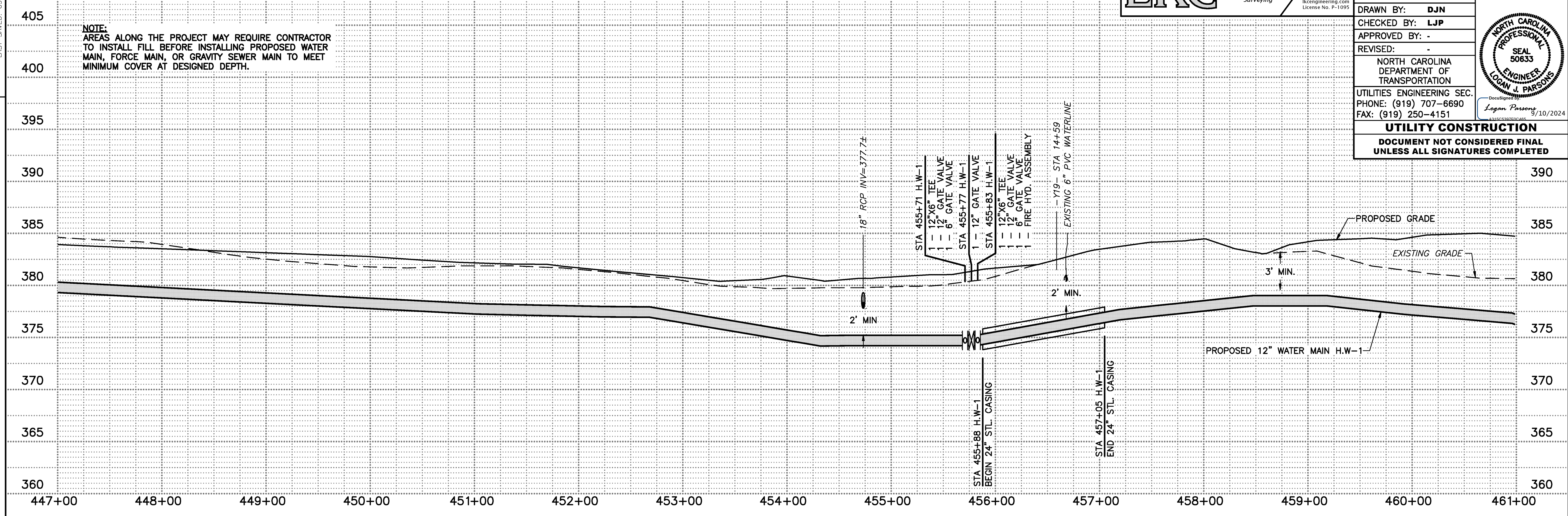
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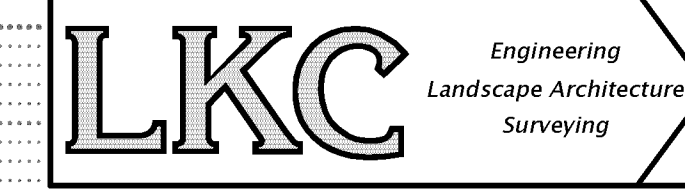
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LINE H.W-1 SEE PLAN SHEET UC-25 & UC-26

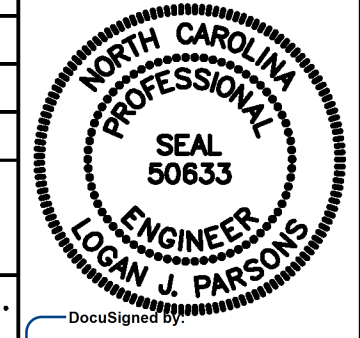


NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.

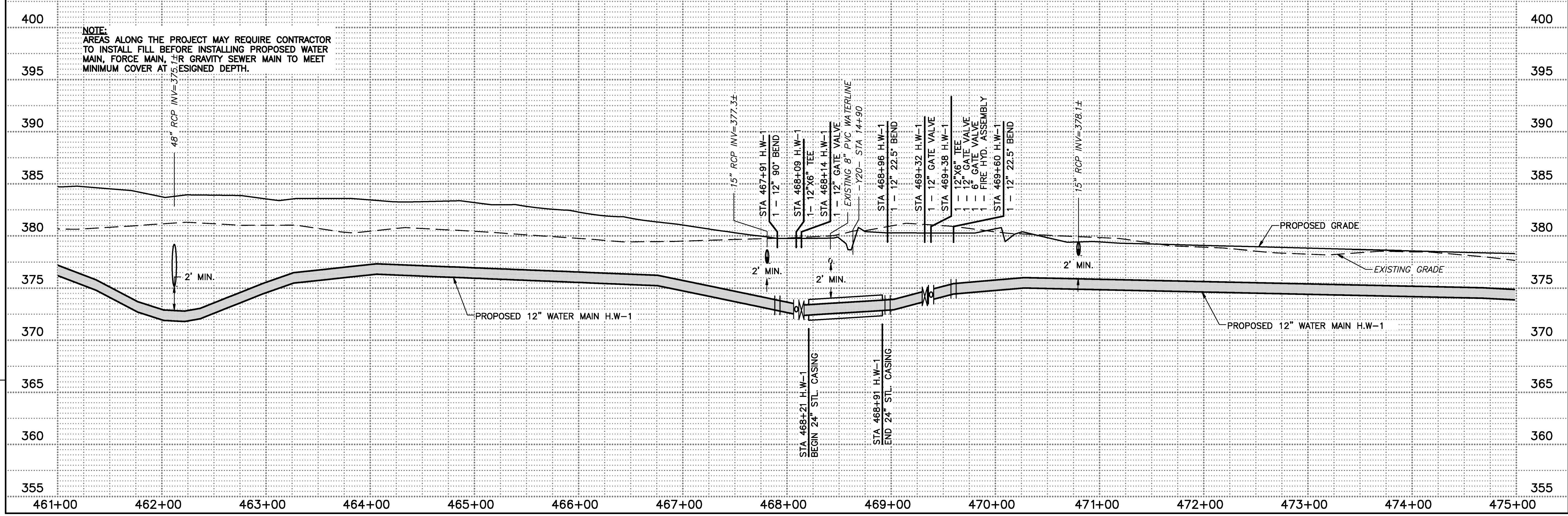


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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-54
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



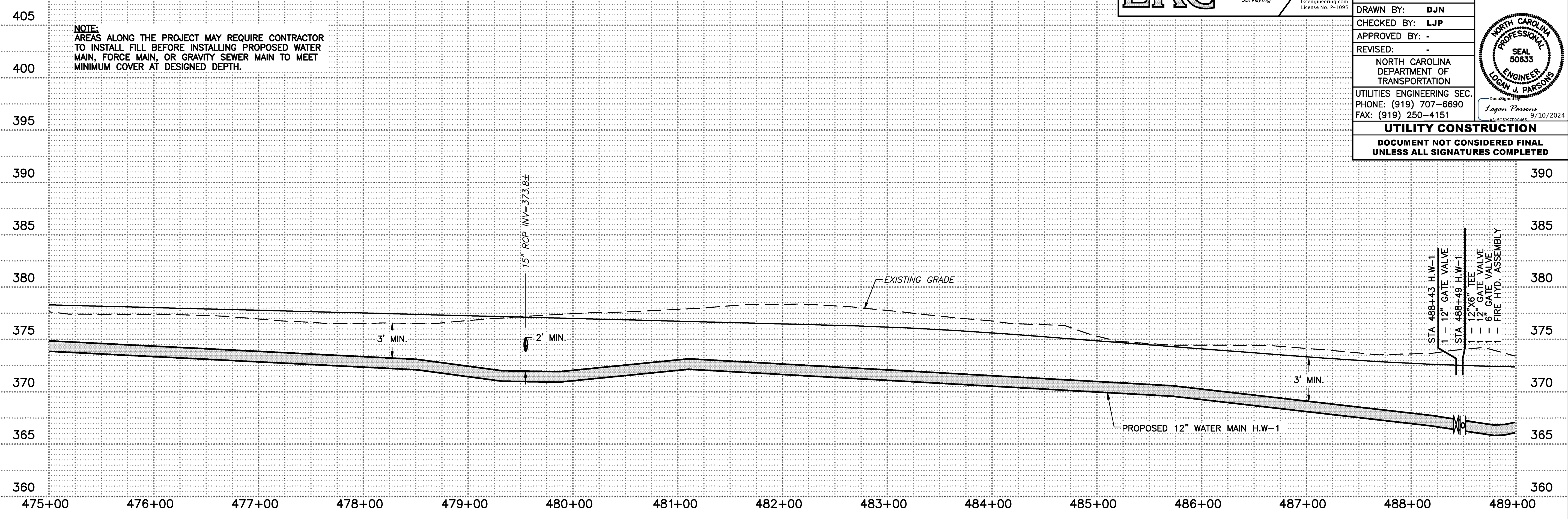
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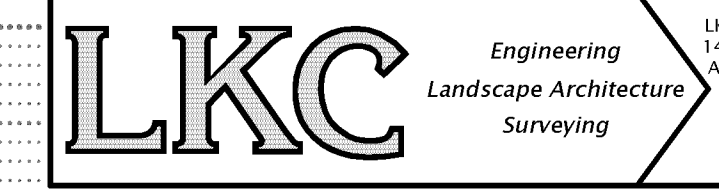
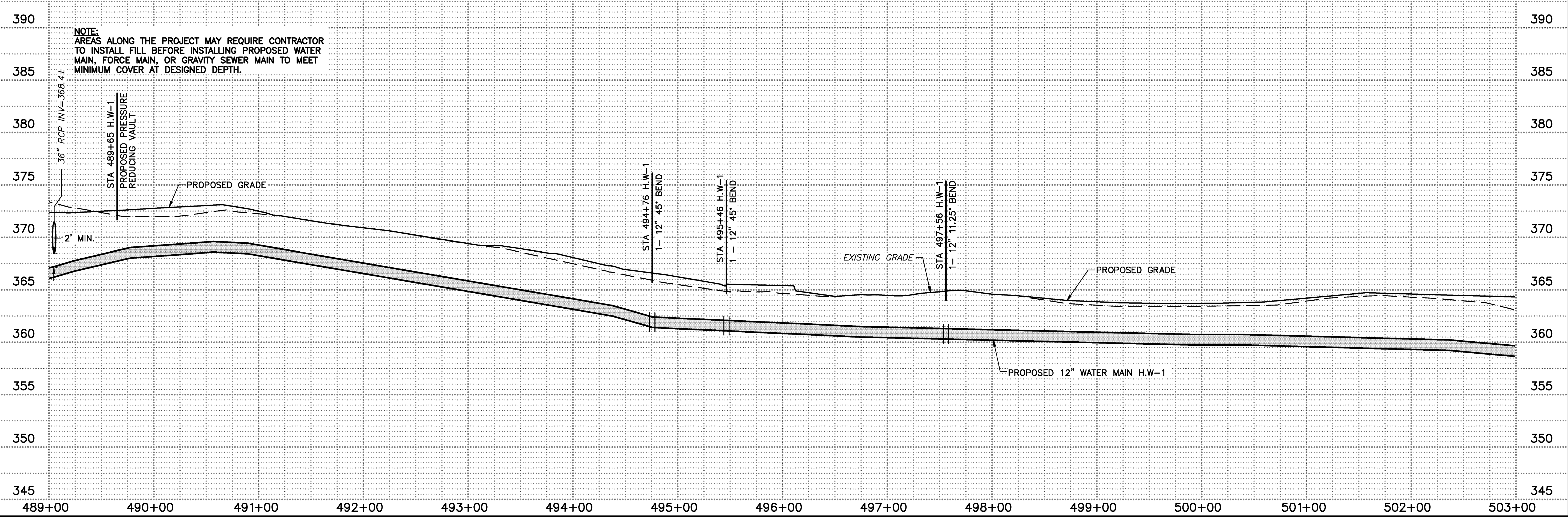
NOTE:
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LINE H.W-1 SEE PLAN SHEET UC-27 & UC-28

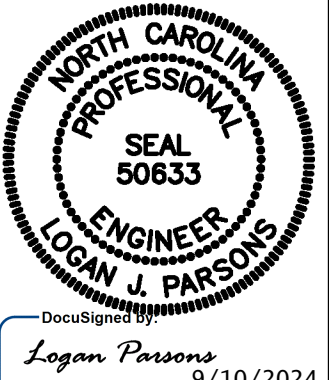


LINE H.W-1 SEE PLAN SHEET UC-28 & UC-29



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PROJECT REFERENCE NO.	R-5709C	SHEET NO.	UC-55
DESIGNED BY:	LJP		
DRAWN BY:	DJN		
CHECKED BY:	LJP		
APPROVED BY:	-		
REVISED:	-		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC.			
PHONE: (919) 707-6690			
FAX: (919) 250-4151			
UTILITY CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



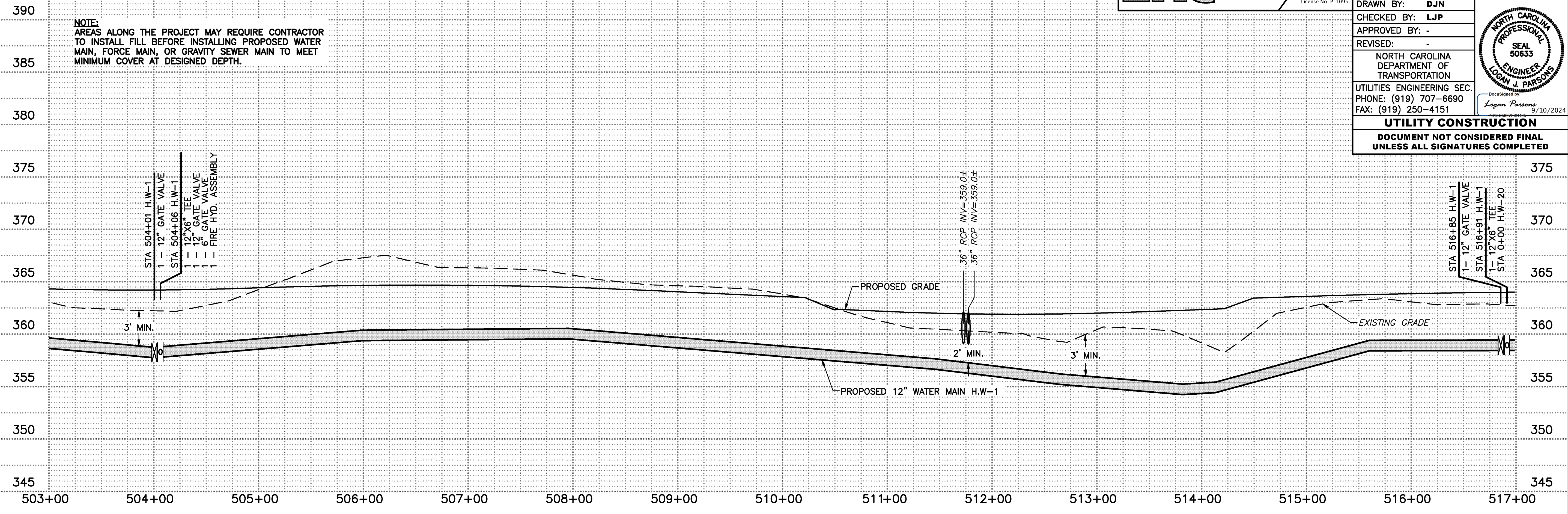
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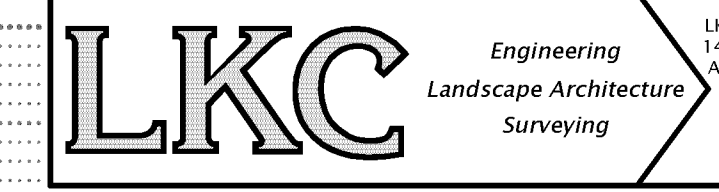
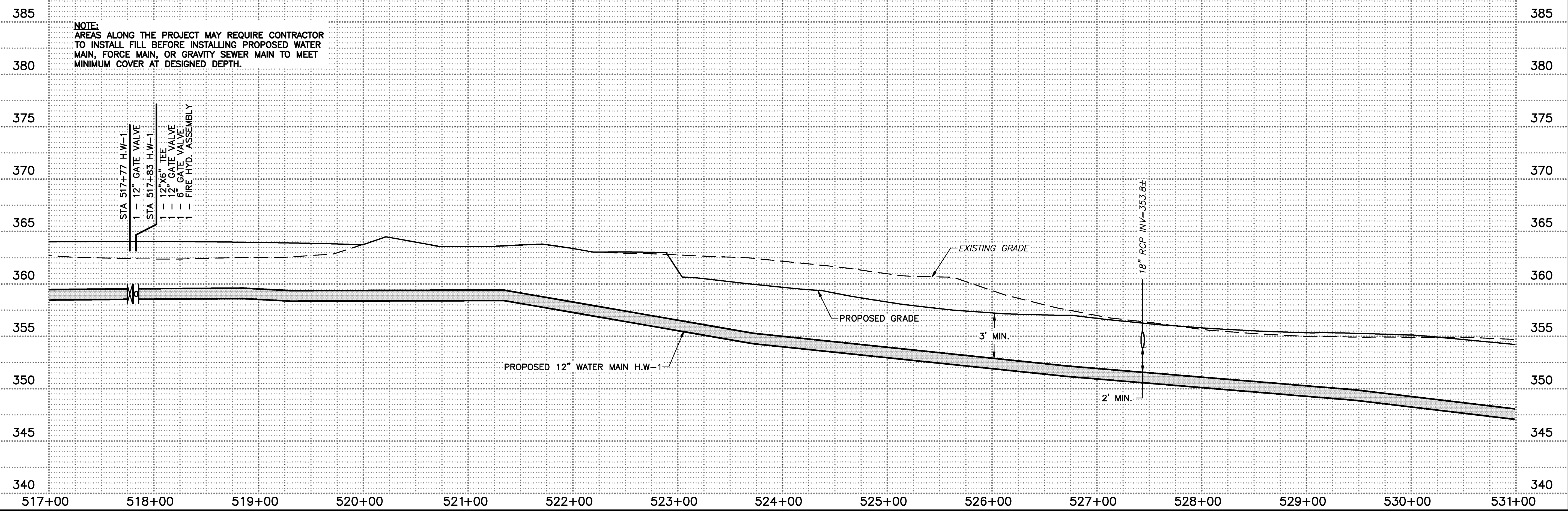
LINE H.W-1 SEE PLAN SHEET UC-29 & UC-30

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



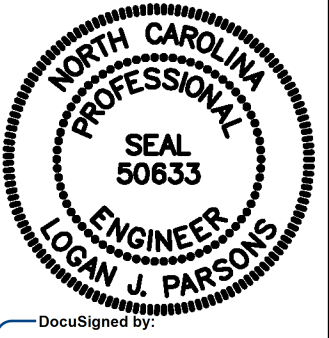
LINE H.W-1 SEE PLAN SHEET UC-30 & UC-31

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



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PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-56
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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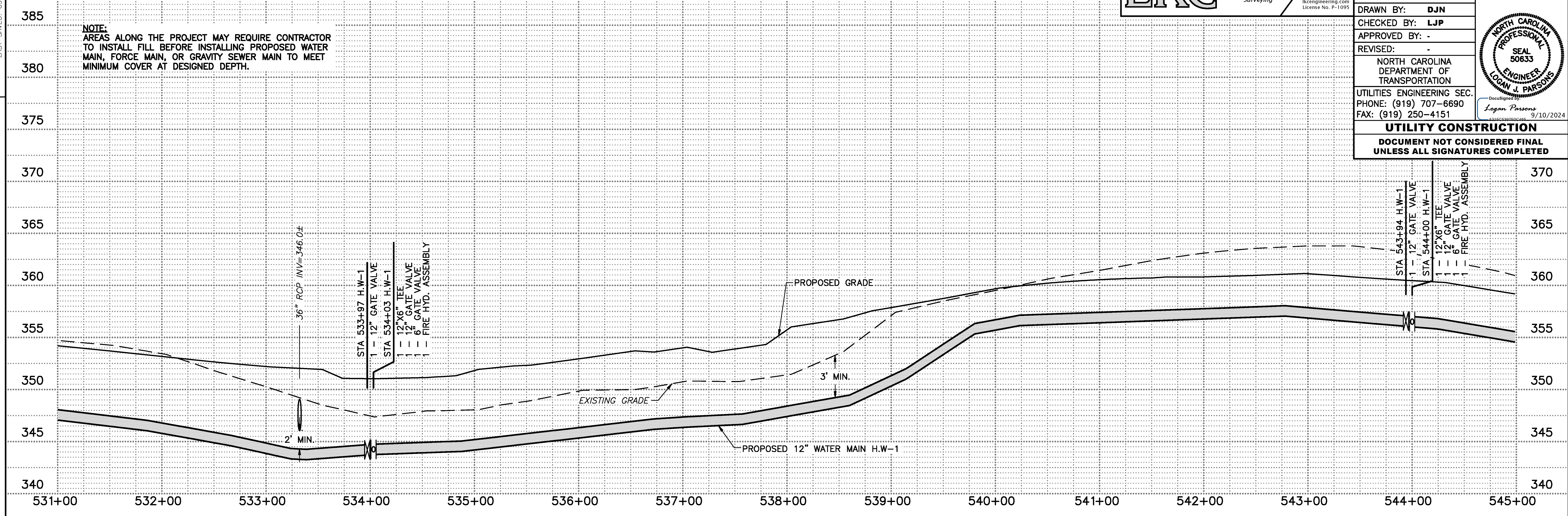
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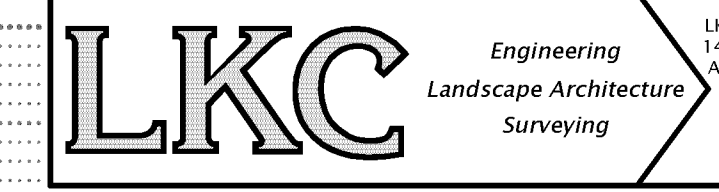
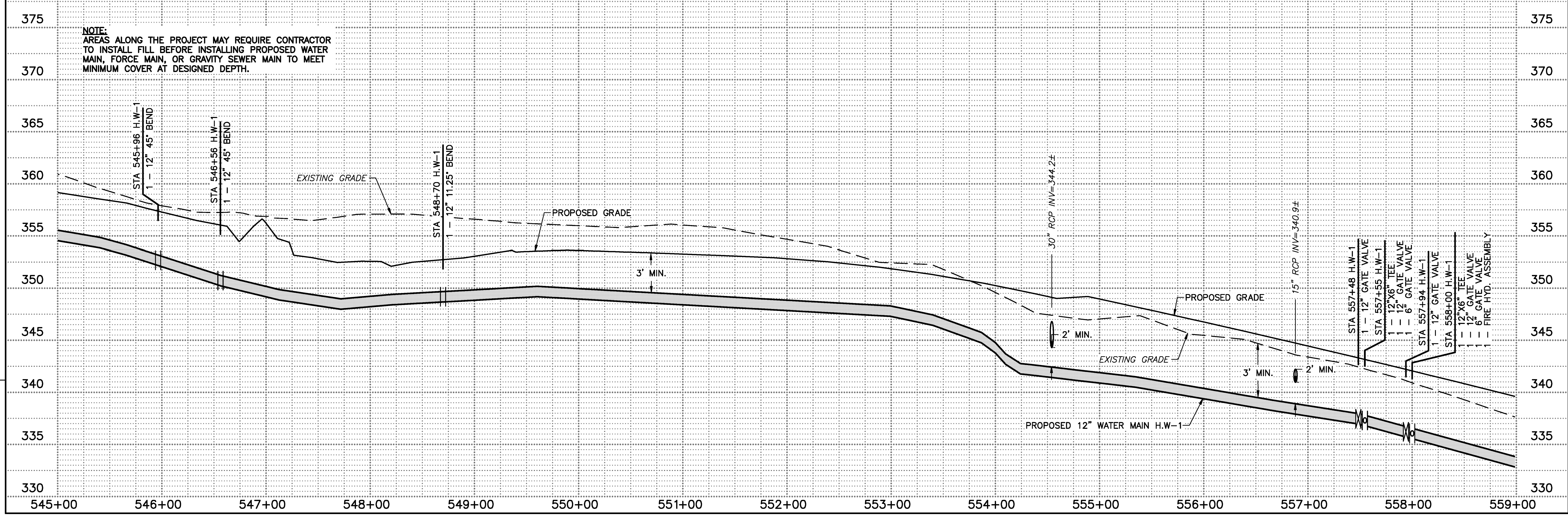
LINE H.W-1 SEE PLAN SHEET UC-31 & UC-32

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



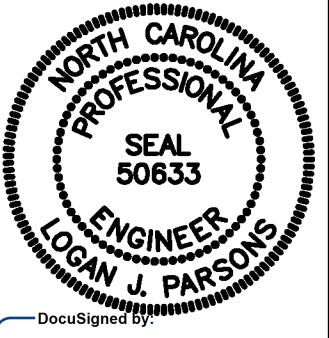
LINE H.W-1 SEE PLAN SHEET UC-32 & UC-33

NOTE:
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PROJECT REFERENCE NO.	R-5709C
SHEET NO.	UC-57
DESIGNED BY:	LJP
DRAWN BY:	DJN
CHECKED BY:	LJP
APPROVED BY:	-
REVISED:	-
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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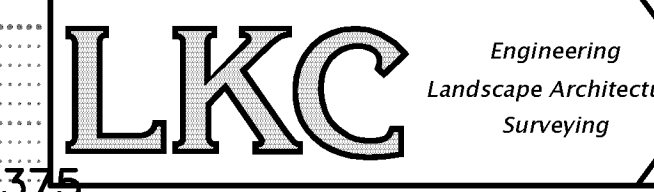
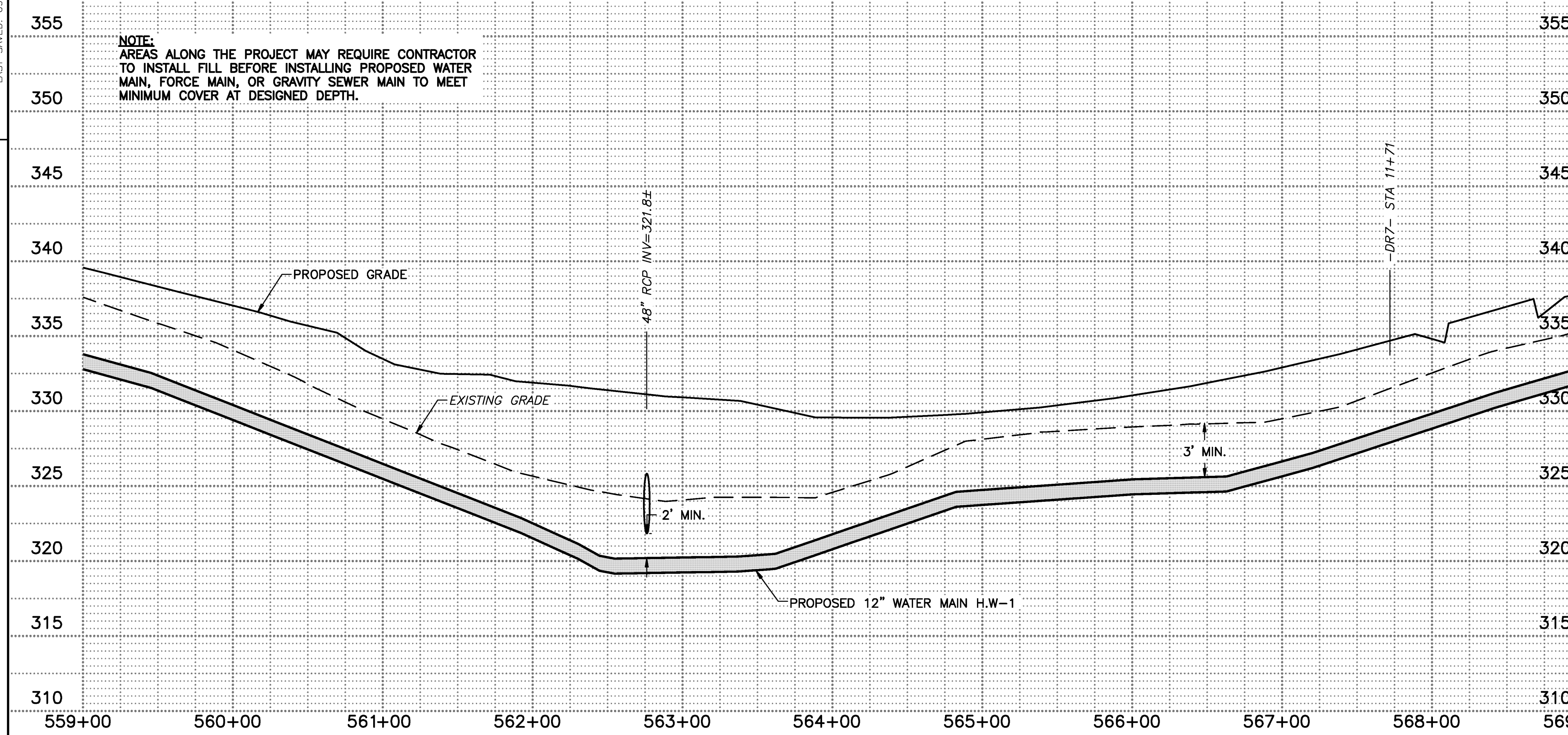
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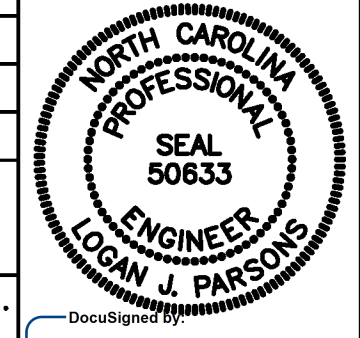
REVISIONS

LINE H.W-1 SEE PLAN SHEET UC-33 & UC-34

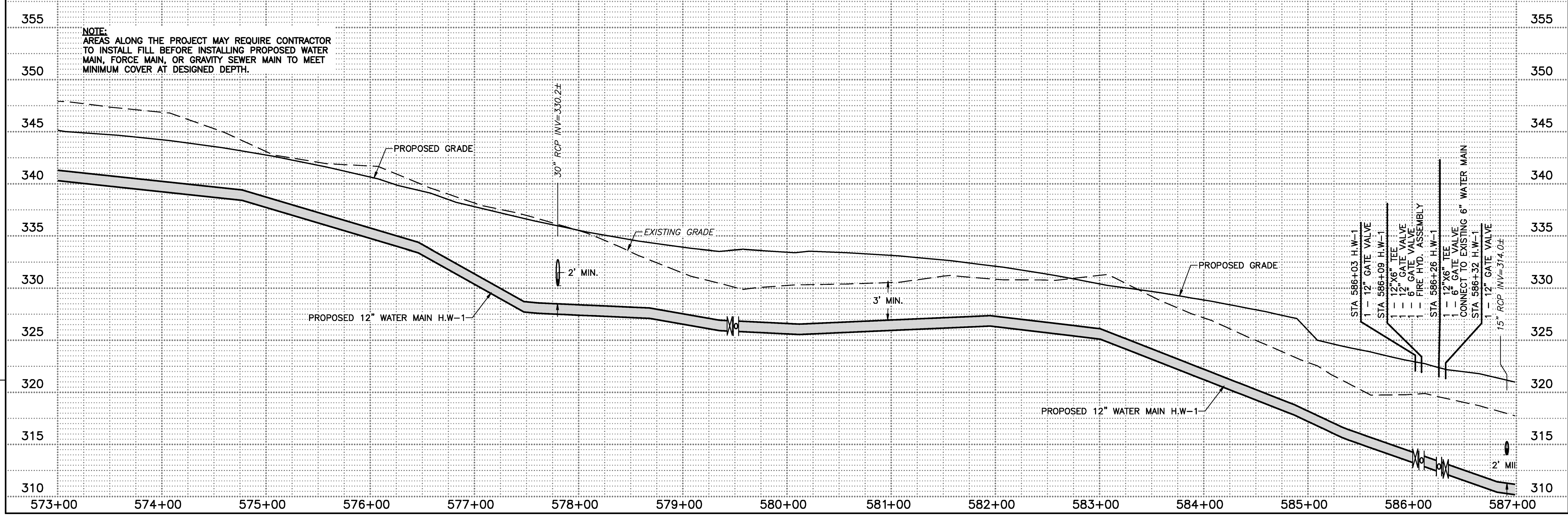


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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-58
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
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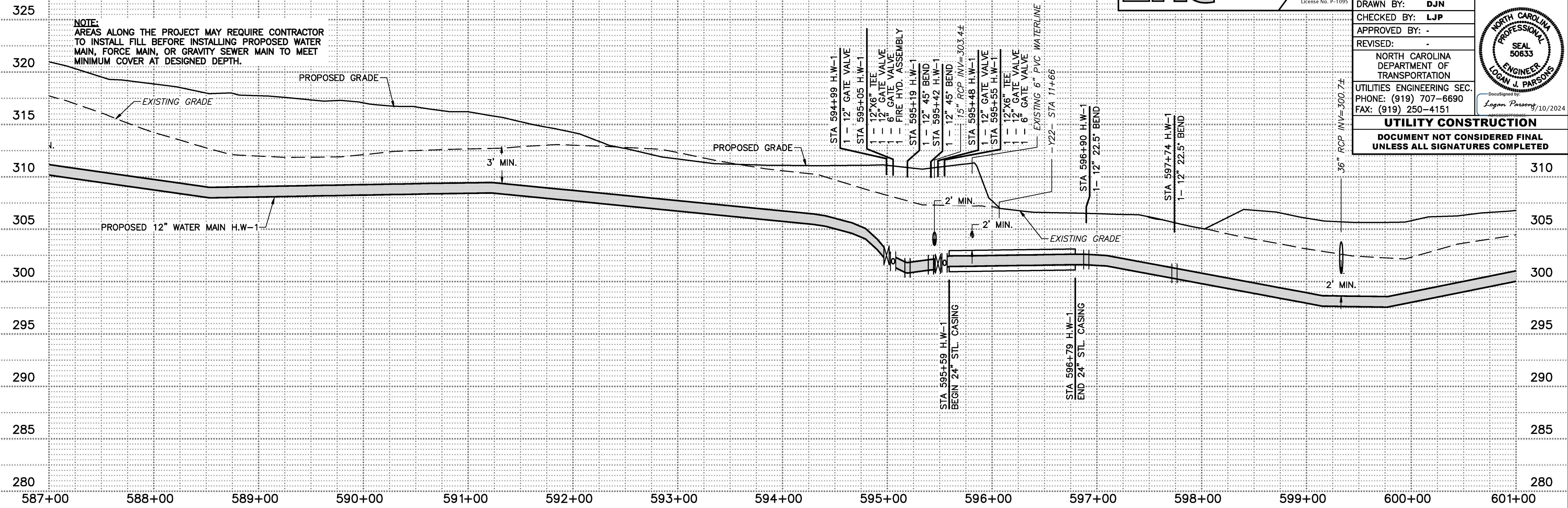


LINE H.W-1 SEE PLAN SHEET UC-34 & UC-35

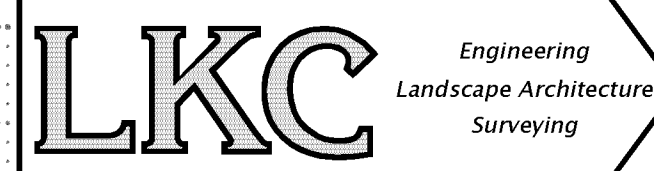
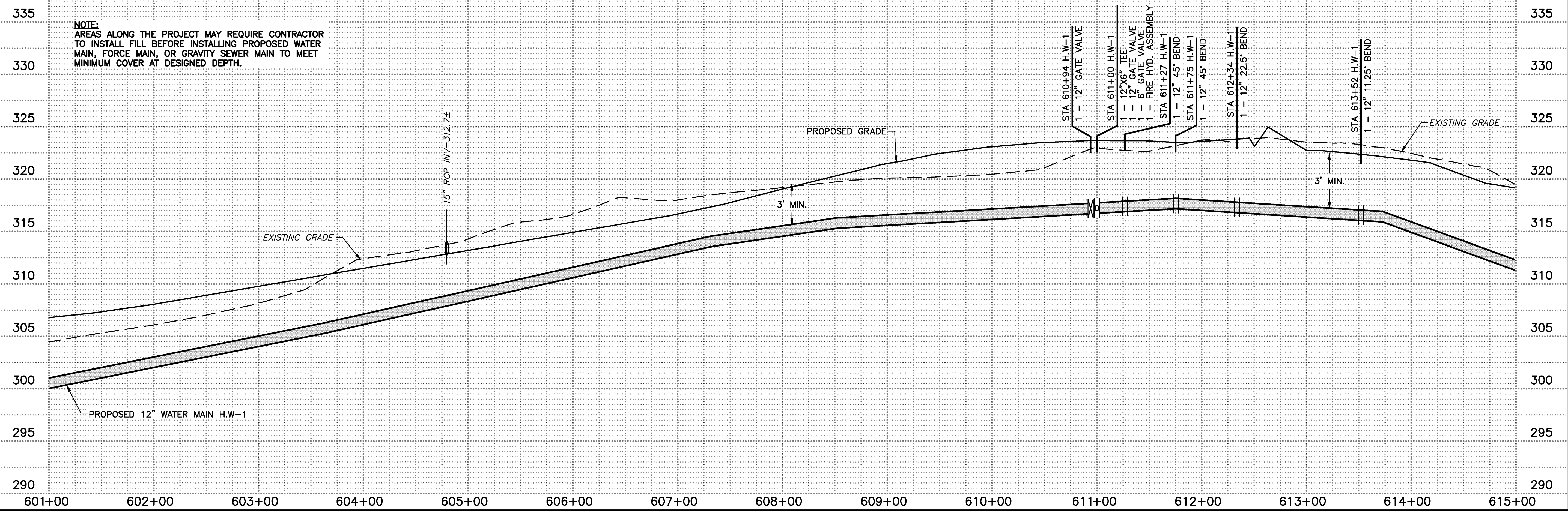


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LINE H.W-1 SEE PLAN SHEET UC-35 & UC-36

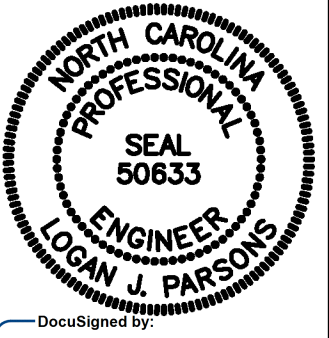


LINE H.W-1 SEE PLAN SHEET UC-36 & UC-37



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-59
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
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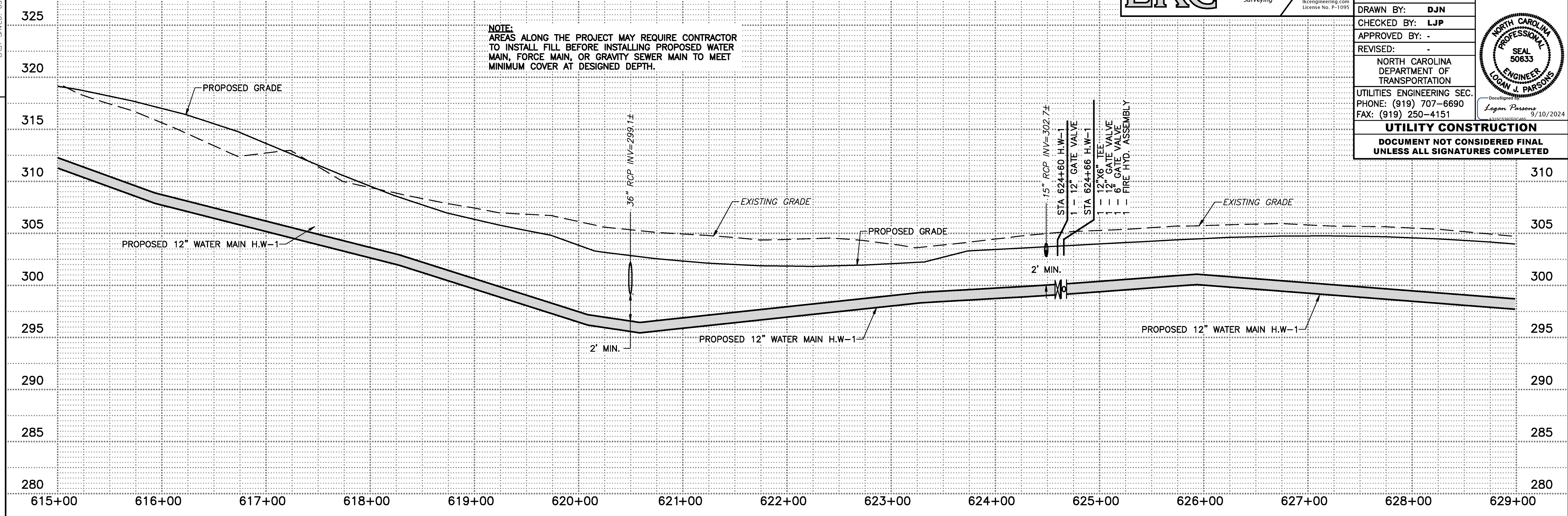
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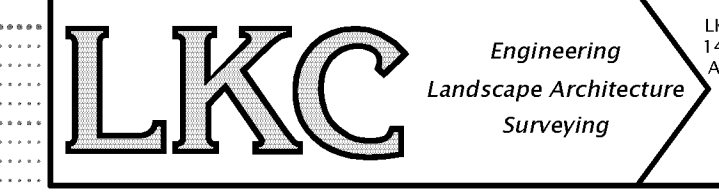
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LINE H.W-1 SEE PLAN SHEET UC-37 & UC-38

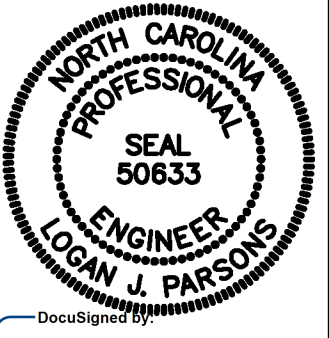


NOTE:
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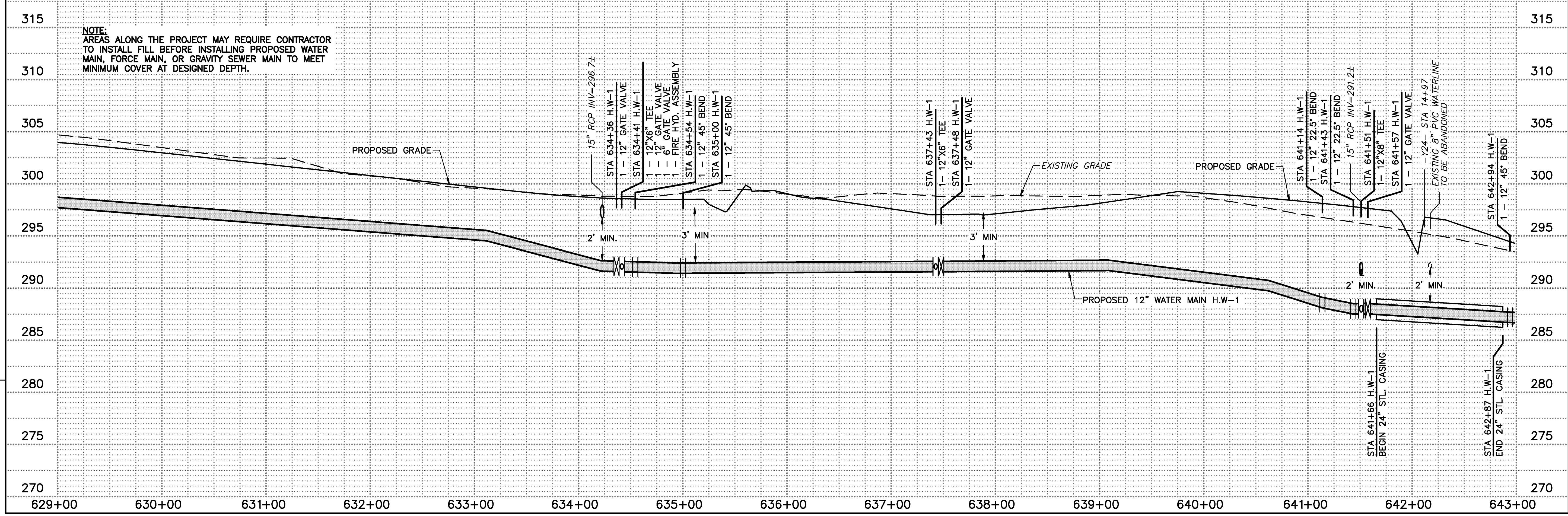


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PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-60
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
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UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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LINE H.W-1 SEE PLAN SHEET UC-38 & UC-39



NOTE:
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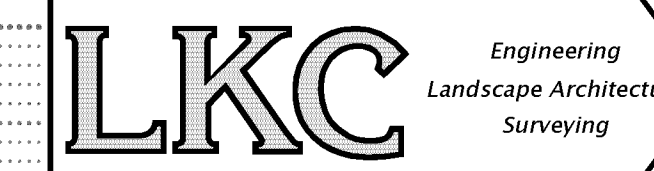
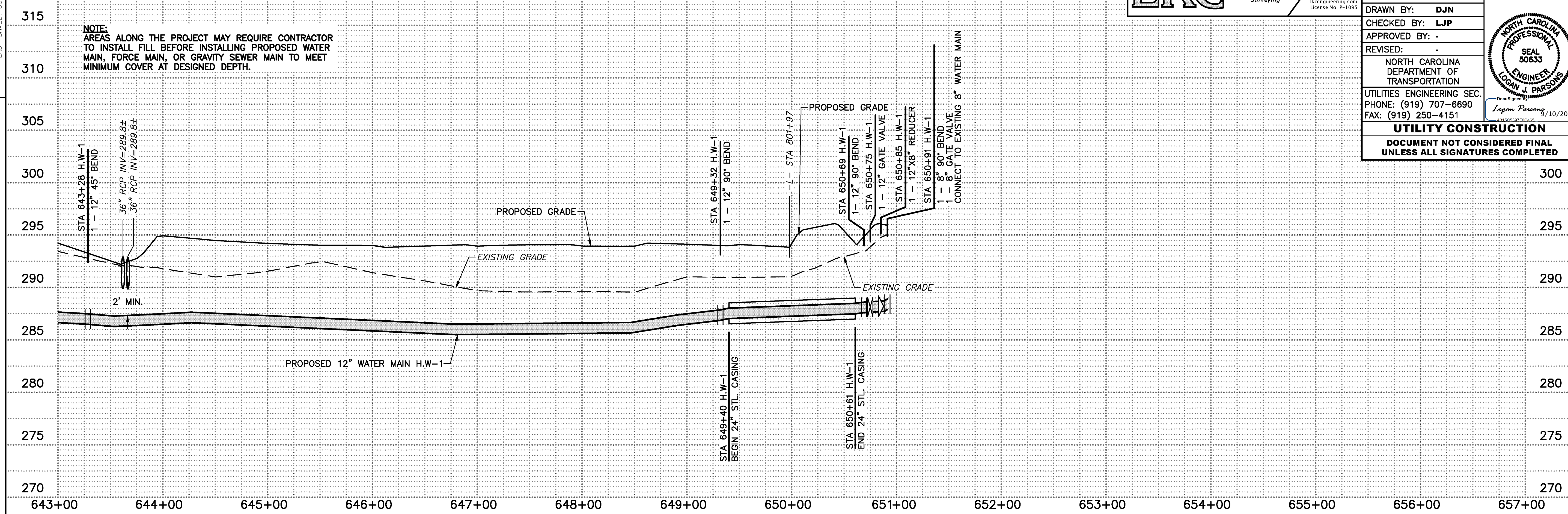
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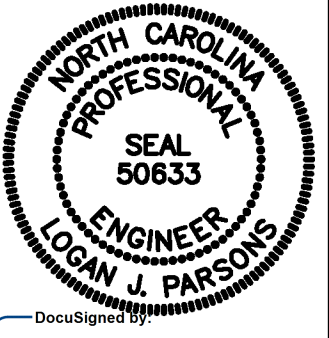
LINE H.W-1 SEE PLAN SHEET UC-39 & UC-40

NOTE:
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PROJECT REFERENCE NO. R-5709C	SHEET NO. UC-61
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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300

295

290

285

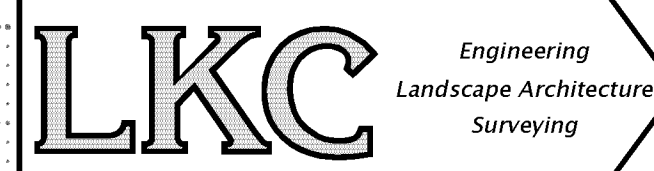
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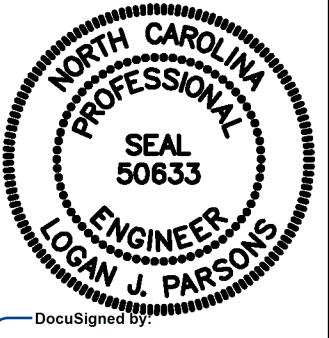
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-62
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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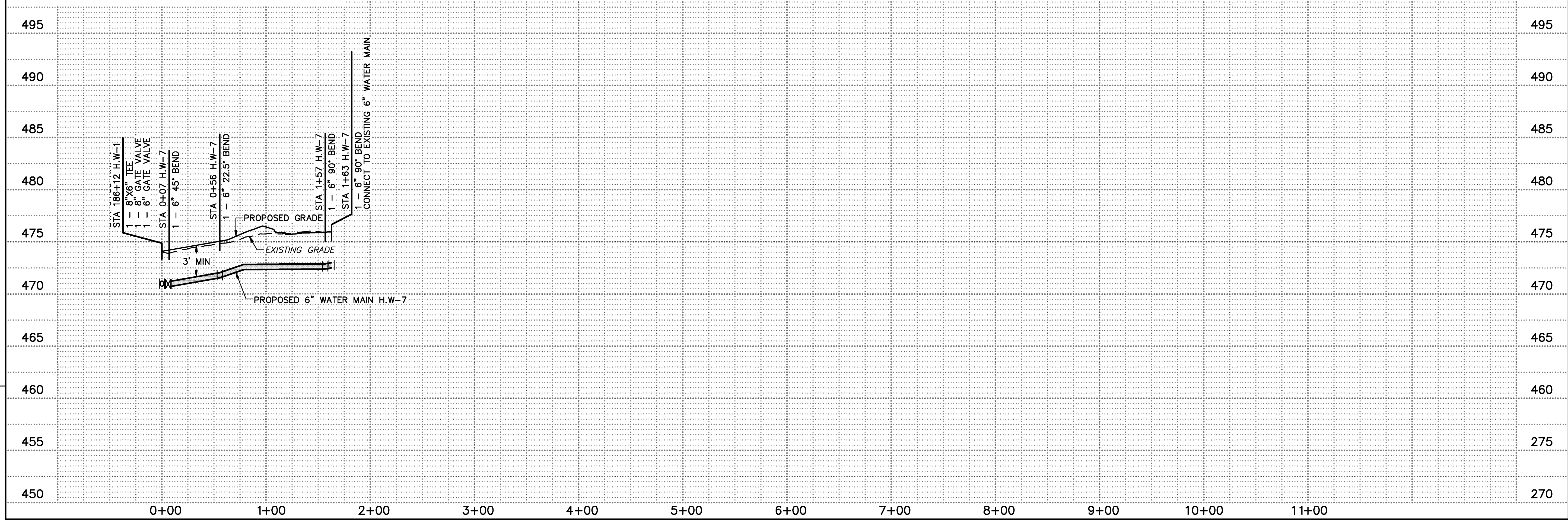


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REVISIONS



LINE H.W-7 SEE PLAN SHEET UC-6



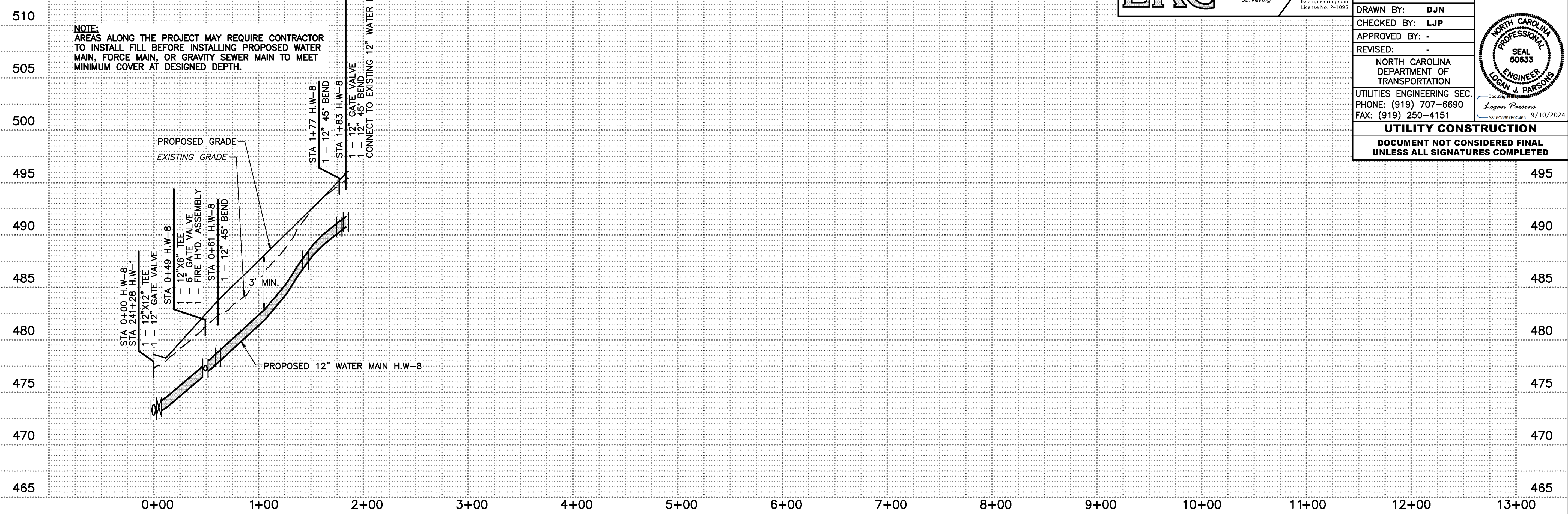
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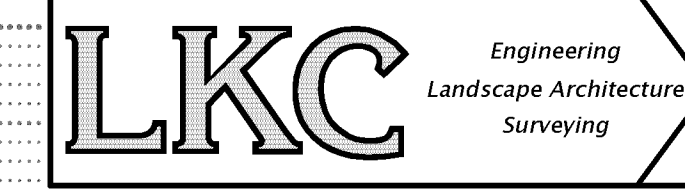
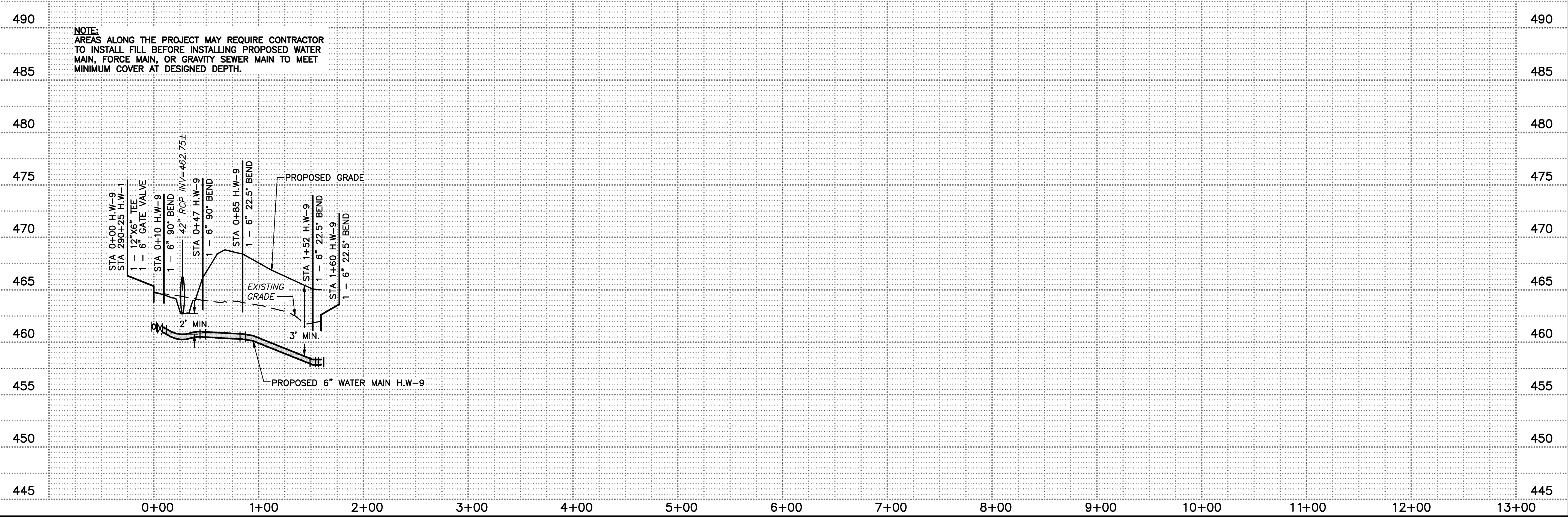
LINE H.W-8 SEE PLAN SHEET UC-11

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



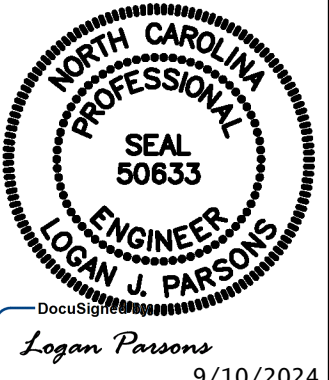
LINE H.W-9 SEE PLAN SHEET UC-14

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-63
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	
FAX: (919) 250-4151	



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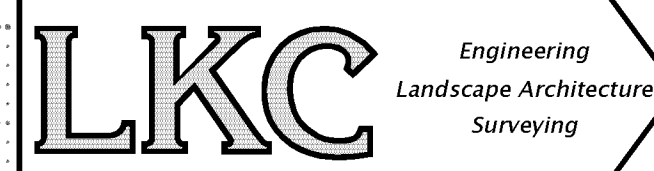
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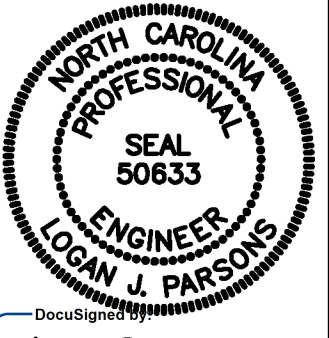
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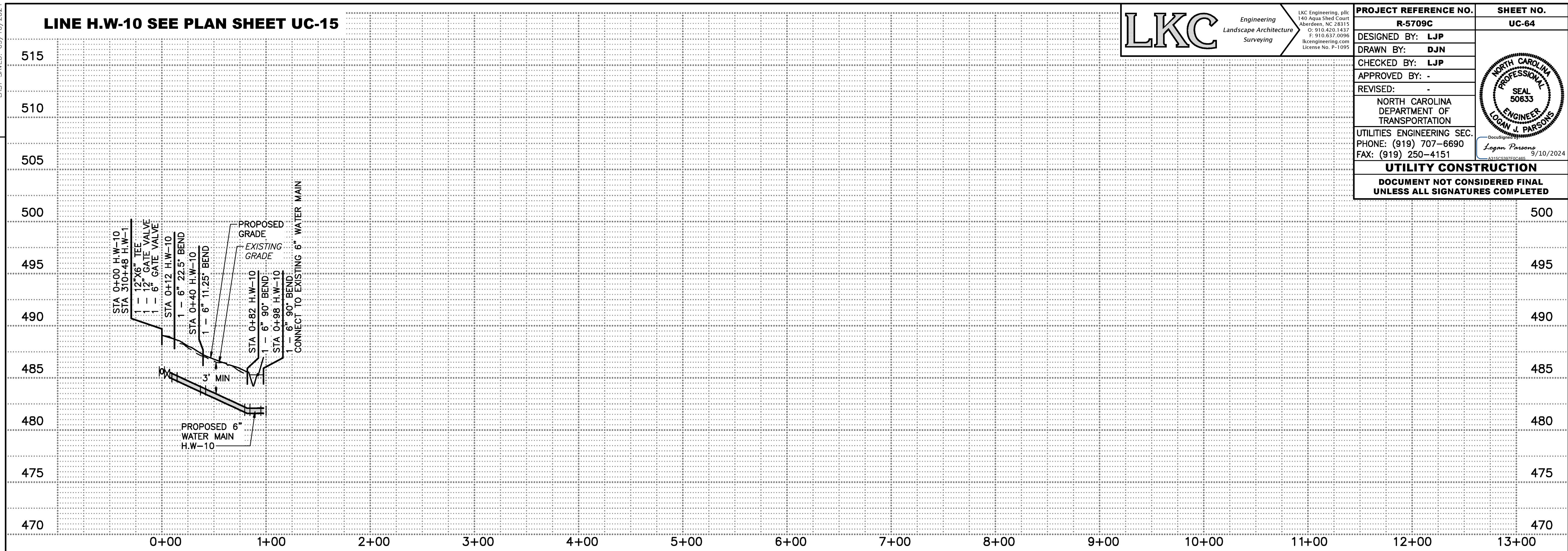


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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-64
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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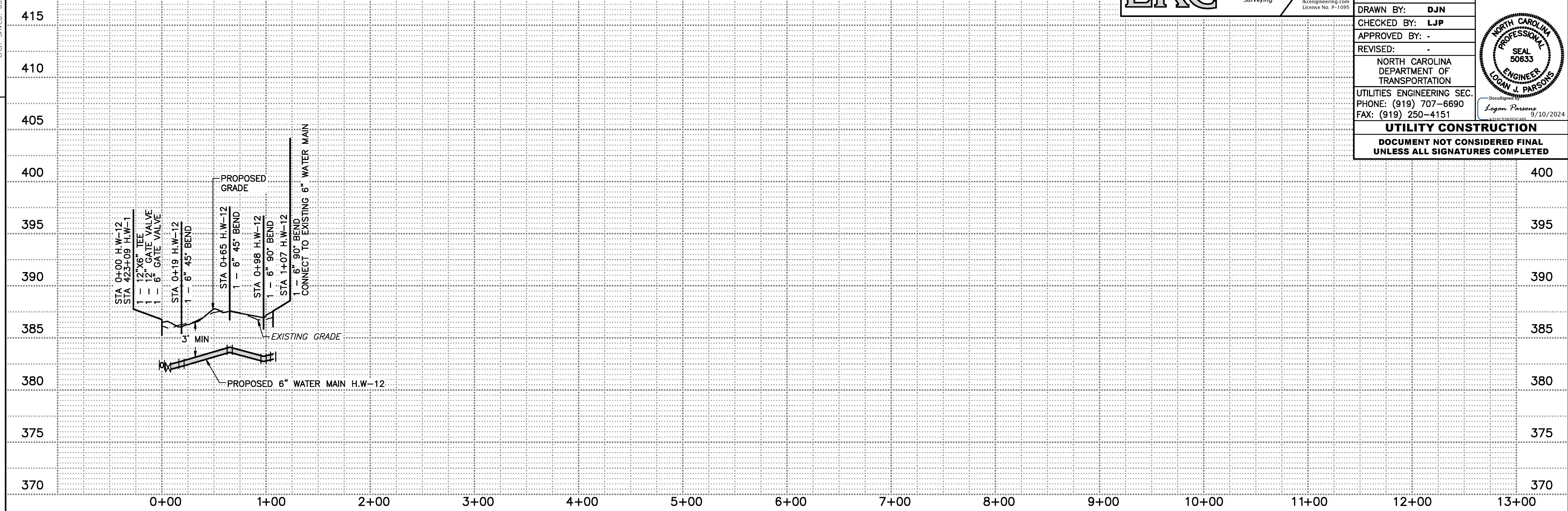
NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.

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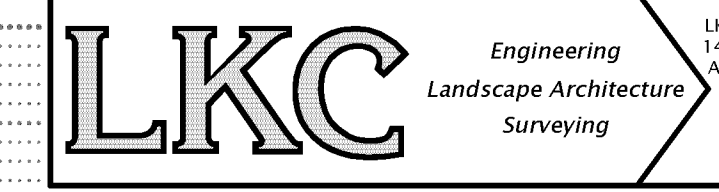
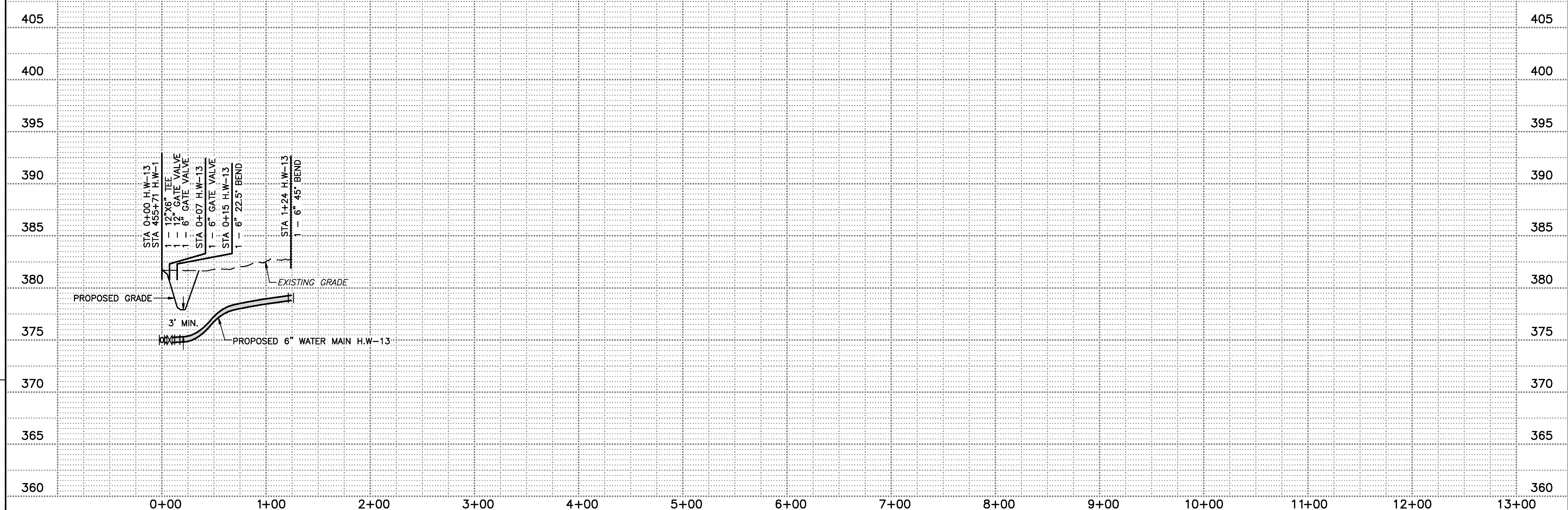
LAST SAVED: 09/10/2024

REVISIONS

LINE H.W-12 SEE PLAN SHEET UC-23

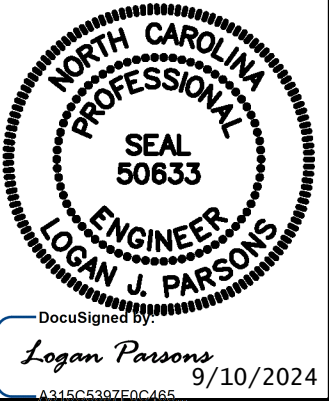


LINE H.W-13 SEE PLAN SHEET UC-26



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PROJECT REFERENCE NO.	R-5709C	SHEET NO.	UC-65
DESIGNED BY:	LJP		
DRAWN BY:	DJN		
CHECKED BY:	LJP		
APPROVED BY:	-		
REVISED:	-		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC.			
PHONE: (919) 707-6690 FAX: (919) 250-4151			
UTILITY CONSTRUCTION			
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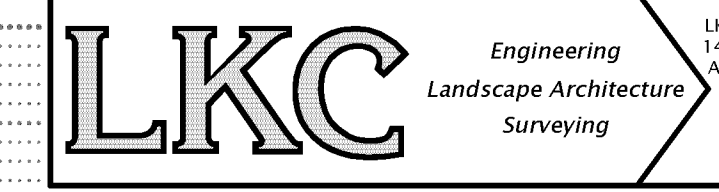
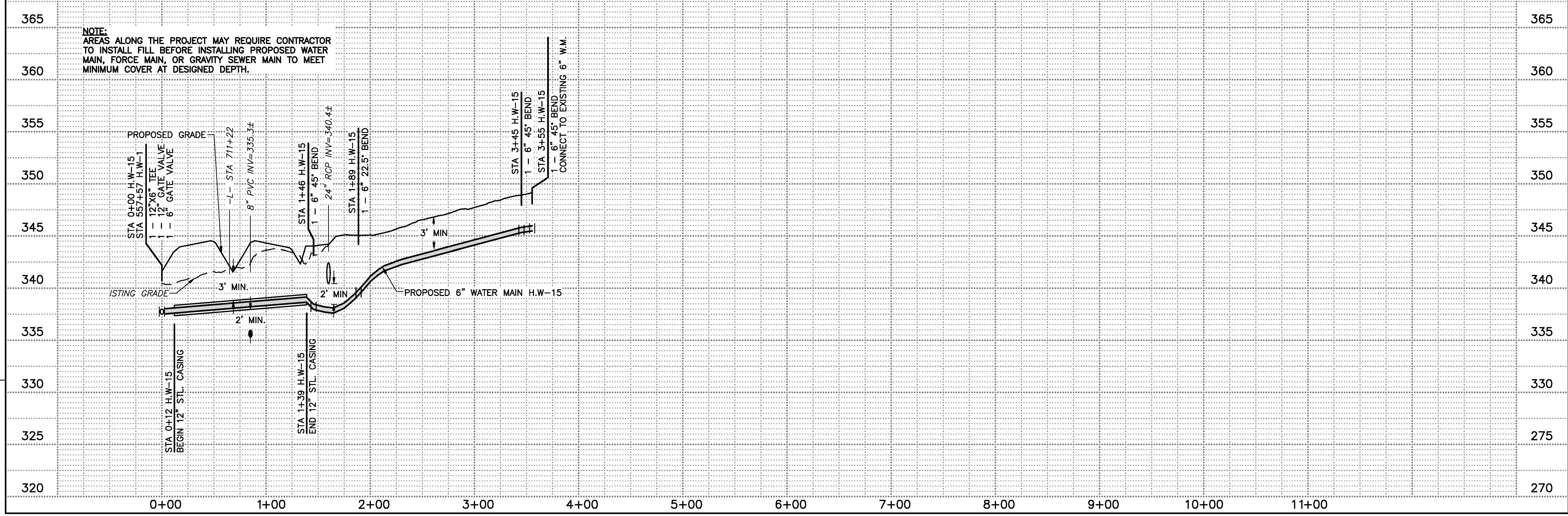
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LINE H.W-14 SEE PLAN SHEET UC-27

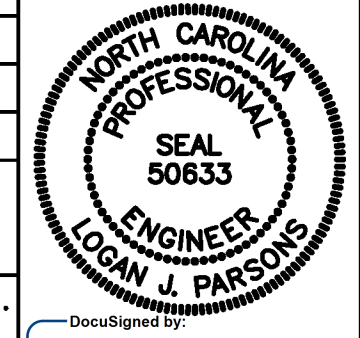


LINE H.W-15 SEE PLAN SHEET UC-33



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-66
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
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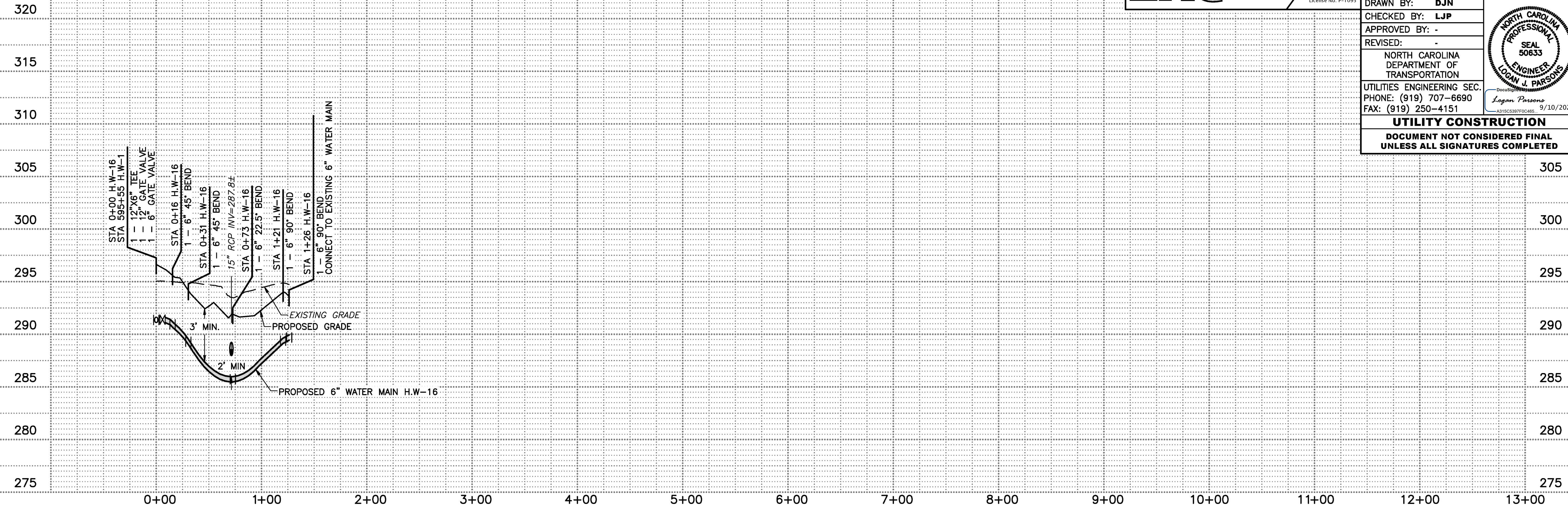


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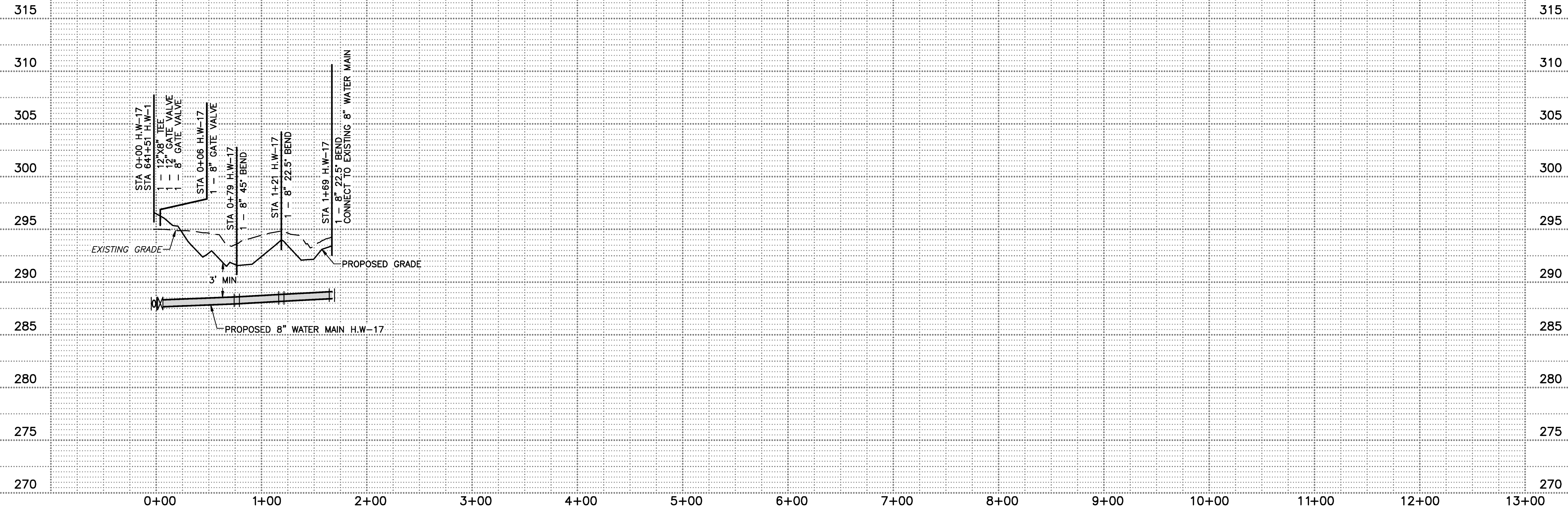
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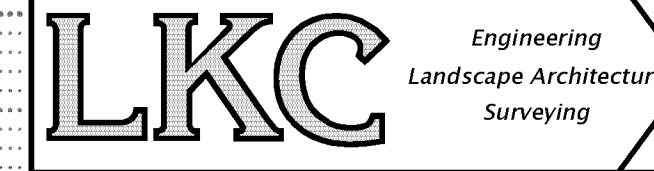
LINE H.W-16 SEE PLAN SHEET UC-36



LINE H.W-17 SEE PLAN SHEET UC-39



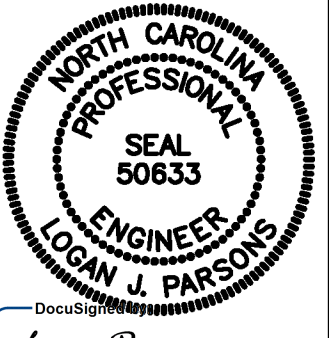
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-67
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
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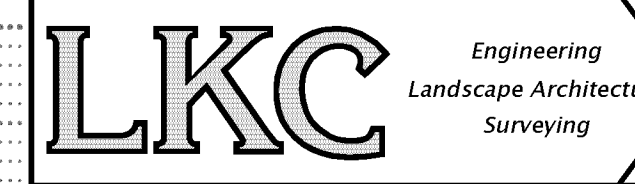
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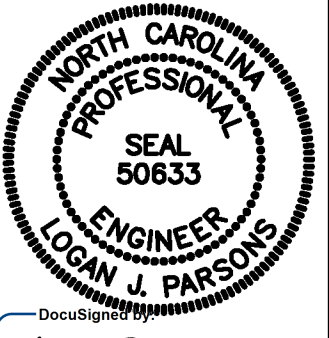
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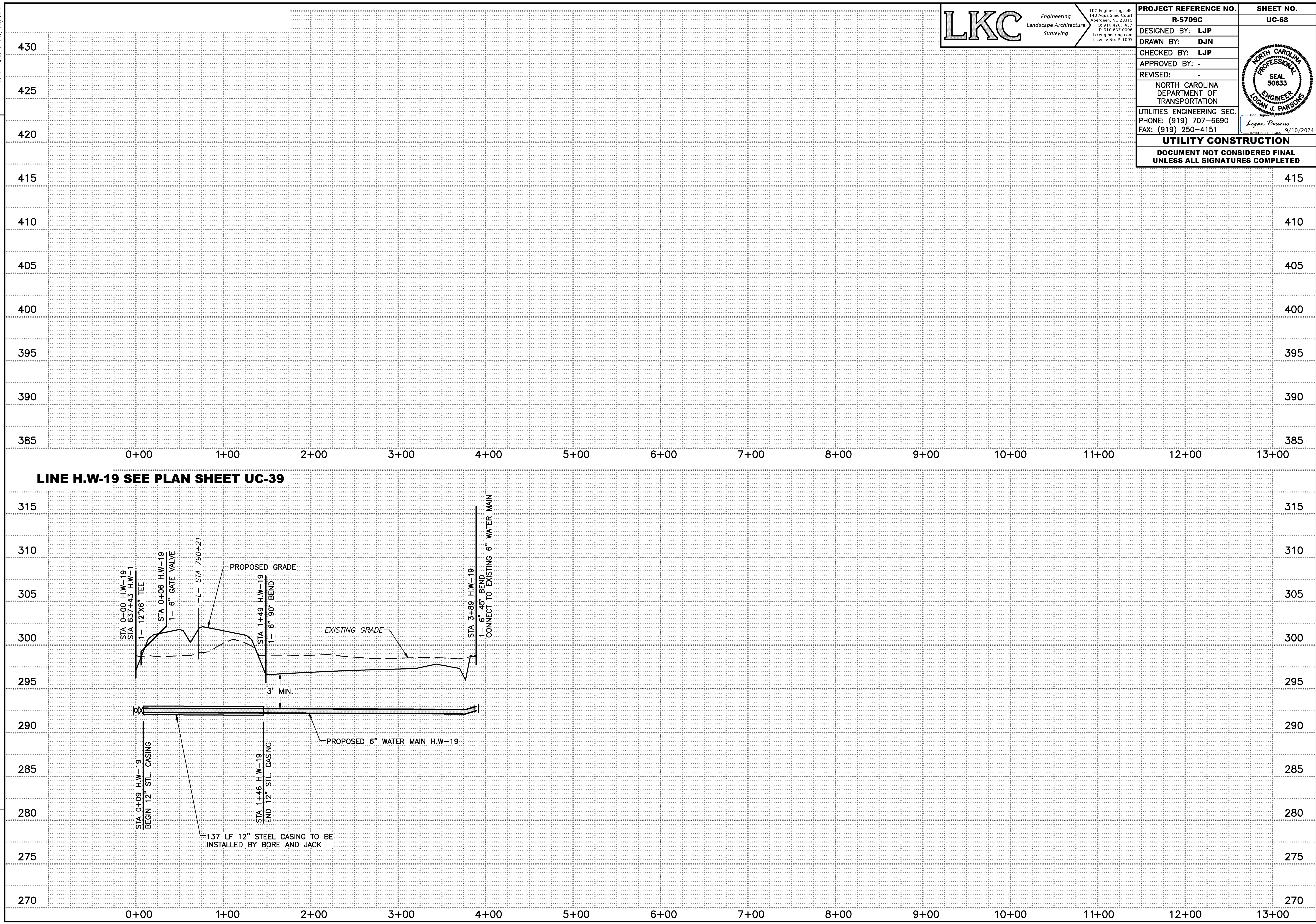


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R-5709C	UC-68
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DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
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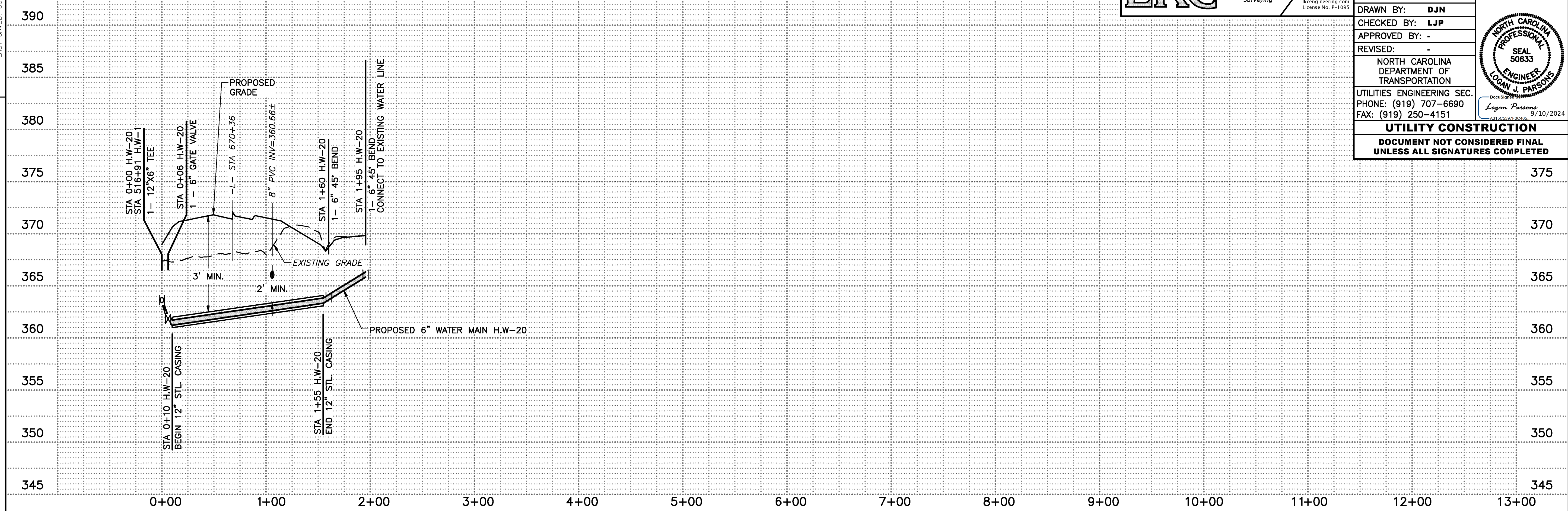
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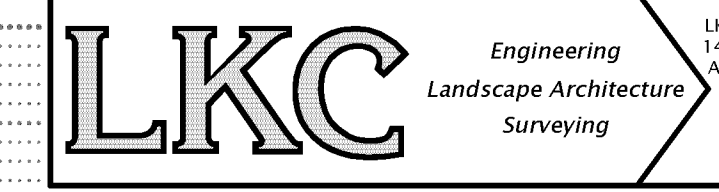
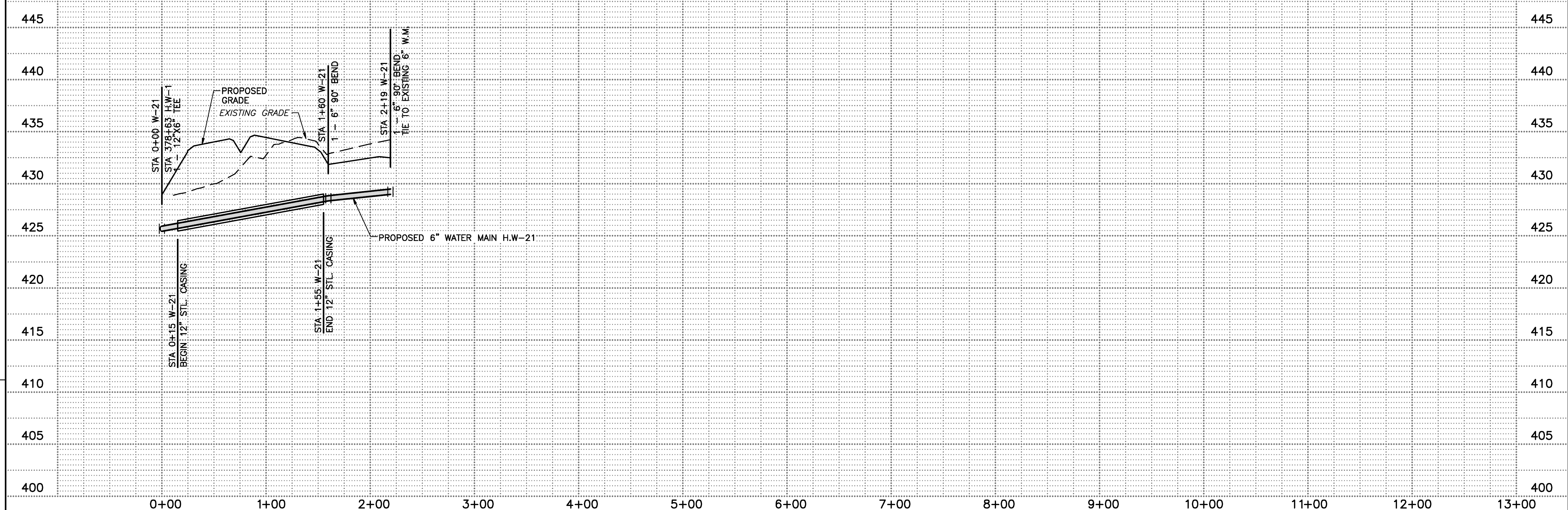
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LINE H.W-20 SEE PLAN SHEET UC-30

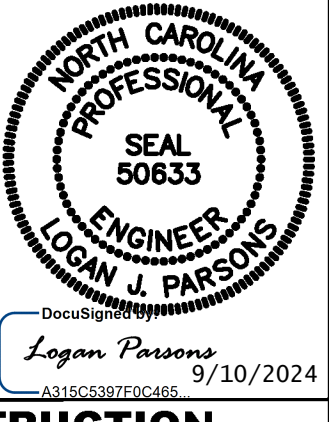


LINE H.W-21 SEE PLAN SHEET UC-20



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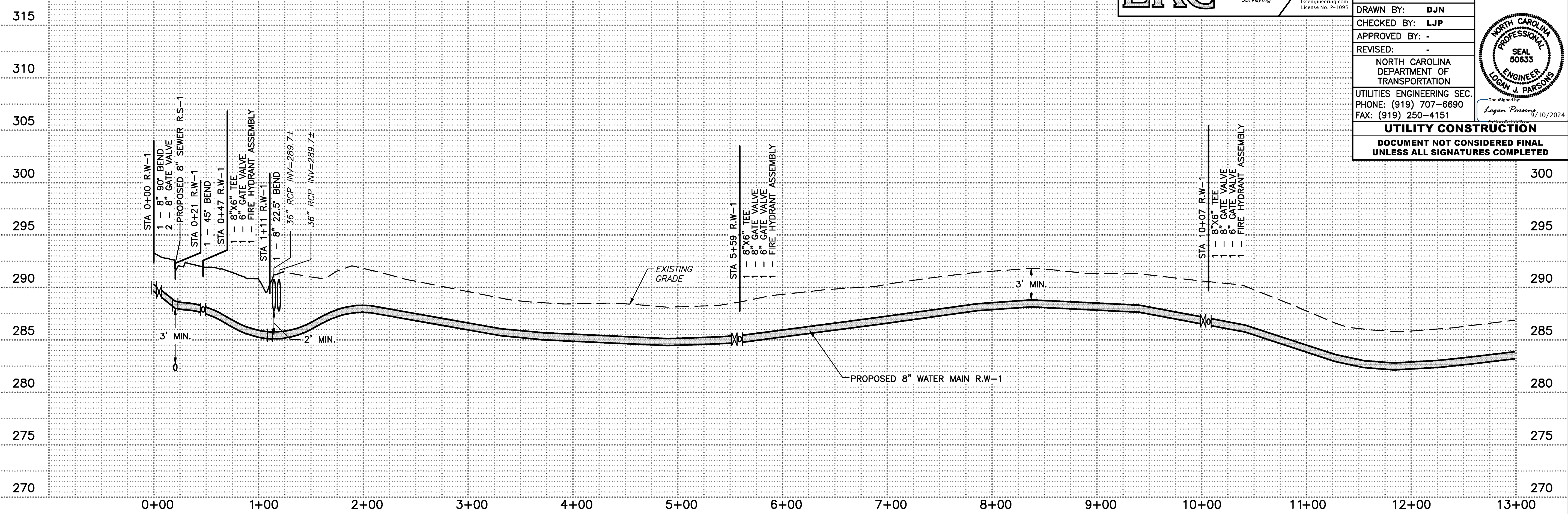


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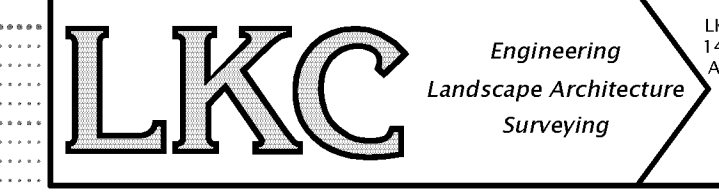
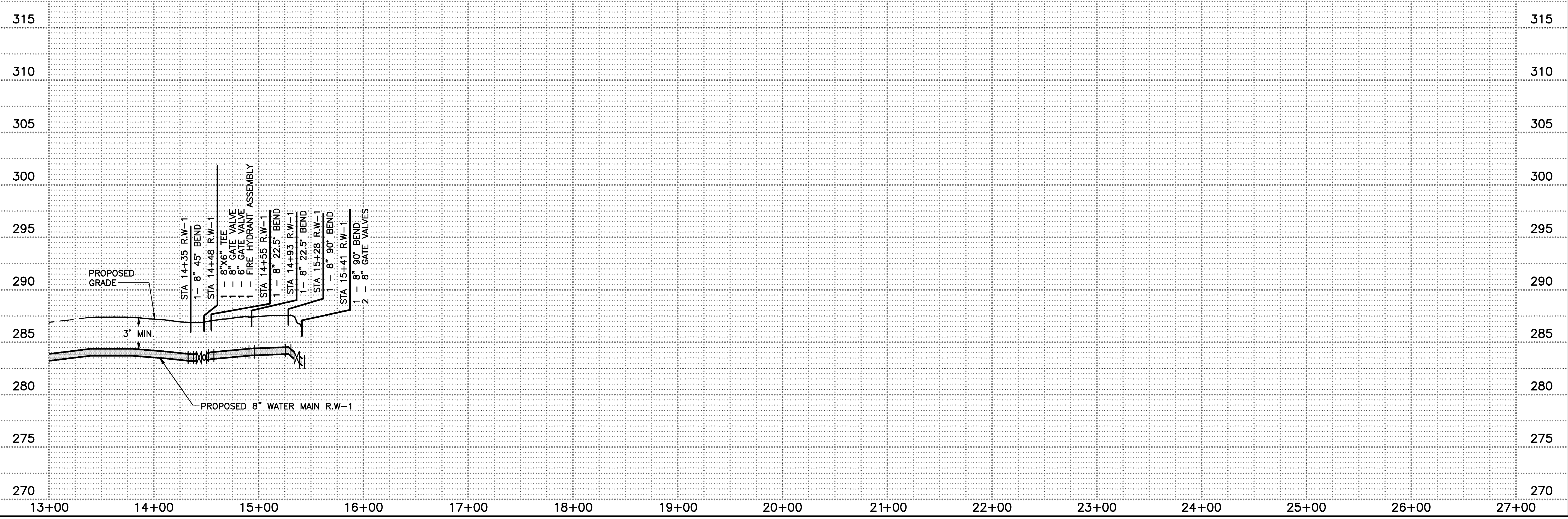
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LINE R.W-1 SEE PLAN SHEET UC-39 & UC-40

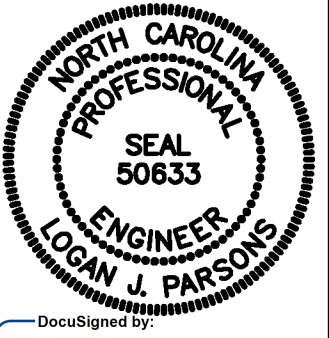


LINE R.W-1 SEE PLAN SHEET UC-40



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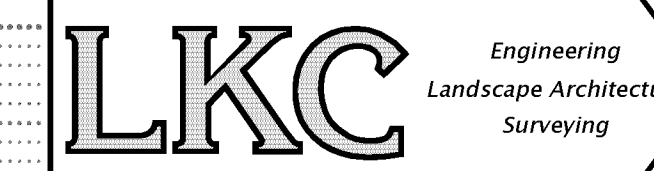
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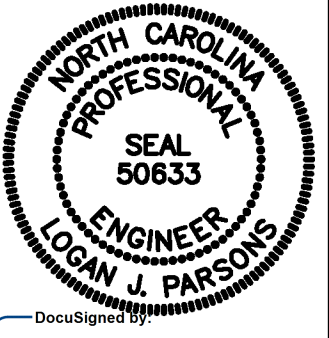
LINE R.W-2 SEE PLAN SHEET UC-41 & UC-42



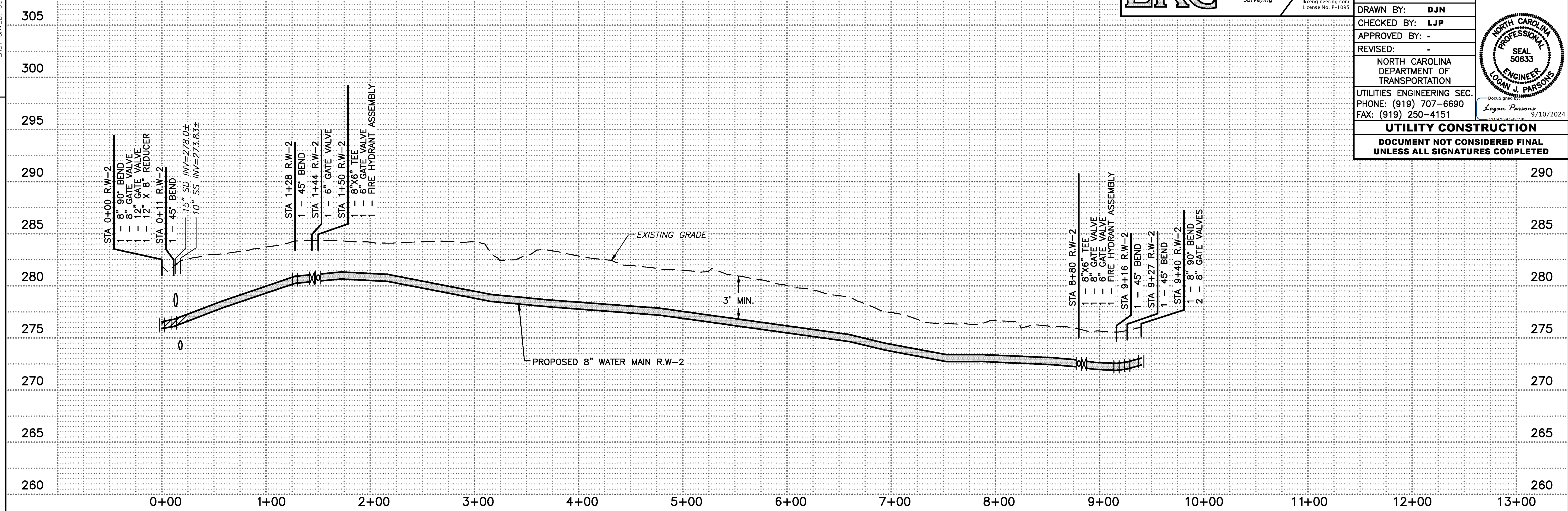
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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-71
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
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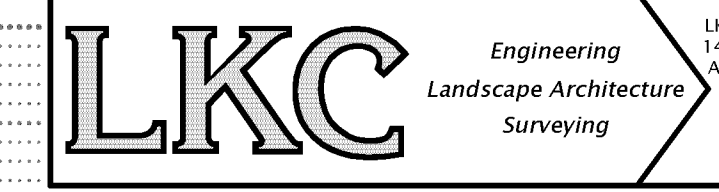


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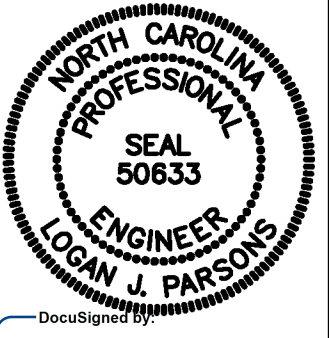
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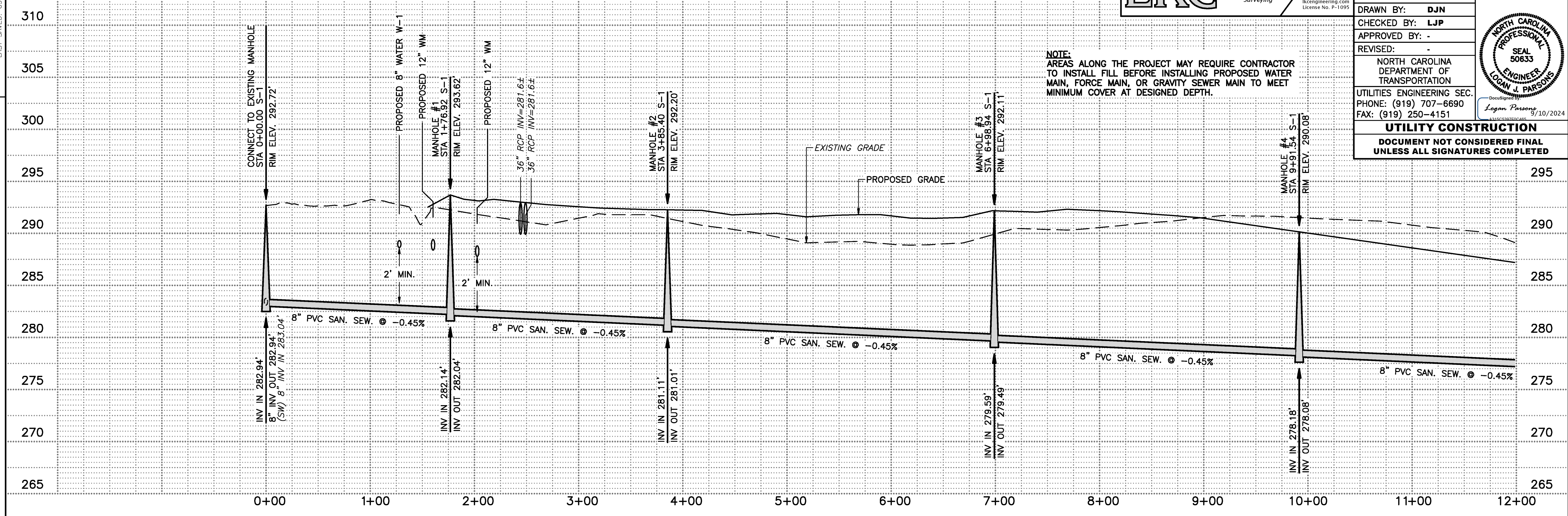


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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-72
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
APPROVED BY: -	
REVISED: -	
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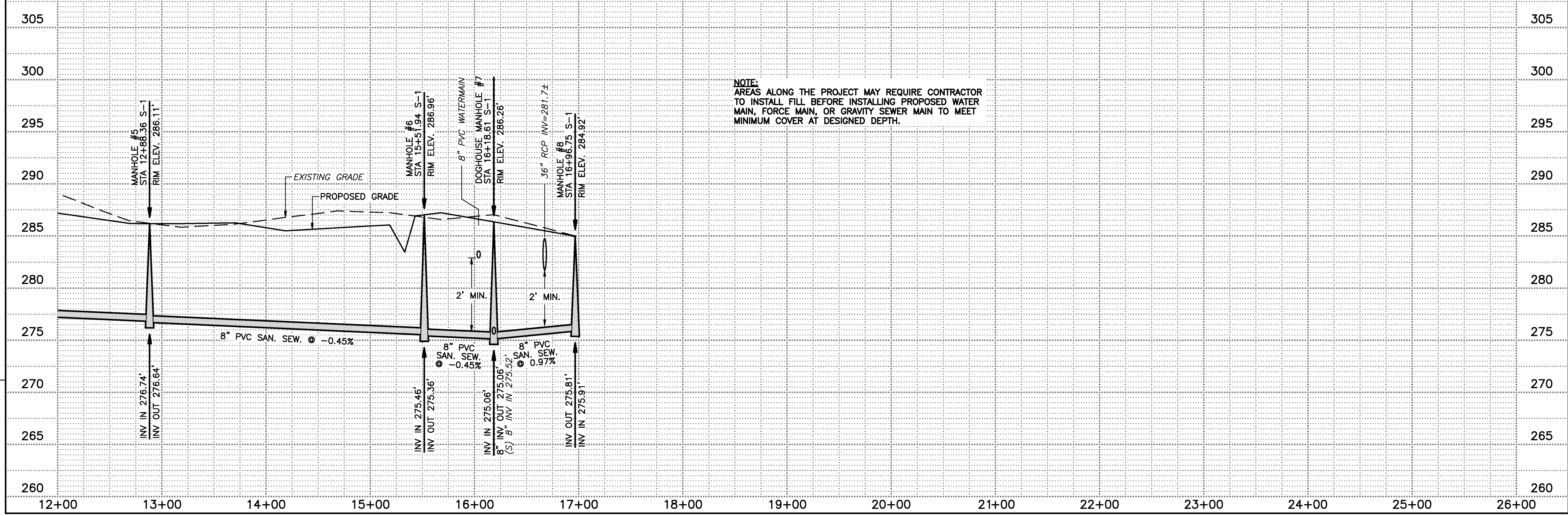


NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



LINE R.S-1 SEE PLAN SHEET UC-40

NOTE:
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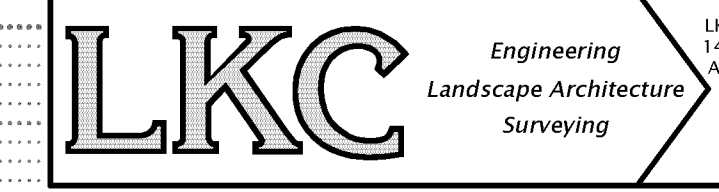
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LINE R.S-2 SEE PLAN SHEET UC-41

NOTE:
AREAS ALONG THE PROJECT MAY REQUIRE CONTRACTOR TO INSTALL FILL BEFORE INSTALLING PROPOSED WATER MAIN, FORCE MAIN, OR GRAVITY SEWER MAIN TO MEET MINIMUM COVER AT DESIGNED DEPTH.



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PROJECT REFERENCE NO.	SHEET NO.
R-5709C	UC-73
DESIGNED BY: LJP	
DRAWN BY: DJN	
CHECKED BY: LJP	
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REVISED: -	
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