

# ACCOUNTS RECEIVABLE AGREEMENTS

## REMITTANCE GUIDANCE



\_\_\_\_\_ : I acknowledge that upon execution of this Agreement, we will be required to submit a down payment, if required. I also acknowledge that we may pre-pay any portion of the estimated cost noted in this Agreement, prior to final billing by the Department.

Please refer to your Agreement's PAYMENT TERMS to correctly remit any payment due to the Department.

<u>PAYMENT TERMS</u>	<u>PAYMENT TIMING</u>
<b>PAYMENT UPON AGREEMENT EXECUTION</b>	Please submit the amount of agreed upon payment via one of the below methods, <u>once you have received notice of execution of the Agreement</u> .
<b>PAYMENT PRIOR TO LETTING (OR START OF PHASE)</b>	You will be notified by the Project Manager when payment will be due. Please remit payment within 60 days of notification.
<b>PAYMENT UPON BILLING</b>	The Department will bill at the completion of the Project (or when defined in the Agreement). All payments are due within 60 days of invoicing.

**NOTE:** You may pre-pay any portion of an estimated cost, prior to Departmental Billing. The Department will adjust final billing to account for any pre-payments made.

### LATE PAYMENTS AND INTEREST RATES:

For payments not received within 60 days, the Department must charge a statutory interest rate of prime plus one percent (1%) on all Utility Relocation Agreements. For any other Receivable Agreement, the Department may charge a late fee and/or interest.

### PAYMENT METHODS

#### 1. SEND PAYMENT BY CHECK

OR

#### 2. SEND PAYMENT VIA ACH (Automated Clearinghouse)

##### MAIL TO:

NCDOT – Accounts Receivable  
1514 Mail Service Center  
Raleigh, NC 27699-1514

Initiate ACH through your bank\* and send an e-mail to:

- ✓ Shamorah Fountain – [sfountain1@ncdot.gov](mailto:sfountain1@ncdot.gov)
- ✓ Melinda Neighbors – [mneighbors@ncdot.gov](mailto:mneighbors@ncdot.gov)

##### INCLUDE:

- Agreement ID (10000xxxxx)
- WBS Element

##### INCLUDE:

- Agreement ID (10000xxxxx)
- WBS Element
- Amount of Payment

\*If you need NCDOT's Account Information, contact Tammy Court at [tlcourt@ncdot.gov](mailto:tlcourt@ncdot.gov)

Failure to follow the above steps and remit payment per the terms in the Agreement may result in delays to project delivery. Please contact your Division Project Manager for questions regarding payment terms.

**AGREEMENT OVERVIEW**

NORTH CAROLINA  
UNION COUNTY

**DATE: 3/18/2026**

**PARTIES TO THE AGREEMENT:**

**PROJECT NUMBERS:**

NORTH CAROLINA DEPARTMENT  
OF TRANSPORTATION

TIP #: U-4714AC

AND

WBS ELEMENTS: PE 39078.1.2  
CON 39078.3.9

UNION COUNTY

The purpose of this Agreement is to identify the participation in project costs, project delivery and/or maintenance, by the other party to this Agreement, as further defined in this Agreement.

**SCOPE OF PROJECT (“Project”):** This Project consists of sewer line betterments related to widening SR 1009 (John Street / Old Monroe Road) to multi-lanes from east of I-485 to west of Morningside Meadow Lane.

**ESTIMATED COST TO OTHER PARTY: \$ 1,359,307.81**

ESTIMATED COST TO OTHER PARTY (PE): \$ 65,000.00

ESTIMATED COSTS TO OTHER PARTY (CON): \$ 1,294,307.81

**PAYMENT TERMS:** Union County will submit payment upon execution of agreement.

**MAINTENANCE:** Union County is responsible for all utility maintenance.

**EFFECTIVE DATES OF AGREEMENT:**

**START:** Upon Full Execution of this Agreement

**END:** When work is complete and all terms are met.

This **Agreement** is made and entered into on the last date executed below, by and between the North Carolina Department of Transportation, an agency of the State of North Carolina, hereinafter referred to as the **Department** and Union County, hereinafter referred to as the **County**; and collectively referred to as the **Parties**.

The **Parties** to this Agreement, listed above, intend that this Agreement, together with all attachments, schedules, exhibits, and other documents that both are referenced in this Agreement and refer to this Agreement, represents the entire understanding between the **Parties** with respect to its subject matter and supersedes any previous communication or agreements that may exist.

## I. WHEREAS STATEMENTS

**WHEREAS**, this Agreement is made under the authority granted to the **Department** by the North Carolina General Assembly under General Statutes of North Carolina (NCGS), particularly Chapter 136-27.1 and 136-27.3; and,

**WHEREAS**, the **Department** has plans to make certain street and highway constructions and/or traffic control improvements; and,

**WHEREAS**, the **County** has requested that the **Department** perform work or provide services; and,

**WHEREAS**, the **Parties** hereto wish to enter into an agreement for scoped work to be performed or provided by the **Department** (including construction, reviews, goods, or services) with reimbursement for the costs thereof by the **County** as hereinafter set out; and,

**WHEREAS**, the **Department** and the **County** have agreed that the jurisdictional limits of the **Parties**, as of the date of entering the agreement for the above-mentioned project, are to be used in determining the duties, responsibilities, rights, and legal obligations of the **Parties** hereto for the purposes of this Agreement.

**NOW, THEREFORE**, this Agreement states the promises and undertakings of each party as herein provided, and the **Parties** do hereby covenant and agree, each with the other, as follows:

## II. RESPONSIBILITIES

### A. DEPARTMENT

The **Department** shall be responsible for all phases of project delivery to include utility relocation, and construction, and/or maintenance as shown in the **PROJECT DELIVERY REQUIREMENTS** Provision.

### B. COUNTY

The **County** shall be responsible for maintenance as shown in the **PROJECT DELIVERY REQUIREMENTS** Provision and payment as shown in the **COSTS AND FUNDING** Provision.

## III. PROJECT DELIVERY REQUIREMENTS

### A. PRELIMINARY ENGINEERING

- i. At the request of the **County**, the **Department** will provide design services for the required relocation and/or betterment of the **County's** utility lines as affected by Project U-4714AC. The work is described as follows: Utility design for sewer line betterment.

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**UTILITY PE and CONSTRUCTION AGREEMENT**  
**1000027773**  
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- ii. The **Department** will ensure the design of municipal utility relocation is performed by professional engineering services. If the **Department** revises highway plans, then the **County** reserves the right to re-engineer relocation plans.
- iii. Upon the satisfactory completion of the utility construction plans covered under this Agreement, the **County** shall review and approve the plans, the associated estimated utility construction cost, and special provisions to be made part of the **Department's** roadway contract for highway construction. The **County** shall release the **Department** of any future responsibility for the design of the utility construction plans. Said releases shall be deemed to be given by the **County** upon completion of the plans, estimate, special provisions and acceptance by the **Department** and **County** for the plans to be made part of the highway contract.

**B. CONSTRUCTION**

- i. At the request of the **County** the **Department** shall place provisions in the construction contract for Project U-4714AC, for the contractor to adjust and relocate utility lines and/or provide betterment. The work is described as follows: Sewer line betterment.
- ii. Said work shall be accomplished in accordance with plan sheets, attached hereto as Exhibit "A", cost estimate attached hereto as Exhibit "B", and project specific provisions, if applicable, attached hereto as Exhibit "C".
- iii. The Department's Standard Special Provisions binds the contractor to guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the **Department**. The highway contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the **Department**, and/or for use in excess of the design. Where items of material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply to that particular piece of material. Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project. Should any failure result from the conditions found in this section the **Department** would then enter into a Contract with the **County** for reimbursement to be made to the **County** for necessary repairs performed by the **County** and/or its contractor. The Utility Relocation Agreement would be issued by the NCDOT Utilities Unit and the repairs would be coordinated between the **County** and the Department's assigned Resident Engineer.

**C. MAINTENANCE AND OPERATIONS**

- i. Upon satisfactory completion of the utility relocations and successful placement of the utility lines into service, the **County** shall assume responsibility for the normal maintenance and operation of the utility lines. Upon completion of the construction of the

highway project, the **County** shall release the **Department** from any and all claims for damages in connection with adjustments made to its utility lines; and, further, the **County** shall release the **Department** of any future responsibility for the cost of maintenance to said utility lines. The **Department** will invite the **County** to the Final Inspection meeting with its contractor and will include the **County** in the project acceptance notification. Said releases shall be deemed to be given by the **County** upon completion of construction of the project and its acceptance by the **Department** from its contractor unless the **County** notifies the **Department**, in writing, to the contrary prior to the **Department's** acceptance of the project.

- ii. The **County** obligates itself to service and to maintain its facilities to be retained and installed over and along the highway within the **Department's** right-of-way limits in accordance with Paragraph B. i., the mandate of the North Carolina General Statutes and such other laws, rules, and regulations as have been or may be validly enacted or adopted, now or hereafter.
- iii. If at any time the **Department** shall require the removal of or changes in the location of the encroaching facilities which are being relocated at the **County's** expense, the **County** binds itself, its successors and assigns, to promptly remove or alter said facilities, in order to conform to the said requirement (if applicable per G.S. 136-27.1), without any cost to the **Department**.

#### IV. COSTS AND FUNDING

##### A. PROJECT COSTS

- i. The **County** shall be responsible for relocation, and/or betterment, costs for utility work as shown on the attached Exhibit "A". The estimated cost to the **County** is \$1,359,307.81 as shown on the attached Exhibit "B". Upon request by the **County**, the **Department** will provide the **County** with an updated estimate of the utility work based on the bid amounts in the awarded highway contract.
- ii. It is understood by both **Parties** that this is an estimated cost for the utility work described in this Agreement and is subject to change.
- iii. If the **County** does not approve the anticipated cost increases, the **Department** will cease work on the Project. Any funding provided by the **County** that is unused will be returned to the **County**.
- iv. A supplemental agreement will be generated to document increased cost participation by the **County**. The **County** shall not unreasonably withhold consent to amending this agreement to account for documented cost increases.

**B. PAYMENT BY THE COUNTY**

- i. Based on the estimated cost of \$1,359,307.81, the **County** shall submit payment for \$1,359,307.81 to the **Department's** Fiscal Section upon full execution of this Agreement in accordance with the attached "Remittance Guidance".
- ii. Any cost incurred due to additional utility work requested by the **County** after award of the construction contract, shall be solely the responsibility of the **County**. The **County** shall reimburse the **Department** 100% of the additional utility cost.
- iii. Upon completion of the Project, if actual costs of the Additional Work exceeds the amount of the down payment, the **County** shall reimburse the **Department** any underpayment within sixty (60) days of invoicing by the **Department**. The **Department** will charge a late payment penalty and interest on any unpaid balance due in accordance with G. S. 147-86.23. If the actual cost of the work is less than \$1,359,307.81, the **Department** will reimburse the **County** any overpayment.

**V. STANDARD PROVISIONS**

**A. AGREEMENT MODIFICATIONS**

Any modification to scope, funding, responsibilities, or time frame will be agreed upon by all **Parties** by means of a written supplemental agreement.

**B. ASSIGNMENT OF RESPONSIBILITIES**

The **Department** must approve any assignment or transfer of the responsibilities of the **County** set forth in this Agreement to other parties or entities.

**C. AGREEMENT FOR IDENTIFIED PARTIES ONLY**

This Agreement is solely for the benefit of the identified **Parties** to the Agreement and is not intended to give any rights, claims, or benefits to third parties or to the public at large.

**D. OTHER AGREEMENTS**

The **County** is solely responsible for all agreements, contracts, and work orders entered into or issued by the **County** to meet the terms of this Agreement. The **Department** is not responsible for any expenses or obligations incurred for the terms of this Agreement except those specifically eligible for the funds and obligations as approved by the **Department** under the terms of this Agreement.

**E. TITLE VI**

The other party to this Agreement shall comply with Title VI of the Civil Rights Act of 1964 (Title 49 CFR, Subtitle A, Part 21) and related nondiscrimination authorities. Title VI and related authorities prohibit discrimination on the basis of race, color, national origin, disability, gender, and age in all programs or activities of any recipient of Federal assistance.

**F. AUTHORIZATION TO EXECUTE**

The **Parties** hereby acknowledge that the individual executing this Agreement has read this Agreement, conferred with legal counsel, fully understands its contents, and is authorized to execute this Agreement and to bind the respective **Parties** to the terms contained herein.

**G. DEBARMENT POLICY**

It is the policy of the **Department** not to enter into any agreement with parties that have been debarred by any government agency (Federal or State). By execution of this agreement, the **County** certifies that neither it nor its agents or contractors are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal or State Agency or Department and that it will not enter into agreements with any entity that is debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction.

**H. INDEMNIFICATION**

To the extent authorized by state and federal statutes, the **County** will indemnify and hold harmless the FHWA (if applicable), the **Department** and the State of North Carolina, their respective officers, directors, principals, employees, agents, successors, and assigns from and against any and all claims for damage and/or liability, including those that may be initiated by third parties, in connection with the Project activities performed pursuant to this Agreement including construction of the Project, except for those claims arising out of the errors, omissions, or negligence of the **Department**, its respective officers, directors, principals, employees, agents, successors, and assigns.

**I. AVAILABILITY OF FUNDS**

All terms and conditions of this Agreement are dependent upon, and, subject to the allocation of funds for the purpose set forth in the Agreement and the Agreement shall automatically terminate if funds cease to be available.

**J. COUNTERPARTS AND ELECTRONIC SIGNATURES**

i. This Agreement, and other documents to be delivered pursuant to this Agreement, may be executed in one or more counterparts, each of which will be deemed to be an original copy and all of which, when taken together, will be deemed to constitute one and the same

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agreement or document and will be effective when counterparts have been signed by each of the **Parties**. An image of a manual signature on this Agreement, or other documents to be delivered pursuant to this Agreement, will constitute an original signature for all purposes. The delivery of copies of this Agreement or other documents to be delivered pursuant to this Agreement, including executed signature pages where required, by electronic transmission will constitute effective delivery of this Agreement or such other document for all purposes.

- ii. The **Parties** hereto further acknowledge and agree that this Agreement may be signed and/or transmitted by email or a PDF document or using electronic signature technology (e.g. DocuSign, Adobe Sign, or other electronic signature technology), and that such signed record shall be valid and as effective to bind the **Party(ies)** so signing as a paper copy bearing a handwritten signature. By selecting "I Agree", "I Accept", or other similar item, button, or icon via use of a keypad, mouse, or other device, as part of the electronic signature technology, the **Parties** consent to be legally bound by the terms and conditions of Agreement and that such act constitutes a signature as if actually signed in writing. The **Parties** also agree that no certification authority or other third-party verification is necessary to validate its electronic signature and that the lack of such certification or third-party verification will not in any way affect the enforceability of its electronic signature; however, each **Party** agrees to maintain certification records and will produce said records upon request. The **Parties** acknowledge and agree that delivery of a copy of this Agreement or any other document contemplated hereby through the electronic signature technology, will have the same effect as physical delivery of the paper document bearing an original written signature.

**K. GIFT BAN**

By Executive Order 24, issued by Governor Perdue, and NCGS 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offeror, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e. Administration, Adult Corrections, Commerce, Environmental Quality, Health and Human Services, Information Technology, Military and Veterans Affairs, Natural and Cultural Resources, Public Safety, Revenue, Transportation, and the Office of the Governor).

**SIGNATURE PAGE**

IN WITNESS WHEREOF, this Agreement has been executed the day and year heretofore set out, on the part of the **Department** and the **County** by authority duly given.

**(DOCUSIGN ONLY)**

**UNION COUNTY**

Authorized Signer: \_\_\_\_\_ Print Name: \_\_\_\_\_

Date Signed: \_\_\_\_\_ Title: \_\_\_\_\_

Approved as to Legal Form: BTI

If applicable, this Agreement has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act:

Finance Signer: \_\_\_\_\_ Print Name: \_\_\_\_\_

Date Signed: \_\_\_\_\_ Title: \_\_\_\_\_

Fed Tax ID No: \_\_\_\_\_

Remittance Address: \_\_\_\_\_

Purchase Order, Ref. No., etc.:  
\_\_\_\_\_

Accounts Payable Contact:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**DEPARTMENT OF TRANSPORTATION**

By: \_\_\_\_\_ Print Name: \_\_\_\_\_

Date: \_\_\_\_\_ Title: \_\_\_\_\_

APPROVED BY BOARD OF TRANSPORTATION ITEM O: \_\_\_\_\_ (DATE)

**SIGNATURE PAGE**

IN WITNESS WHEREOF, this Agreement has been executed the day and year heretofore set out, on the part of the **Department** and the **County** by authority duly given.

**UNION COUNTY (INK SIGNATURES)**

Attest:	Authorized Signer: _____
By: _____	Print Name: _____
Title: _____	Title: _____
	Date Signed: _____

If applicable, this Agreement has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act:

Fed Tax ID No: _____	Finance Signer: _____
Remittance Address:	Print Name: _____
_____	Title: _____
_____	Date Signed: _____

Purchase Order, Ref. No., etc.:	Accounts Payable Contact:
_____	Name: _____
	Email: _____
	Phone Number: _____

**DEPARTMENT OF TRANSPORTATION (DOCUSIGN)**

By: _____	Print Name: _____
Date: _____	Title: _____

APPROVED BY BOARD OF TRANSPORTATION ITEM O: \_\_\_\_\_ (DATE)

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# UTILITIES CONSTRUCTION PLANS MECKLENBURG & UNION COUNTY

LOCATION: SR 1009 (JOHN STREET/OLD MONROE ROAD)  
FROM EAST OF I-485 INTERCHANGE TO  
WEST OF MORNINGSIDES MEADOW LANE

TYPE OF WORK: RELOCATION OF WATER & SEWER LINES

T.I.P. NO. U-4714AC  
SHEET NO. UC-1

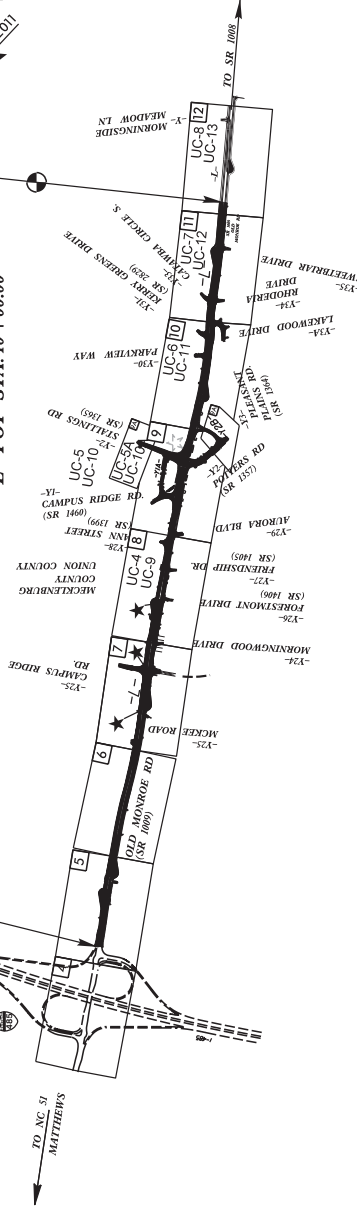
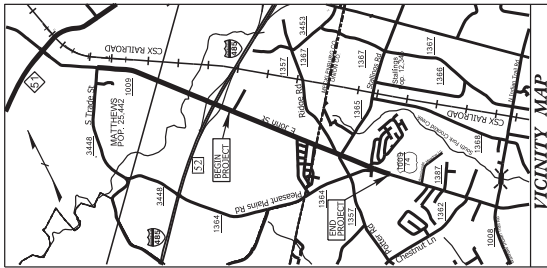
NOTE: ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

STATE COST (CAROLINA WATER SERVICE, INC. OF NORTH CAROLINA)  
STATE COST (UNION COUNTY WATER)  
STATE COST (UNION COUNTY SEWER)  
BET1 COST (UNION COUNTY)

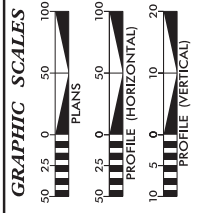
END TIP PROJECT U-4714AC  
-L- POT STA. 193 + 50.61 =  
BEGIN TIP PROJECT U-4714BA  
-L- POT STA. 10 + 00.00

BEGIN TIP PROJECT U-4714AC  
-L- POT STA. 96 + 20.00

LEGEND  
★ PROPOSED SIGNAL  
☆ EXISTING SIGNAL



**EXHIBIT A**  
**UC AGREEMENT**  
**PLAN FOR**  
**U-4714AC**



SHEET NO.:

UC-1
UC-2
UC-3
UC-3A THRU UC-3I
UC-4 THRU UC-8
UC-9 THRU UC-13
UC-14 THRU UC-22
UC-23 THRU UC-24

INDEX OF SHEETS

DESCRIPTION:

- TITLE SHEET
- UTILITY SYMBOLOLOGY
- PROJECT NOTES
- DETAIL SHEETS
- WATER LINE PLAN SHEETS
- SEWER LINE PLAN SHEETS
- WATER LINE PROFILE SHEETS
- SEWER LINE PROFILE SHEETS

WATER AND SEWER  
OWNER ON PROJECT  
WATER - CAROLINA WATER SERVICE, INC.  
OF NORTH CAROLINA  
WATER - UNION COUNTY  
SEWER - UNION COUNTY

PREPARED IN THE OFFICE OF  
KCI Associates of N.C., P.A.  
4800 Falls of Neuse Road, Suite 200  
Raleigh, NC 27609  
Phone (919) 783-9214  
Fax (919) 783-9266

PROJECT MANAGER (UTILITY CONSTRUCTION)  
ANGELICA PURA (UTILITY CONSTRUCTION)

DIVISION OF HIGHWAYS  
UTILITIES UNIT  
1555 MAH SERVICES CENTER  
RALEIGH, NC 27606-1555  
PHONE (919) 783-4000  
FAX (919) 783-4043

REGIONAL UTILITY ENGINEER  
DONALD E. HAMPTON

SENIOR UTILITY ENGINEER  
JONG T. YOON, PE

REGIONAL UTILITY COORDINATOR  
DAYTON C. MARTIN, III





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

# UTILITY CONSTRUCTION

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
2. THE EXISTING WATER AND SEWER UTILITIES BELONG TO UNION COUNTY AND CAROLINA WATER SERVICE.
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, AND 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, AND WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
6. 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.

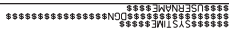
7. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1600-7. "SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

## PROJECT SPECIFIC NOTES: UNION COUNTY

1. ALL CONSTRUCTED AND PROPOSED WATER LINES TO BE TESTED PER UNION COUNTY WATER, NCDOT, AND NCDEQ STANDARD SPECIFICATIONS.
2. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY UNION COUNTY WATER REPRESENTATIVE.
3. IF THE PROPOSED WATER AND/OR SANITARY SEWER MAIN IS INSTALLED WITHIN 12' IN ANY DIRECTION (VERTICALLY OR HORIZONTALLY) OF A GAS MAIN THEN THE CONTRACTOR SHALL CALL PIEDMONT NATURAL GAS COMPANY AT (704) 525-5585 AND INFORM THEM.
4. THE CONTRACTOR SHALL USE EROSION CONTROL MEASURES, AS DIRECTED.
5. IF ADDITIONAL WORK SPACE IS NEEDED, AN ENCROACHMENT IS TO BE AGREED UPON BETWEEN THE CONTRACTOR, NCDOT, AND THE PROPERTY OWNER.
6. CONCRETE THRUST BLOCKING, WALL BLOCKING, RODDING, OR OTHER APPROVED METHOD SHALL BE PROVIDED BY CONTRACTOR AS NEEDED ON EXISTING WATER LINES AT THE PROPOSED RELOCATION TIE-IN POINTS.

7. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS IS FOR THE USE OF THE CONTRACTOR IN PROVIDING PROTECTION FOR THE UTILITIES DURING CONSTRUCTION OPERATIONS. NCDOT AND UNION COUNTY DESIGN CONSULTANT WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF LOCATION, SIZE, DEPTH, OR COMPLETENESS OF THE INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL SUPPORT AND PROTECT ANY EXISTING UNDERGROUND UTILITIES ENCOUNTERED DURING TRENCH EXCAVATION AND/OR PIPE INSTALLATION.
9. MINIMUM PIPE SEPARATION: 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS OVER SEWER MAINS, WHEN WATER MAINS ARE BELOW SEWER MAINS OR THE ABOVE MINIMUM SEPARATIONS CANNOT BE MAINTAINED. DUCTILE IRON PIPE SHALL BE USED FOR BOTH MAINS TO 10 FEET ON EITHER SIDE OF THE CROSSINGS, AND ALL ALONG THE LENGTH OF MAINS WHERE MINIMUM SEPARATION CANNOT BE MAINTAINED.
10. PIPE THICKNESS FOR DUCTILE IRON PIPE 6 INCHES TO 12 INCHES IN DIAMETER TO BE PC 350. PIPE THICKNESS FOR DUCTILE IRON PIPE 16 INCHES AND LARGER MAY BE PC 250.
11. 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.
12. LAY PIPE STRAIGHT IN ALIGNMENT AND GRADIENT OR FOLLOW TRUE CURVES AS NEARLY AS POSSIBLE. DO NOT DEFLECT ANY JOINT MORE THAN HALF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
13. CONTRACTOR SHALL ADHERE TO SECTION 15301 "ABANDON OR REMOVE UTILITIES" FOR ABANDONMENT OF EXISTING WATER LINES.
14. CONTRACTOR SHALL COORDINATE SHUTDOWNS OF WATER LINES FOR TIE-INS A MINIMUM OF 96 HOURS IN ADVANCE OF TIE-IN OPERATIONS. COORDINATE WITH UNION COUNTY FIELD REPRESENTATIVE.
15. ALL DUCTILE IRON WATER PIPE AND FITTINGS SHALL BE FURNISHED WITH CEMENT MORTAR LINING AND SEAL COATING IN ACCORDANCE WITH ANSIAWWA A21.4/C-104.

16. DUCTILE IRON SEWER PIPE AND FITTINGS SHALL BE FURNISHED WITH CERAMIC EPOXY LINING, TNE MEC 431, OR EQUAL, AND SEAL COATED IN ACCORDANCE WITH ANSIAWWA A21.4/C-104.
17. PRIOR TO THE START OF PROJECT CONTRACTOR MUST CONTACT THOMAS MANN, CIP PROGRAM MANAGER OF UNION COUNTY WATER, UNION COUNTY WATER MAY INSPECT THE WORK AT ANY TIME.
18. NO INTERRUPTION OF EXISTING WATER SERVICE SHALL BE MADE DURING CONSTRUCTION UNTIL AUTHORIZED BY UNION COUNTY WATER. UNION COUNTY WATER WILL BE COPIED ON BOTH THE WATER MAIN PRESSURE TEST REPORT AND THE WATER MAIN CHLORINATION TEST REPORT. UNION COUNTY COLLECTS SAMPLES FOR BACTERIOLOGICAL TESTING. SAMPLES WILL BE COLLECTED ONLY ON WEDNESDAY MORNINGS, USUALLY BEFORE 9:00 AM. SCHEDULE WATER INSTALLATIONS AND PRESSURE TESTING ACCORDINGLY. THERE WILL BE NO COST TO THE CONTRACTOR FOR BACTERIOLOGICAL TESTING FOR THE FIRST SAMPLES COLLECTED FOR EACH SEGMENT. RE-TESTING FOR FAILING BACTERIOLOGICAL TESTS WILL BE \$50.00 PER SAMPLE, PAYABLE TO K&W LABORATORIES, TO BE PAID BY CONTRACTOR. PRICE IS SUBJECT TO CHANGE. UNION COUNTY WILL NOT ACCEPT TEST RESULTS FROM OUTSIDE TESTING LABS.
19. EXISTING WATER VALVES ARE TO BE OPERATED BY UNION COUNTY OPERATIONS STAFF.
20. WHEN ABANDONING VALVES, CLOSE VALVE BEFORE REMOVING VALVE BOX.
21. INSTALLATION OF PIPE MAY REQUIRE EXCAVATING AROUND AND BENEATH RELOCATED TELECOMMUNICATION AND OTHER UTILITY LINES FOR WATER RELOCATION.
22. PROPOSED WATER SERVICE LINE SHALL BE TYP 'K' COPPER TUBING. SPLICING OF COPPER SERVICE LINE BETWEEN THE WATER METER AND EXISTING OR NEW WATER LINES WILL NOT BE ALLOWED FOR ANY CASE. PROVIDE AND INSTALL A CONTINUOUS SEGMENT OF COPPER WATER SERVICE LINE BETWEEN THE CORPORATION STOP AND WATER METER. IN THE EVENT A WATER SERVICE PIPE IS DAMAGED DURING THE COURSE OF CONSTRUCTION, A NEW REPLACEMENT COPPER SERVICE LINE IS TO BE INSTALLED BETWEEN THE WATER LINE AND WATER METER AT NO COST TO UNION COUNTY OR NCDOT.
















# SANITARY SEWER MANHOLE SCHEDULES

PROJECT REFERENCE NO. <b>U-474AC</b>	SHEET NO. <b>UC-3H</b>
DESIGNED BY: <b>TW</b>	
DRAWN BY: <b>TW</b>	
CHECKED BY: <b>MM</b>	
APPROVED BY: <b>MM</b>	
REVISED:	
NORTH CAROLINA UTILITIES ENGINEERING SOCIETY TRANSPORTATION P.A.C.T. 1913239-4151 UTILITY CONSTRUCTION PLANS ONLY	
KCI KCI Infrastructure Services, a Delaware Corporation 10000 Lakeside Drive, Suite 200 Charlotte, NC 28226-4000 Phone: 704.366.7000 Fax: 704.366.7000	

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

-SS-1-

MANHOLE SCHEDULE												
MANHOLE LOCATION					OUTFLOW PIPE (DIAMETER AND DEPTH)							
MH ID	STATION	MANHOLE TYPE	NORTHING	EASTING	RIM ELEV. FT.	DIA. IN.	Invert Elev. FT.	PIPE 1		PIPE 2		
								DEPTH TO INV. FT.	ANGLE	DEPTH TO INV. FT.	ANGLE	
101	0+00	4' STANDARD	491899.835	1491807.023	771.1	8	TBD	-	2.9	8	762.27	8.83
102	1+48.84	4' STANDARD	491972.846	1491936.720	776.2	8	768.80	7.40	1.4	8	769.00	7.20
103	2+42.08	4' STANDARD	491893.841	1491986.241	779.0	8	771.00	8.00	2.0	8	TBD	-

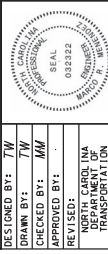

-SS-2-

MANHOLE SCHEDULE													
MANHOLE LOCATION					OUTFLOW PIPE (DIAMETER AND DEPTH)								
MH ID	STATION	MANHOLE TYPE	NORTHING	EASTING	RIM ELEV. FT.	DIA. IN.	Invert Elev. FT.	DEPTH TO INV. FT.	ANGLE	PIPE 1		PIPE 2	
										DEPTH TO INV. FT.	ANGLE	DEPTH TO INV. FT.	ANGLE
201	2+19.26	4' STANDARD	491002.663	1493276.630	764.8	8	755.30	9.52	3.5	8	755.50	9.32	
202	2+62.47	4' STANDARD	490959.780	1493280.969	765.4	8	755.86	9.75	3.8	8	755.86	9.55	
203	3+57.65	4' STANDARD	490921.686	1493193.704	767.1	8	756.22	10.86	4.9	8	756.42	10.66	
204	6+28.33	4' STANDARD	490813.718	1492945.455	771.7	8	762.36	9.37	3.4	8	762.56	9.17	

-SS-3-

MANHOLE SCHEDULE													
MANHOLE LOCATION					OUTFLOW PIPE (DIAMETER AND DEPTH)								
MH ID	STATION	MANHOLE TYPE	NORTHING	EASTING	RIM ELEV. FT.	DIA. IN.	Invert Elev. FT.	DEPTH TO INV. FT.	ANGLE	PIPE 1		PIPE 2	
										DEPTH TO INV. FT.	ANGLE	DEPTH TO INV. FT.	ANGLE
301	0+52.59	4' STANDARD	490291.637	1492525.917	780.7	8	777.4	3.25	-	8	777.5	3.15	

# SANITARY SEWER MANHOLE SCHEDULES

PROJECT REFERENCE NO. <b>U-474AC</b>	SHEET NO. <b>UC-31</b>
DESIGNED BY: <b>TW</b>	
CHECKED BY: <b>MM</b>	
APPROVED BY:	
REVISED:	
NORTH CAROLINA UTILITIES ENGINEERING SOCIETY TRANSPORTATION P.A.C.T. 1913.2330-4151 UTILITY CONSTRUCTION PLANS ONLY	
 KCI 10000 University City Center Raleigh, NC 27601-1000 Phone: 919.790.1000 Fax: 919.790.2000	

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

-SS-4-

MANHOLE SCHEDULE									
MANHOLE LOCATION					OUTFLOW PIPE (DIAMETER AND DEPTH)				
MH ID	STATION	MANHOLE TYPE	NORTHING	EASTING	RIM ELEV. FT.	DIA. IN.	Invert Elev. FT.	DEPTH TO INV. FT.	GREATER THAN 6
401	1+11.82	4' STANDARD	490122.053	1493084.570	766.6	8	760.73	5.86	-
402	2+11.16	4' STANDARD	490213.462	1493045.888	767.0	8	761.50	5.47	-
					INFLOW PIPES (DIAMETER, DEPTH, ANGLE FROM OUTFLOW PIPE)				
					PIPE 1				
					DIA. IN.	Invert Elev. ft.	DEPTH TO INV. FT.	ANGLE	DIA. IN.
					8	760.83	5.76	171°29'27"	
					8	761.60	5.37	-	
					PIPE 2				
					DIA. IN.	Invert Elev. ft.	DEPTH TO INV. FT.	ANGLE	DIA. IN.

-SS-5-

MANHOLE SCHEDULE									
MANHOLE LOCATION					OUTFLOW PIPE (DIAMETER AND DEPTH)				
MH ID	STATION	MANHOLE TYPE	NORTHING	EASTING	RIM ELEV. FT.	DIA. IN.	Invert Elev. FT.	DEPTH TO INV. FT.	GREATER THAN 6
501	0+47.05	4' STANDARD	488210.983	1494408.246	753.4	8	740.28	13.12	7.1
502	3+76.83	4' STANDARD	488472.642	1494207.525	756.3	8	742.1	14.20	8.2
503	5+59.57	4' STANDARD	488611.133	1494088.288	754.7	8	743.2	11.50	5.5
504	8+63.96	4' STANDARD	488859.941	1493912.939	756.0	8	744.9	11.10	5.1
505	9+26.42	4' STANDARD	488838.963	1493854.113	755.5	8	745.39	10.11	4.1
506	11+04.42	4' STANDARD	488958.628	1493722.331	755.9	8	747.19	8.71	2.7
507	13+53.07	4' STANDARD	489120.199	1493533.341	760.7	8	749.63	11.07	5.1
508	15+74.30	4' STANDARD	489258.186	1493360.415	763.1	8	755.14	7.96	2.0
					INFLOW PIPES (DIAMETER, DEPTH, ANGLE FROM OUTFLOW PIPE)				
					PIPE 1				
					DIA. IN.	Invert Elev. ft.	DEPTH TO INV. FT.	ANGLE	DIA. IN.
					8	740.48	12.92	90°10'59"	
					8	742.3	14.00	176°45'57"	
					8	743.4	11.30	174°28'48"	
					8	745.1	10.90	105°32'52"	
					8	745.59	9.91	118°07'56"	
					8	747.39	8.51	178°17'12"	
					8	749.83	10.87	178°03'38"	
					8	756.79	6.31	178°51'03"	
					PIPE 2				
					DIA. IN.	Invert Elev. ft.	DEPTH TO INV. FT.	ANGLE	DIA. IN.





PROJECT REFERENCE NO. **U-4744C**  
 SHEET NO. **UC-5A**

DESIGNED BY: **AP**  
 DRAWN BY: **AP**  
 CHECKED BY: **TB**  
 APPROVED BY: **TB**  
 REVISED:

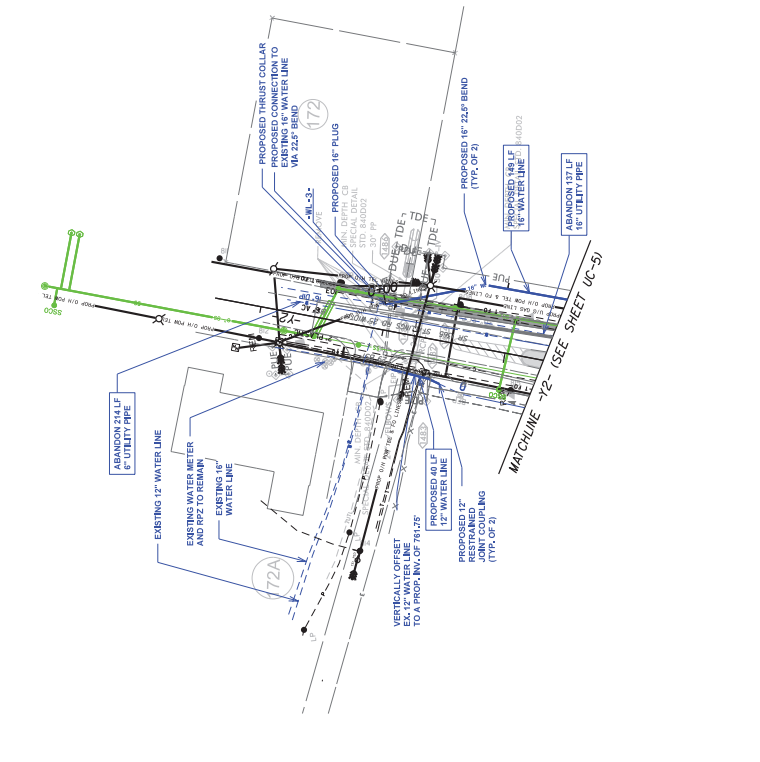
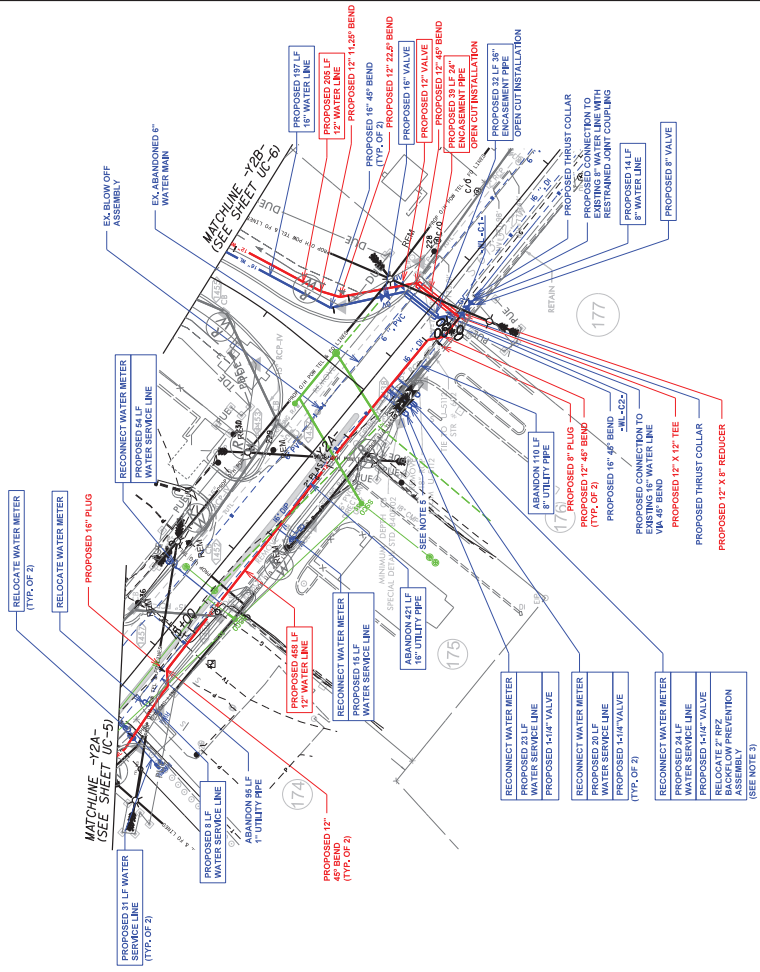
NORTH CAROLINA  
 UTILITIES ENGINEERING SOCIETY  
 TRANSPORTATION  
 PLAN 01.19.1259-4151  
 UTILITY CONSTRUCTION  
 PLANS ONLY

**KCI**  
 KCI Infrastructure Services, LLC  
 10000 University City Blvd., Suite 200  
 Charlotte, NC 28213  
 Phone: 704.366.7200  
 Fax: 704.366.7201  
 Email: kci@kci.com



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

- NOTES:**
1. PROPOSED WATER LINE SHALL HAVE 18" VERTICAL SEPARATION FROM PROPOSED DRY UTILITIES UNLESS OTHERWISE SHOWN (SEE PROFILES).
  2. EXISTING UTILITIES SHALL BE VERIFIED LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  3. EXACT PLACEMENT OF THE RPZ SHALL BE COORDINATED BETWEEN NCDOT AND CONTRACTOR.
  4. CONTRACTOR SHALL COORDINATE WITH ALL BUSINESS OWNERS ON WATER SERVICE TEAMS.
  5. CONTRACTOR TO LOCATE EXISTING 6" FIRE LINE, ABANDON AND PLUG EXISTING 12" WATER LINE AND RPZ TO REMAIN.
  6. SEE SHEET UC-10A FOR CORRESPONDING SANITARY SEWER PAY ITEMS AND NOTES.
  7. ALL COATED PIPE HYDRANTS SHALL INCLUDE THE TYPICAL FIRE HYDRANT ASSEMBLY SUCH AS FIRE HYDRANT TEE 8" GATE VALVE.



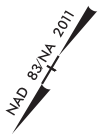
PROPOSED 1.56 POUNDS OF  
 DUCTILE IRON WATER PEE FITTINGS

PROPOSED 2.089 POUNDS OF  
 DUCTILE IRON WATER PEE FITTINGS

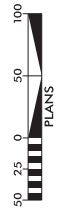
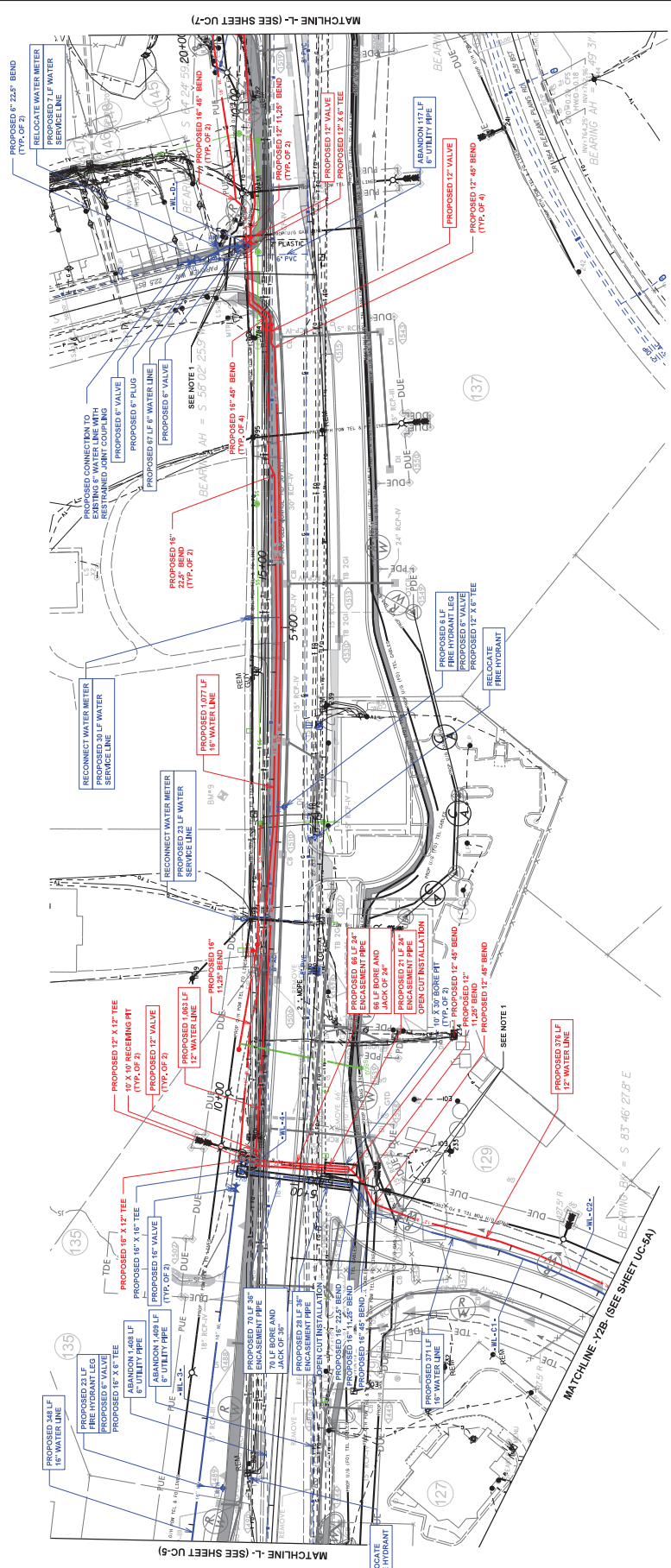
PROJECT REFERENCE NO.	U-4714AC
SHEET NO.	UC-6
DESIGNED BY:	AP
DRAWN BY:	AP
CHECKED BY:	TB
APPROVED BY:	
REVISED:	
NORTH CAROLINA UTILITY ENGINEERING SOCIETY TRANSPARTATION	
UTILITY CONSTRUCTION PLANS, D.N.Y.	



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



- NOTES:**
1. PROPOSED WATER LINE SHALL HAVE 18" VERTICAL SEPARATION FROM EXISTING SANITARY SEWER LINES (SEE EXISTING PROFILES).
  2. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  3. CONTRACTOR TO COORDINATE WITH ALL BUSINESS OWNERS.
  4. SEE SHEET UC-11 FOR CORRESPONDING SANITARY SEWER PAY ITEMS AND NOTES.
  5. FIRE HYDRANTS SHALL INCLUDE THE TYPICAL FIRE HYDRANT ASSEMBLY SUCH AS FIRE HYDRANT TEE AND 6" GATE VALVE.



PLANS

- PROPOSED 3.625 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS
- PROPOSED 7.545 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS



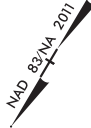


PROJECT REFERENCE NO. **U-474AC**  
 SHEET NO. **UC-5A**

DESIGNED BY: **AP**  
 DRAWN BY: **AP**  
 CHECKED BY: **TB**  
 APPROVED BY: **TB**  
 REVISED:

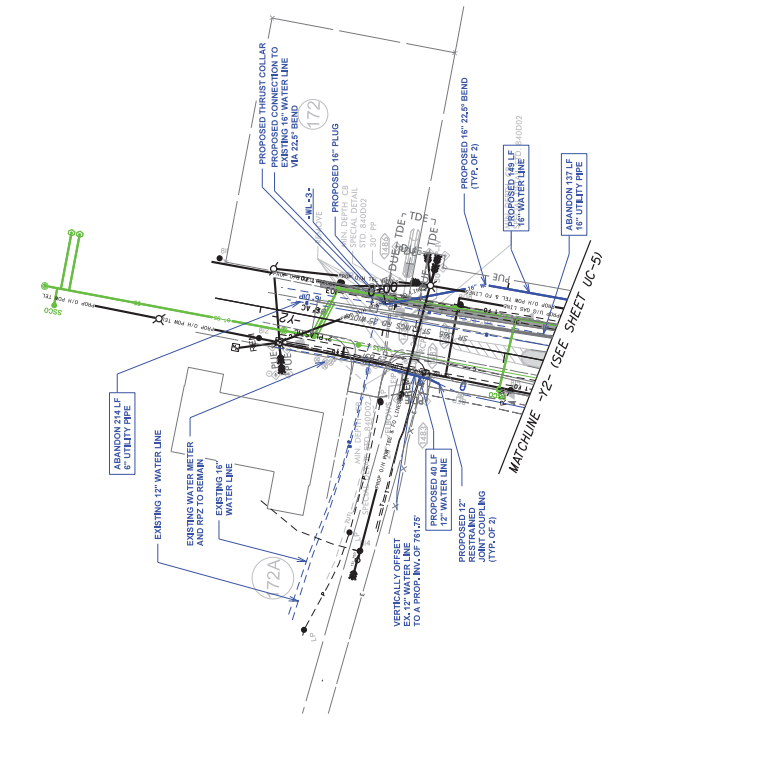
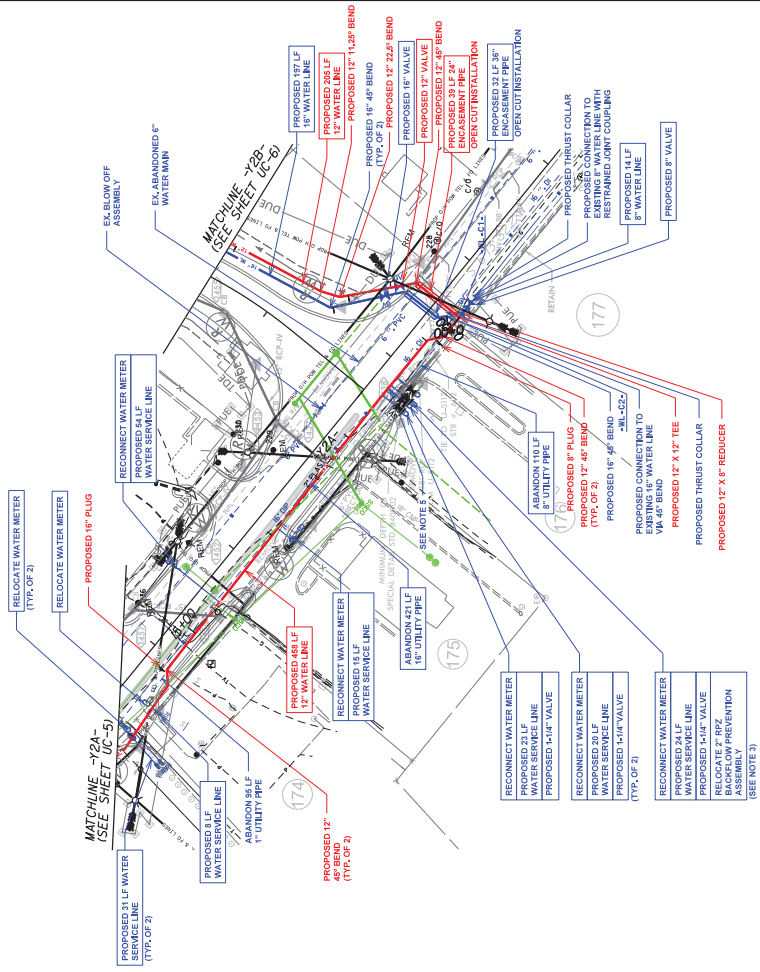
NORTH CAROLINA  
 UTILITIES ENGINEERING SOCIETY  
 TRANSPORTATION  
 FACILITY (1913259-415)  
 UTILITY CONSTRUCTION  
 PLANS, D.N.Y.

**KCI**  
 KCI Infrastructure Services, LLC  
 10000 University City Blvd., Suite 200  
 Charlotte, NC 28213  
 Phone: 704.366.7200  
 Fax: 704.366.7200



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

- NOTES:**
1. PROPOSED WATER LINE SHALL HAVE 18" VERTICAL SEPARATION FROM PROPOSED DRY UTILITIES UNLESS OTHERWISE SHOWN (SEE PROFILES).
  2. CONTRACTOR SHALL VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  3. EXACT PLACEMENT OF THE RPZ SHALL BE COORDINATED BETWEEN NCDOT AND CONTRACTOR.
  4. CONTRACTOR SHALL COORDINATE WITH ALL BUSINESS OWNERS ON WATER SERVICE TEAMS.
  5. CONTRACTOR TO LOCATE EXISTING 6" FIRE LINE, ABANDON AND PLUG EXISTING 12" WATER LINE AND RPZ TO REMAIN.
  6. SEE SHEET UC-10A FOR CORRESPONDING SANITARY SEWER PAY ITEMS AND NOTES.
  7. ALL COATED PIPE HYDRANTS SHALL INCLUDE THE TYPICAL FIRE HYDRANT ASSEMBLY SUCH AS FIRE HYDRANT TEE 8" GATE VALVE.



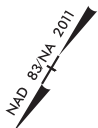
PROPOSED 1.56 POUNDS OF  
 DUCTILE IRON WATER PEE FITTINGS

PROPOSED 2.089 POUNDS OF  
 DUCTILE IRON WATER PEE FITTINGS

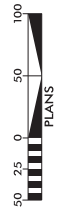
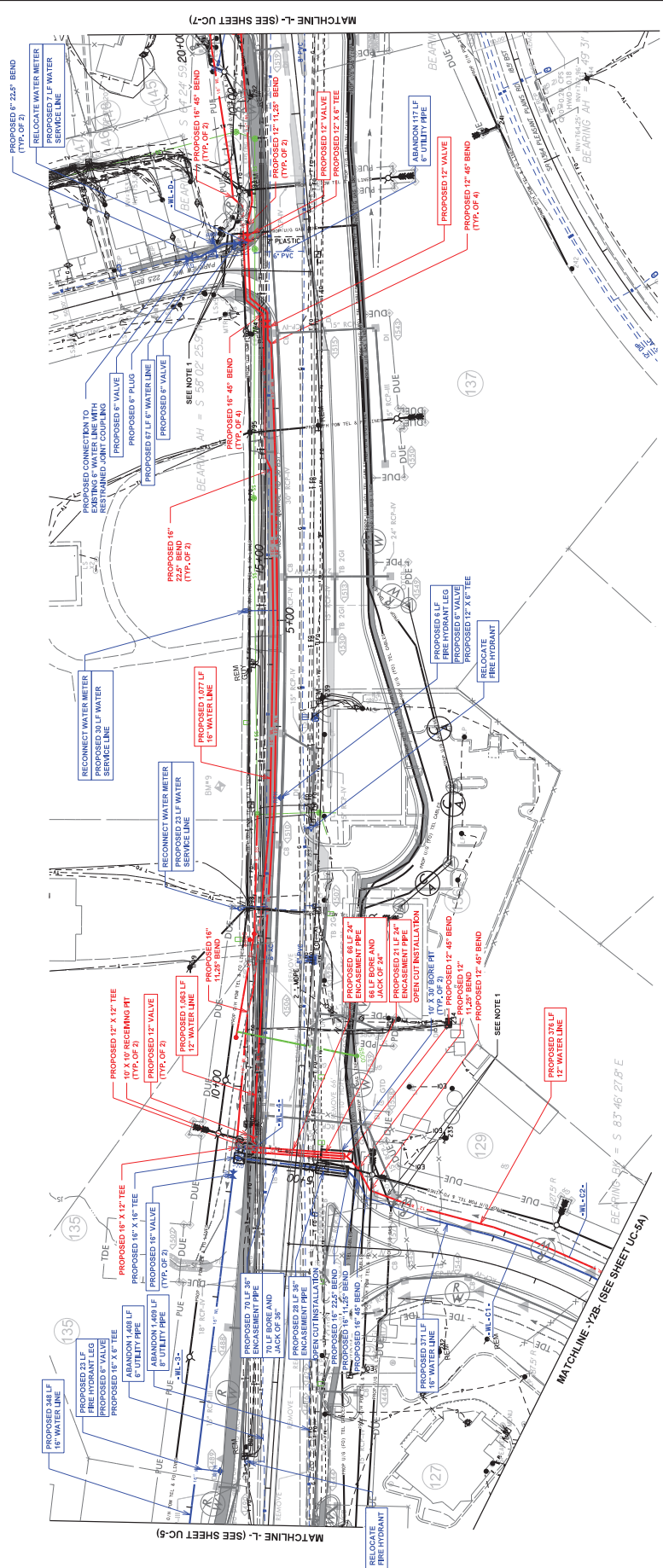
PROJECT REFERENCE NO.	U-474AC
SHEET NO.	UC-6
DESIGNED BY:	AP
DRAWN BY:	AP
CHECKED BY:	TB
APPROVED BY:	
REVISED:	
NORTH CAROLINA UTILITY ENGINEERING SOCIETY TRANSPARTATION	
KCI KCI Infrastructure Services, a subsidiary of KCI Holdings, Inc. 10000 Lakeside Drive, Suite 200 Charlotte, NC 28226	



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



- NOTES:**
1. PROPOSED WATER LINE SHALL HAVE 18" VERTICAL SEPARATION FROM EXISTING SANITARY SEWER LINES (SEE EXISTING PROFILES).
  2. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  3. CONTRACTOR TO COORDINATE WITH ALL BUSINESS OWNERS.
  4. SEE SHEET UC-11 FOR CORRESPONDING SANITARY SEWER PAY ITEMS AND NOTES.
  5. FIRE HYDRANTS SHALL INCLUDE THE TYPICAL FIRE HYDRANT ASSEMBLY SUCH AS FIRE HYDRANT TEE AND 6" GATE VALVE.



PLANS

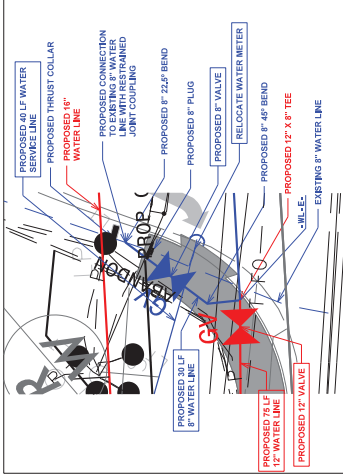
- PROPOSED 3,625 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS
- PROPOSED 7,545 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS

PROJECT REFERENCE NO.	U-474AC	SHEET NO.	UC-7
DESIGNED BY:	AP		
CHECKED BY:	TB		
APPROVED BY:			
REVISED:			
NORTH CAROLINA UTILITIES ENGINEERING SOCIETY TRANSPORTATION DIVISION UTILITY CONSTRUCTION PLANS ONLY			
KCI 10000 University City Center Charlotte, NC 28226 Phone: 704.376.7000 Fax: 704.376.7001 www.kci.com			

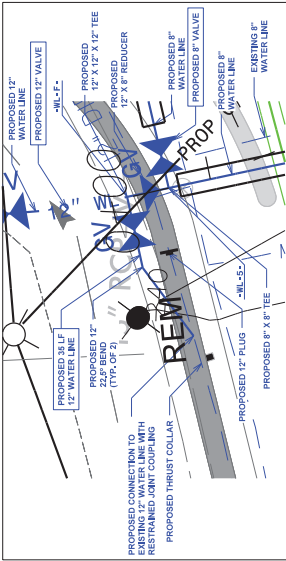
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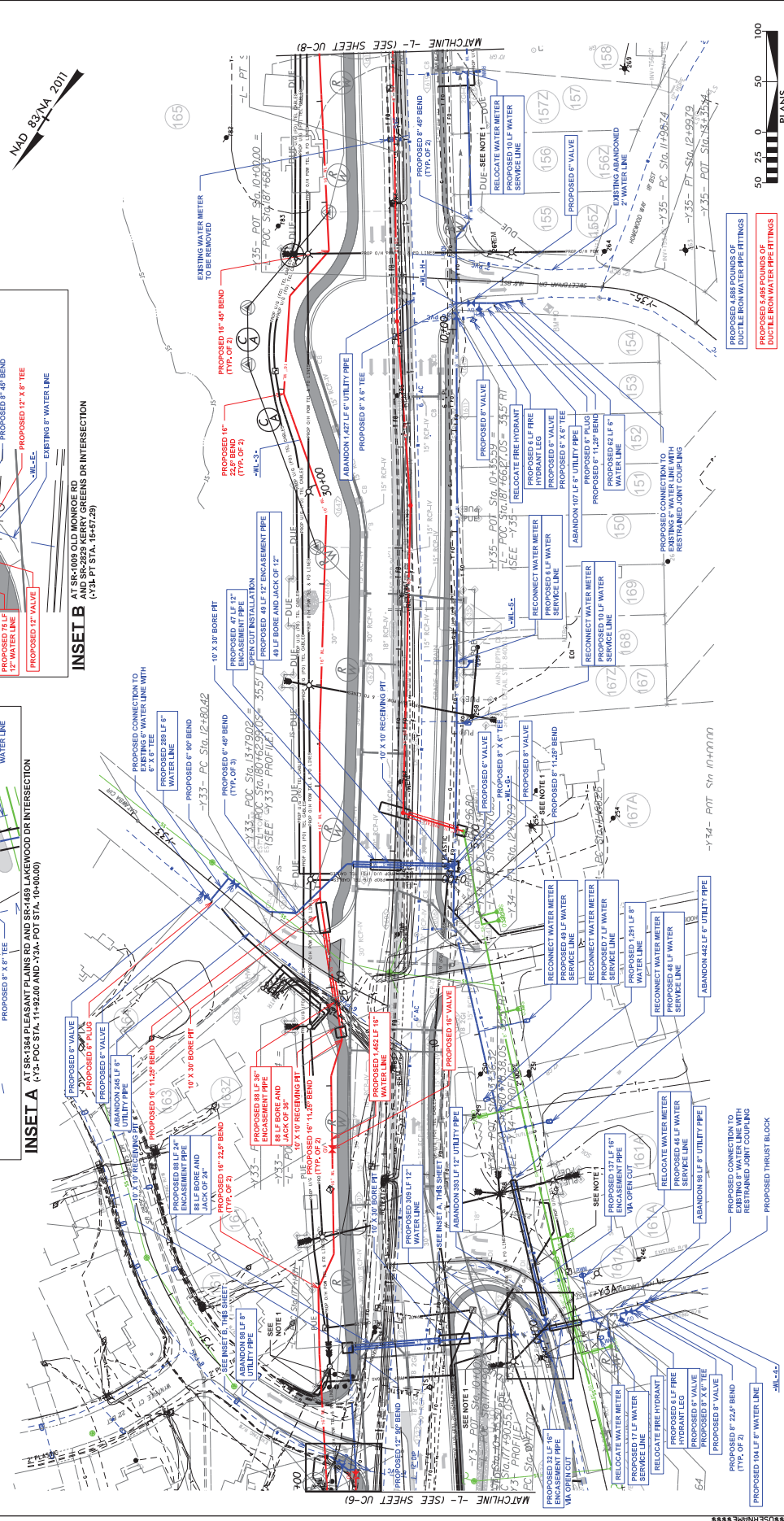
- NOTES:**
1. PROPOSED WATER LINE SHALL HAVE 18" VERTICAL SEPARATION FROM EXISTING SANITARY SEWER LINES TO AVOID PROBLEMS.
  2. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  3. CONTRACTOR TO COORDINATE WITH ALL BUSINESS OWNERS ON WATER SERVICE TIE-INS.
  4. SEE SHEET UC-12 FOR CORRESPONDING SANITARY SEWER TIE-INS.
  5. PROPOSED RELOCATED FIRE HYDRANTS SHALL INCLUDE THE TYPICAL FIRE HYDRANT ASSEMBLY SUCH AS FIRE HYDRANT TEE AND 6" GATE VALVE.



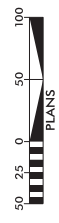
**INSET A**  
 AT SR-1384 PLEASANT PLAINS RD AND SR-1459 LAKEWOOD DR INTERSECTION  
 (Y-2- POC STA. 11+82.00 AND Y-2A- POT STA. 10+00.00)



**INSET B**  
 AT SR-008 OLD MONROE RD AND SR-1459 LAKEWOOD DR INTERSECTION  
 (Y-3A- PT STA. 15+57.28)



PROPOSED 488 POUNDS OF  
 DUCTILE IRON WATER PIPE FITTINGS  
 PROPOSED 265 POUNDS OF  
 DUCTILE IRON WATER PIPE FITTINGS

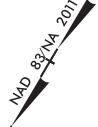


PLANS

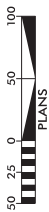
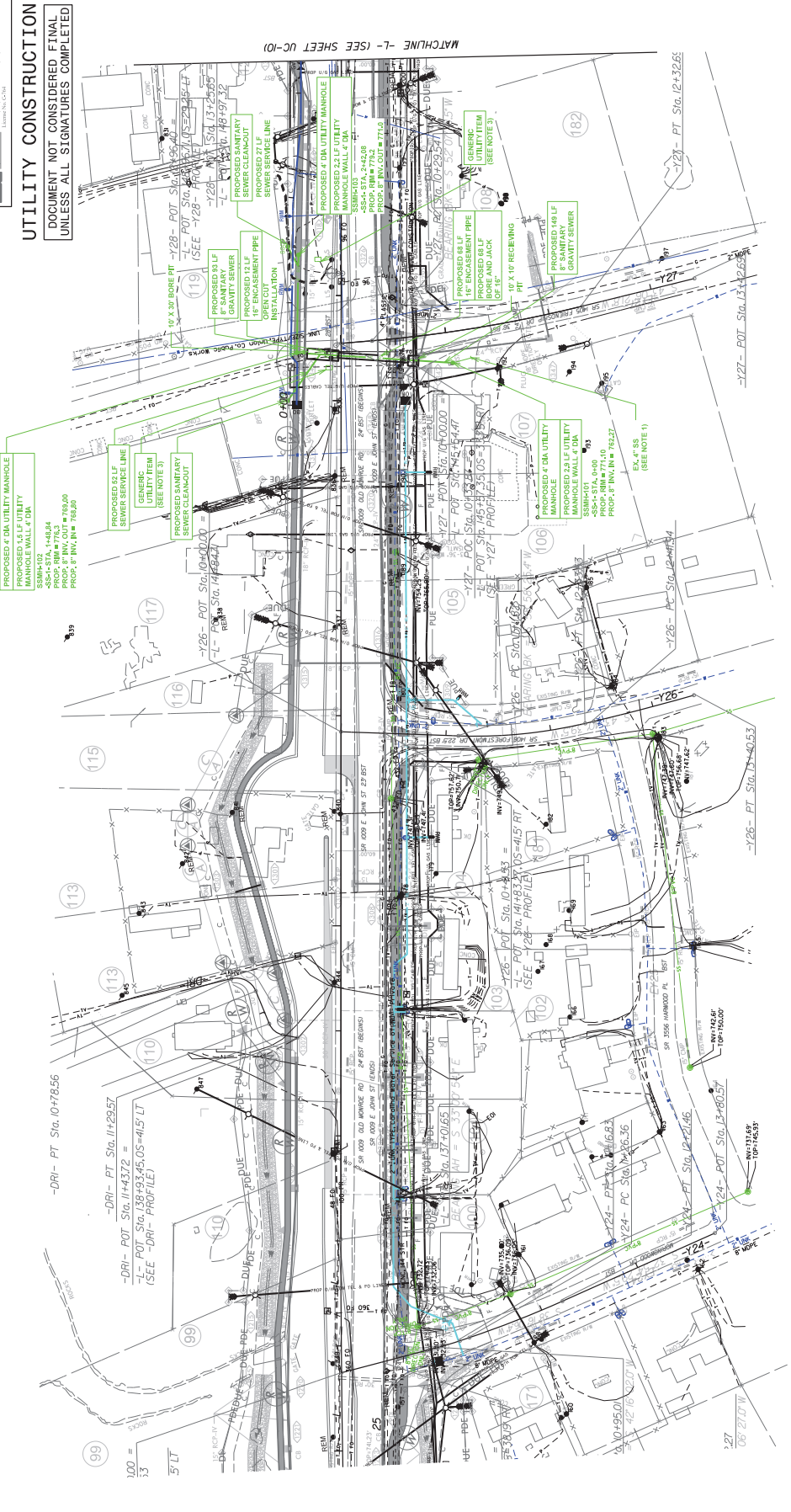


PROJECT REFERENCE NO.	U-4744C	SHEET NO.	UC-9
DESIGNED BY:	AP		
DRAWN BY:	AP		
CHECKED BY:	TB		
APPROVED BY:			
REVISED:		NIPAR CONSULTING AND TRANSPORTATION 10000 WILSON AVENUE, SUITE 100 FORT MYERS, FL 33907-4151 PHONE: (813) 240-4151 FAX: (813) 240-4151 UTILITY CONSTRUCTION PLANS ONLY	



**UTILITY CONSTRUCTION**  
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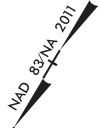
- NOTES:**
1. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE
  2. CONTRACTOR TO VERIFY ALL CORRESPONDING WATER LINE PAY ITEMS AND NOTES.
  3. CONTRACTOR TO REMOVE EXISTING INTERCEPT TANK AND INSTALL/CONNECT THE SEWER SERVICE LINE AS SHOWN IN STANDARD DETAIL ON SHEET UC-06.



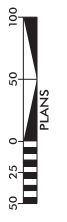
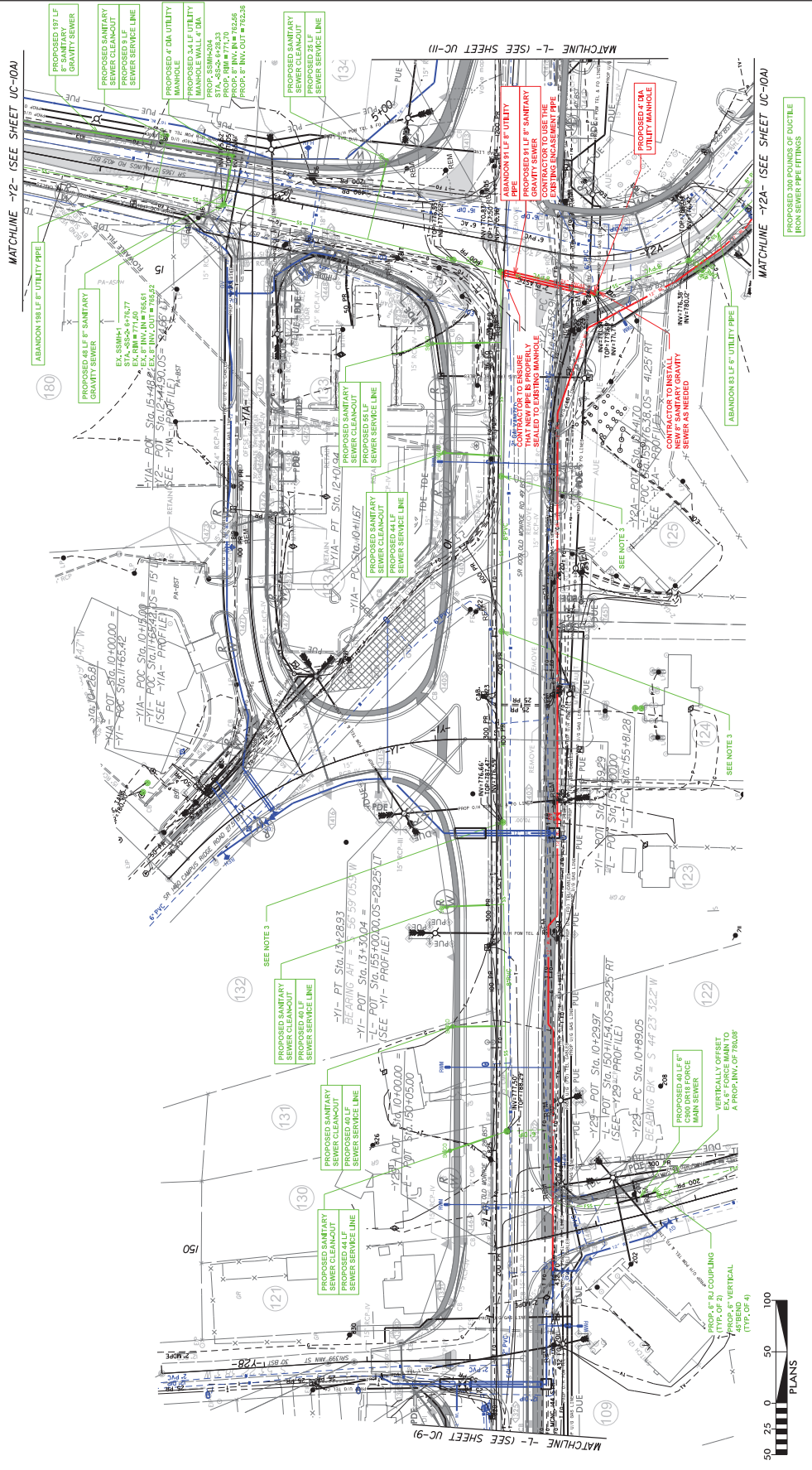
MATCHLINE -L- (SEE SHEET UC-10)

PROJECT REFERENCE NO.	U-474AC
SHEET NO.	UC-10
DESIGNED BY:	AP
DRAWN BY:	AP
CHECKED BY:	TB
APPROVED BY:	
REVISED:	
	
NORTH CAROLINA UTILITIES ENGINEERING SOCIETY TRANSPORTATION PLANS ONLY EXPIRES 12/31/2018	
	



**UTILITY CONSTRUCTION**  
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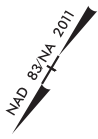
- NOTES:**
- CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  - SEE SHEET UC-5 FOR CORRESPONDING WATER LINE PAY ITEMS AND NOTES.
  - CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES. CONTRACTOR TO PROVIDE SOLID LID IF GUTTER FLOW WILL CROSS THE SSMH.



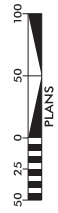
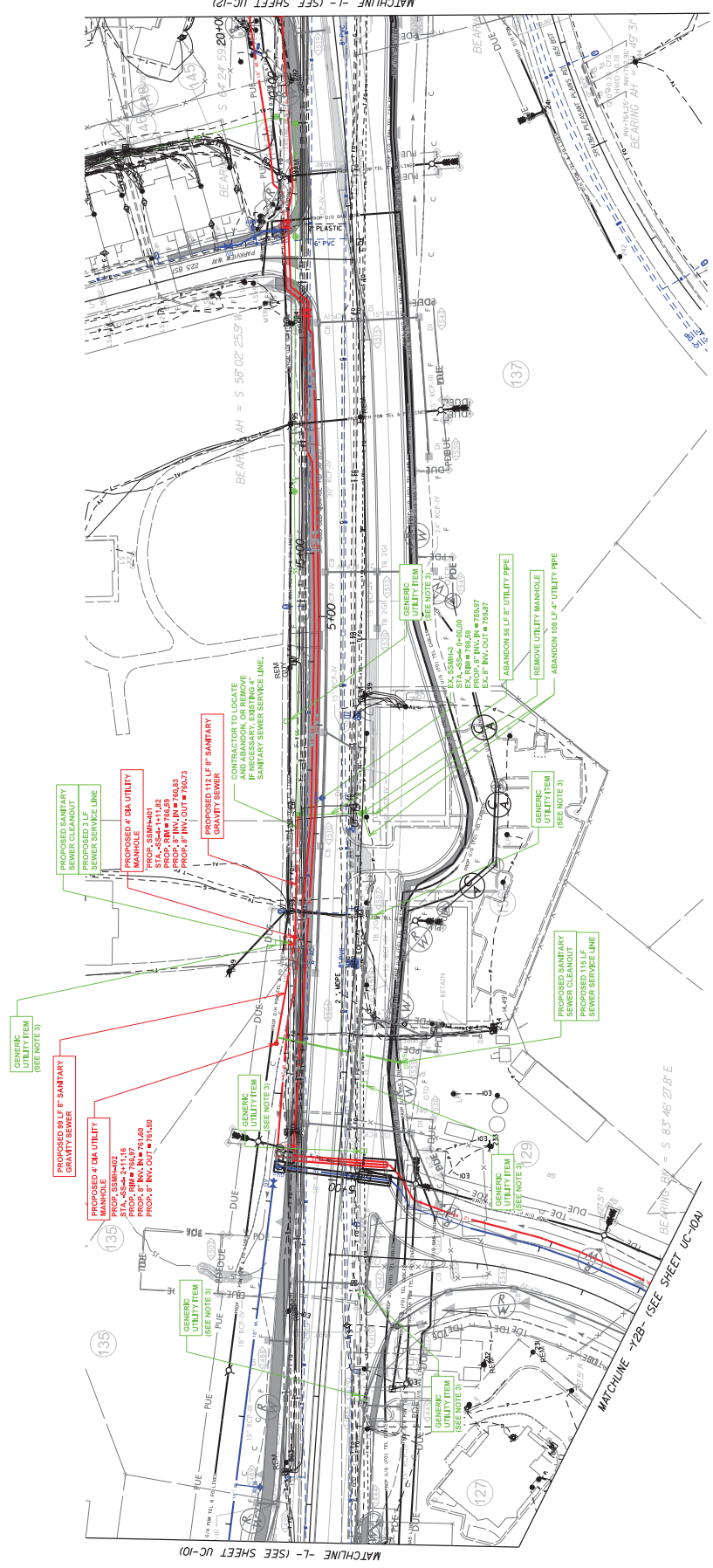


PROJECT REFERENCE NO.	U-474AC
SHEET NO.	UC-II
DESIGNED BY:	AP
DRAWN BY:	AP
CHECKED BY:	TB
APPROVED BY:	
REVISED:	
	
NORTH CAROLINA UTILITIES ENGINEERING SOCIETY TRANSPORTATION PLANS DIV.	
	

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

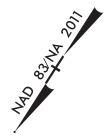


- NOTES:**
1. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE
  2. SEE SHEET UC-I FOR CORRESPONDING WATER LINE PAY ITEMS AND NOTES.
  3. CONTRACTOR TO REMOVE EXISTING INTERCEPTOR TANK AND INSTALL/CONNECT THE SEWER SERVICE LINE AS SHOWN IN STANDARD DETAIL ON SHEET UC-36.

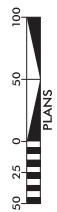
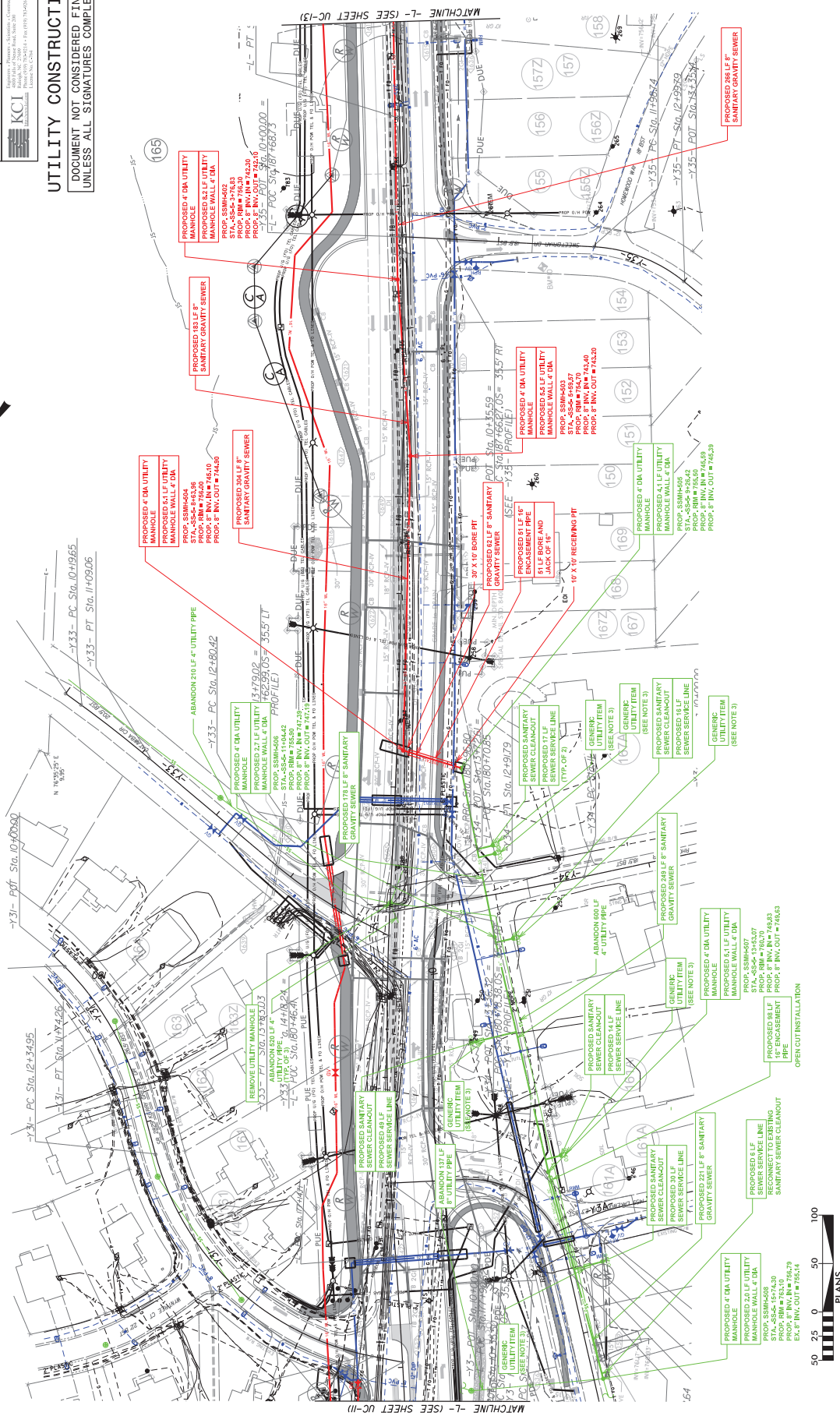


PROJECT REFERENCE NO.	U-474AC
SHEET NO.	UC-12
DESIGNED BY:	AP
DRAWN BY:	AP
CHECKED BY:	TB
APPROVED BY:	
REVISED:	
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER TRANSPORTATION EXPIRES 12/31/2025	
KCI KCI Infrastructure Solutions, a Commencement Member of the KCI Group 10000 Lakeside Drive, Suite 200 Charlotte, NC 28226	

UTILITY CONSTRUCTION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



- NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.
  2. SEE SHEET UC-7 FOR CORRESPONDING WATER LINE PAY ITEMS AND NOTES.
  3. SEE SHEET UC-11 FOR CORRESPONDING WATER LINE PAY ITEMS AND NOTES.
  4. INSTALL/CONNECT THE SEWER SERVICE LINE AS SHOWN IN STANDARD DETAIL ON SHEET UC-3G.



PLANS





# -WL-1-

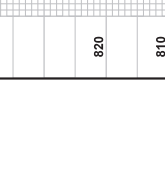
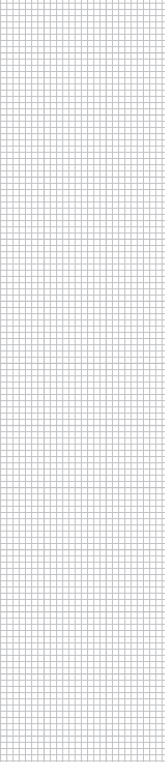
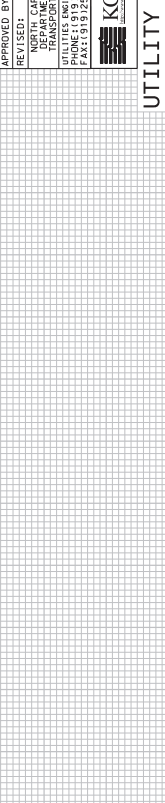
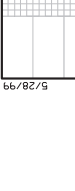
NOTES:  
1. CONTRACTOR TO VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.

PROJECT REFERENCE NO. UC-15  
SHEET NO. UC-15

DESIGNED BY: AP  
DRAWN BY: AP  
CHECKED BY: MM  
APPROVED BY: MM  
REVISED:  
NORTH CAROLINA  
REGISTERED PROFESSIONAL  
ENGINEER  
EXPIRES 12/31/2026  
KCI  
KCI ENGINEERING, INC.  
1000 W. HARRIS STREET  
Raleigh, NC 27601  
TEL: 919.216.4150  
FAX: 919.216.4151  
UTILITY CONSTRUCTION  
PLANS ONLY



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UNLESS ALL SIGNATURES COMPLETED



# -WL-2-

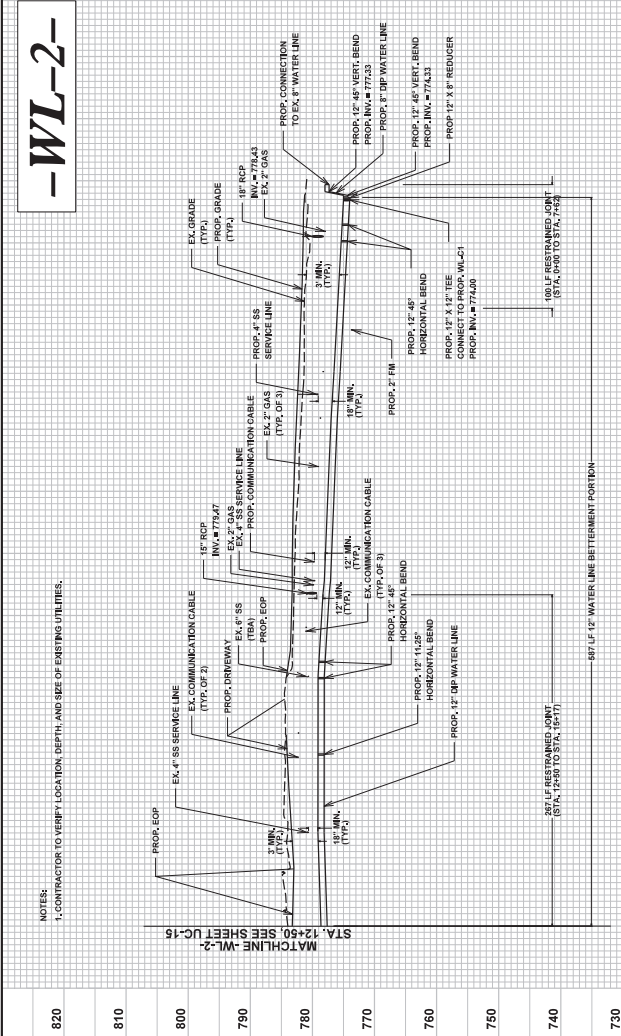


# -WL-2-



# -WL-2-

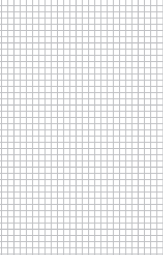
NOTES:  
1. CONTRACTOR TO VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.



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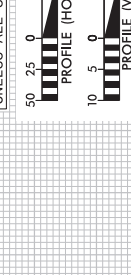
PROJECT REFERENCE NO. U-4714AC  
SHEET NO. UC-16

DESIGNED BY: AP  
DRAWN BY: AP  
CHECKED BY: MM  
APPROVED BY: MM  
REVISED:  
NORTH CAROLINA  
REGISTERED PROFESSIONAL  
ENGINEER  
EXPIRES 12/31/2024  
FAX: 919-250-4150  
UTILITY CONSTRUCTION  
PLANS ONLY



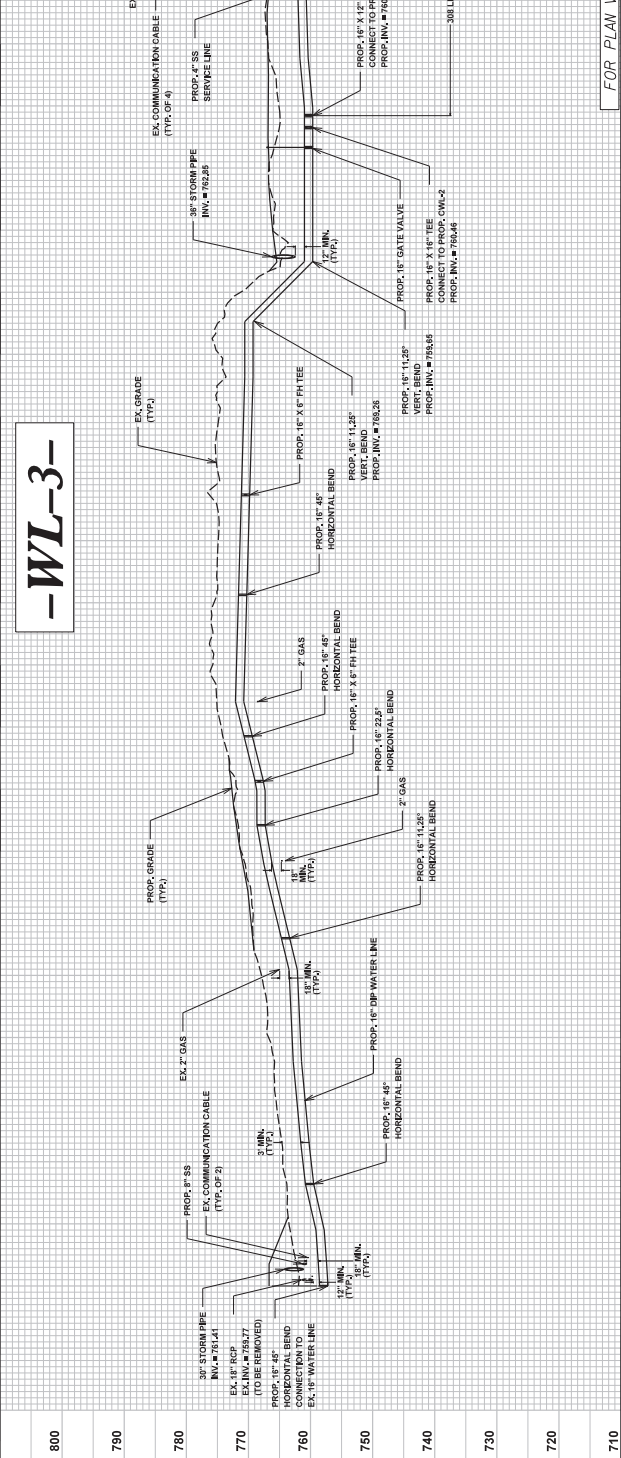
## UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



FOR PLAN VIEW, SEE SHEET UC-5 & 5A

# -WL-3-



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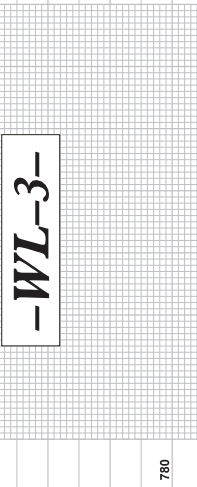
FOR PLAN VIEW, SEE SHEET UC-5 & UC-6



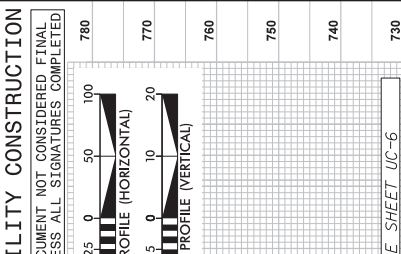
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**-WL-3-**

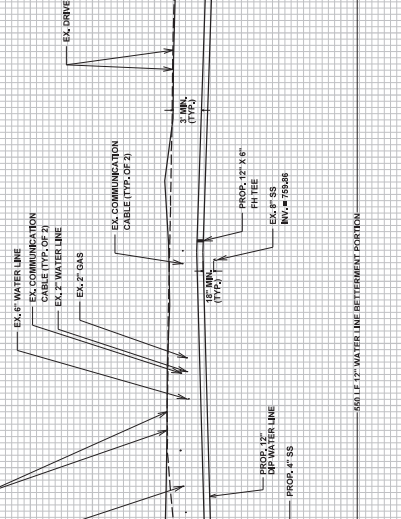
NOTES:  
 1. CONTRACTOR TO VERIFY LOCATION, DEPTH,  
 AND SIZE OF EXISTING UTILITIES.



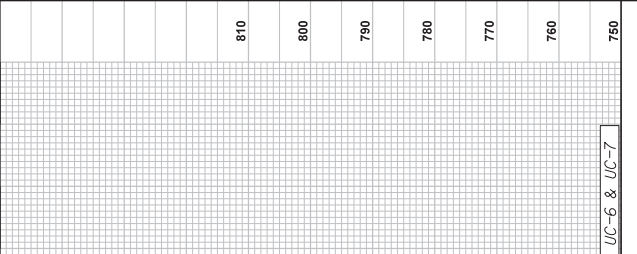
FOR PLAN VIEW, SEE SHEET UC-8



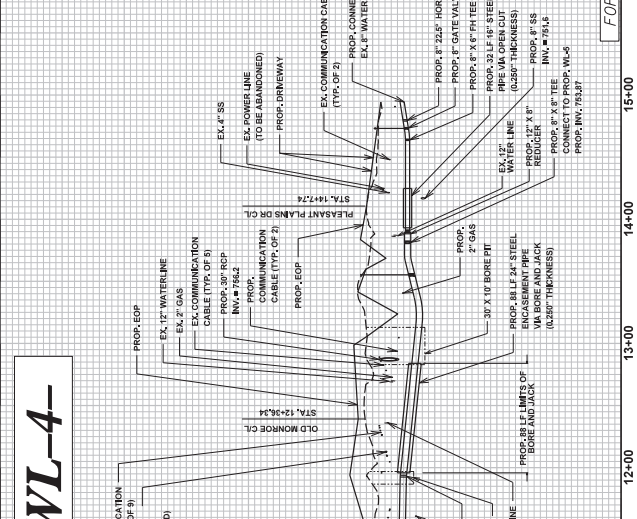
**UTILITY CONSTRUCTION**  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



FOR PLAN VIEW, SEE SHEET UC-6



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



FOR PLAN VIEW, SEE SHEETS UC-6 & UC-7

PROJECT REFERENCE NO. **U-4714AC** SHEET NO. **UC-19**

DESIGNED BY: **AH**  
 DRAWN BY: **AH**  
 CHECKED BY: **MM**  
 APPROVED BY: **MM**

REVISIONS:  
 NORTH CAROLINA  
 PROFESSIONAL ENGINEERING  
 EXPIRES 12/31/00  
 FAYAT & ASSOCIATES  
 1515 SOUTH COLLETT STREET  
 RALEIGH, NC 27601-1159  
 UTILITY CONSTRUCTION  
 PLANS ONLY

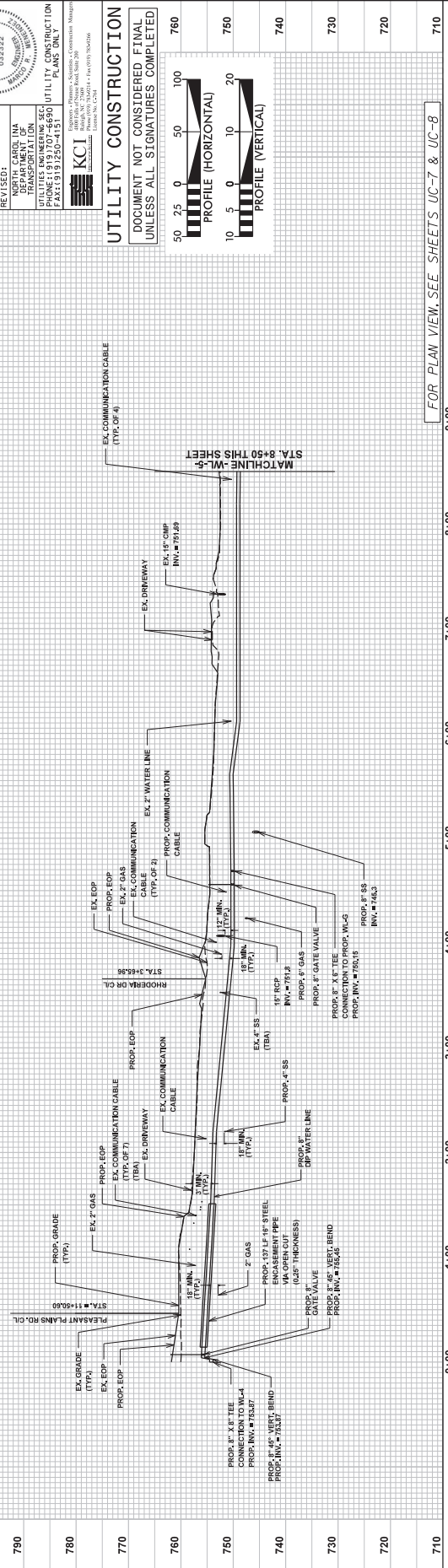
**UTILITY CONSTRUCTION**  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

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 PROFILE (HORIZONTAL)

10 5 0 10 20  
 PROFILE (VERTICAL)

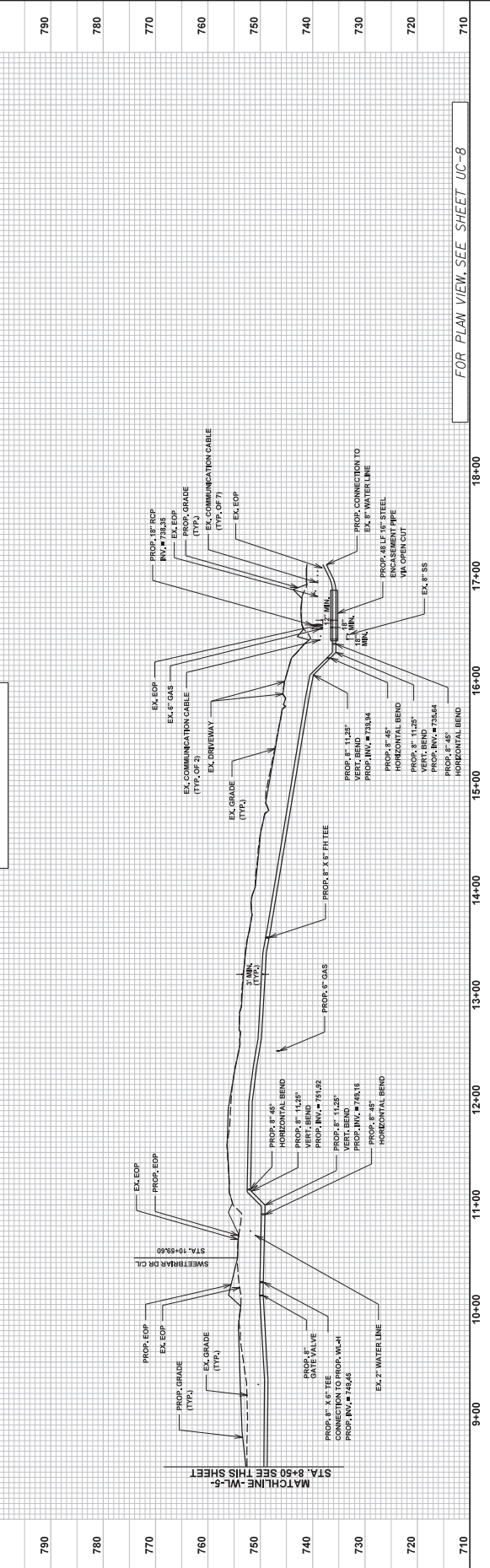
# -WL-5-

NOTES:  
1. CONTRACTOR TO VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.



FOR PLAN VIEW, SEE SHEETS UC-7 & UC-8

# -WL-5-

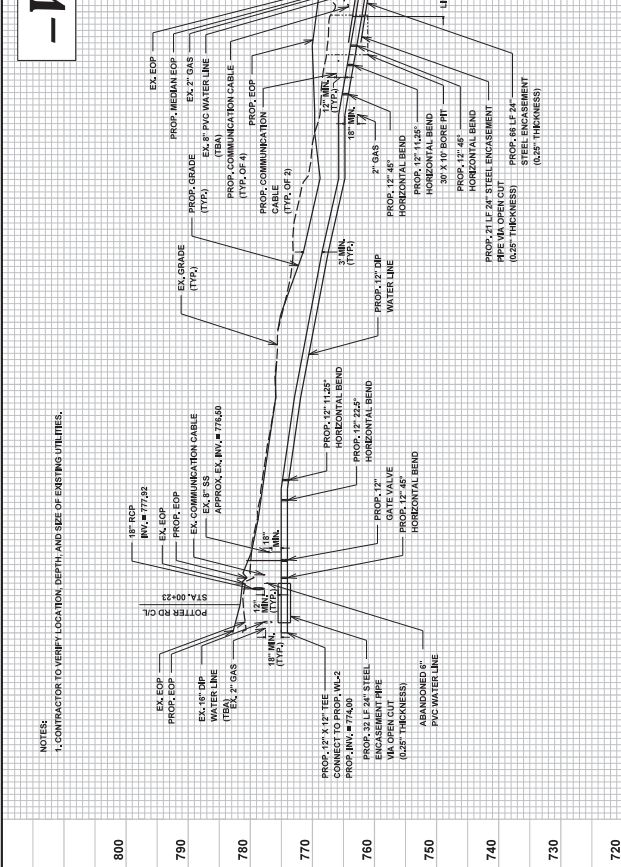


FOR PLAN VIEW, SEE SHEET UC-8



# -WL-C1-

NOTES:  
1. CONTRACTOR TO VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES.





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5/28/99

PROJECT REFERENCE NO. **U-471AAC** SHEET NO. **UC-21**

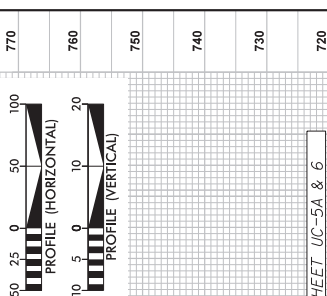
DESIGNED BY: **AP**  
 DRAWN BY: **AP**  
 CHECKED BY: **MM**  
 APPROVED BY: **MM**  
 REVISIONS:

  
 NORTH CAROLINIAN  
 PROFESSIONAL ENGINEER  
 EXPIRES 12/31/2004  
 NO. 032322  
 STATE OF NORTH CAROLINA

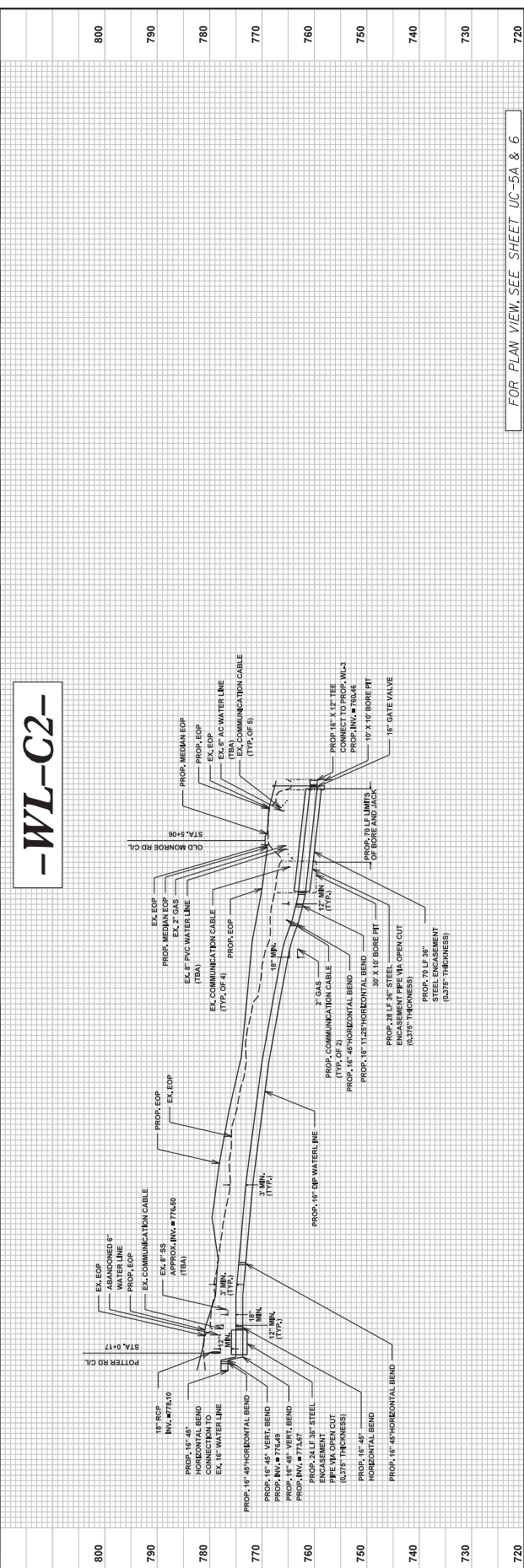
  
**KCI**  
 KCI CONSULTANTS, INC.  
 1000 W. HARRIS STREET  
 LENOIR, NC 28756

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

UTILITY CONSTRUCTION  
 PLANS ONLY  
 PROJECT NO. U-471AAC  
 SHEET NO. UC-21



FOR PLAN VIEW, SEE SHEET UC-5A & 6



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FOR PLAN VIEW, SEE SHEET UC-5A & 6

04-FEB-2026 09:2  
 8383 1587 2017.24170182.03-U-471AAC Water and Wastewater-U-471AAC-UC21.plt  
 5/28/99







Utility Owner: Union County - Betterment  
 County: Union  
 Route: SR 1009  
 Length:

EXHIBIT B

UC AGREEMENT  
 COST ESTIMATION  
 FOR U-4714AC

Based on Utility Construction Plans- 02/06/2026(U-4714AC)  
 Prepared By: Seth Shearon  
 Checked By: Marco Menendez  
 Date: 2/9/2026

Line Item	Item No.	Pay Item	Quantity	Unit	Betterment		Union County Cost Responsibility
					Union County	Union County	
1	0318000000-E	Foundation Conditioning Material, Minor Structures	783	TONS			17%
2	0321000000-E	Foundation Conditioning Geotextile	3,759	SY			58%
3	5691300000-E	8" Sanitary Gravity Sewer	1,228	LF			100%
4	5801000000-E	Abandon 8" Utility Pipe	91	LF			100%
5	5775000000-E	4' Dia Utility Manhole	7	EA			100%
6	5781000000-E	Utility Manhole Wall 4' Dia.	26	LF			100%
7	5326600000-E	16" Water Line	2,881	LF			43%
8	5326200000-E	12" Water Line	3,281	LF			6%
9	5540000000-E	6" Valve	1	EA			100%
10	5558000000-E	12" Valve	8	EA			59%
11	5558600000-E	16" Valve	2	EA			78%
12	5666000000-N	Fire Hydrant	1	EA			100%
13	5673000000-E	Fire Hydrant Leg	9	LF			100%
14	5329000000-E	Pounds of Ductile Iron Water Pipe Fittings	18,065	LBS			80%
15	5835700000-E	16" Encasement Pipe	84	LF			100%
16	5836000000-E	24" Encasement Pipe	126	LF			29%
17	5836400000-E	36" Encasement Pipe	88	LF			53%
18	5872500000-E	Bore and Jack of 16"	84	LF			100%
19	5872500000-E	Bore and Jack of 24"	66	LF			55%
20	5872500000-E	Bore and Jack of 36"	88	LF			33%
					<b>Opinion of Probable Construction Cost \$</b>		<b>\$ 1,294,307.81</b>

Project: U-4714AC

UC-1

County: Union

**PROJECT SPECIAL PROVISIONS**  
Utility Construction  
Union County



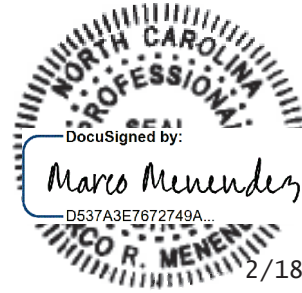
ISO 9001:2015 CERTIFIED

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

4800 Falls of Neuse Rd., Suite 200 • Raleigh, NC 27609 • Phone 919-783-9214

EXHIBIT C

SPECIAL  
PROVISIONS  
FOR U-4714AC



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UNLESS ALL SIGNATURES COMPLETED

**GENERAL CONSTRUCTION REQUIREMENTS:**

**Specifications:**

The proposed water and sewer line construction shall meet the applicable requirements of the NC Department of Transportation “Standard Specifications for Roads and Structures” dated January 2024 (which includes measurement and payment); Union County’s “Sanitary Sewer and Water Specifications” revision #8 dated 5/13/25 and “Standard Details” dated 9/13/24, the notes and details provided in the construction plans and the provisions outlined below.

Measurement and payment for proposed Utility Construction shall conform to the applicable requirements of the 2024 NCDOT Standard Specifications for Roads and Structures and as modified by these Special Provisions. If a discrepancy arises between the NCDOT Standard Specifications and Union County’s Sanitary Sewer and Water Specifications that is not related to measurement and payment, the more stringent requirement shall prevail.

**Owner:**

The existing water and sewer lines and service lines within Union County are owned by Union County and operated and maintained by Union County Water. The primary contact person for the owner is Mr. Thomas Mann, PE; office phone is 704-292-2560; cell phone is 803-622-8169.

**1500-2 Cooperation with the Utility Owner:**

**Page 15-1, Article 1500-2 Cooperation with the Utility Owner, lines 23 and 24, delete all of lines 23 and 24 and replace with the following paragraphs:**

Project: U-4714AC

**UC-2**

County: Union

Notify the utility owner at least 96 hours in advance of all arrangements for temporary service and for agreement with the utility owner as to the time that the service may be interrupted.

Testing, inspection, and acceptance of water and sewer utility shall be in accordance with NCDEQ and Union County requirements. Contractor shall coordinate with Union County to ensure all testing, inspection, and documentation requirements are met

Union County will notify water customers of planned service interruptions associated with work on the water and sewer lines. 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 and sewer customers.

After testing is approved, Contractor to coordinate with Union County field representative to determine and plan working transfers of water service from existing water lines to the new water lines with a minimum of service interruption for water customers.

**Utility Locations and Contractor Responsibility:**

Contractor is to notify NCDOT and Union County field representatives of any discrepancies between the plans and field conditions prior to proceeding with work.

**Placing Pipelines into Service:**

Coordinate with Union County field representative to develop a plan to connect the new water lines to existing water lines while minimizing water service interruptions

For connections to existing water lines requiring a shutdown of the water system, contractor is to coordinate with Union County field representative. Provide a minimum of 96 hours of notice to field representative prior to the need for isolation of water lines to allow Union County time to notify Union County Operations staff, Union County Customer Care, emergency personnel, and customers of the planned service outage.

**Materials:**

Water line pipe of 6" and 8" diameter shall be Pressure Class 350 ductile iron pipe or PVC C900 pipe. 12" water line pipe shall be Pressure Class 350 ductile iron pipe. 16" water line pipe shall be Pressure Class 250 ductile iron pipe. Follow Union County specifications and NCDOT Section 1036. In addition to allowable restraining systems for restrained-joint ductile iron pipe as provided in the Union County specifications, field-locking gaskets are allowable as a restraining device.

All 2" water line pipe shall be PVC 1120 SDR 21 in accordance with ASTM-D2241. Fittings for 2" PVC pipe shall be push-on joint PVC or threaded malleable iron.

Project: U-4714AC

**UC-3**

County: Union

All water service line ¾" thru 2" shall be Type "K" copper tubing with compression fittings. Splicing of copper service line of runs less than 100 feet will not be allowed. Provide and install a continuous segment of copper water service line between the corporation stop and water meter.

Gravity sewer pipe shall be SDR 26 PVC pipe or Pressure Class 350 ductile iron pipe. Pressure Class 350 ductile iron pipe shall be furnished with ceramic epoxy lining, Tnemec 431 or equal, and seal coating in accordance with ANSI/AWWA A21.4/C104.

All sewer lateral pipe shall be smooth-walled Schedule 40 PVC pipe in accordance with ASTM D1784, or Pressure Class 350 ductile iron pipe furnished with ceramic epoxy lining, Tnemec 431 or equal, and seal coating in accordance with ANSI/AWWA A21.4/C104.

Provide and use #12 or #14 AWG stranded-copper wire with blue insulation for the utility locator wires on water pipe. Provide and use #12 or #14 AWG stranded-copper wire with green insulation for the utility locator wires on sewer pipe.

Ductile iron sewer fittings shall have a ceramic epoxy lining, Tnemec 431 or equal, and seal coated in accordance with ANSI/AWWA A21.4/C104. Ductile iron water pipe and fittings shall meet the requirements of Section 1036-5 (Ductile Iron Pipe and Fittings) of the NCDOT Standard Specifications for Roads and Structures, January 2024.

Valves, fire hydrants, corporation stops, saddles, and materials associated with water services shall meet the requirements for brand and model number as provided in the Union County Water "Sanitary Sewer and Water Specifications" revision #8 dated 5/13/25 and "Standard Details" dated 9/13/24. Water and sewer pipe for utility lines to be made in USA.

2" blow offs include MJ plug to match the diameter of the water pipe as required, 2" brass nipple, 2" brass pipe, 2" 90-degree bend, 2" coupling, 2" gate valve when required, valve box, concrete ring, and thrust blocking or restraint as required.

Elevations of fire hydrants above finished grade to be within manufacturer's recommendation. Elevations of fire hydrants to be determined by Contractor. No separate payment will be made for fire hydrant extensions. The cost of fire hydrant extensions is to be included in the unit price for fire hydrants.

Provide and install materials for temporary connection between the existing and proposed water mains for testing as called for in the plans. Apparatus for chlorine injection for testing should be installed along the temporary connection whenever possible. Such materials and associated work for testing will be incidental to water line installation. No separate payment will be made for installation and removal of temporary connections.

**Testing and Sterilization:**

Water for filling and testing water lines will be provided by Union County. Tests shall be repeated until test results are satisfactory.

Project: U-4714AC

UC-4

County: Union

Samples for bacteriological testing will be collected by Union County personnel and tested at a laboratory under contract by Union County. Samples will typically be collected only on Wednesday mornings. 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 delivered to the lab. There will be no cost to Contractor for sample testing for the first sample collected for each water line segment to be tested. Re-testing for failing bacteriological tests will be \$50 per sample, payable to the testing laboratory, to be paid by contractor upon sample collection. Price is subject to change.

**Twelve Month Guarantee:**

(A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department or Union County. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Department or Union County, and/or for use in excess of the design.

(B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. Union County's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. Union County would be afforded the same warranty as provided by the Manufacturer.

This guarantee provision shall be invoked only for major components of work in which the Contractor would be wholly responsible for under the terms of the contract. Examples would include water and sewer pipe, valves, blow off assemblies, fire hydrants, and manholes. This provision will not be used as a mechanism to force the Contractor to return to the project to make repairs or perform additional work for which the Department or Union County would normally compensate the Contractor. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

**Payment:**

No direct payment will be made for utility construction work required by the preceding provisions, which are general requirements applying to utility construction, and all the requirements stated will be considered incidental work, paid at the contract unit prices of the various utility items included in this contract.

Project: U-4714AC

**UC-5**

County: Union

Measurement and payment for work will be in accordance with the NCDOT Standard Specifications for Roads and Structures, January 2024, with the exception of the following:

**SP-1 RELOCATE SEWER LATERAL CLEAN OUT TO NEW RIGHT-OF-WAY**

**Description:**

Locate and remove existing sewer clean out and lateral pipe and install new clean out and lateral pipe.

**Materials:**

Refer to Division 10 and Union County Specifications.

Item	Section
Sanitary Sewer Pipe and Fittings	1034

Use any pipe specified under Section 1034 except where a particular type of pipe is specified in the plans or required by environmental regulations or Departmental or Union County policy. Verify the pipe is appropriate for the test pressure of the system and the external loading.

For sewer services and laterals, use Schedule 40 PVC pipe or Pressure Class 350 ductile iron pipe furnished with ceramic epoxy lining, Tnemec 431 or equal, and seal coating in accordance with ANSI/AWWA A21.4/C104.

**Construction Methods:**

Locate existing sewer clean out at old roadway right-of-way line. Contact North Carolina 811 as needed to locate the existing sewer service line. Coordinate with sewer customer as needed to minimize disruption to service.

Apply Section 1505 for excavation, trenching, pipe laying and backfill to sanitary sewer installation. Perform all excavation to uncover existing clean out, wye, and sewer lateral. Saw-cut and remove wye and vertical clean out pipe. Remove existing lateral pipe between the existing clean out and proposed clean out at the right-of-way or easement line shown in the plans.

Install 4-inch minimum diameter sanitary sewer clean-out flush with finished grade on 4-inch and 6-inch service lines. Provide clean-outs at the right-of-way line and at changes in direction. Do not locate clean-outs within the roadway pavement or shoulders. Provide clean-outs no more than 50 feet apart when beyond the roadway shoulders. Provide and install Pressure Class 350 ductile iron pipe furnished with ceramic epoxy lining, Tnemec 431 or equal, and seal coating in accordance with ANSI/AWWA A21.4/C104 when required due to proximity to other utilities.

Assemble pipe in accordance with the recommendations of the manufacturer. Connect pipe to the saw-cut end of the existing lateral pipe and extend new lateral pipe to the new clean out location. Extend new pipe at the same slope as the existing sewer lateral pipe on the “sewer side” of the saw-cut. Differences in the elevations between the new lateral pipe and the existing private sewer

Project: U-4714AC

**UC-6**

County: Union

lateral pipe at the right-of-way should be made up in the vertical clean out pipe using combination wyes as needed. Connect the existing sewer lateral pipe at the right-of-way to the new clean out. Provide sleeves or couplings as needed.

**Measurement and Payment:**

Relocate Sewer Lateral Clean Out to New Right-of-Way will be paid as the actual number of sewer clean outs relocated to the new right-of-way line, complete in place.

Materials used for clean outs and extension of sewer service lines for which there is a pay item will be paid under the specific pay item, including Sanitary Sewer Clean-Out and Sewer Service Line. No extra payment will be made for work included in other pay items. No separate payment will be made for explorations, PVC fittings, adapters, couplings, or construction equipment.

**Pay Item:**

Relocate Sewer Lateral Clean Out to New Right-of-Way

**Pay Unit**

Each

**SP-2 REMOVE INTERCEPTOR TANK AND RECONNECT SEWER SERVICE**

**Description:**

Locate and remove existing concrete sewer interceptor tanks and connect associated existing sewer service lines to new sanitary sewers. Provide clean outs as required.

**Materials:**

Refer to Division 10 and Union County Specifications.

**Item**

Sanitary Sewer Pipe and Fittings

**Section**

1034

Use any pipe specified under Section 1034 except where a particular type of pipe is specified in the plans or required by environmental regulations or Departmental or Union County policy. Verify the pipe is appropriate for the test pressure of the system and the external loading.

For sewer services and laterals, use Schedule 40 PVC pipe or Pressure Class 350 ductile iron pipe furnished with ceramic epoxy lining, Tnemec 431 or equal, and seal coating in accordance with ANSI/AWWA A21.4/C104.

**Construction Methods:**

Locate existing sewer interceptor tanks near old roadway right-of-way line. Contact North Carolina 811 as needed to locate the existing sewer service line and tank. Coordinate with sewer customer as needed to minimize disruption to service.

The new mainline sewer must be installed, tested, approved, and permitted prior to removal of interceptor tanks and connection of new sewer service lines to the new sewer. Testing of the new mainline sewer is to include the sewer, sewer lateral service pipe to the clean out, and the clean

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out. If the interceptor tank is in the way of the new lateral pipe or clean out, test as much lateral pipe as is available and install the clean out as part of the service reconnection.

Apply Section 1505 for excavation, trenching, pipe laying and backfill to sanitary sewer installation. Furnish all equipment and materials necessary to perform all work. Excavate as needed to uncover the existing interceptor tank, clean out, and sewer lateral at each end of the tank. Pump all contents from the tank and dispose of the contents in a legal manner. Saw-cut lateral pipes entering and exiting the tank. Remove the tank and dispose of it at an environmentally approved location. Backfill and compact the excavation to finished service pipe elevation. Connect the new service pipe to the existing service pipe at the rear of the tank location and extend new service pipe to the proposed sewer clean out location at the right-of-way or permanent utility easement as shown in the plans. Install a plug on the saw-cut service line downstream of the tank location to complete abandonment of the old sewer service. Backfill and compact over the new service pipe to finished grade in accordance with the project specifications. Connection to the clean out and connection to the new sewer line must be accomplished immediately as an extension of this work to complete the new sewer service. Restore work areas in accordance with the project specifications and requirements.

Install 4-inch minimum diameter sanitary sewer clean-out flush with finished grade on 4-inch and 6-inch service lines. Provide clean-outs at the right-of-way line and at changes in direction. Do not locate clean-outs within the roadway pavement or shoulders. Provide clean-outs no more than 50 feet apart when beyond the roadway shoulders. Provide and install Pressure Class 350 ductile iron pipe furnished with ceramic epoxy lining, Tnemec 431 or equal, and seal coating in accordance with ANSI/AWWA A21.4/C104 when required due to proximity to other utilities.

Assemble pipe in accordance with the recommendations of the manufacturer. Differences in the elevations between the new lateral pipe and the existing private sewer lateral pipe at the right-of-way should be made up in the vertical clean out pipe using combination wyes as needed. Provide sleeves, bushings, or couplings as needed.

**Measurement and Payment:**

*Remove Interceptor Tank and Reconnect Sewer Service* will be paid as the actual number of interceptor tanks removed and services reconnected, complete in place.

Materials used for clean outs and extension of sewer service lines for which there is a pay item will be paid under the specific pay item, including Sanitary Sewer Clean-Out and Sewer Service Line. No extra payment will be made for work included in other pay items. No separate payment will be made for explorations, PVC fittings, adapters, couplings, or construction equipment.

**Pay Item:**

Remove Interceptor Tank and Reconnect Sewer Service

**Pay Unit**

Each