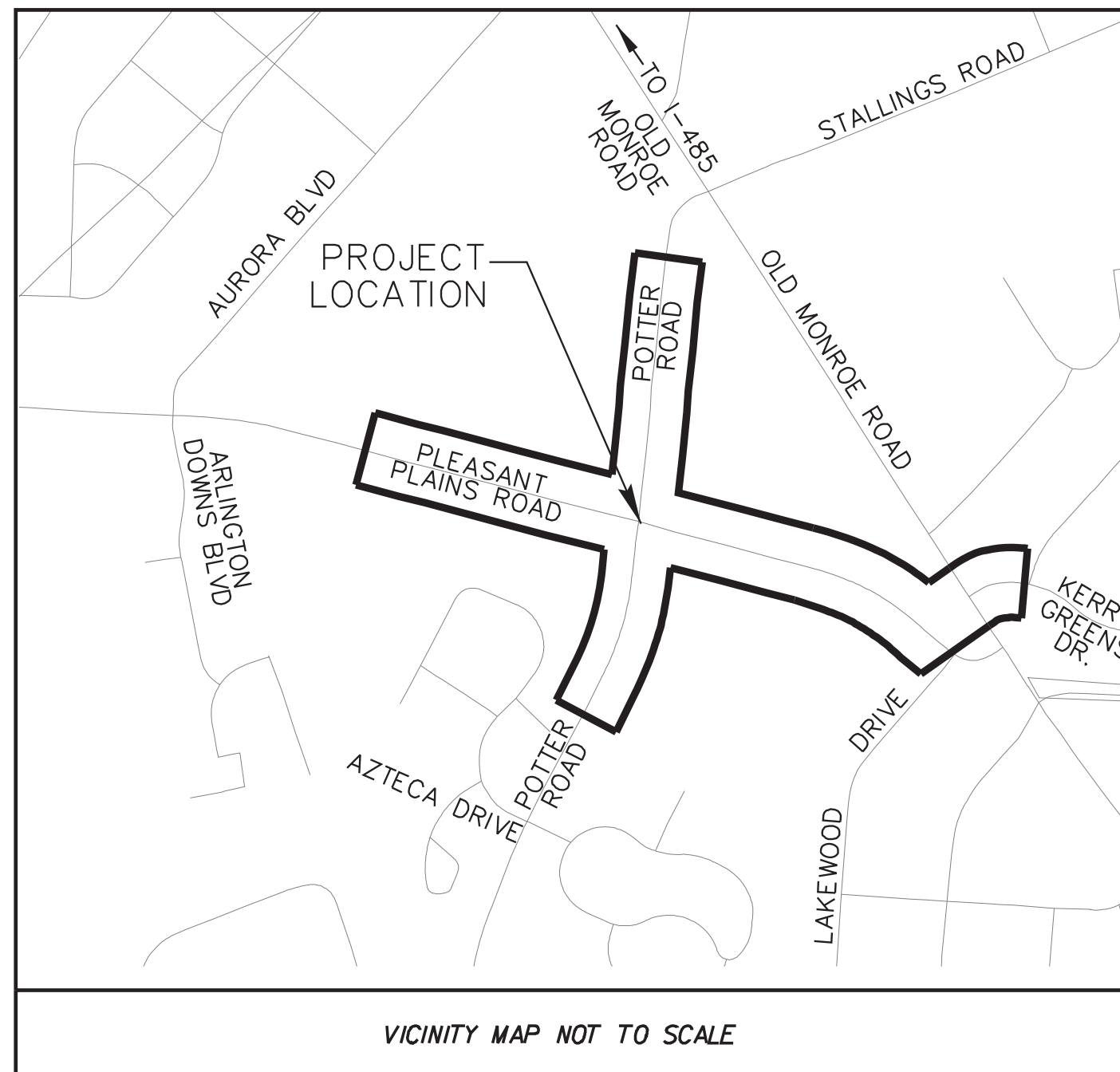


TIP PROJECT: U-5112

CONTRACT: C204822



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UNION COUNTY

**LOCATION: POTTER ROAD FROM AZTECA DRIVE TO OLD MONROE ROAD
AND PLEASANT PLAINS ROAD FROM EAST OF AURORA BOULEVARD
TO WEST OF LAKEWOOD DRIVE**

TYPE OF WORK: WATER, SEWER

100% Utility Plans



NCDOT CONTACT:
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DIVISION 10, DISTRICT 3
716 W. MAIN STREET
ALBEMARLE, NC 28001
(704) 983-4400

ENGINEER:
FRANK MASTERSON, PE
PROJECT MANAGER
200 SOUTH TRYON ST.
SUITE 200
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SURVEYOR:
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CHARLOTTE, NC 28204
(704) 376-2186 EXT 104

UNION COUNTY WATER CONTACT:
MICHAEL CALDWELL
PROJECT MANAGER
500 N. MAIN STREET
SUITE 600
MONROE, NC 28112
(704) 296-4293

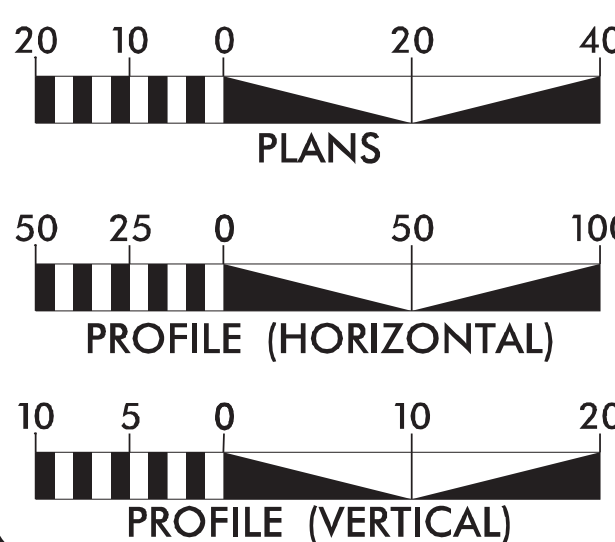
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5112	1	14
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
42374.2.1	STPDA-1032(3)	R/W	
42374.3.1	STPDA-1032(3)	CONST	

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

PERMIT PLANS

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

GRAPHIC SCALES



INDEX

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	GENERAL NOTES
UC-3A THRU UC-3D	WATER & SEWER DETAILS
UC-4 THRU UC-9A	WATER & SEWER UTILITY SHEETS - PLAN
UC-10 THRU UC-14	WATER & SEWER UTILITY SHEETS - PROFILES

PROJECT LENGTH

12" WATER LINE: 254 LF
8" WATER LINE: 421 LF
8" SANITARY SEWER: 3,643 LF

UTILITY OWNERS

WATER - UNION COUNTY WATER
SEWER - UNION COUNTY WATER

**PLANS PREPARED FOR
THE NCDOT BY:**

Kimley»Horn
NC LICENSE #P-0102
200 SOUTH TRYON STREET, SUITE 200
CHARLOTTE, NORTH CAROLINA 28202
PHONE: (704) 333-5131

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

DECEMBER 19, 2018

LETTING DATE:

MARCH 19, 2024

FRANK MASTERSON, PE
PROJECT ENGINEER

DUDLEY SMITH, PE
PROJECT DESIGN ENGINEER

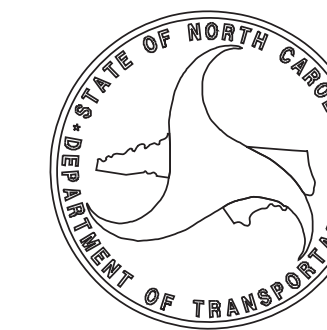
YANWEI MA, PE
NCDOT CONTACT

UTILITIES DESIGN ENGINEER



DocuSigned by:
D. C. Smith III
SIGNATURE

P.E.



INDEX OF SHEETS

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UC-10 THRU UC-14	WATER & SEWER SHEETS—PROFILES

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION OR PRIOR TO THE MANUFACTURE OF PIPE. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR THE COMPLETENESS OF ANY SUCH INFORMATION AND DATA; AND, THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND FOR REPAIRING ANY DAMAGE THERE TO RESULTING FROM THE WORK. IF A DISCREPANCY EXISTS BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND COUNTY PRIOR TO WORK. THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE NC ONE CALL TELEPHONE NUMBER IS 1-800-632-4949 OR 811.
- CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION AND ANGLATIONS OF EXISTING LINES PRIOR TO CONSTRUCTION. THIS ITEM SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- BEFORE A PIPELINE IS LAID ON ANY STREET, THE CONTRACTOR SHALL LOCATE WATER, SEWER, GAS AND OTHER UTILITIES' LINES AND SERVICES AS NECESSARY TO AVOID CONFLICTS. THE CONTRACTOR SHALL LOCATE EXISTING SMALL LINES, AND OTHER POSSIBLE EXISTING UNKNOWN UTILITY LINES, WITH AN ELECTRONIC PIPE FINDER AND SHALL EXCAVATE AND EXPOSE ALL EXISTING UNDERGROUND LINES IN ADVANCE OF TRENCHING OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPAIR ANY DAMAGE DONE TO UTILITIES' SERVICES RESULTING FROM THE WORK OF LOCATING SERVICES OR RESULTING FROM THE CONSTRUCTION OPERATIONS. DAMAGE TO EXISTING UTILITY LINES, SERVICES, POLES, AND STRUCTURES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR OWN EXPENSE. THE APPROXIMATE POSITIONS OF CERTAIN KNOWN UNDERGROUND LINES ARE SHOWN FOR INFORMATION. A MINIMUM CLEARANCE OF TEN FEET (10') HORIZONTAL AND EIGHTEEN INCHES (18") VERTICAL MUST BE MAINTAINED BETWEEN NEW SEWER LINES AND EXISTING WATER MAINS. SEE NOTE 5 OF SANITARY SEWER NOTES.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT UNION COUNTY AND NCDOT STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL COORDINATE WITH UNION COUNTY WATER A MINIMUM OF 96 HOURS PRIOR TO CUTTING OR CONNECTING TO EXISTING UTILITY LINES. UNION COUNTY PERSONNEL SHALL DETERMINE THE MOST APPROPRIATE TIME FOR THESE ACTIVITIES TO TAKE PLACE. THE CONTRACTOR SHALL CONTACT THE UNION COUNTY PUBLIC WORKS PROJECT MANAGER AT 704-968-4150 AT LEAST 96 HOURS PRIOR TO STARTING CONSTRUCTION.
- ALL PHASES OF CONSTRUCTION MUST BE COORDINATED WITH UNION COUNTY WATER. FIELD ADJUSTMENTS MAY BE NECESSARY AND WILL BE CARRIED OUT AS DIRECTED BY UNION COUNTY WATER AT NO EXTRA PAY.
- PROVIDE ACCESS FOR UNION COUNTY REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING ALL CONSTRUCTION LAYOUTS FROM THE SITE LAYOUT CONTROL POINTS, AND FROM THE DIMENSIONS AND CENTERLINES SHOWN. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL MAINTAIN A NEAT AND ACCURATE RECORD OF CONSTRUCTION FOR UNION COUNTY'S RECORDS. THE CONTRACTOR SHALL PROVIDE UNION COUNTY FULL SIZE REPRODUCIBLE MARKUPS THAT RECORD ALL CONSTRUCTION DEVIATING FROM THE PLANS AT SUBSTANTIAL COMPLETION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT.
- THE CONTRACTOR SHALL SUBMIT IN WRITING A SEQUENCE OF CONSTRUCTION AND WORK SCHEDULE TO THE ENGINEER AT THE TIME OF THE PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR AS APPROVED BY THE ENGINEER. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND PROPERTIES ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION AT ALL TIMES.
- WHERE THE CONTRACTOR DESIRES TO MOVE EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS ON OR ACROSS ANY PAVEMENT, THEY SHALL PROTECT THE PAVEMENT FROM ALL DAMAGE.
- CONTRACTOR SHALL NOT STORE MATERIALS, EQUIPMENT OR OTHER CONSTRUCTION ITEMS ON ADJACENT PROPERTIES OR RIGHT-OF-WAY WITHOUT THE PRIOR WRITTEN CONSENT OF THE PROPERTY OWNER OR UNION COUNTY PUBLIC WORKS (FOR R.O.W.) ALL CONSTRUCTION MATERIALS TO BE REMOVED SHALL BE DISPOSED OF AT A LEGAL DISPOSAL LOCATION OFF SITE, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE PROPERTY OWNER.
- THE CONTRACTOR SHALL NOT PLACE FILL OR WASTE MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN AGREEMENT WITH PROPERTY OWNER.
- CONSTRUCTION DEWATERING, IF ANY, IS INCIDENTAL TO THE PROJECT BID ITEMS. ALL DEWATERING DISCHARGE SHALL BE FILTERED THROUGH SILT BAGS AND/OR OTHER APPROVED EROSION CONTROL MEASURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSFER FROM ONE PIPE MATERIAL TO ANOTHER, WHERE INDICATED ON THE PLANS. MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR PROPER TRANSITION BETWEEN MATERIALS SHALL BE SUBSIDIARY TO THE COST OF THE PROJECT.
- UNTIL THE WORK IS ACCEPTED BY UNION COUNTY, THE PROJECT SHALL BE UNDER THE CHARGE AND CUSTODY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE EVERY NECESSARY PRECAUTION AGAINST INJURY AND/OR DAMAGE TO THE WORK.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UNION COUNTY INSPECTOR OF ANY DAMAGE OR CHANGED CONDITION CAUSED BY CONSTRUCTION ACTIVITIES THAT MAY RESULT IN COMPROMISED WATER QUALITY ENTERING THE DISTRIBUTION SYSTEM.
- ALL TESTING SHALL BE IN ACCORDANCE WITH UNION COUNTY AND NCDOT STANDARD SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.
- THE CONTRACTOR SHALL NOT COMMENCE WORK BEFORE 7:00AM AND SHALL ARRANGE THEIR WORK SO THAT NO MACHINERY OR EQUIPMENT SHALL BE CLOSER THAN 30 FEET TO ANY TRAVEL LANES AFTER SUNSET EXCEPT AS AUTHORIZED BY THE OWNER. NO WORK IS ALLOWED ON SUNDAY.

GENERAL NOTES (CONT.)

- THE CONTRACTOR SHALL DISTRIBUTE LETTERS TO ALL AFFECTED PROPERTY OWNERS PRIOR TO BEGINNING WORK ON EACH PROPERTY. THIS LETTER SHALL INCLUDE NAMES AND TELEPHONE NUMBERS OF CONTRACTOR CONTACTS, A DESCRIPTION OF WORK TO BE DONE, AND THE TIME FRAME FOR DOING THE WORK. COPIES OF THE LETTER SHALL BE FORWARDED TO THE UNION COUNTY PUBLIC WORKS INSPECTOR. THE CONTRACTOR SHALL NOTIFY RESIDENTS 48 HOURS IN ADVANCE OF PERFORMING ANY WORK ON PRIVATE PROPERTY. DISTRIBUTION OF LETTERS SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY. THE CONTRACTOR SHALL VIDEO THE ENTIRE PROJECT CORRIDOR AND PROVIDE A COPY OF THE CD TO NCDOT PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY DAMAGE TO PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO, FENCES, BRICKS, WALLS, PAVEMENT, GRASS, AND TREES, AT NO ADDITIONAL COST TO THE OWNER. THIS WORK SHALL BE SUBSIDIARY TO THE COST OF THE CONTRACT UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS IN VICINITY OF ANY OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL ABIDE BY NATIONAL ELECTRIC CODE AND ANY REQUIREMENT BY OWNER OF ELECTRIC LINE.
- THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. TRENCH SIDE SLOPES SHALL MEET OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS THAT ARE IN EFFECT AT THE TIME OF CONSTRUCTION. SHEETING, SHORING AND BRACING SHALL BE REQUIRED WHEN SIDE SLOPE STANDARDS ARE NOT MET. A PULL BOX, MEETING OSHA STANDARDS, MAY BE ACCEPTABLE, UNLESS NEGATED BY GROUNDWATER CONTROL MEASURES. CONTRACTOR SHALL HAVE A TRENCH SAFETY PLAN AT THE TIME OF PRE-CONSTRUCTION MEETING. NO OPEN TRENCHES WILL BE ALLOWED OVERNIGHT WITHOUT THE PRIOR WRITTEN APPROVAL OF UNION COUNTY PUBLIC WORKS. ONSITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL INSTALL TEMPORARY BACKFILL AS REQUIRED FOR OPEN TRENCH IN ESTABLISHED ROADWAYS. NO OPEN TRENCH WILL BE ALLOWED IN EXISTING PAVEMENT EXCEPT DURING DAYLIGHT HOURS AND DURING CONSTRUCTION OPERATIONS. TEMPORARY BACKFILL SHALL BE INSTALLED TO THE FINISHED GRADE OF THE EXISTING PAVEMENT AND SHALL BE MAINTAINED BY THE CONTRACTOR TO ENSURE A SMOOTH DRIVING SURFACE FREE OF RUTTING AND POTHOLES. REPAIR DAMAGED PAVEMENT IN ACCORDANCE WITH SPECIFICATIONS. A LIMIT OF 40 LF OF TRENCH MAY BE CLOSED BY PLATES OUTSIDE OF CONSTRUCTION HOURS.
- TOPSOIL REPLACEMENT IS REQUIRED IN ALL AREAS WHERE TOPSOIL EXISTS. TOPSOIL SHALL INCLUDE THE TOP SIX (6) INCHES OF TRENCH, UNLESS ROCK DEPTH IS LESS THAN SIX (6) INCHES. TOPSOIL SHALL BE KEPT SEPARATE FROM GENERAL TRENCH EXCAVATED MATERIAL AND SHALL BE PLACED ON TOP OF TRENCH BACK FILL. CONTRACTOR SHALL REMOVE ALL ROCK FROM TOPSOIL IN CULTIVATED AREAS.
- ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNSUABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF AT A LEGAL DISPOSAL FACILITY OFF SITE BY THE CONTRACTOR AT THEIR EXPENSE UNLESS OTHERWISE SPECIFIED OR AGREED TO BY OWNER.
- ALL PAVING DIMENSIONS ARE TO EDGE OF PAVEMENT AND/OR FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL SAW-CUT TO PROVIDE SMOOTH TRANSITION AT TIE-IN TO EXISTING EDGE OF PAVEMENT AND MEET EXISTING PAVEMENT AS NECESSARY TO ENSURE POSITIVE DRAINAGE.
- THE CONTRACTOR SHALL PROTECT ALL FRANCHISE UTILITIES DURING ALL CONSTRUCTION PHASES (INCLUDING POWER POLES, TELEPHONE RISERS, ETC.). THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES IN ACCORDANCE WITH UNION COUNTY PUBLIC WORKS REQUIREMENTS AND RETURN ANY SALVAGED UTILITIES TO NCDOT.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL THERMOPLASTIC PAVEMENT MARKINGS AS SHOWN ON THE PLANS. STOP BARS SHALL BE INSTALLED AT ALL STREET INTERSECTIONS.
- THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. THIS ITEM SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- THE CONTRACTOR SHALL GIVE THE OWNER A MINIMUM OF 5 DAYS NOTICE PRIOR TO THE TIME A STREET SIGN IS TO BE REMOVED DUE TO CONSTRUCTION OPERATIONS. AT NO TIME SHALL THE CONTRACTOR REMOVE OR RELOCATE A STOP OR YIELD SIGN WITHOUT THE APPROVAL OF NCDOT.
- CONTRACTOR SHALL MAKE ALL ATTEMPTS TO PROTECT ALL SIGNS WITHIN THE LIMITS OF CONSTRUCTION. ANY SIGN REQUIRING REMOVAL AND REPLACEMENT AS A RESULT OF CONSTRUCTION SHALL BE REPLACED AT EQUAL OR BETTER CONDITION AND IN ACCORDANCE WITH NCDOT GUIDELINES. ANY SIGNS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS A NON-PAY ITEM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FENCING ALONG THE PROJECT.
- CONTRACTOR SHALL MAKE ALL ATTEMPTS TO PROTECT ALL TREES WITHIN THE LIMITS OF CONSTRUCTION. IF CONSTRUCTION REQUIRES ANY TREE TO BE REMOVED, THE CONTRACTOR SHALL NOTIFY NCDOT STAFF OF THE NECESSARY REMOVAL PRIOR TO CONSTRUCTION. THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- TEMPORARY MAILBOXES SHALL BE PROVIDED AS REQUIRED. THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE LOCATION OF MAILBOXES IS TO BE DETERMINED BY PROPERTY OWNERS. MAILBOXES MUST MEET POST OFFICE STANDARDS.
- CONSTRUCTION WATER FOR TESTING AND CHLORINATION OF WATER LINES WILL BE PROVIDED BY UNION COUNTY AT NO COST TO CONTRACTOR. CONSTRUCTION WATER FOR TESTING AND CHLORINATION IS TO BE COORDINATED THROUGH UNION COUNTY CUSTOMER SERVICE AND IS TO BE METERED.
- ALL WATER SERVICE AND SEWER LATERAL CONNECTIONS TO PRIVATE PROPERTY SHALL BE COMPLETED BY AN NC LICENSED PLUMBER.

EROSION CONTROL NOTES

- VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE DIVISION ROADSIDE ENVIRONMENTAL ENGINEER.
- PROPER TEMPORARY AND PERMANENT MEASURES SHALL BE USED TO CONTROL EROSION AND SEDIMENTATION IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ALL EROSION AND POLLUTION CONTROL DEVICES AND MEASURES SHALL BE CONSTRUCTED, INSTALLED, MAINTAINED, AND REMOVED BY THE ENCRONCHING PARTY IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, ORDINANCES, AND POLICIES.
- THE ENCRONCHING PARTY SHALL BE RESPONSIBLE TO KEEP FULLY INFORMED TO COMPLY WITH THE APPLICABLE AND MOST CURRENT REGULATIONS OF ALL LEGALLY CONSTITUTED AUTHORITIES RELATING TO POLLUTION PREVENTION AND CONTROL INCLUDING EROSION CONTROL. IN THE EVENT OF CONFLICT BETWEEN LAWS, REGULATIONS, ORDINANCES, POLICIES, SPECIFICATIONS, OR OTHER REQUIREMENTS, THE MORE RESTRICTIVE REQUIREMENT SHALL APPLY.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY AND IN A TIMELY MANNER.

EROSION CONTROL NOTES (CONT.)

- CONTRACTOR WILL COMPLY WITH PROJECT EROSION CONTROL PLAN.
 - THE CONTRACTOR SHALL REVEGETATE UNPAVED AREAS DISTURBED BY CONSTRUCTION PRIOR TO ACCEPTANCE OF THE PROJECT. REVEGETATION SHALL CONSIST OF SEED SOWING, STRAW MULCHING, FERTILIZING AND WATERING. REVEGETATION SHALL BE ACCEPTABLE WHEN VEGETATION ACHIEVES ONE (1) INCH IN HEIGHT, WITH 85% COVERAGE AND NO GREATER THAN 10 SQUARE FEET BARE.
- WATER LINE NOTES**
- EXISTING WATER MAINS ARE OWNED BY UNION COUNTY. THE PRIMARY CONTACT PERSON FOR THE OWNER IS MICHAEL COLDWELL; OFFICE PHONE IS 704-296-4284; CELL PHONE IS 704-968-4150.
 - THE PROPOSED WATER MAIN CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024; UNION COUNTY'S "SANITARY SEWER AND WATER SPECIFICATIONS" AND "STANDARD DETAILS" - REVISION #6 DATED NOVEMBER 18, 2014; THE NOTES AND DETAILS PROVIDED IN THE CONSTRUCTION PLANS; AND THE PROVISIONS OUTLINED IN ASSOCIATED DOCUMENTS.
 - THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE.
 - CONTRACTOR SHALL INSTALL STANDARD BENDS AT LOCATIONS SHOWN. ALL NON-STANDARD VERTICAL AND HORIZONTAL BENDS SHALL BE INSTALLED USING STANDARD BENDS AND 50% OF THE MAXIMUM ALLOWABLE JOINT DEFLECTIONS AND MINIMUM RADIUS AS RECOMMENDED BY THE PIPE MANUFACTURER.
 - THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
 - ALL TEES, BENDS, REDUCERS, AND PLUGS SHALL BE RESTRAINED AND/OR BLOCKED.
 - FIELD-LOCKING GASKETS ARE ALLOWABLE AS A RESTRAINING DEVICE.
 - WATER PIPE SHALL HAVE A MINIMUM OF 36 INCHES OF COVER (UNLESS NOTED OTHERWISE).
 - CONCRETE THRUST BLOCKING SHALL BE USED AT ALL HORIZONTAL AND VERTICAL BENDS, TEES, AND WYES, UNLESS PIPE IS RESTRAINED JOINT.
 - THE CONTRACTOR SHALL INSTALL A FULL JOINT OF PIPE ON BOTH SIDES OF ALL FITTINGS WHERE POSSIBLE.
 - CONTRACTOR SHALL INSTALL DETECTABLE WARNING TAPE A MINIMUM OF 12" ABOVE WATER LINES AS WELL AS BLUE-COATED COPPER TRACER WIRE ON ALL WATER LINES. DETECTABLE WARNING TAPE AND TRACER WIRE SHALL BE INCLUDED IN THE PRICE OF THE WATER PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM.
 - CONTRACTOR MUST USE #14 AWG STRANDED-COPPER WIRE WITH BLUE INSULATION FOR THE UTILITY LOCATOR WIRES.
 - WHERE THE CONTRACTOR CROSSES WITHIN 18 INCHES (VERTICALLY) OF AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL WITH THE NEW POTABLE WATER LINE PIPE, ONE SEGMENT OF THE WATER LINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATER LINE PIPE ARE EQUIDISTANT AND AT LEAST TEN FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL.
 - UNION COUNTY WATER PERSONNEL ONLY SHALL OPERATE EXISTING WATER VALVES AND HYDRANTS EXCEPT IN THE CASE OF AN EMERGENCY. PRIOR NOTICE IS REQUIRED. NOTIFY UNION COUNTY IMMEDIATELY OF AN EMERGENCY REQUIRING VALVE OR HYDRANT OPERATION.
 - ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), IS LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS.
 - CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE AWWA, NDEQ, AND ASTM STANDARDS FOR CONNECTIONS TO EXISTING ASBESTOS CEMENT PIPES.
 - WRITTEN NOTIFICATION TO THE NORTH CAROLINA DEPARTMENT OF HEALTH SERVICES OR THE DEPARTMENT OF ENVIRONMENTAL HEALTH OF UNION COUNTY 10 DAYS PRIOR COMMENCING WITH THE REMOVAL OF AC PIPE IS REQUIRED. AT EACH LOCATION SHOWN IN THE PLANS AND/OR IDENTIFIED BY THE CONTRACTOR TO INVOLVE AC PIPE, THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE NECESSARY AMOUNT OF AC PIPE TO MAKE THE CONNECTION WITHOUT CREATING ANY FRIABLE MATERIAL. THE CONTRACTOR SHALL REMOVE WHOLE SECTIONS OF AC PIPE AND MAKE THE TIE-IN AT THE NEAREST JOINT. CONTRACTOR WILL ONLY UNCOVER 20- FEET OF AC PIPE AT ANY TIME. CUTTING OF AC PIPE SHALL BE MINIMIZED. THE CONTRACTOR SHALL REMOVE ANY CUT AC PIPE AND STORE IT IN A SECURE, ENGINEER APPROVED LOCATION FOR EVENTUAL DISPOSAL BY CONTRACTOR. PRIOR TO PERFORMING THIS WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER OF THE UTILITY OF THE WORK SCHEDULED 72 HOURS IN ADVANCE OF BEGINNING THE WORK.
 - WHEN WORKING WITH AC PIPES, CONTRACTOR WILL COMPLY WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND NATIONAL OMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REGULATIONS, INCLUDING BUT NOT LIMITED TO USE OF PERSONAL PROTECTIVE EQUIPMENT, SPECIALIZED TRAINING, ACCREDITATION, USE OF WET WORK PROCEDURES TO CUT AND REMOVE AC PIPE, AND HANDLING AND DISPOSAL OF AC PIPE AND MATERIAL INCLUDING CONTAMINATED SOIL.
 - AC PIPE WILL BE ABANDONED IN PLACE BY GROUTING. ALL AC PIPE AND MATERIALS REMOVED WILL BE THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR WILL PROVIDE THE OWNER WITH DISPOSAL RECEIPTS SHOWING PROPER DISPOSAL AT AN AUTHORIZED FACILITY.
 - WATER FOR TESTING WATER LINES WILL BE PROVIDED BY UNION COUNTY. TESTS SHALL BE REPEATED UNTIL TEST RESULTS ARE SATISFACTORY.
 - SAMPLES FOR BIOLOGICAL TESTING WILL BE COLLECTED BY UNION COUNTY PERSONNEL AND TESTED AT CATAWBA RIVER WATER TREATMENT PLANT LABORATORY OR A LABORATORY UNDER CONTRACT BY UNION COUNTY. SAMPLES WILL TYPICALLY BE COLLECTED ONLY ON WEDNESDAYS. REQUESTS FOR SAMPLE COLLECTION MUST BE MADE AT LEAST 48 HOURS IN ADVANCE OF THE SAMPLE COLLECTION. SAMPLE RESULTS WILL BE AVAILABLE NO SOONER THAN 24 HOURS AFTER THE SAMPLES ARE RECEIVED BY THE LAB. THERE WILL BE NO COST TO CONTRACTOR FOR SAMPLE TESTING.
 - BASED ON THE LOCATIONS OF EXISTING WATER VALVES AND WATER SERVICES, FINAL CONNECTIONS OF THE NEW WORK TO EXISTING WATER LINES MAY REQUIRE AT LEAST TWO CREWS WORKING SIMULTANEOUSLY TO MAKE THE CONNECTIONS AND TO TRANSFER WATER SERVICES FROM THE EXISTING WATER LINES TO THE NEW WATER LINES. CONTRACTOR TO COORDINATE WITH UNION COUNTY FIELD REPRESENTATIVE TO DETERMINE AND PLAN A WORKING TRANSFER OF WATER SERVICE FROM THE OLD SYSTEM TO THE NEW WATER IMPROVEMENTS WITH A MINIMUM OF SERVICE INTERRUPTION FOR WATER CUSTOMERS. CONTRACTOR MUST PROVIDE A MINIMUM OF 96 HOURS OF NOTICE TO FIELD REPRESENTATIVE PRIOR TO THE NEED FOR ISOLATION OF WATER LINES.
 - CONTRACTOR MUST COORDINATE WITH UNION COUNTY FIELD REPRESENTATIVE TO DEVELOP PLAN TO CONNECT NEW WATER LINES TO EXISTING WATER LINES AND PERFORM WATER SERVICE TRANSFERS WHILE MINIMIZING WATER SERVICE INTERRUPTIONS. NIGHT WORK MAY BE REQUIRED.

WATER LINE NOTES (CONT.)

- UNION COUNTY WILL NOTIFY WATER CUSTOMERS OF PLANNED SERVICE INTERRUPTIONS ASSOCIATED WITH WORK ON THE WATER MAINS. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING INDIVIDUAL CUSTOMERS FOR SERVICE INTERRUPTIONS PERTAINING TO SERVICE TRANSFERS AND SERVICE REPAIRS. SERVICE TRANSFERS SHALL BE PERFORMED DURING PERIODS OF CONVENIENCE FOR INDIVIDUAL WATER CUSTOMERS.
- LIMIT INTERRUPTION OF SERVICE TO UNION COUNTY WATER CUSTOMERS TO NO MORE THAN FIVE HOURS FOR WATER LINE INTERCONNECTIONS, AND 30 MINUTES FOR WATER SERVICE TRANSFERS.
- IN ACCORDANCE WITH NCDOT SECTION 1036-2, WATER SERVICE LINE SHALL BE OF TYPE "K" COPPER. SPLICING OF COPPER SERVICE LINE WILL NOT BE ALLOWED UNLESS SERVICE LINE IS LONGER THAN 100 FEET. PROVIDE AND INSTALL A CONTINUOUS SEGMENT OF COPPER WATER SERVICE LINE BETWEEN THE CORPORATION STOP AND WATER METER.
- ELEVATIONS OF FIRE HYDRANTS ABOVE FINISHED GRADE TO BE WITHIN MANUFACTURER'S RECOMMENDATION. ELEVATIONS OF FIRE HYDRANTS TO BE DETERMINED BY CONTRACTOR.
- PRIOR TO WATER CONSTRUCTION, THE CONTRACTOR MUST SUBMIT TO UNION COUNTY AND NCDOT THE PROPOSED UTILITY MATERIAL SUBMITTALS AND SHOP DRAWINGS, AS APPLICABLE FOR REVIEW AND OBTAIN UNION COUNTY APPROVAL OF UTILITY MATERIAL SUBMITTALS AND SHOP DRAWINGS.

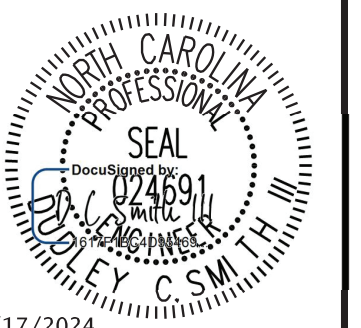
SANITARY SEWER NOTES

- SANITARY SEWER SERVICE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AT ALL TIMES. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND OWNER A PLAN PRIOR TO CONSTRUCTION FOR APPROVAL FOR MAINTAINING SANITARY SEWER SERVICE. THE COST FOR MAINTAINING SEWER SERVICE SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE SANITARY SEWER PIPE INSTALLATION. ACTIVATION OF SEGMENTS OF THE NEW SEWER DOWNSIDE OF SEWER INSTALLATION OPERATIONS MAY BE REQUIRED. COORDINATE TESTING AS NEEDED WITH UNION COUNTY PERSONNEL.
- ABANDONMENT OF EXISTING SANITARY SEWER LINES, INTERCEPTOR BOXES, AND CLEAN OUTS SHALL CONSIST OF THE WORK, LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO LOCATE, CUT, AND PLUG THE EXISTING SANITARY SEWER LINE AND PROVIDE NEW TERMINAL CLEAN OUTS AT THE LOCATIONS IDENTIFIED ON THE PLANS AND IN ACCORDANCE WITH THE REFERENCED DETAIL.
- ALL MATERIALS, CONSTRUCTION AND PLANS WILL COMPLY WITH THE CURRENT UNION COUNTY PUBLIC WORKS SANITARY SEWER & WATER SPECIFICATIONS AND DETAILS.
- SANITARY SEWER SERVICE CONNECTIONS AT MANHOLES SHALL BE INSTALLED VIA CORE DRILL WITH RUBBER BOOT.
- MINIMUM SEPARATION DISTANCES FOR WATER LINES FROM:
 - SANITARY SEWER LINES OR FORCE MAINS - 18" VERTICAL OR 10' HORIZONTAL
 - STORM SEWERS - 18" VERTICAL
 - IF THE PROPOSED SEWER MAIN IS INSTALLED WITHIN 12" IN ANY DIRECTION (VERTICALLY OR HORIZONTALLY) FROM A GAS MAIN, THEN THE CONTRACTOR SHALL CALL GAS COMPANY AND INFORM THEM.
 - ALL SHORING SHALL BE IN ACCORDANCE TO OSHA TRENCHING STANDARDS PART 1926, SUBPART P, AS AMENDED TO DATE.
 - OPEN CUT OF EXISTING PAVEMENT SHALL CONFORM WITH THE NCDOT UTILITY ACCOMMODATIONS MANUAL SECTION 3.6.9.1. OPEN CUT PROVISIONS, PAVEMENT PATCHING AND RESURFACING MUST BE COMPLETED WITHIN THE TIMEFRAME PERScribed BY THE NCDOT INSPECTOR, OR A MAXIMUM OF FIVE DAYS AFTER COMPLETION OF TRENCHING ACTIVITIES. SMALL PATCH AREAS CAN BE MAINTAINED WITH TEMPORARY PAVEMENT PATCHING OR CBAC STONE UNTIL PERMANENT PATCHING IS COMPLETE.
 - THE CONTRACTOR WILL STRING IN ADVANCE NO MORE THAN THE AMOUNT OF PIPE AND MATERIAL THAT CAN BE INSTALLED WITHIN TWO WEEKS UNLESS APPROVED OTHERWISE BY THE ENGINEER.
 - THE CONTRACTOR SHALL SAW CUT EXISTING ASPHALT AND/OR CONCRETE SURFACES ALONG A STRAIGHT EDGE PRIOR TO REMOVAL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DISTURBED PAVEMENT IN ROADWAYS SHALL BE TEMPORARILY OR PERMANENTLY REPAIRED/REPLACED THE SAME DAY THEY ARE DISTURBED.
 - AS A MINIMUM REQUIREMENT, ALL GRADED AREAS NOT UNDER PAVEMENT AND WITHIN THE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE PREPARED, FERTILIZED AND LIMED, SEEDED, AND MULCHED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
 - IF ADDITIONAL WORK SPACE IS NEEDED, AN ENCRONCHMENT IS TO BE AGREED UPON BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER.
 - ALL SANITARY SEWER PIPE BEDDING SHALL BE AS INDICATED IN UNION COUNTY DETAIL 8A. PROVIDE CLASS C BEDDING.
 - STABILIZATION STONE IS REQUIRED UNDER PIPING WHEN CONDITIONS WARRANT OR AS REQUIRED BY THE ENGINEER.
 - REPLACE UNSUITABLE BACKFILL MATERIAL (AS INDICATED BY NCDOT INSPECTOR) WITH CRUSHED STONE STABILIZATION. BACKFILL CONSOLIDATION OF THE TRENCH SHOULD BE 95% MAXIMUM DRY DENSITY WITH THE TOP 18" OF BACKFILL MATERIAL COMPACTED TO A MINIMUM OF 100% MAXIMUM DRY DENSITY (TO MATCH NCDOT STANDARD PAVEMENT REPAIR DETAIL). TESTING SHALL BE PERFORMED AS REQUIRED BY NCDOT SPECIFICATIONS.
 - CERAMIC EPOXY COATING REQUIRED ON ALL DIP SANITARY SEWER PIPES.
 - THE EXISTING SANITARY SEWER SYSTEM WITHIN THE PROJECT LIMITS IS A 4-INCH DIAMETER GREY-WATER SYSTEM THAT UTILIZES CONCRETE INTERCEPTOR BOXES TO CAPTURE SOLIDS. ABANDONMENT OF THE EXISTING SEWERS (WHEN REQUIRED) SHALL INCLUDE REMOVAL OF THE INTERCEPTOR BOXES, CONNECTION OF EXISTING 4-INCH SEWER SERVICES TO THE NEW 8-INCH SEWER BY A CERTIFIED NC PLUMBER, AND CONVERSION OF MAINLINE SEWER CLEAN OUTS TO TERMINAL CLEAN OUTS WHERE CALLED FOR IN THE PLANS. ALL WORK ON SEWER LATERALS WITHIN 5 FT OF BUILDINGS MUST BE COMPLETED BY A CERTIFIED NC PLUMBER. THE CONTRACTOR SHALL INSTALL CLEANOUTS AS NECESSARY FOR THE RESIDENT TO CLEAN THE LATERAL BY A SNAKE OR AUGER. REFER TO DETAILS.
 - LOCATIONS OF THE INTERCEPTOR BOXES ARE APPROXIMATE. CONTRACTOR TO LOCATE INTERCEPTOR BOXES AND SERVICE PIPES PRIOR TO BEGINNING SERVICE TRANSFERS AND REMOVAL/ABANDONMENT OF BOXES.

Kimley Horn

200 SOUTH TRYON ST, SUITE 200
CHARLOTTE, N.C. 28202

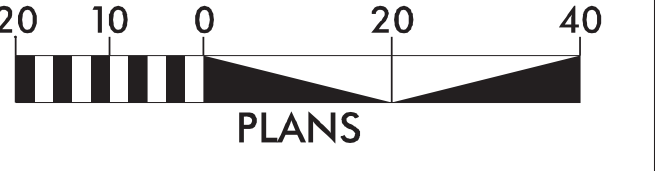
PROJECT REFERENCE NO.	SHEET NO.
U-5112	UC-2
DESIGNED BY: SJJ	
DRAWN BY: SCA	
CHECKED BY: MAS	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SECTION: (919) 707-6690 FAX: (919) 250-4151	1/17/2024 UTILITY CONSTRUCTION PLANS ONLY



UTILITY CONSTRUCTION

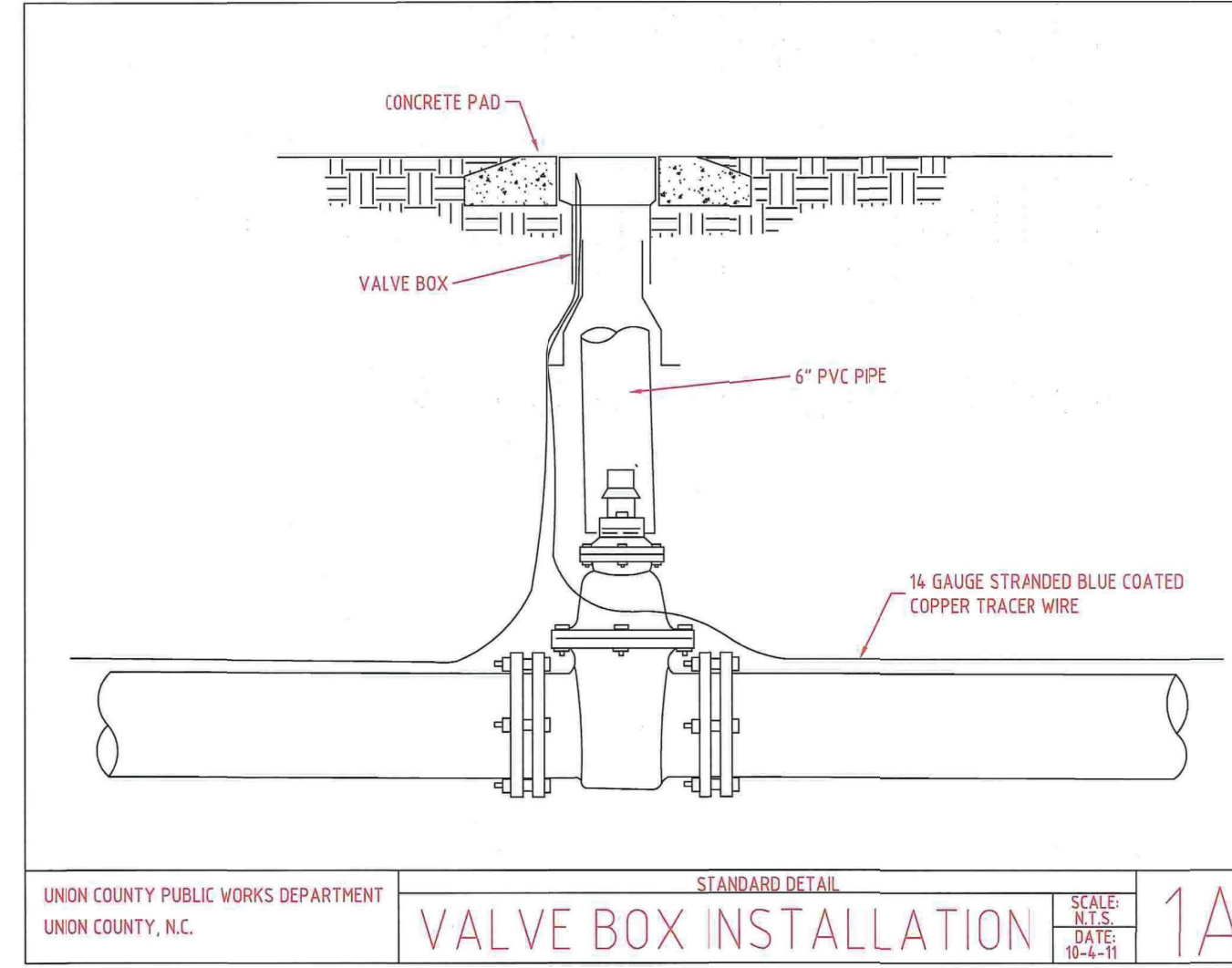
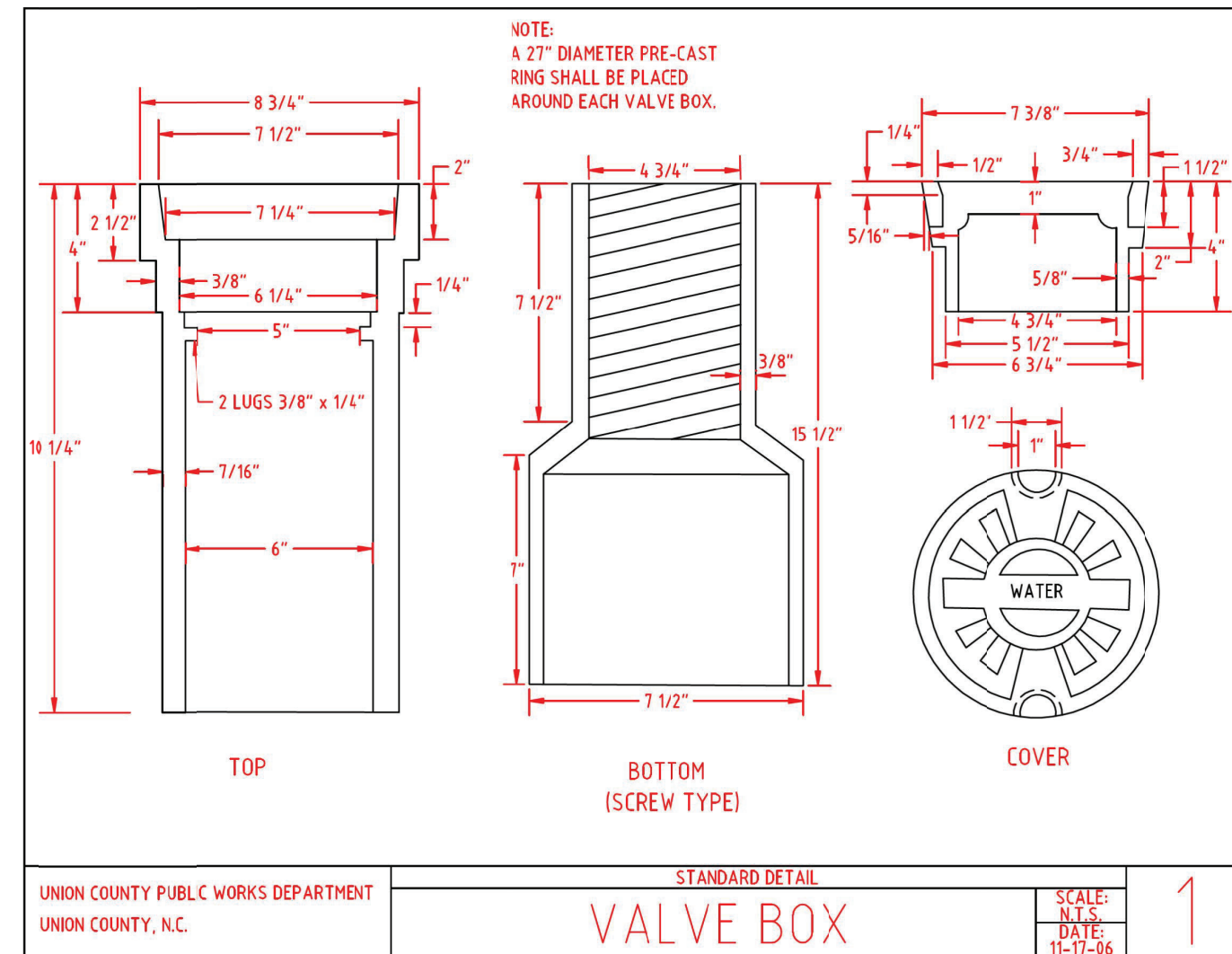
REVISIONS

1/17/2024

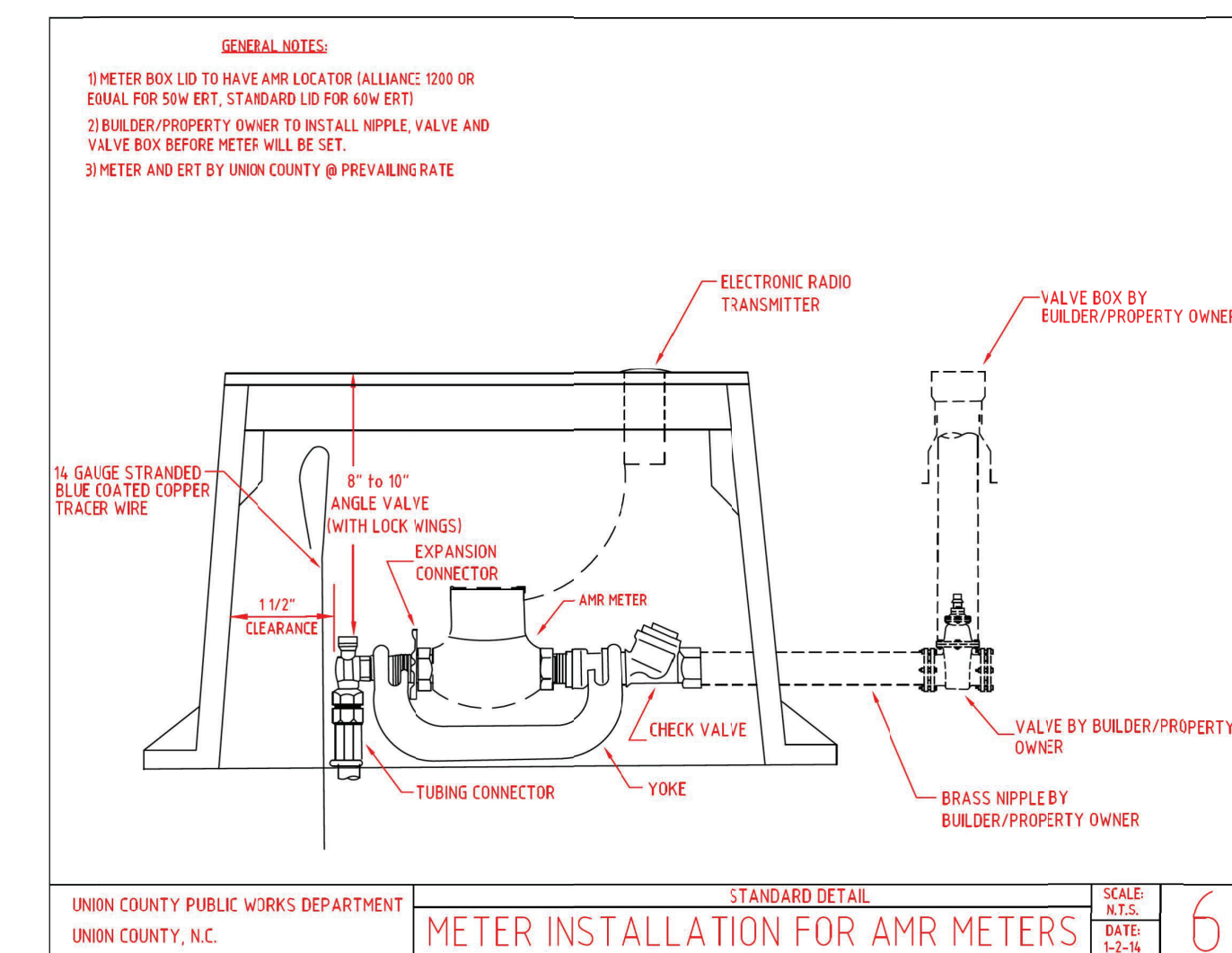
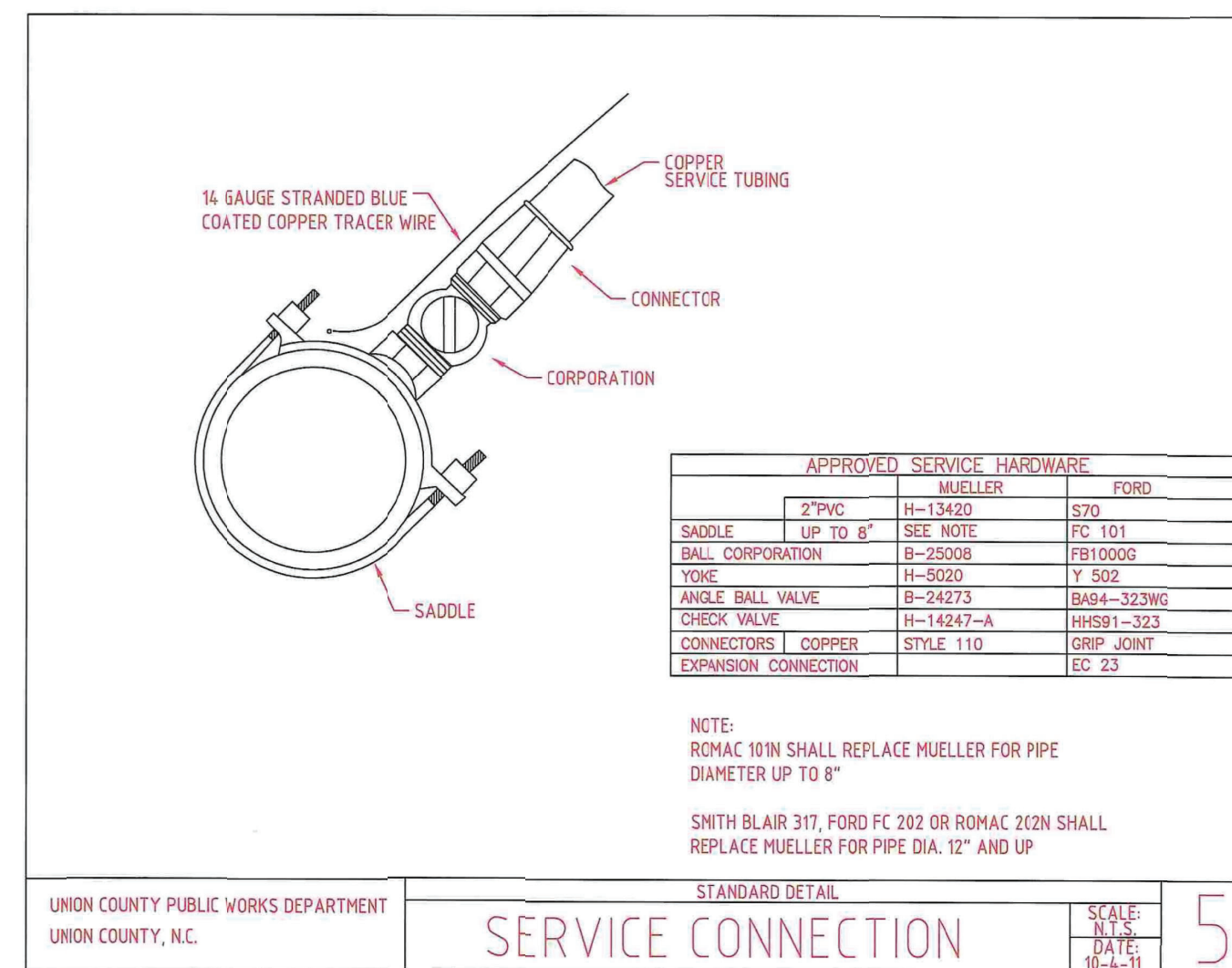
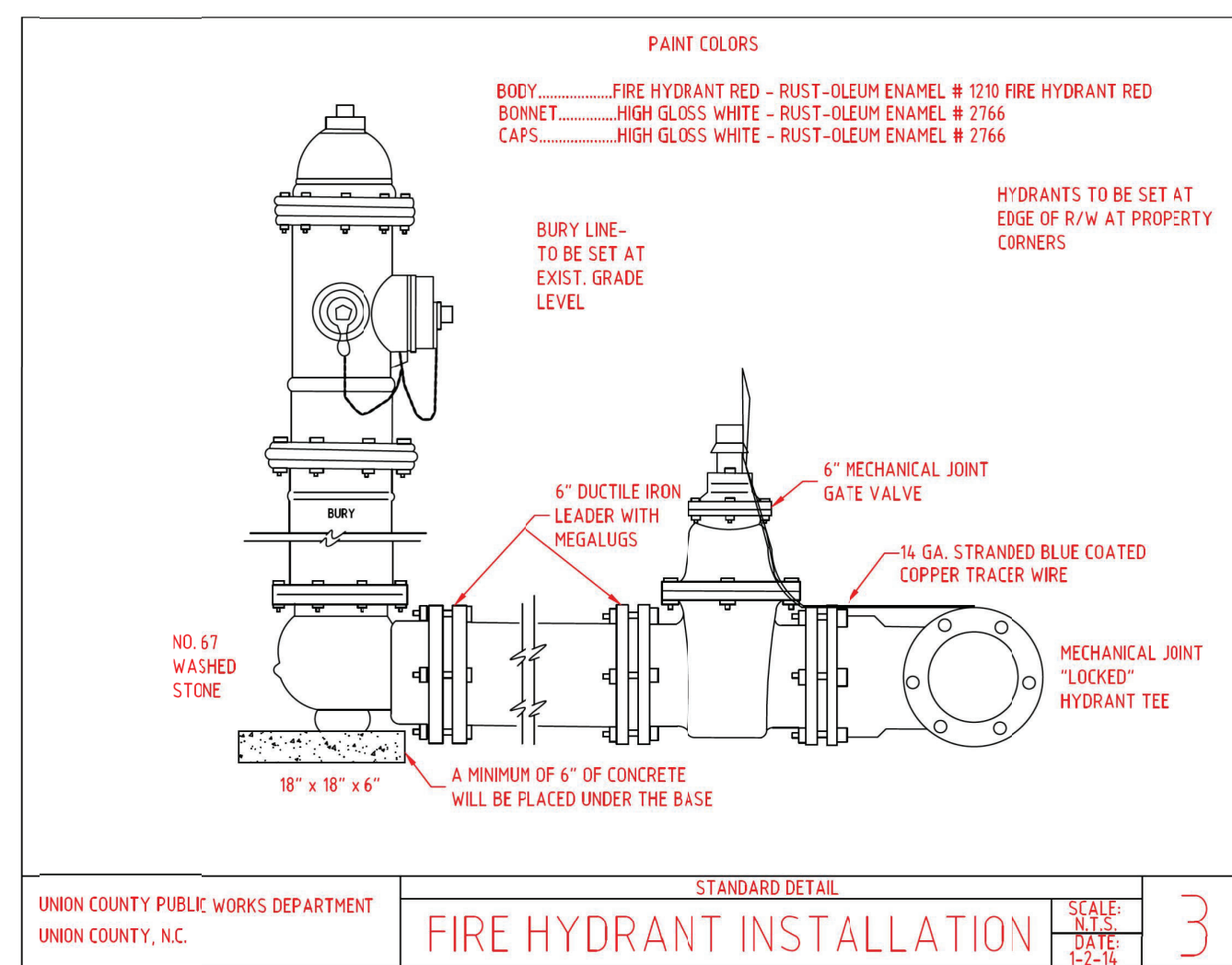
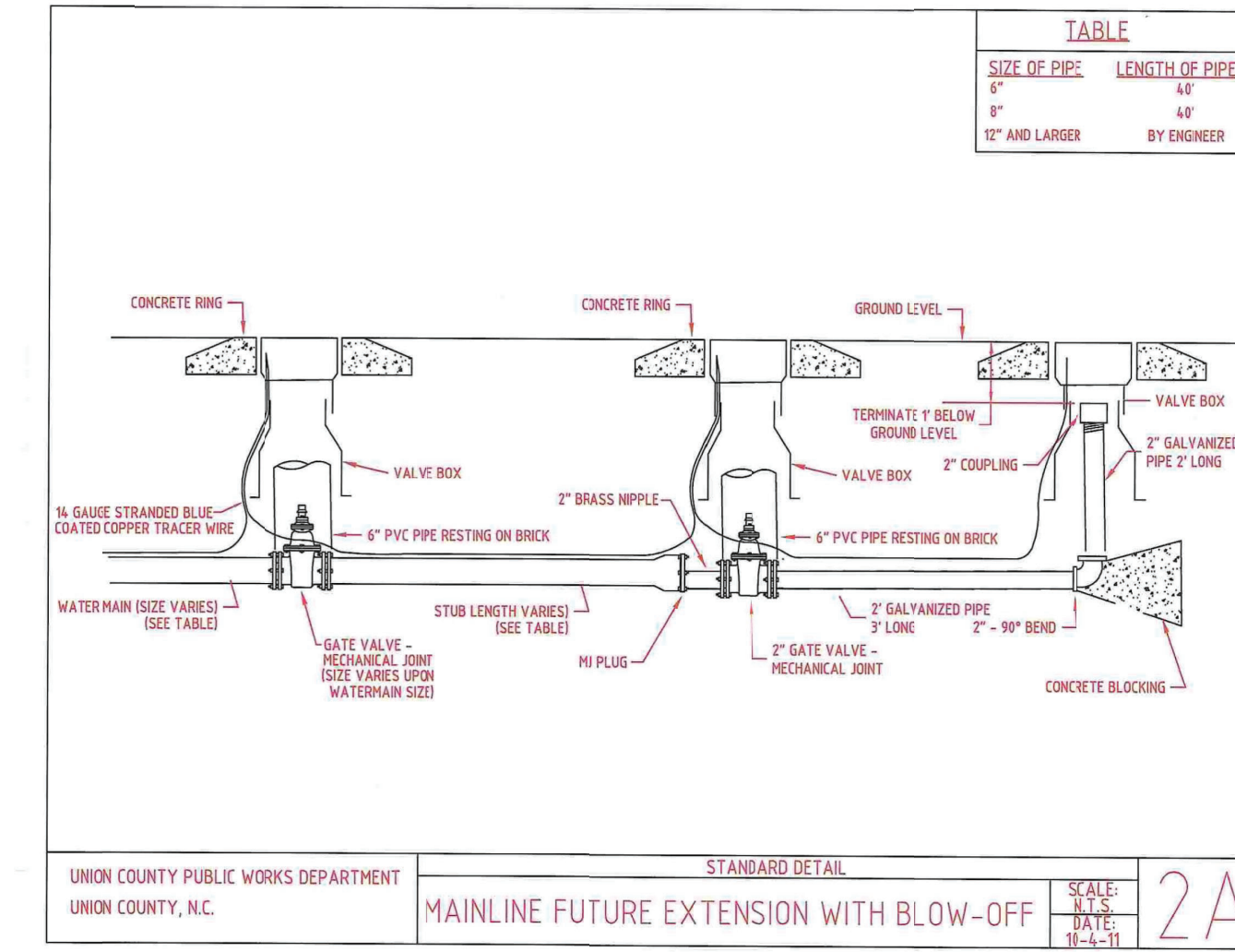


PROJECT REFERENCE NO.	SHEET NO.
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DRAWN BY: SCA	
CHECKED BY: MAS	
APPROVED BY:	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
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UTILITY CONSTRUCTION

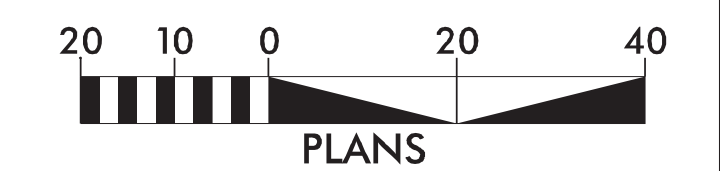


NOTE: FOR PIPE DEPTH GREATER THAN 5-FOOT, PROVIDE SWIVEL JOINT VALVE EXTENSION.



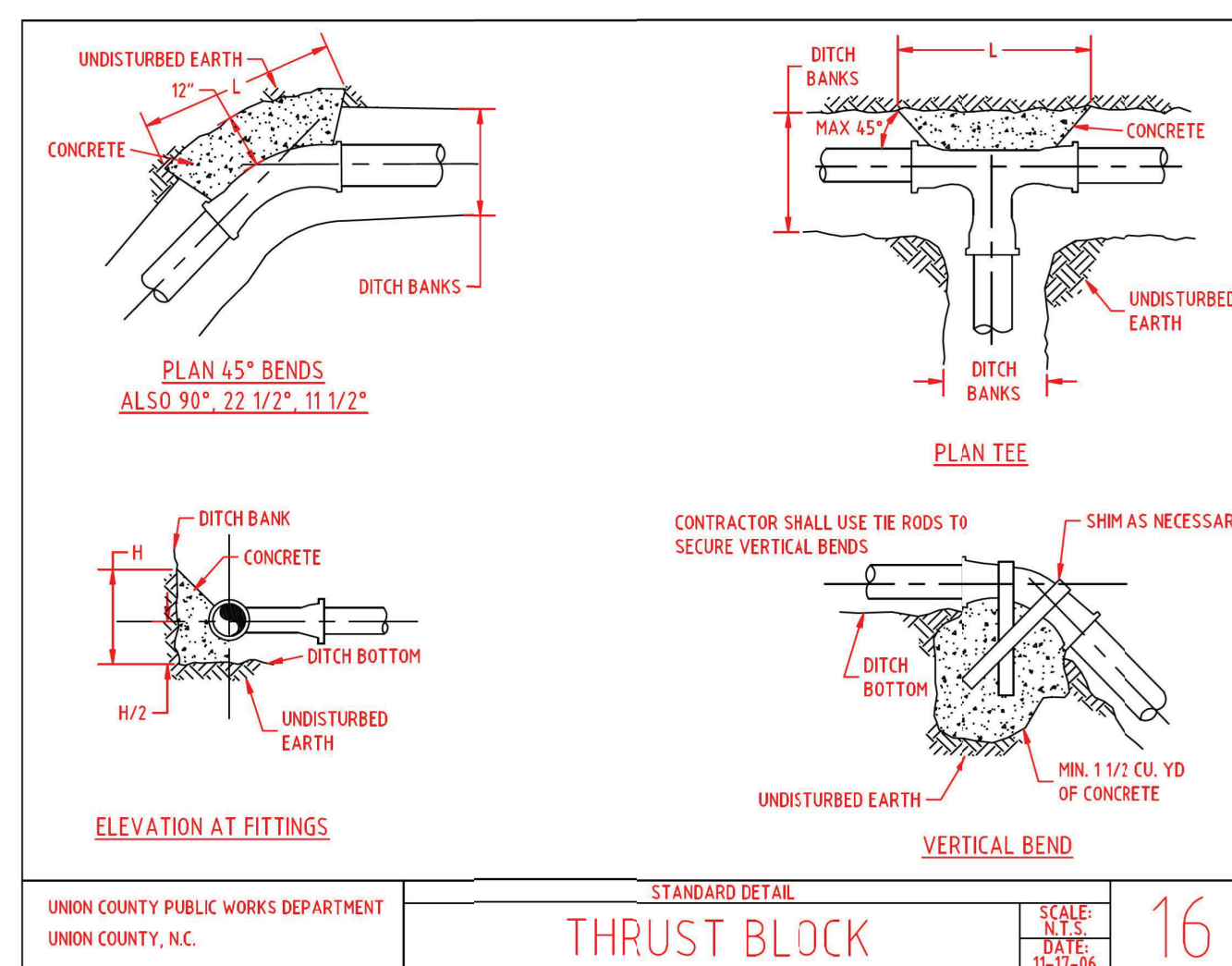
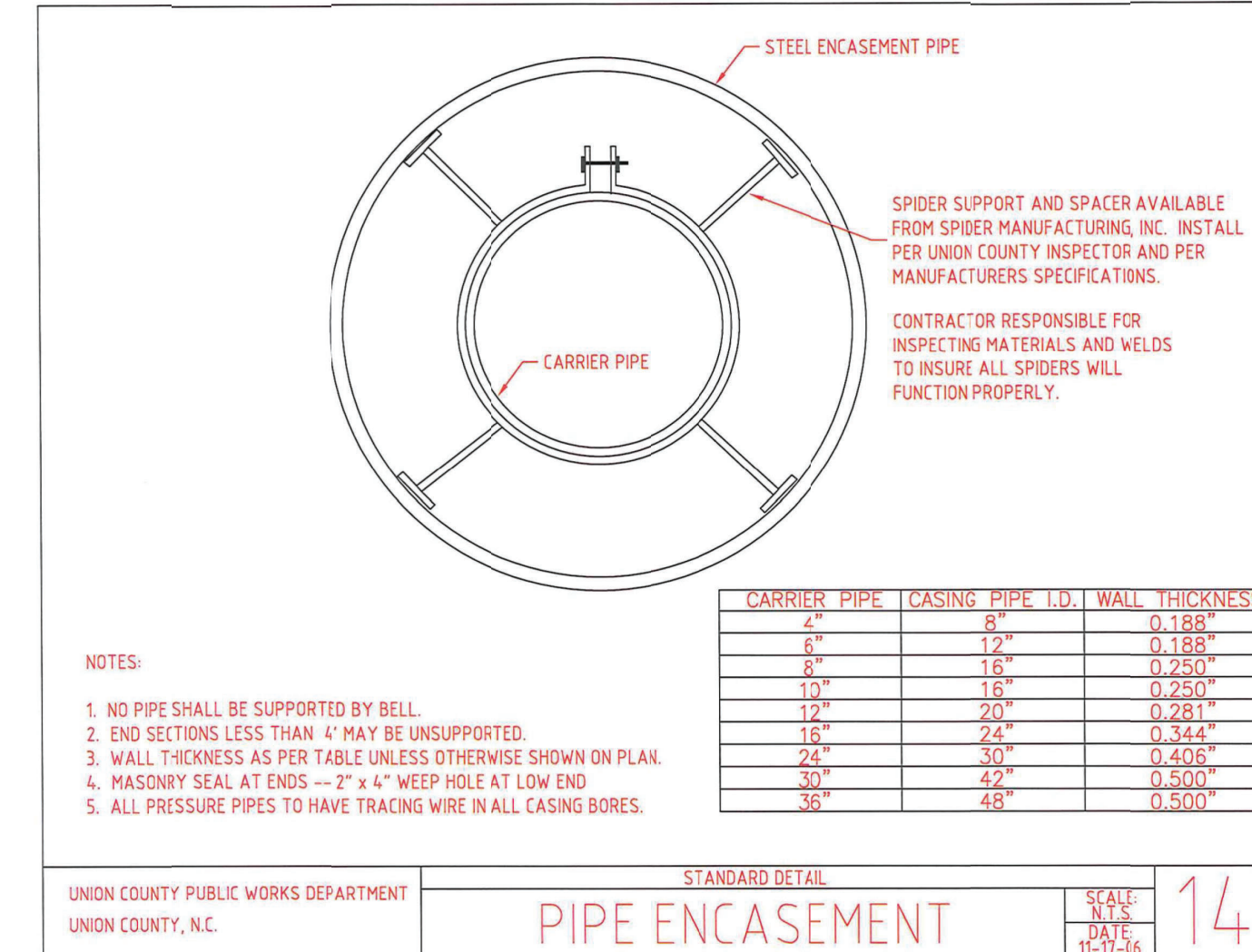
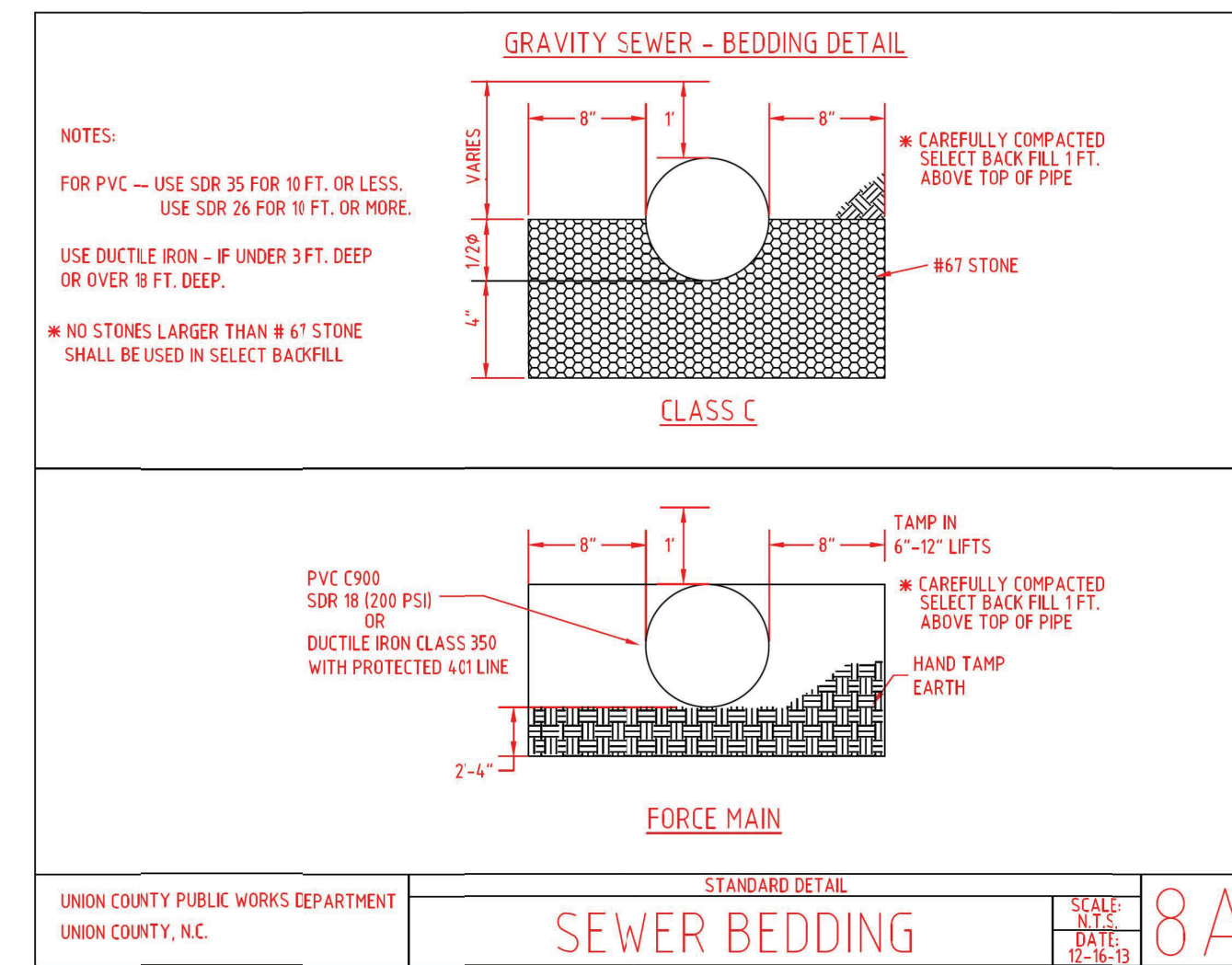
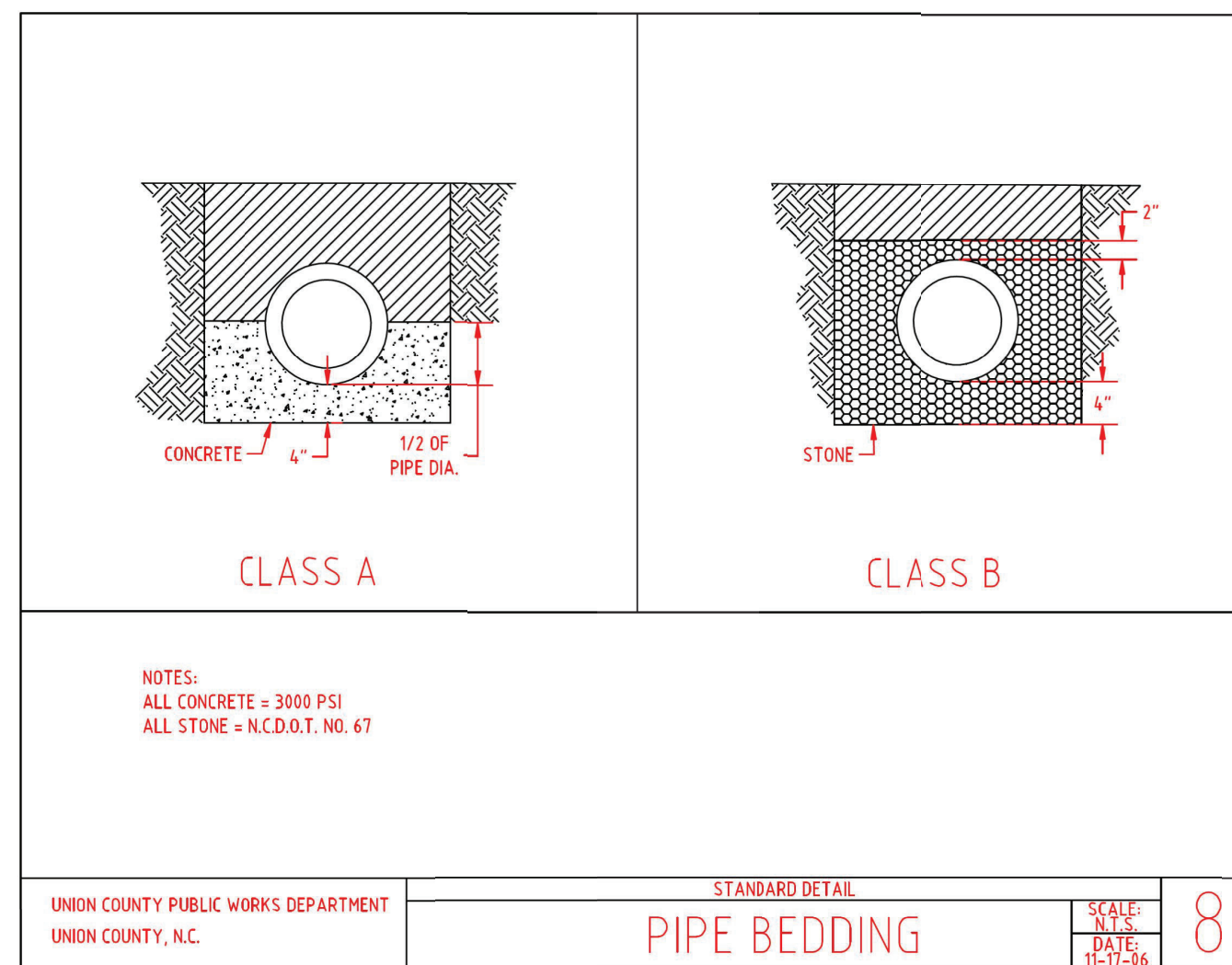
REVISIONS

1/17/2024

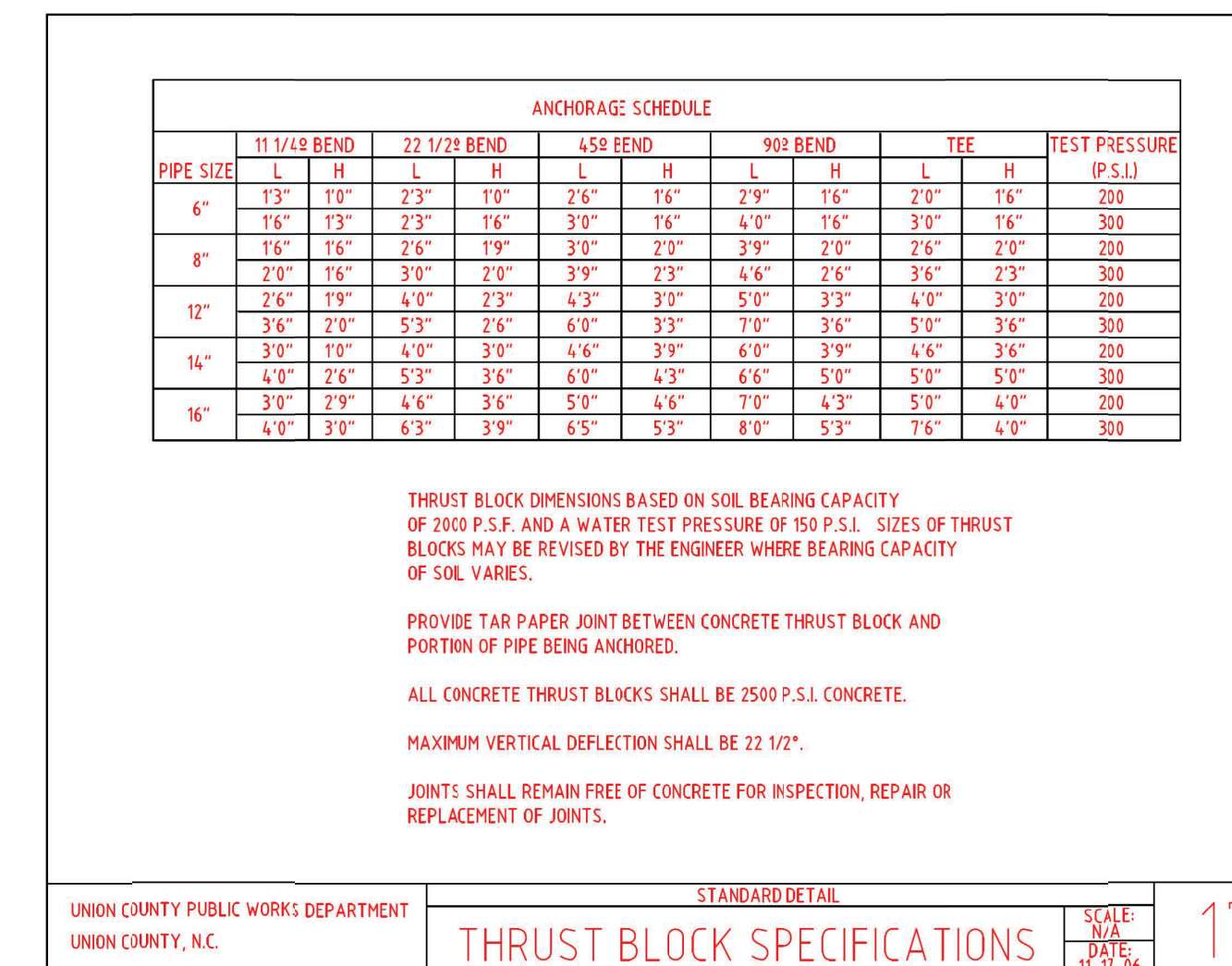
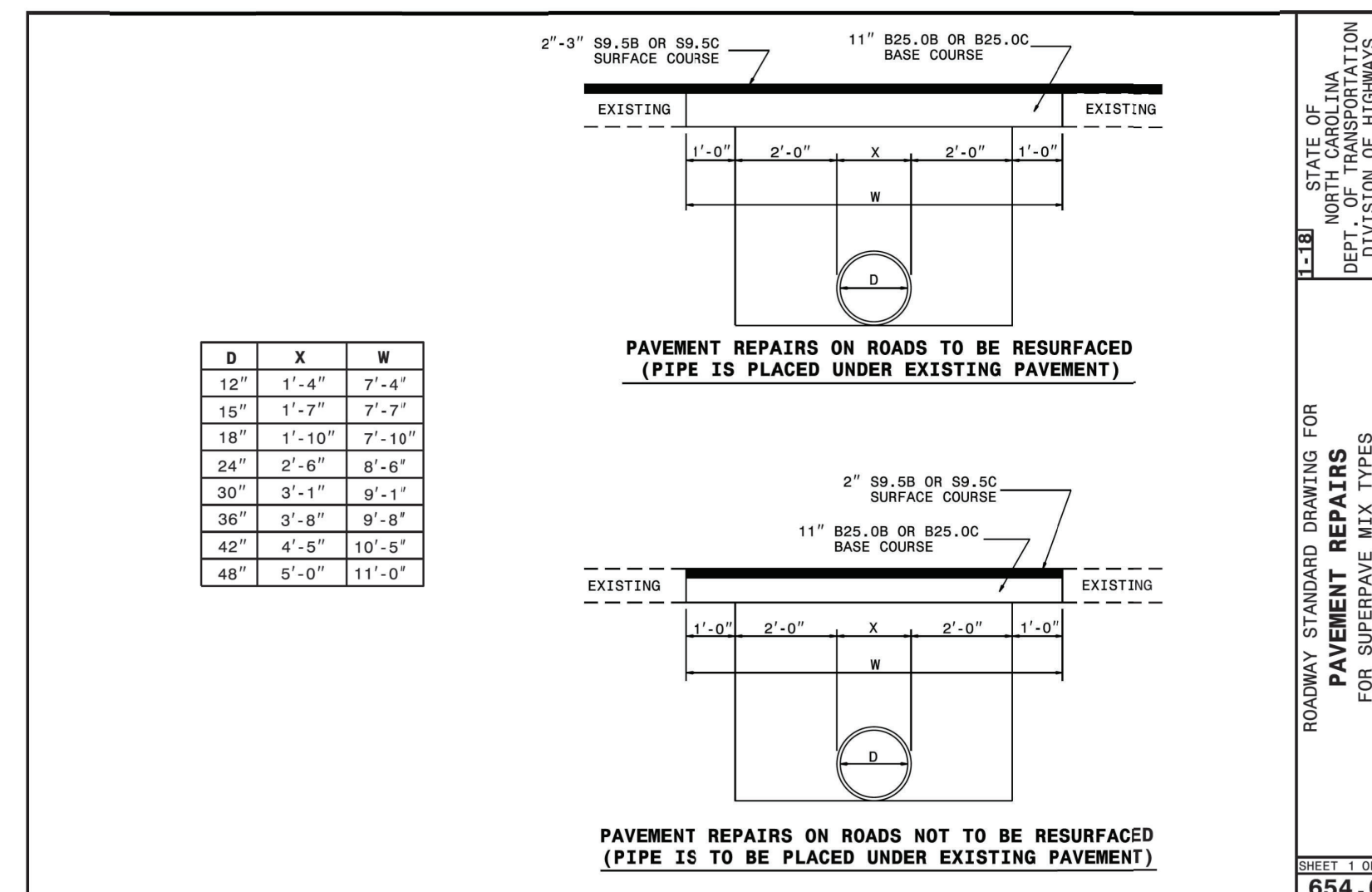


PROJECT REFERENCE NO.	SHEET NO.
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DESIGNED BY: SJJ	
DRAWN BY: SCA	
CHECKED BY: MAS	
APPROVED BY:	
REVISED:	
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UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

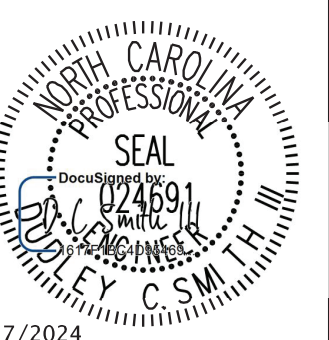


NOTE: CONCRETE THRUST BLOCKING MAY BE PROVIDED ONLY WHEN CONCRETE CAN BE ALLOWED TO CURE FOR A MINIMUM OF 48 HOURS PRIOR TO FILLING OR TESTING WATER MAINS OR FORCE MAINS.



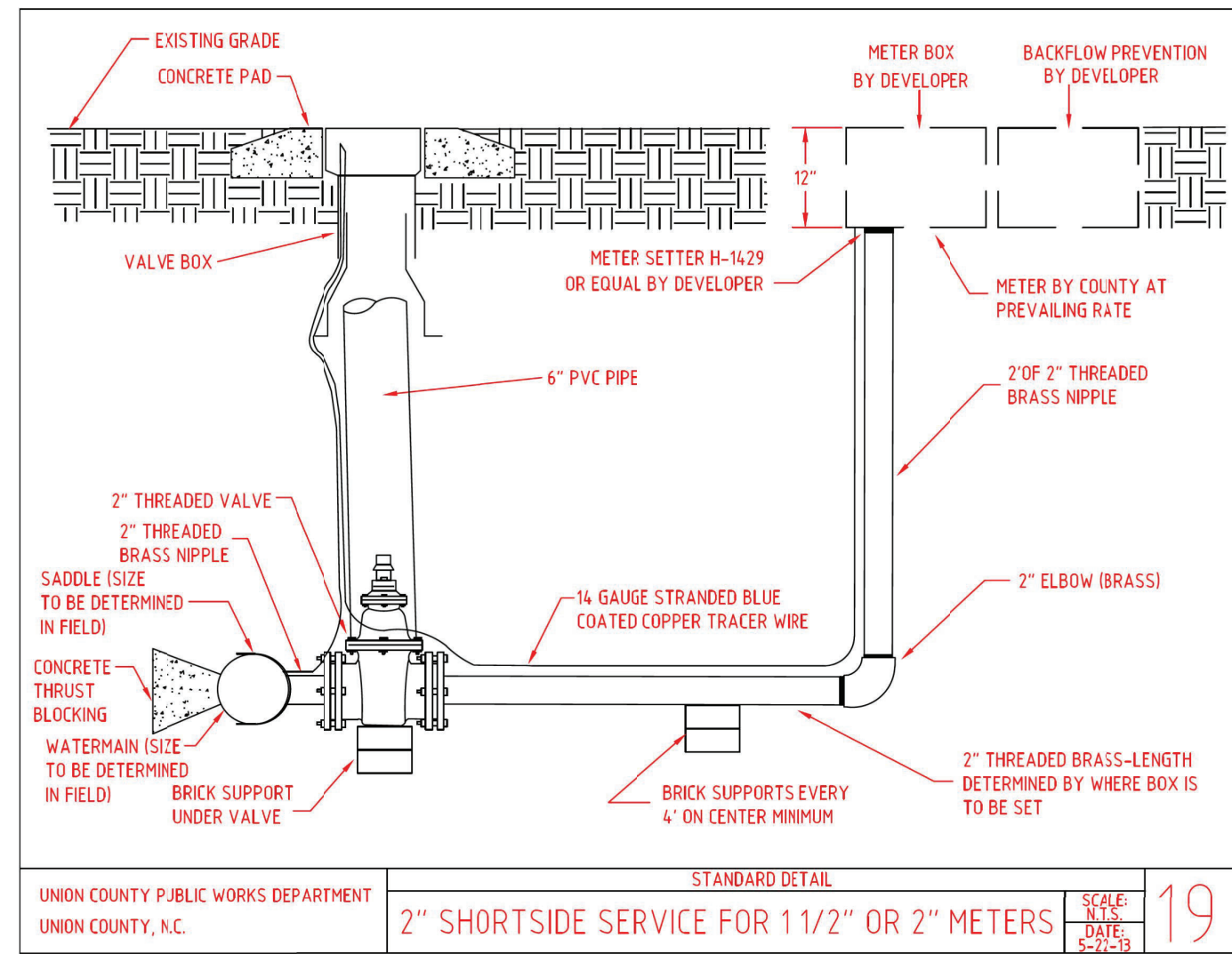
REVISIONS

PROJECT REFERENCE NO.	UC-3C
DESIGNED BY:	SJJ
DRAWN BY:	SCA
CHECKED BY:	MAS
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SECTION	
PHONE: (919) 707-6690	1/17/2024
FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

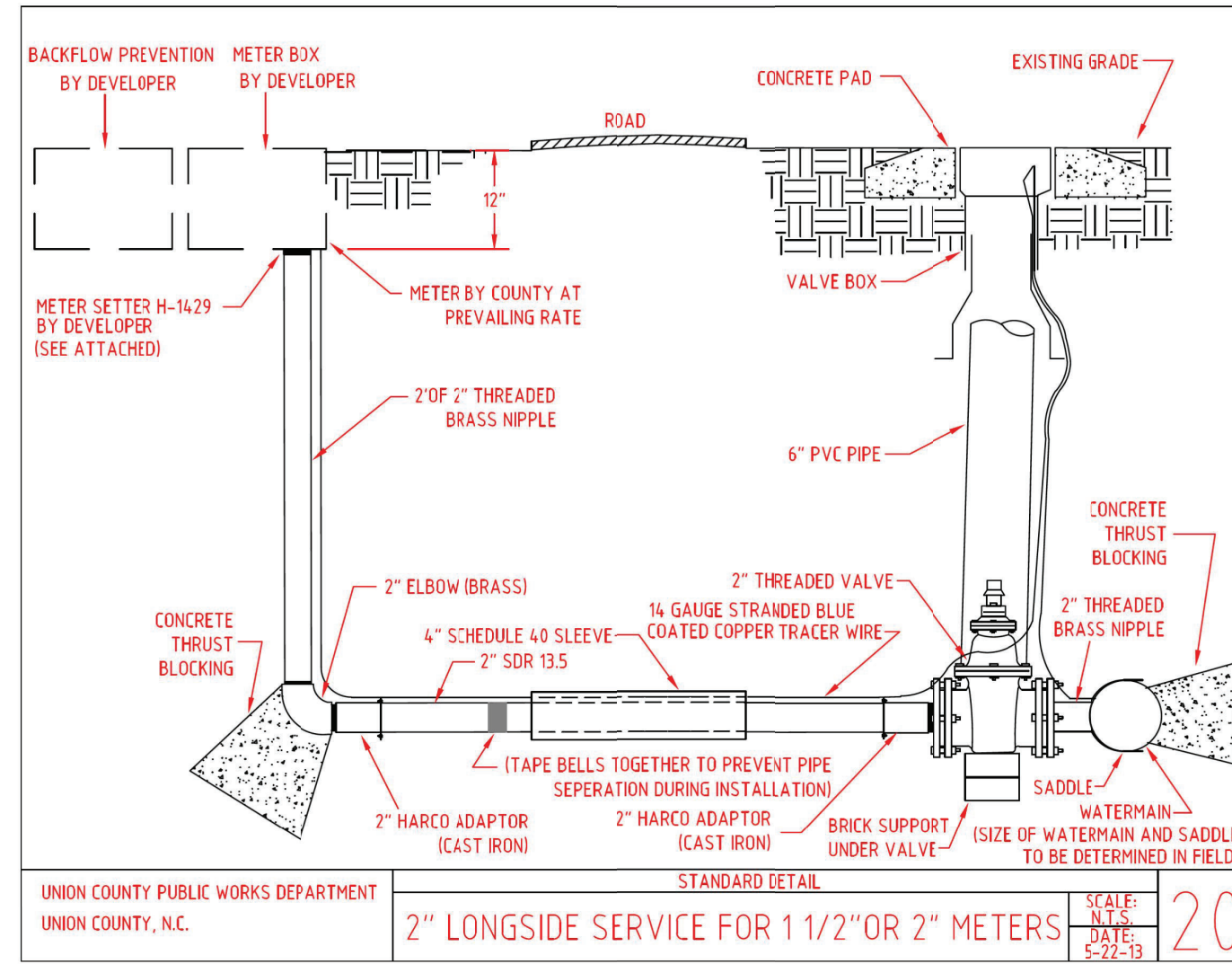


UTILITY CONSTRUCTION

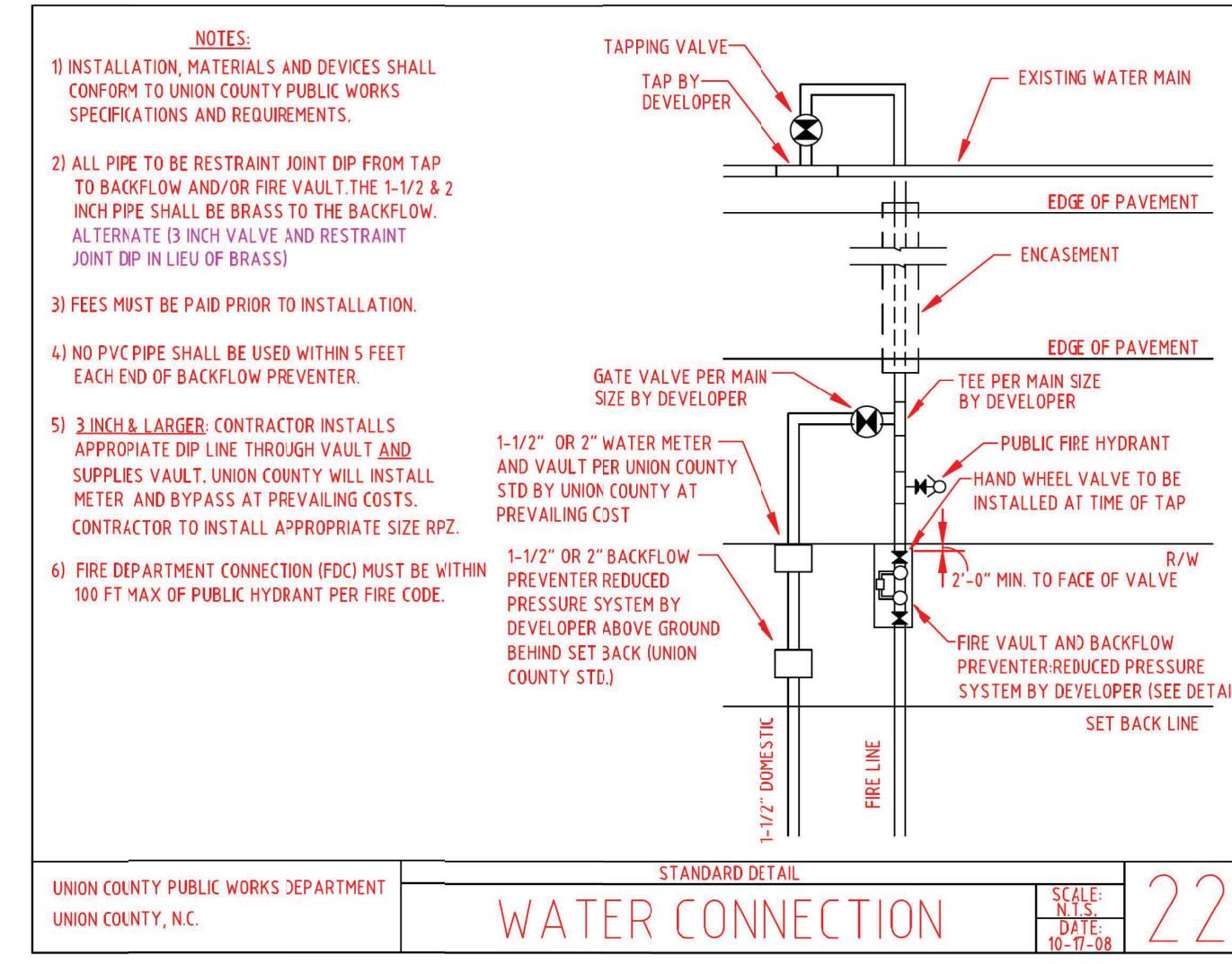
REVISIONS



UNION COUNTY PUBLIC WORKS DEPARTMENT
UNION COUNTY, N.C. STANDARD DETAIL
2" SHORTSIDE SERVICE FOR 1 1/2" OR 2" METERS SCALE: N.T.S. DATE: 6-22-13 **19**

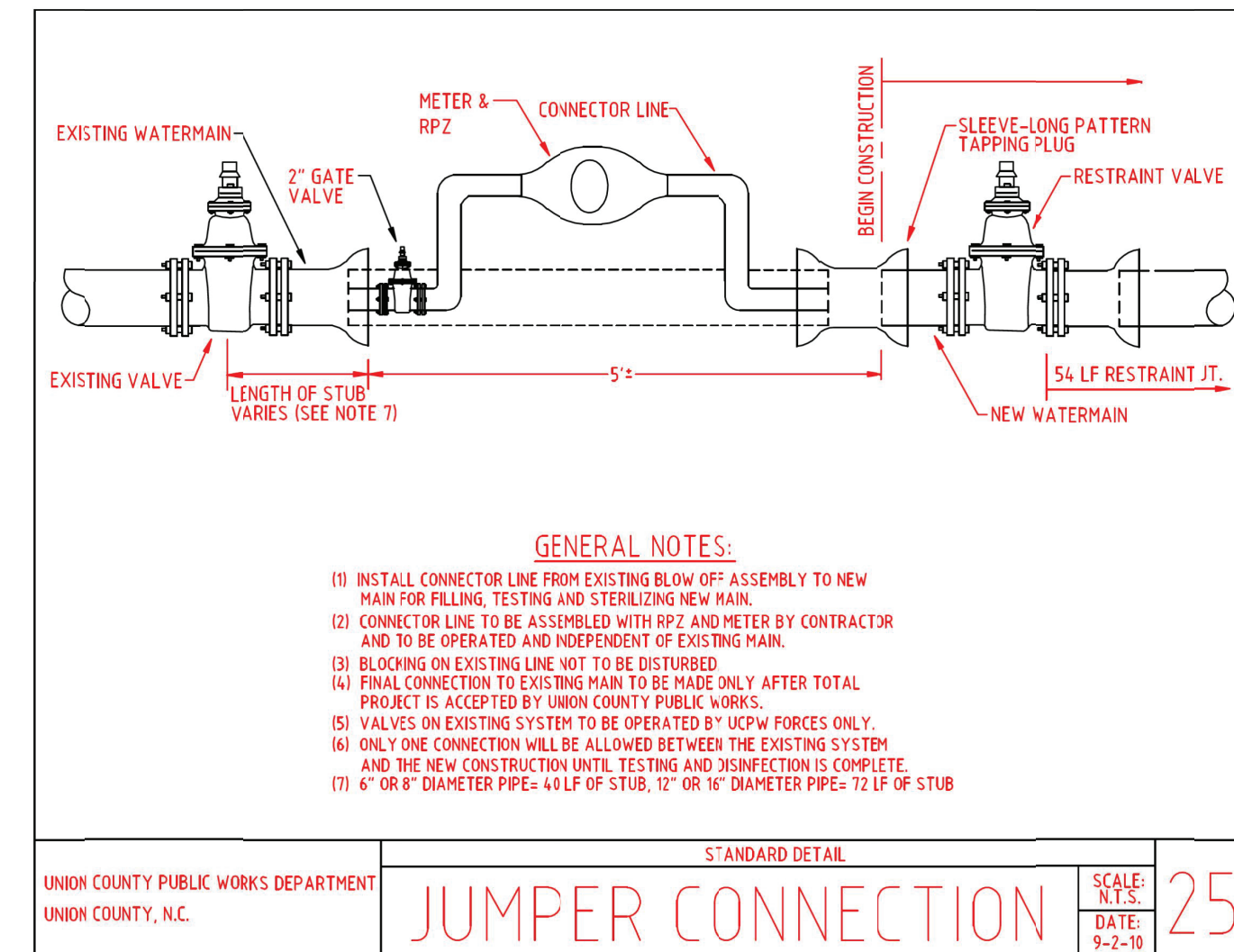


UNION COUNTY PUBLIC WORKS DEPARTMENT
UNION COUNTY, N.C. STANDARD DETAIL
2" LONGSIDE SERVICE FOR 1 1/2" OR 2" METERS SCALE: N.T.S. DATE: 6-22-13 **20**



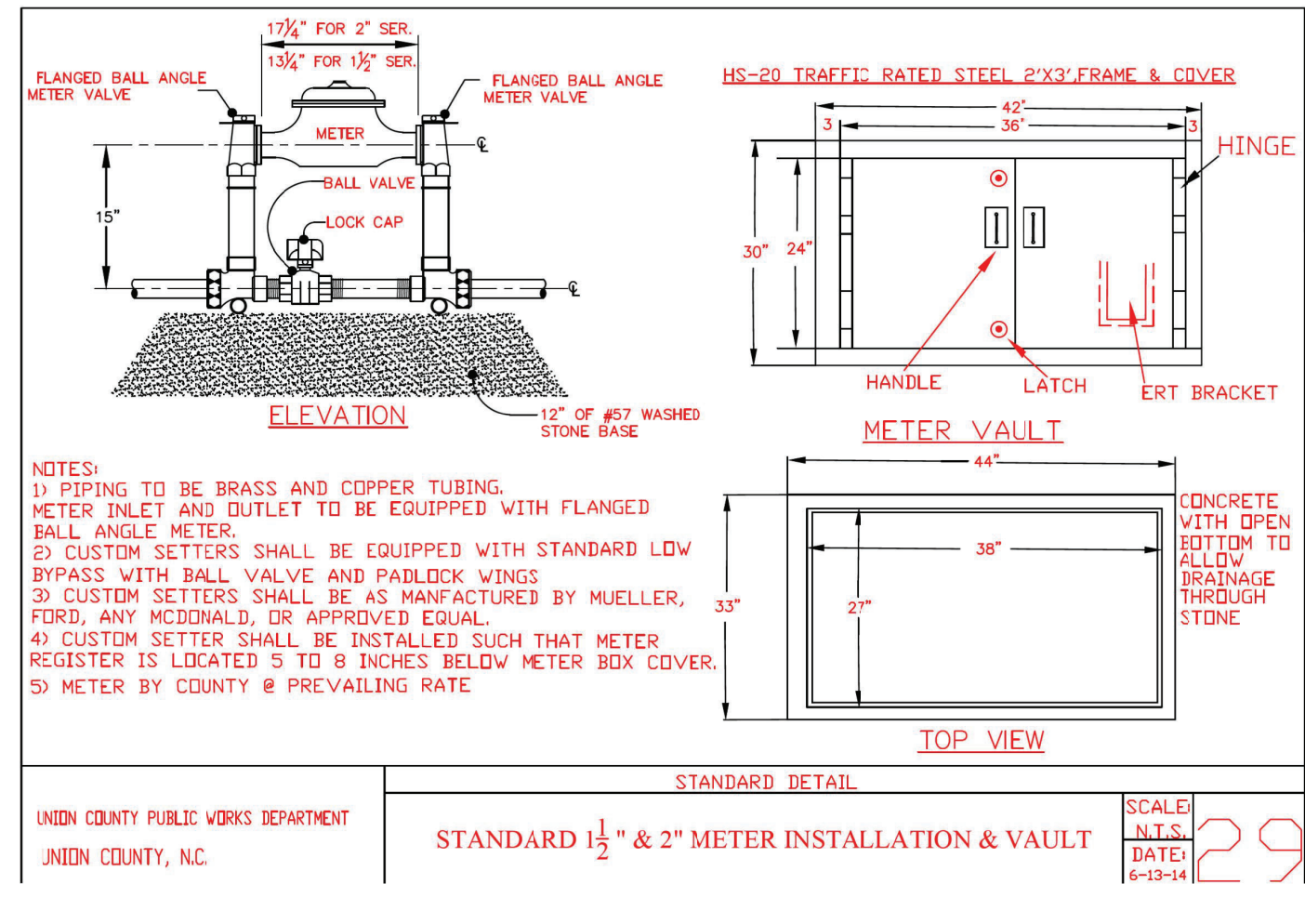
- NOTES:**
- 1) INSTALLATION, MATERIALS AND DEVICES SHALL CONFORM TO UNION COUNTY PUBLIC WORKS SPECIFICATIONS AND REQUIREMENTS.
 - 2) ALL PIPE TO BE RESTRAINT JOINT DIP FROM TAP TO BACKFLOW AND/OR FIRE VAULT THE 1-1/2" & 2" INCH PIPE SHALL BE BRASS TO THE BACKFLOW. ALTERNATE 1/2" INCH VALVE AND RESTRAINT JOINT DIP IN LIEU OF BRASS.
 - 3) FEES MUST BE PAID PRIOR TO INSTALLATION.
 - 4) NO PVC PIPE SHALL BE USED WITHIN 5 FEET EACH END OF BACKFLOW PREVENTER.
 - 5) 3" INCH & LARGER: CONTRACTOR INSTALLS APPROPRIATE DIP LINE THROUGH VAULT AND SUPPLIES VAULT. UNION COUNTY WILL INSTALL METER AND BYPASS AT PREVAILING COSTS. CONTRACTOR TO INSTALL APPROPRIATE SIZE RPZ.
 - 6) FIRE DEPARTMENT CONNECTION (FDC) MUST BE WITHIN 100 FT MAX OF PUBLIC HYDRANT PER FIRE CODE.

UNION COUNTY PUBLIC WORKS DEPARTMENT
UNION COUNTY, N.C. STANDARD DETAIL
WATER CONNECTION SCALE: N.T.S. DATE: 10-17-08 **22**



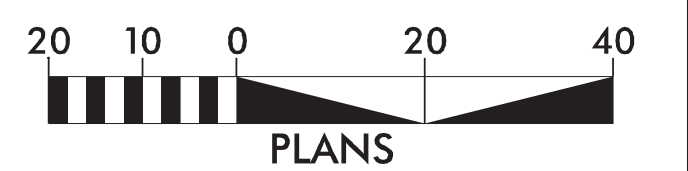
- GENERAL NOTES:**
- 1) INSTALL CONNECTOR LINE FROM EXISTING BLOW OFF ASSEMBLY TO NEW MAIN FOR FILLING, TESTING AND STERILIZING NEW MAIN.
 - 2) CONNECTOR LINE TO BE ASSEMBLED WITH RPZ AND METER BY CONTRACTOR AND TO BE OPERATED INDEPENDENT OF EXISTING MAIN.
 - 3) BLOCKING ON EXISTING LINE NOT TO BE DISTURBED.
 - 4) FINAL CONNECTION TO EXISTING MAIN TO BE MADE ONLY AFTER TOTAL PROJECT IS ACCEPTED BY UNION COUNTY PUBLIC WORKS.
 - 5) VALVES ON EXISTING SYSTEM TO BE OPERATED BY UCWP FORCES ONLY.
 - 6) ONLY ONE CONNECTION WILL BE ALLOWED BETWEEN THE EXISTING SYSTEM AND THE NEW CONSTRUCTION UNTIL TESTING AND DISINFECTION IS COMPLETE.
 - 7) 6" OR 8" DIAMETER PIPE= 44 LF OF STUB, 12" OR 16" DIAMETER PIPE= 72 LF OF STUB

UNION COUNTY PUBLIC WORKS DEPARTMENT
UNION COUNTY, N.C. STANDARD DETAIL
JUMPER CONNECTION SCALE: N.T.S. DATE: 9-2-10 **25**



- NOTES:**
- 1) PIPING TO BE BRASS AND COPPER TUBING. METER INLET AND OUTLET TO BE EQUIPPED WITH FLANGED BALL ANGLE METER.
 - 2) CUSTOM SETTERS SHALL BE EQUIPPED WITH STANDARD LOW BYPASS WITH BALL VALVE AND PADLOCK WINGS.
 - 3) CUSTOM SETTERS SHALL BE AS MANUFACTURED BY MUELLER, FURD, ANY MCDONALD, OR APPROVED EQUAL.
 - 4) CUSTOM SETTER SHALL BE INSTALLED SUCH THAT METER REGISTER IS LOCATED 5 TO 8 INCHES BELOW METER BOX COVER.
 - 5) METER BY COUNTY @ PREVAILING RATE.

UNION COUNTY PUBLIC WORKS DEPARTMENT
UNION COUNTY, N.C. STANDARD DETAIL
STANDARD 1 1/2" & 2" METER INSTALLATION & VAULT SCALE: N.T.S. DATE: 6-13-14 **29**

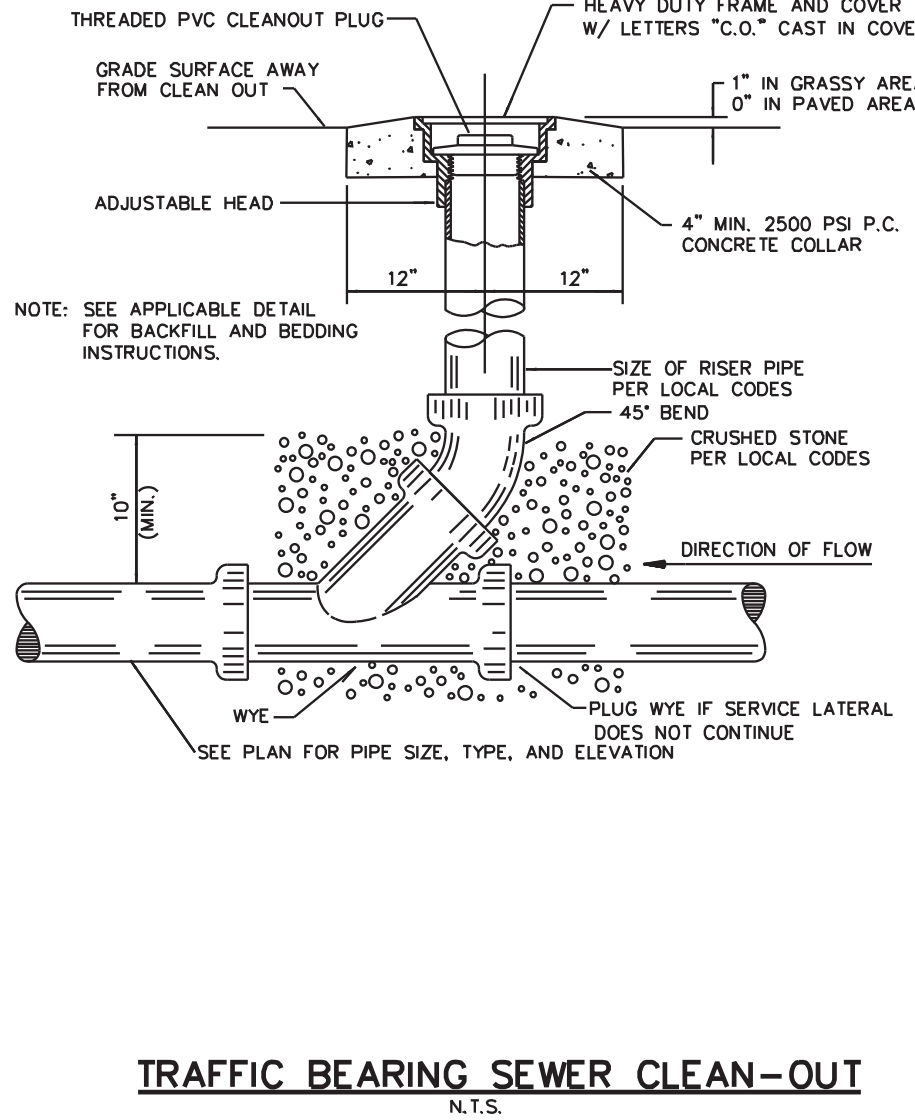
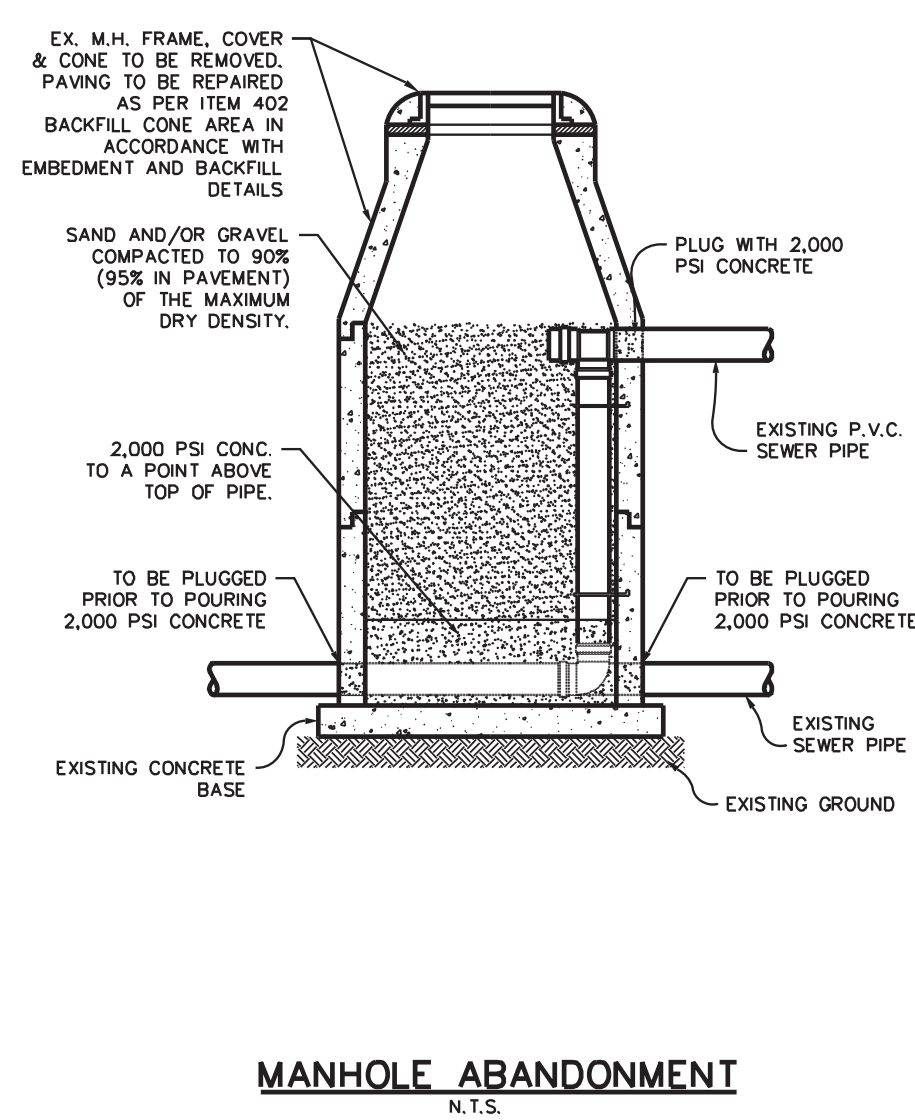
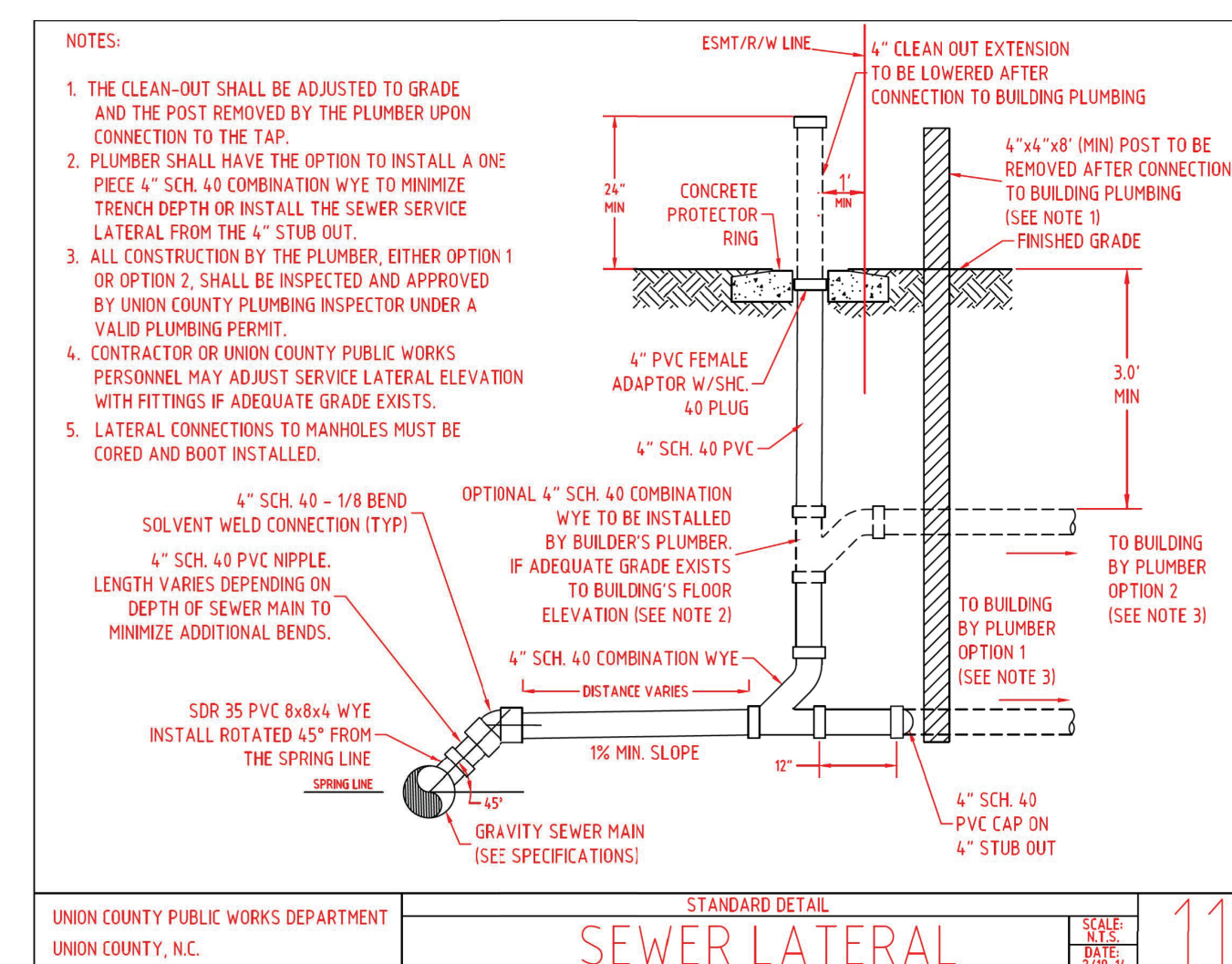
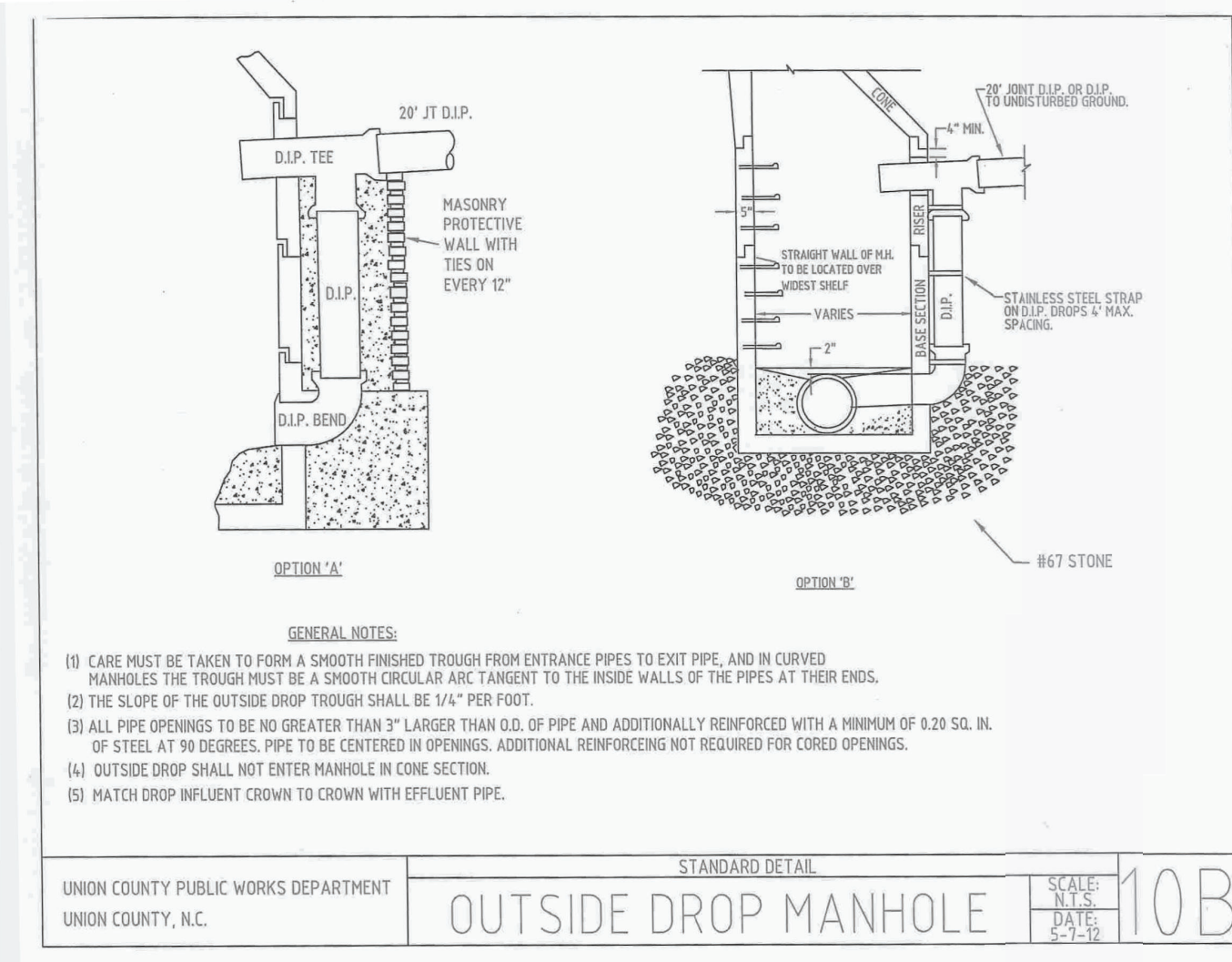
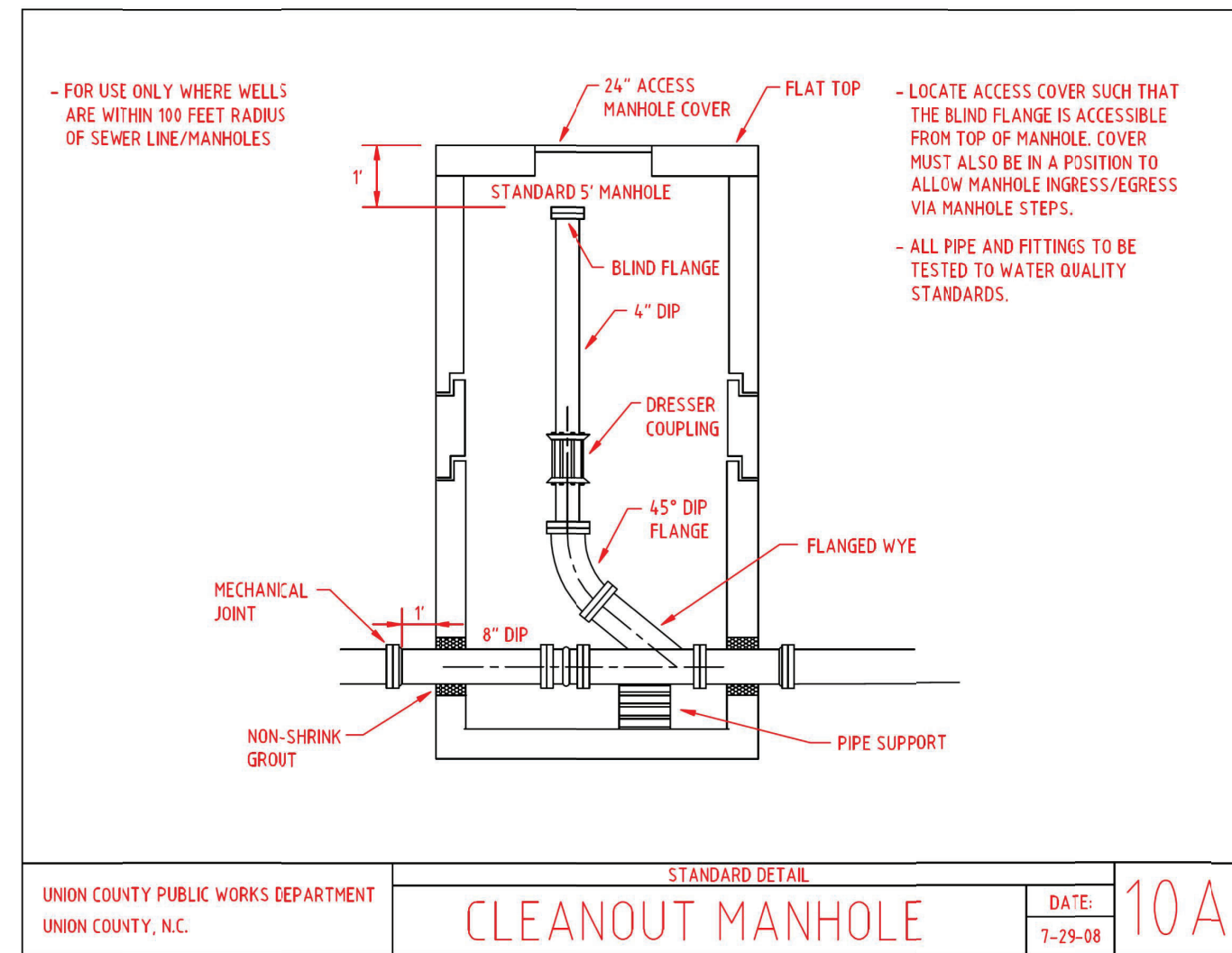
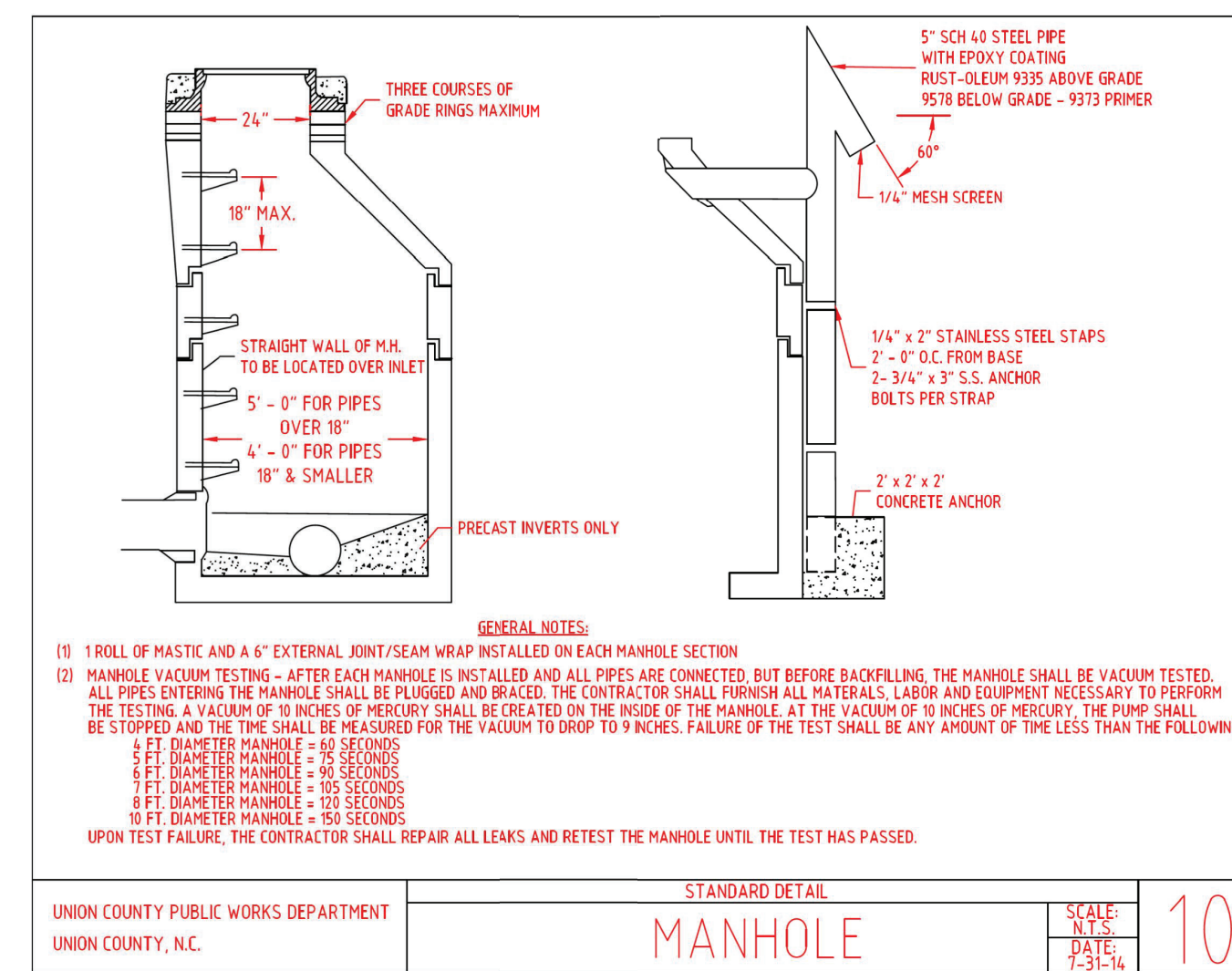
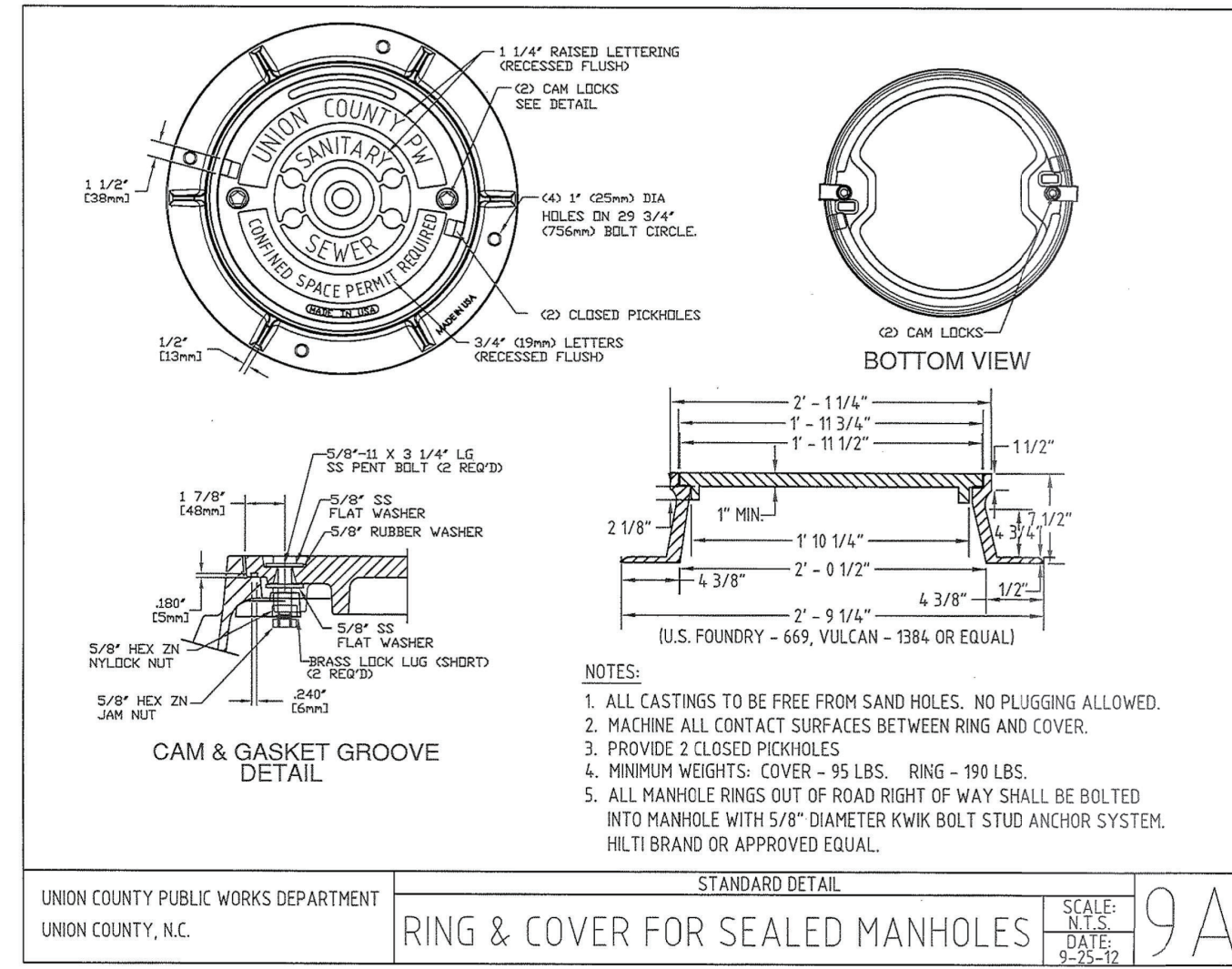
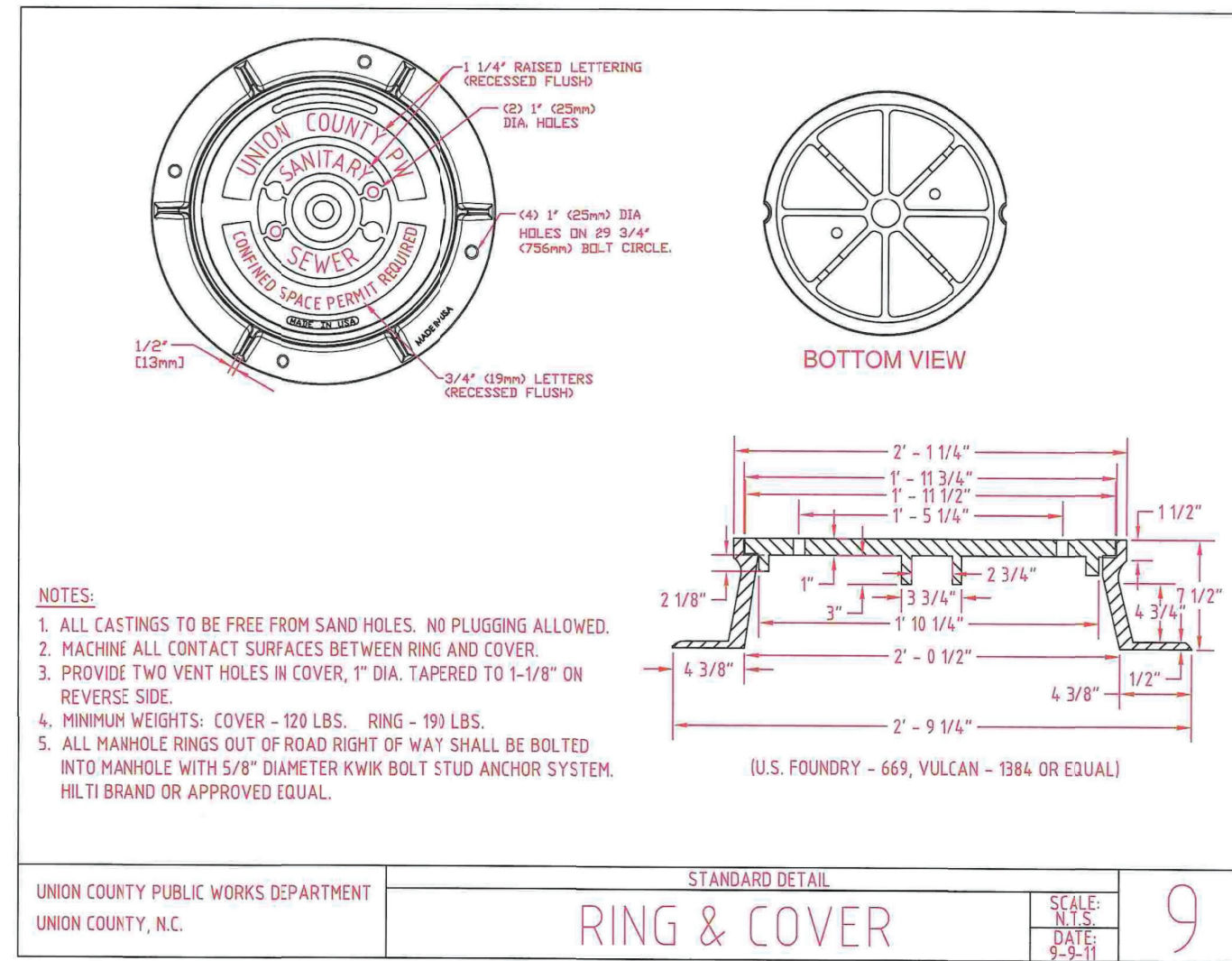


PLANS

1/17/2024

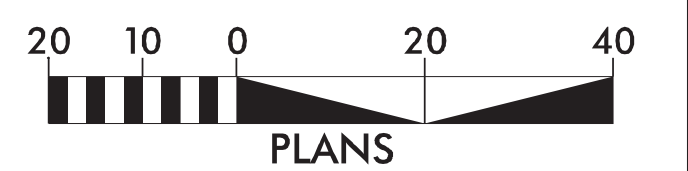
PROJECT REFERENCE NO.	SHEET NO.
U-5112	UC-3D
DESIGNED BY: SJJ	
DRAWN BY: SCA	
CHECKED BY: MAS	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

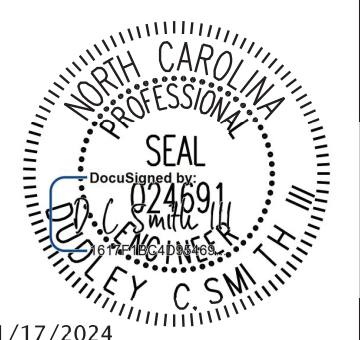


REVISIONS

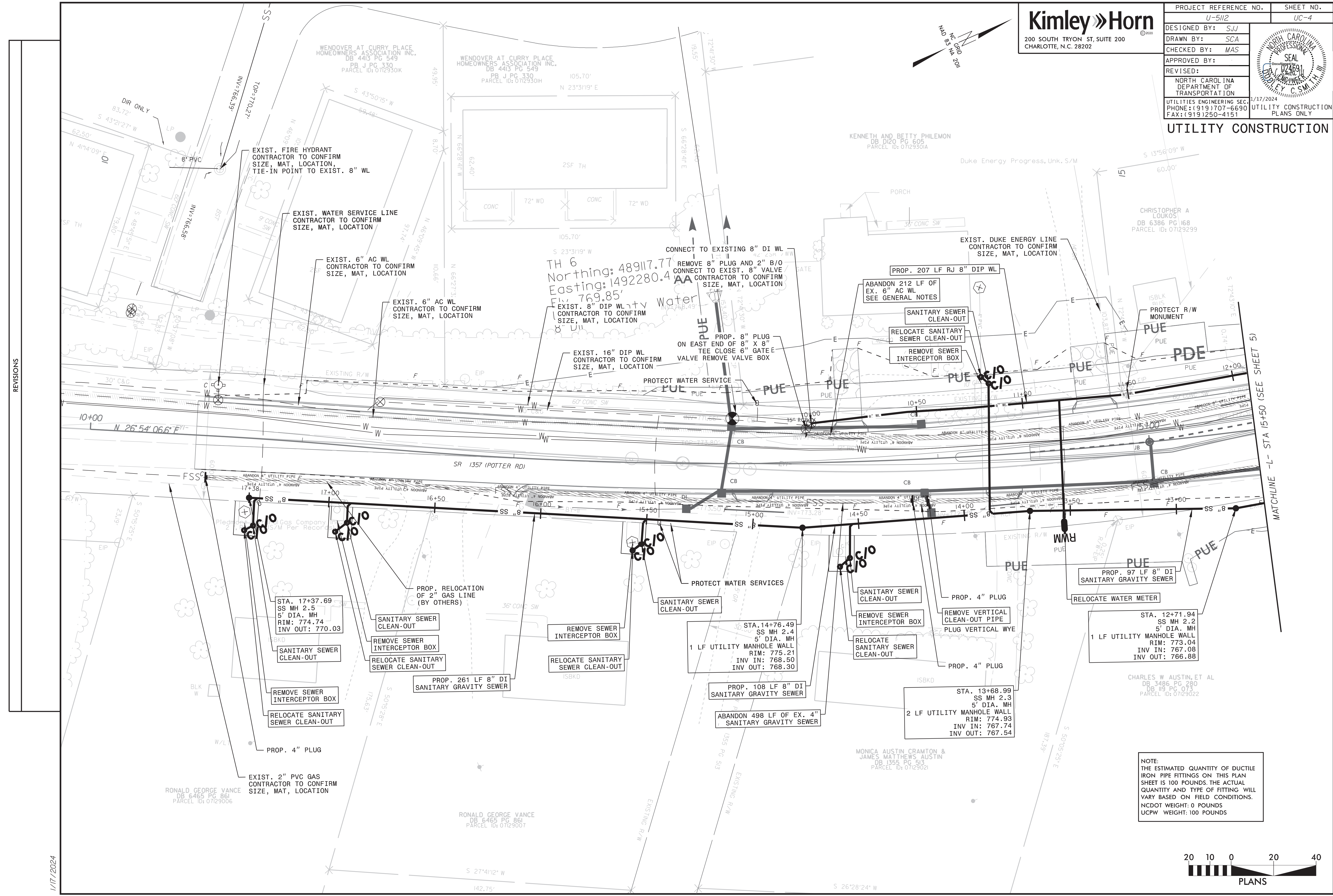
1/17/2024



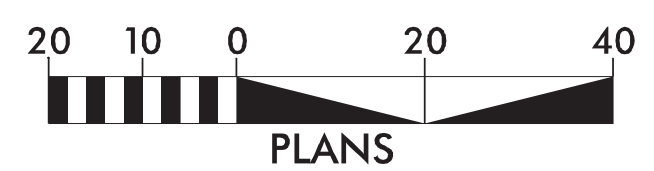
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DESIGNED BY:	SJJ
DRAWN BY:	SCA
CHECKED BY:	MAS
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SECTION	
DATE: 1/17/2024	UTILITY CONSTRUCTION PLANS ONLY



UTILITY CONSTRUCTION

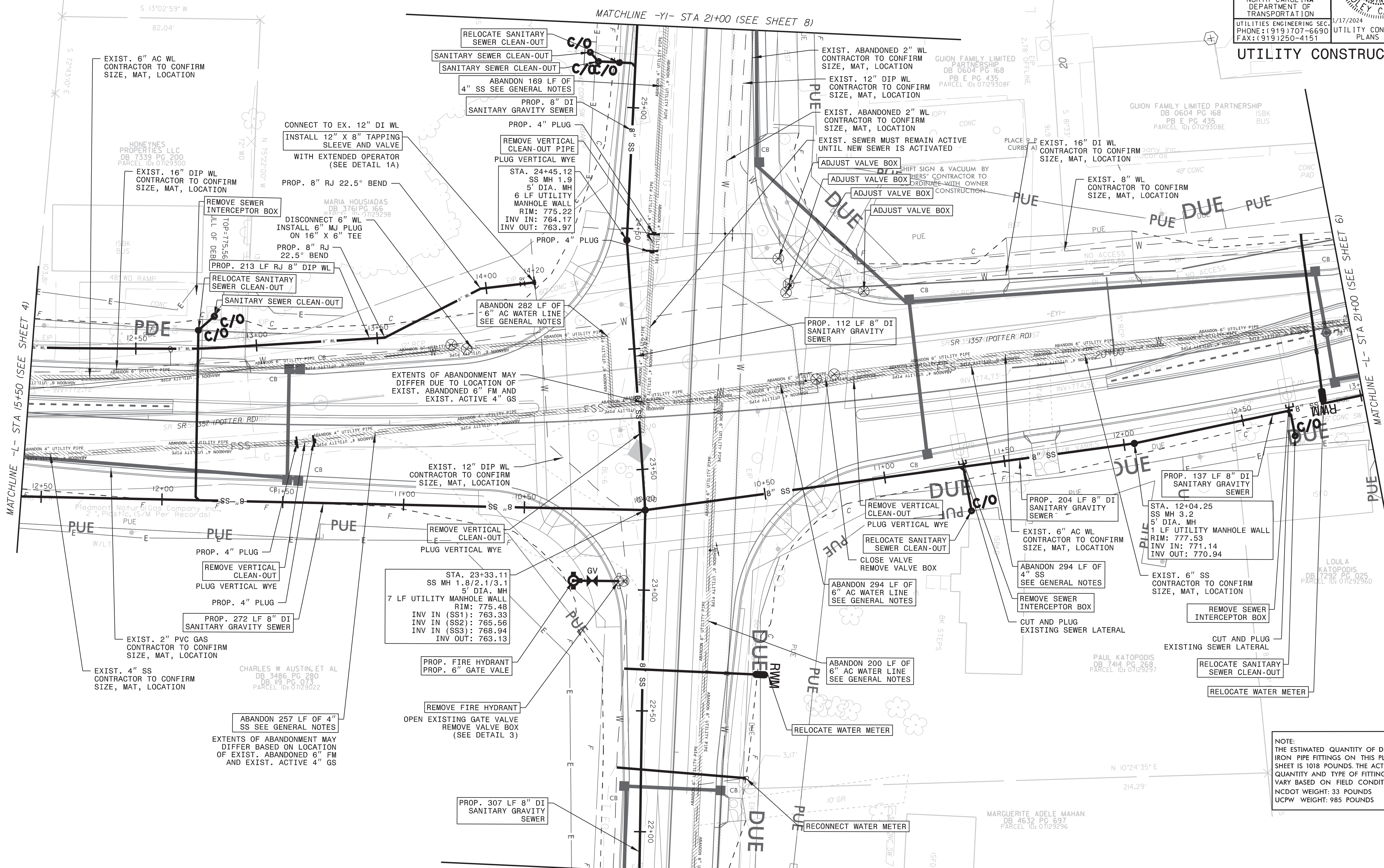


NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTINGS ON THIS PLAN SHEET IS 100 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTING WILL VARY BASED ON FIELD CONDITIONS.
NCDOT WEIGHT: 0 POUNDS
UCPW WEIGHT: 100 POUNDS



PROJECT REFERENCE NO.	UC-5
DESIGNED BY:	SJJ
DRAWN BY:	SCA
CHECKED BY:	MAS
APPROVED BY:	
REVISED:	
NORTH CAROLINA PROFESSIONAL SEAL 024691 KIMLEY HORN & ASSOCIATES, P.C. NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	1/17/2024 UTILITY CONSTRUCTION PLANS ONLY

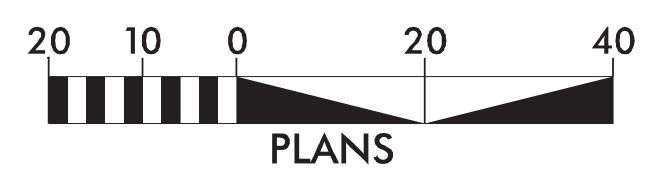
UTILITY CONSTRUCTION



MATCHLINE -L- STA 15+50 (SEE SHEET 4)

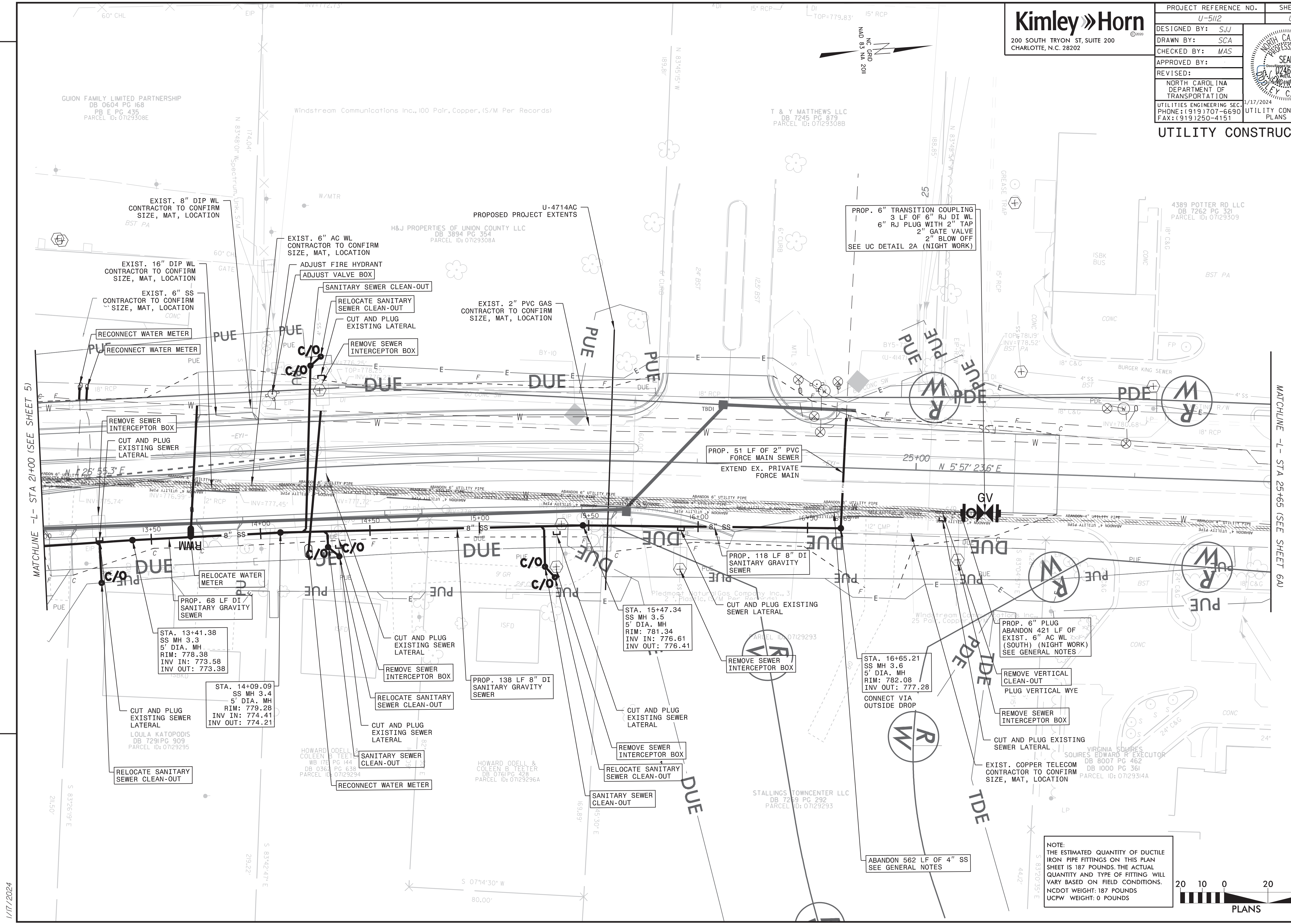
MATCHLINE -L- STA 21+00 (SEE SHEET 6)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTINGS ON THIS PLAN SHEET IS 1018 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTING WILL VARY BASED ON FIELD CONDITIONS.
NCDOT WEIGHT: 33 POUNDS
UCPW WEIGHT: 985 POUNDS



PROJECT REFERENCE NO.	UC-6
SHEET NO.	UC-6
DESIGNED BY:	SJJ
DRAWN BY:	SCA
CHECKED BY:	MAS
APPROVED BY:	
REVISED:	
NORTH CAROLINA PROFESSIONAL SEAL 024691 KIMLEY HORN & ASSOCIATES, P.C. REGISTERED PROFESSIONAL ENGINEERS EXPIRES 12/31/2024	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

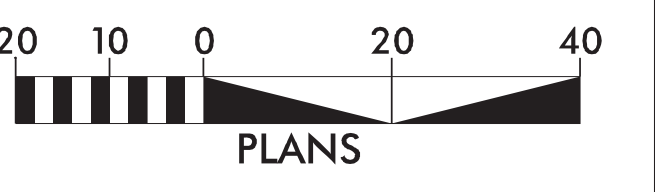


REVISIONS

MATCHLINE -L- STA 21+00 (SEE SHEET 5)

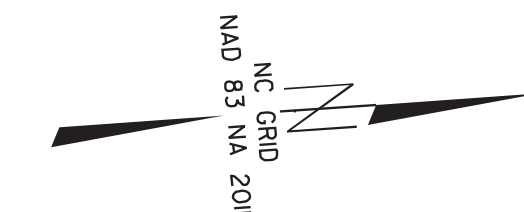
MATCHLINE -L- STA 25+65 (SEE SHEET 6A)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTINGS ON THIS PLAN SHEET IS 187 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTING WILL VARY BASED ON FIELD CONDITIONS. NCDOT WEIGHT: 187 POUNDS UCPW WEIGHT: 0 POUNDS



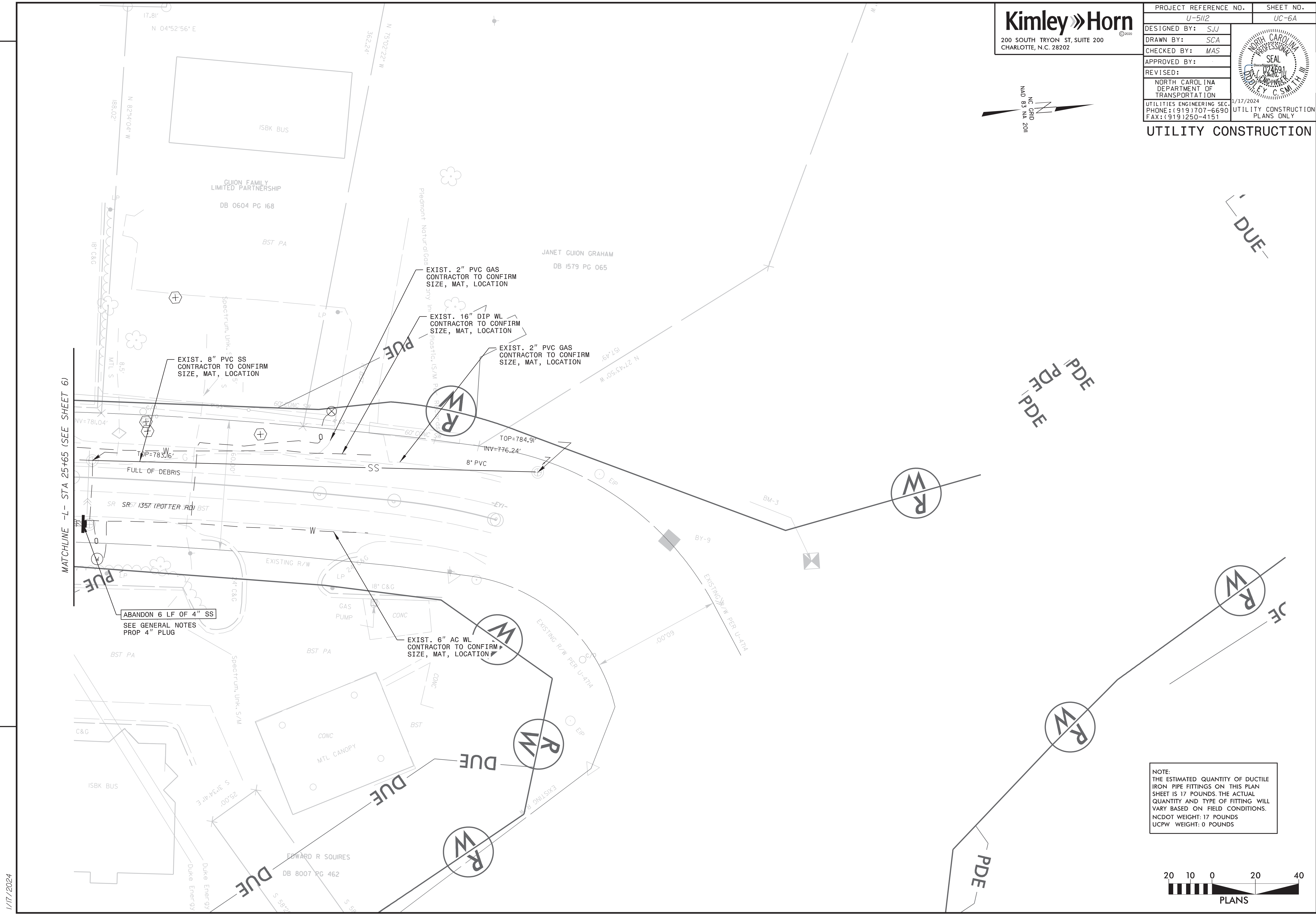
1/17/2024

PROJECT REFERENCE NO.	SHEET NO.
U-5112	UC-6A
DESIGNED BY: SJJ	
DRAWN BY: SCA	
CHECKED BY: MAS	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	1/17/2024
UTILITIES ENGINEERING SEC.	UTILITY CONSTRUCTION
PHONE: (919) 707-6690	PLANS ONLY
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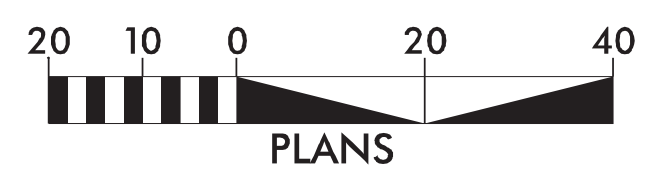


UTILITY CONSTRUCTION

REVISIONS



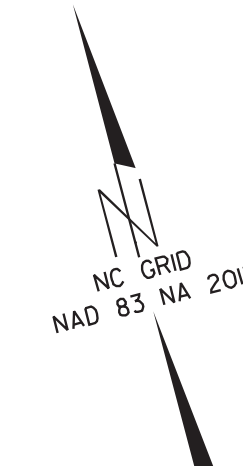
NOTE:
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NCDOT WEIGHT: 17 POUNDS
UCPW WEIGHT: 0 POUNDS



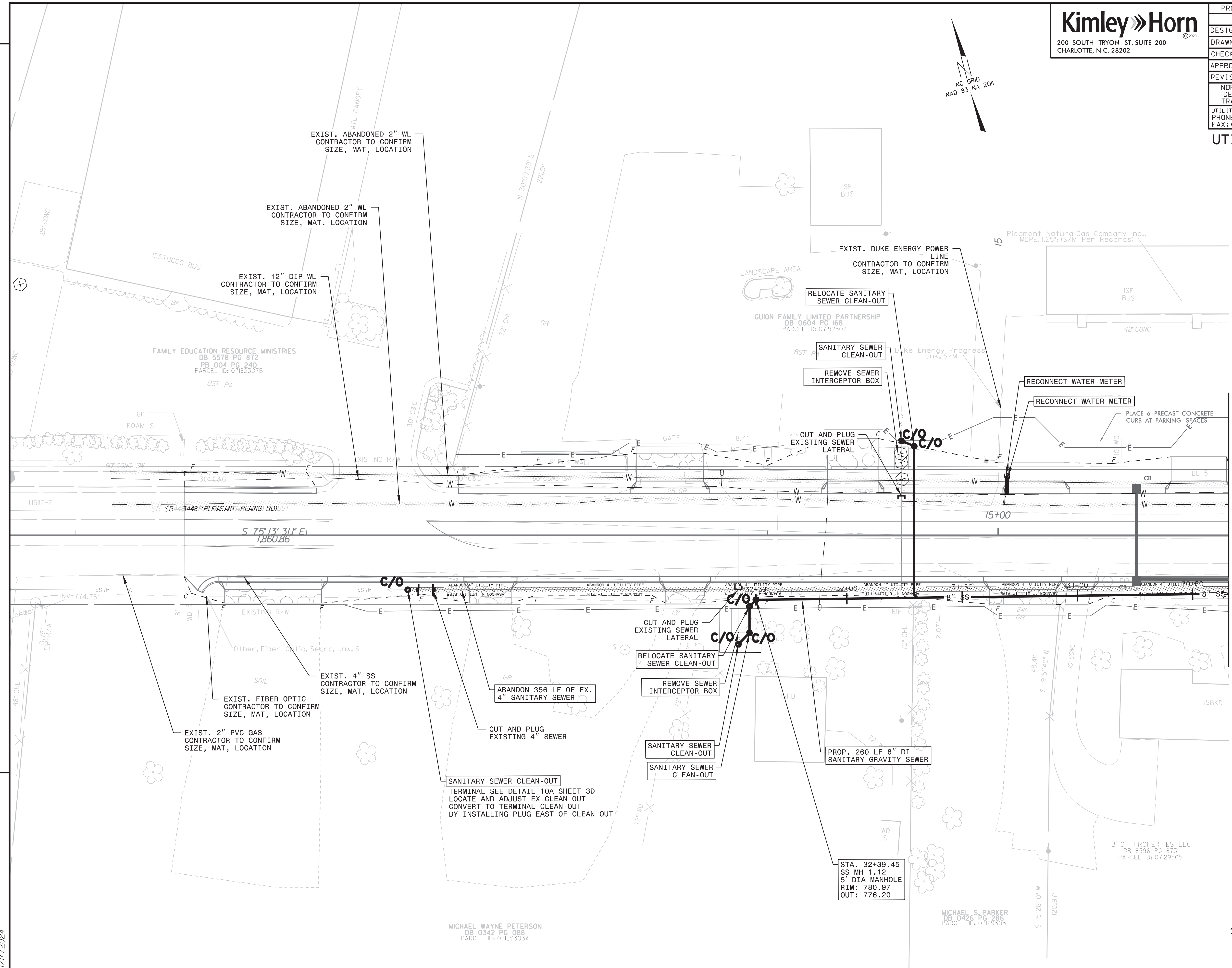
1/17/2024

PROJECT REFERENCE NO.	SHEET NO.
U-5112	UC-7
DESIGNED BY: SJJ	
DRAWN BY: SCA	
CHECKED BY: MAS	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION



REVISIONS

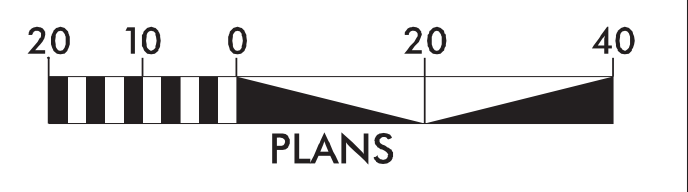


1/17/2024

MICHAEL WAYNE PETERSON
DB 0342 PG 088
PARCEL ID: 07129303A

MICHAEL S. PARKER
DB 0426 PG 286
PARCEL ID: 07129303

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTINGS ON THIS PLAN SHEET IS 49 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTING WILL VARY BASED ON FIELD CONDITIONS.
NCDOT WEIGHT: 49 POUNDS
UCPW WEIGHT: 0 POUNDS



MATCHLINE -YI- STA 16+00 (SEE SHEET 8)

PROJECT REFERENCE NO.	U-5112	SHEET NO.	UC-8
DESIGNED BY:	SJJ		
DRAWN BY:	SCA		
CHECKED BY:	MAS		
APPROVED BY:			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		1/17/2024	
UTILITIES ENGINEERING SEC.		UTILITY CONSTRUCTION PLANS ONLY	
PHONE: (919) 707-6690			
FAX: (919) 250-4151			



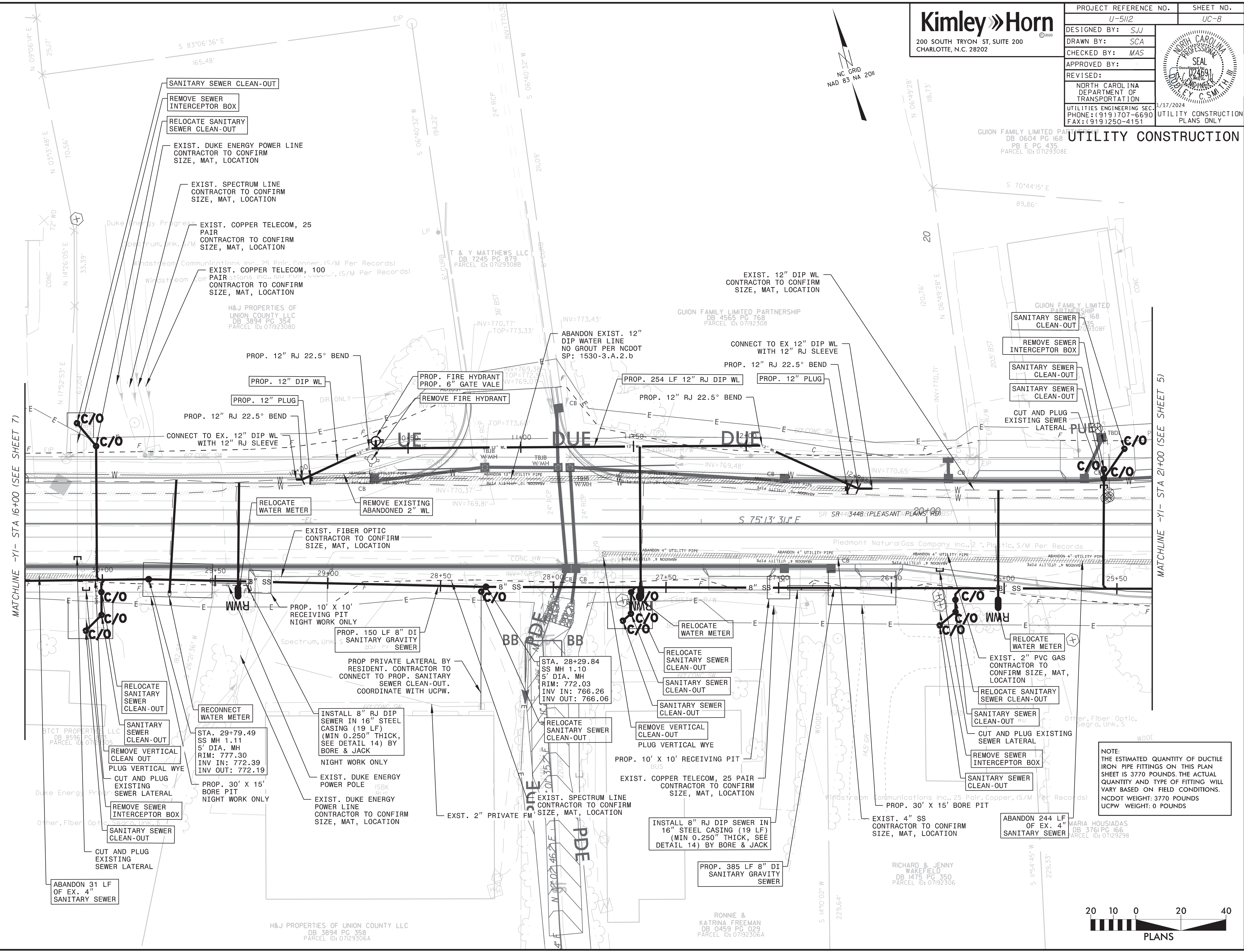
UTILITY CONSTRUCTION

REVISIONS

MATCHLINE -Y1- STA 16+00 (SEE SHEET 7)

MATCHLINE -Y1- STA 21+00 (SEE SHEET 5)

1/17/2024



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON PIPE FITTINGS ON THIS PLAN SHEET IS 3770 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTING WILL VARY BASED ON FIELD CONDITIONS. NCDOT WEIGHT: 3770 POUNDS UCPW WEIGHT: 0 POUNDS

