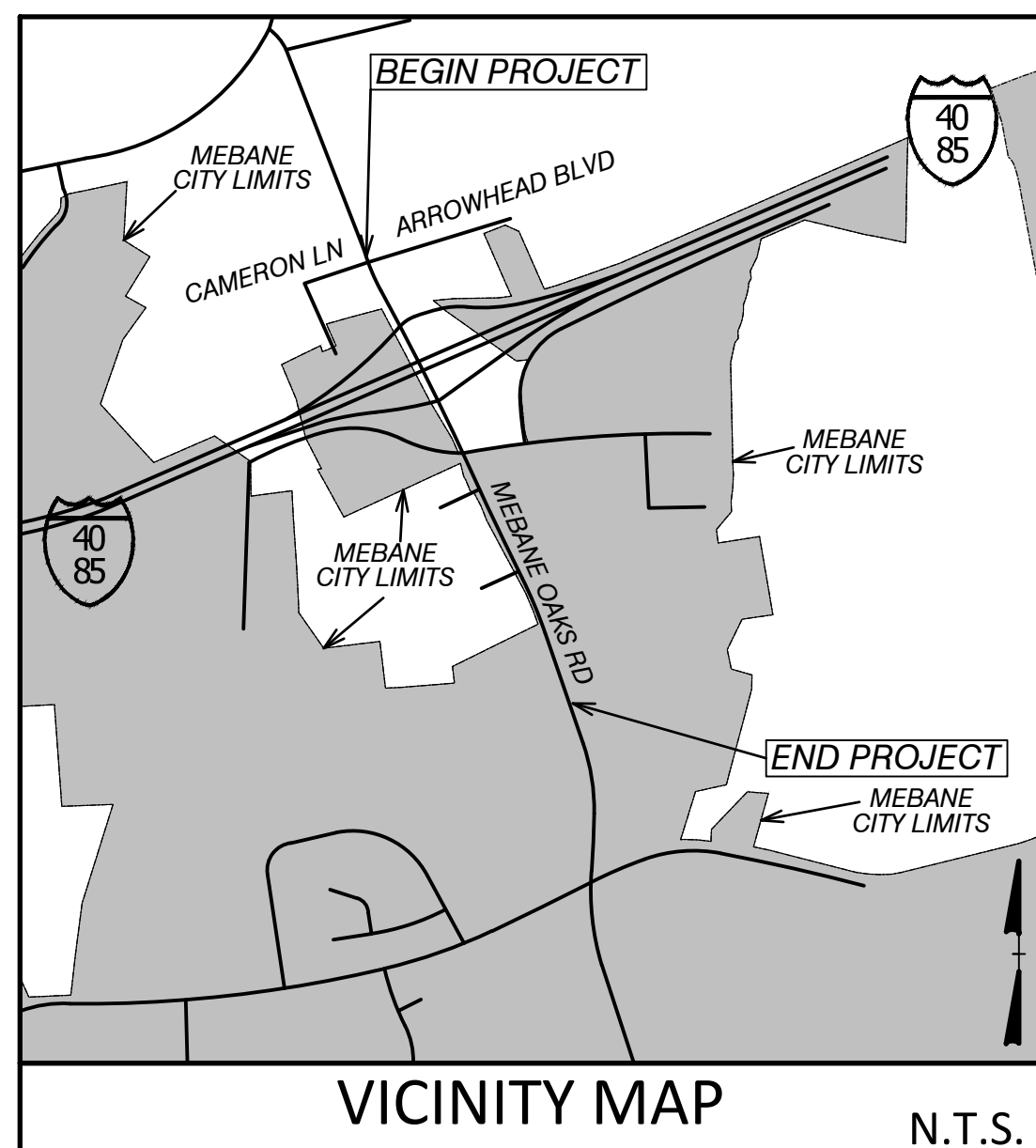


TIP PROJECT: I-5711

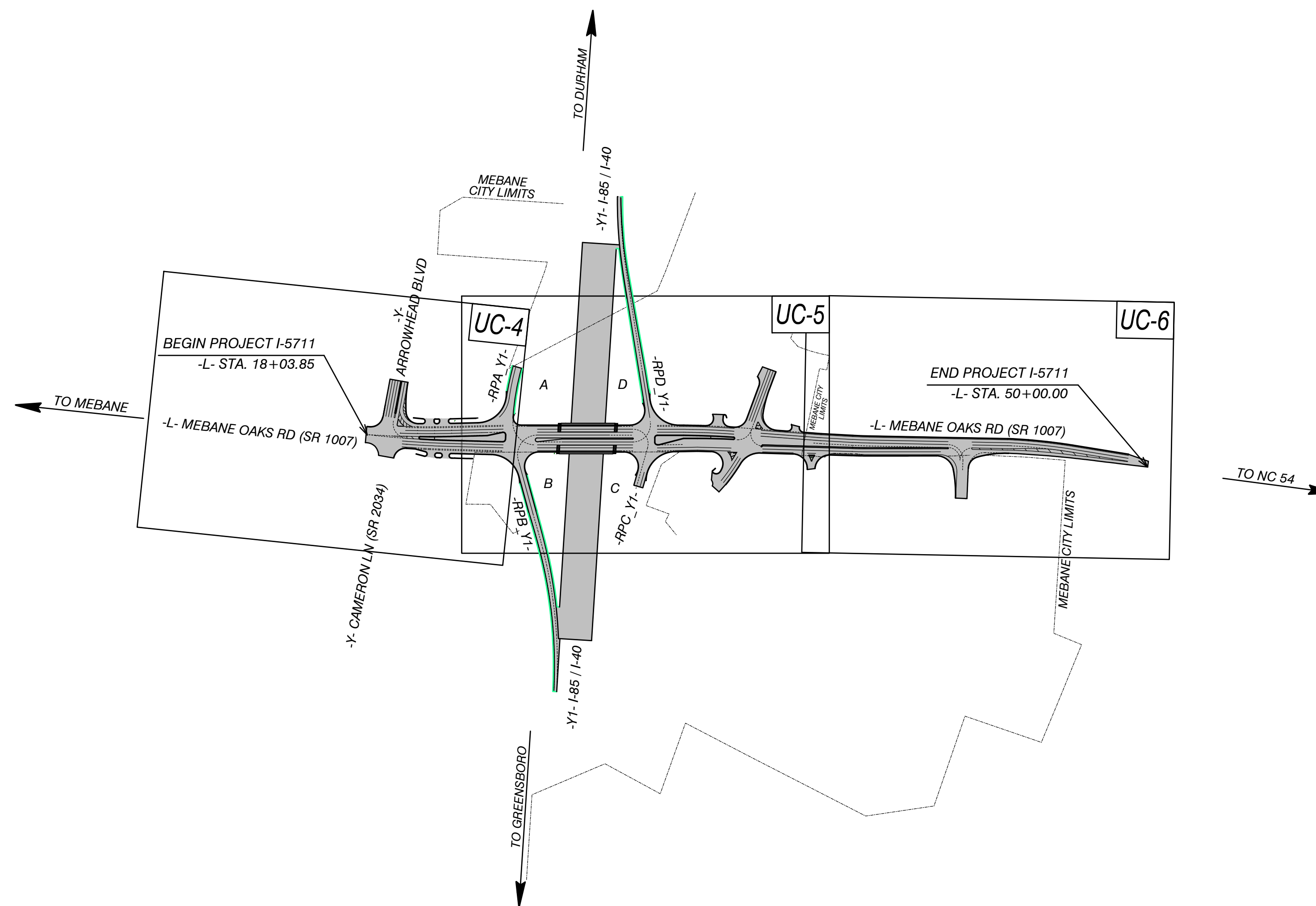
CONTRACT: C204352



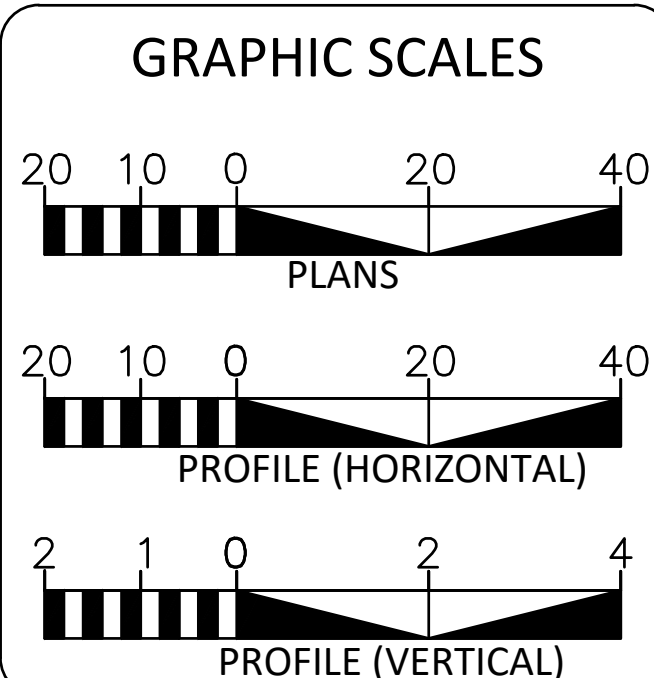
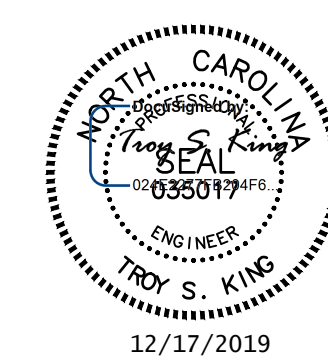
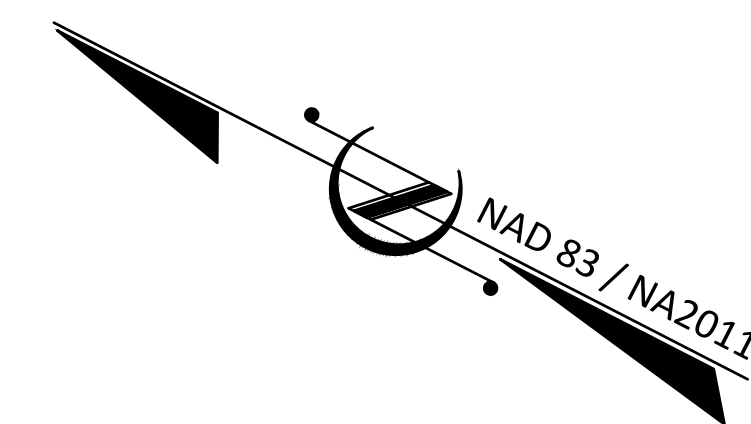
# EXHIBIT A: UTILITY CONSTRUCTION PLANS ALAMANCE COUNTY

LOCATION: INTERCHANGE IMPROVEMENTS AT I-40/I-85  
AND SR 1007 (MEBANE OAKS RD) IN MEBANE

TYPE OF WORK: WATER AND SEWER RELOCATIONS



|            |           |
|------------|-----------|
| T.I.P. NO. | SHEET NO. |
| I-5711     | UC-1      |



| SHEET NO.:      | DESCRIPTION:          |
|-----------------|-----------------------|
| UC-1            | TITLE SHEET           |
| UC-2 THRU UC-3  | DETAILS               |
| UC-4 THRU UC-6  | OVERALL PLAN SHEETS   |
| UC-7 THRU UC-10 | PLAN & PROFILE SHEETS |

| WATER AND SEWER OWNERS ON PROJECT |                      |
|-----------------------------------|----------------------|
| (A) WATER:                        | CITY OF MEBANE       |
| (B) SANITARY:                     | SEWER CITY OF MEBANE |

PREPARED IN THE OFFICE OF

alley, williams, carmen & king, inc.  
ENGINEERS, ARCHITECTS & SURVEYORS  
740 chapel hill road p.o. box 1179  
burlington, n.c. 27215 336/226-5534  
Firm's Engineering License No. F-0203

ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT

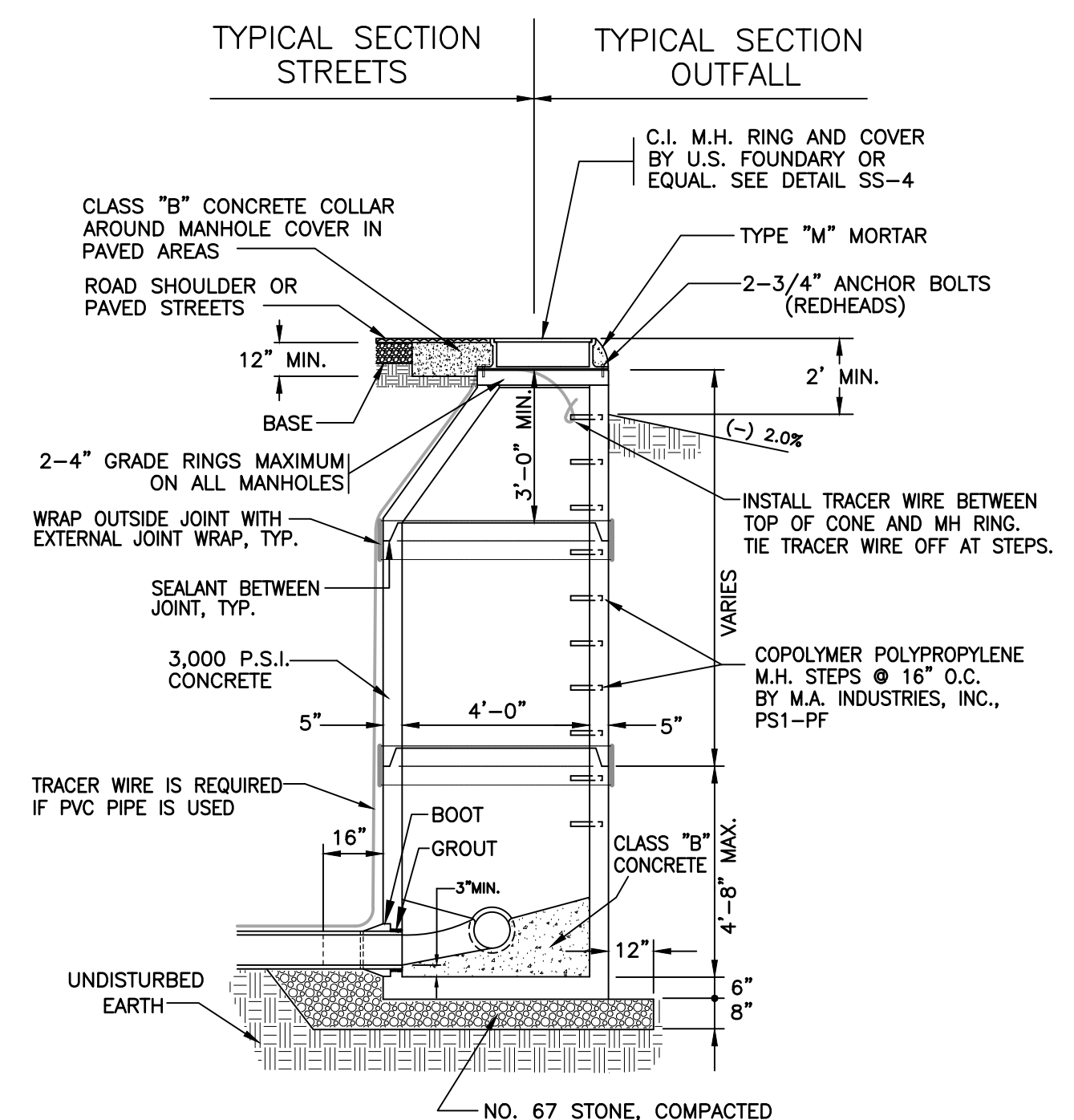
|               |                       |
|---------------|-----------------------|
| TROY KING, PE | CONSULTANT CONTACT #1 |
| WALLY FOX     | CONSULTANT CONTACT #2 |

DIVISION OF HIGHWAYS  
UTILITIES UNIT  
1555 MAIL SERVICES CENTER  
RALEIGH NC 27659-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

|                   |                             |
|-------------------|-----------------------------|
| TUCKER MARTIN, PE | UTILITIES REGIONAL ENGINEER |
| ALI KOUCHEKI, PE  | UTILITIES ENGINEER          |
| DAYTON MARTIN     | UTILITIES AREA COORDINATOR  |
| TANGA SAMPSON     | UTILITIES COORDINATOR       |

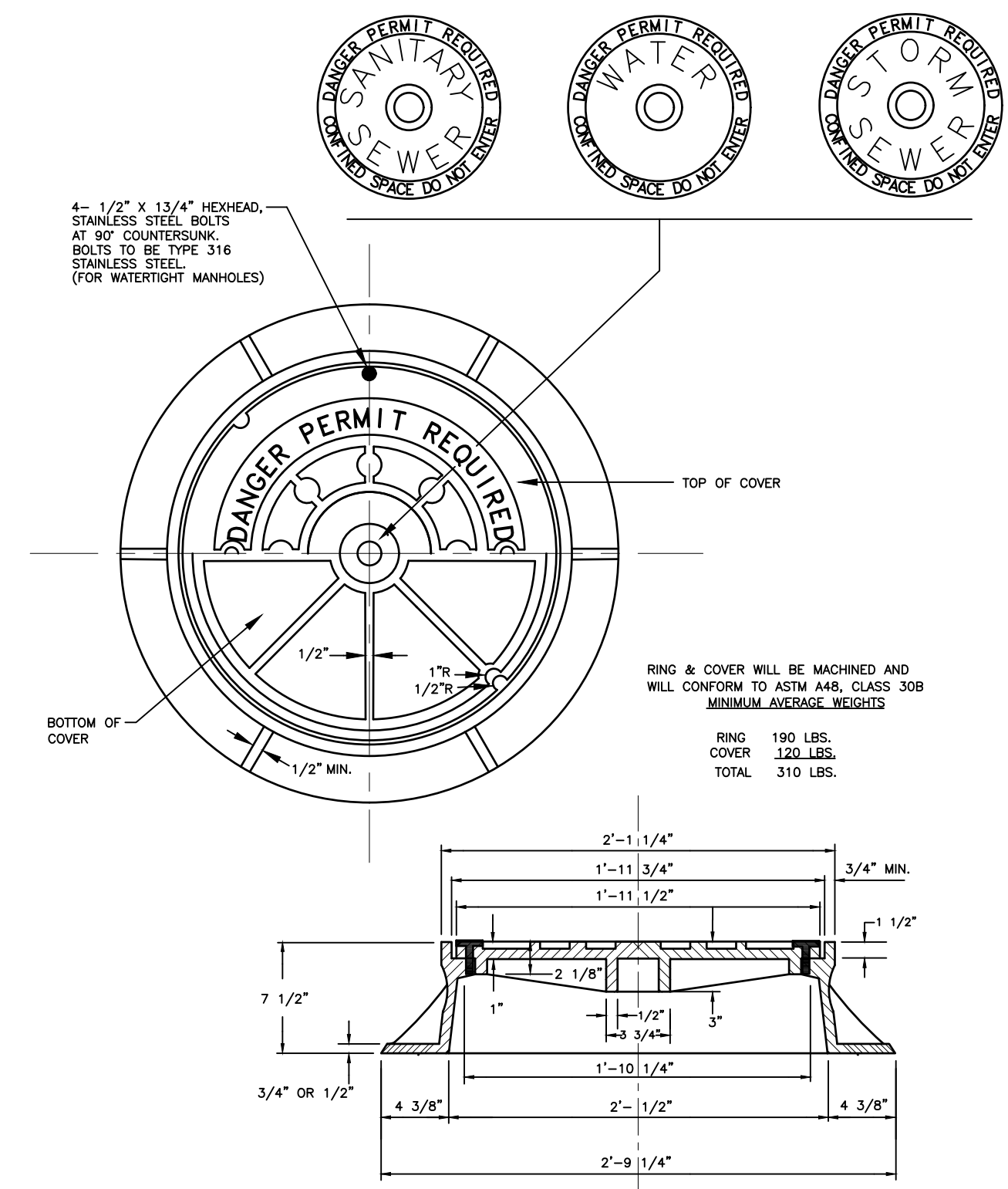
**alley, williams, carmen & king, inc.**  
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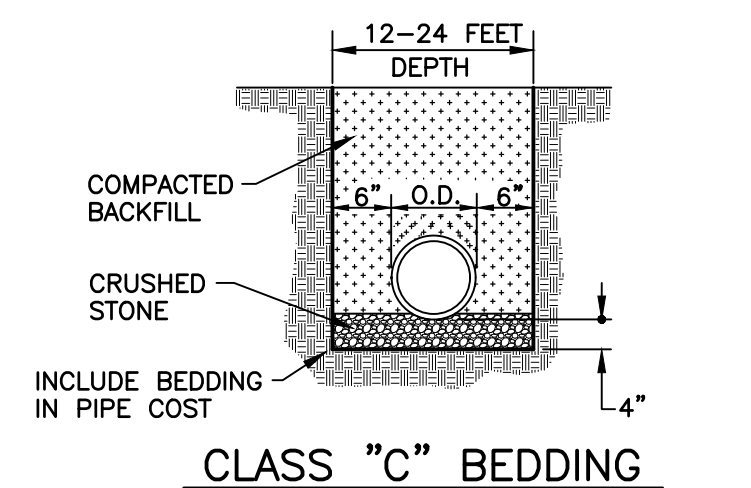


**NOTES:**  
 1. MANHOLES ARE TO BE AS MFG. N.C. PRODUCTS OR APPROVED EQUAL.  
 2. GROUT ALL JOINTS FROM INSIDE.

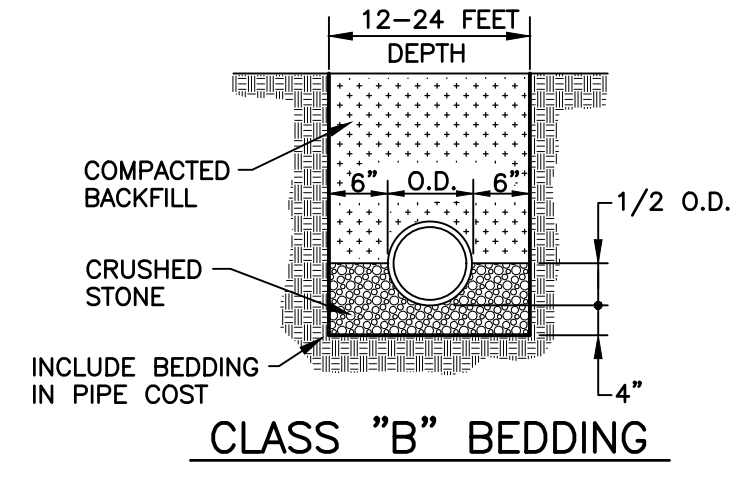
**STANDARD PRECAST MANHOLE**



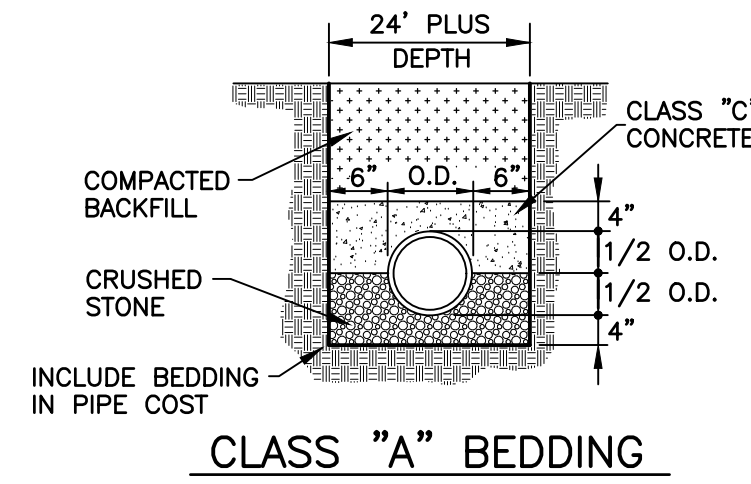
**MANHOLE RING AND COVER**



**CLASS "C" BEDDING**

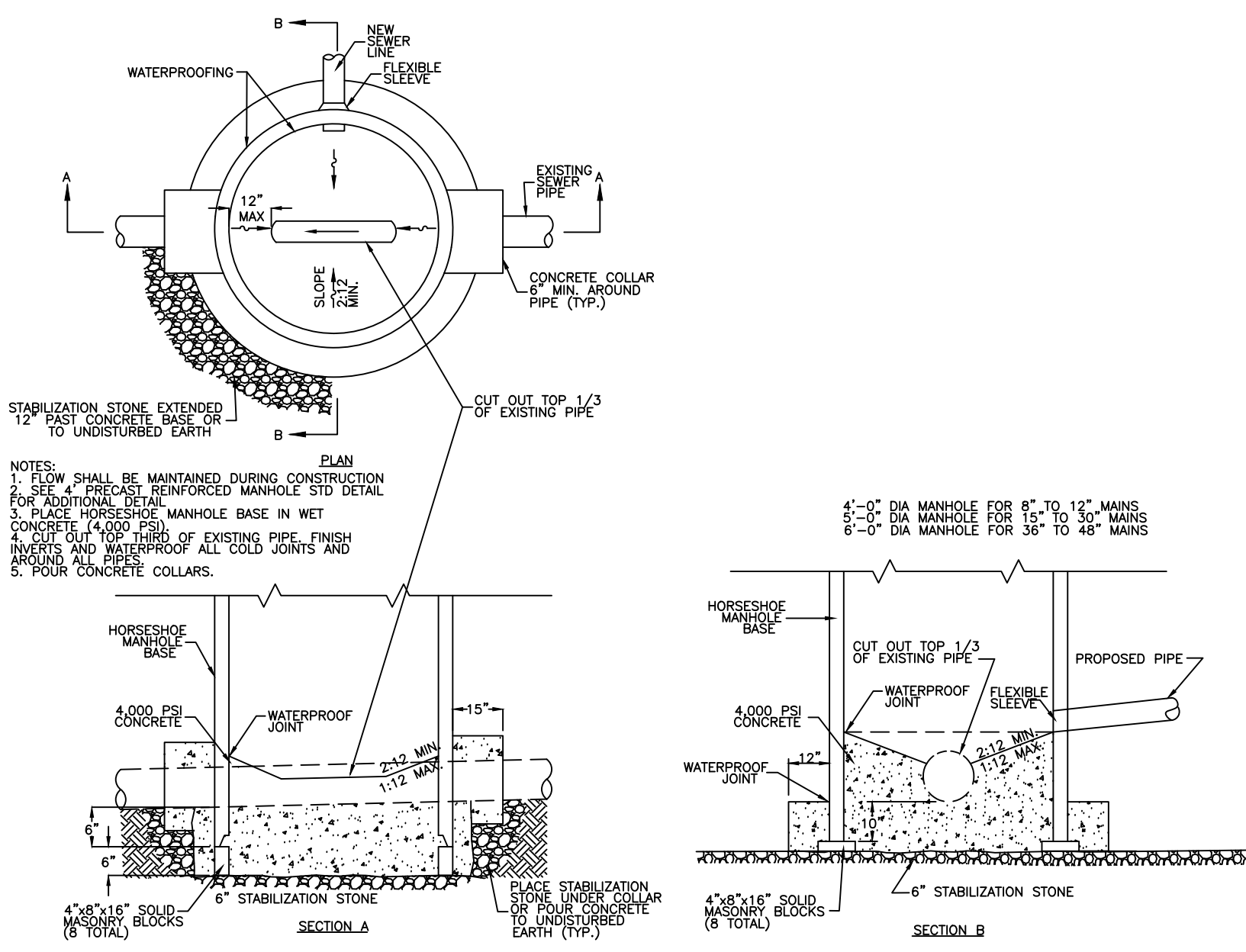


**CLASS "B" BEDDING**



**CLASS "A" BEDDING**

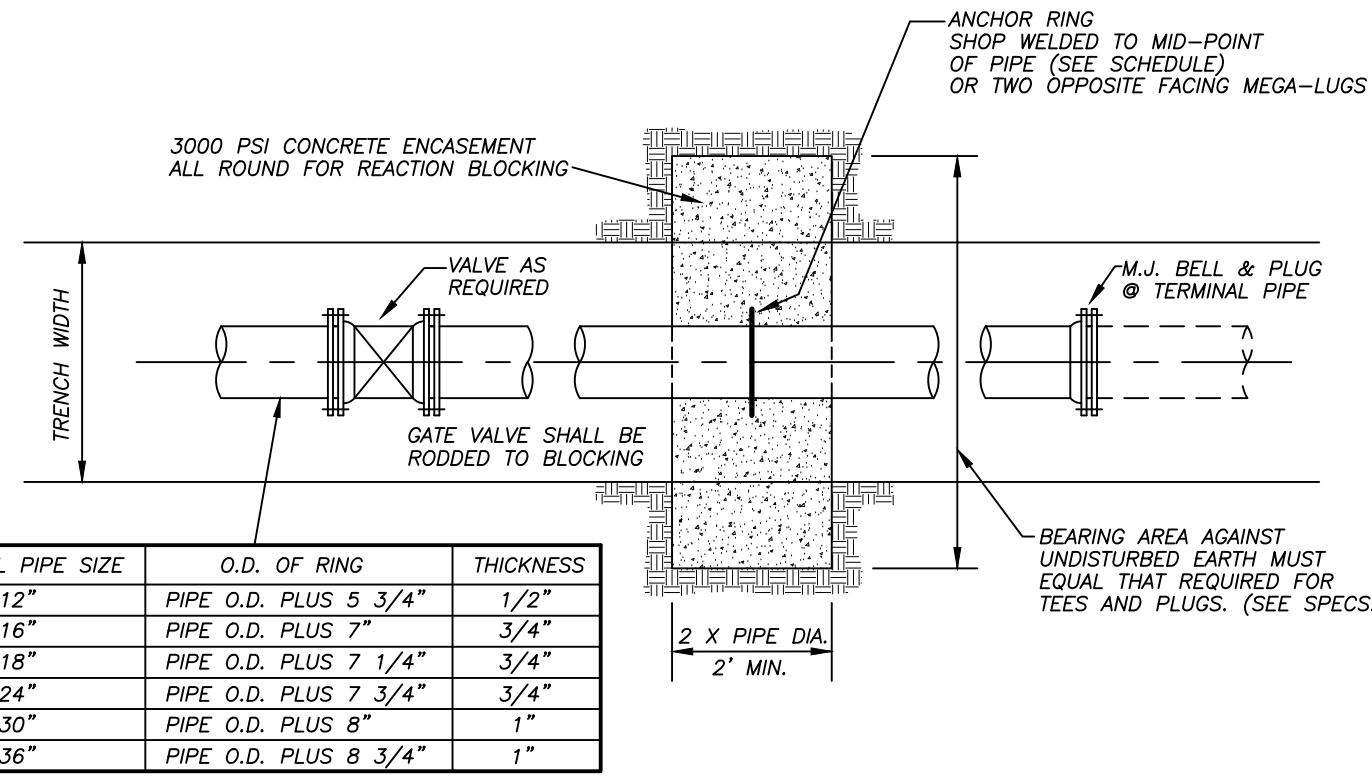
**SANITARY SEWER BEDDING**



**STANDARD MANHOLE INSTALLATION OVER EXISTING SEWER MAIN**

**GENERAL UTILITY NOTES (APPLICABLE TO ALL SHEETS):**

- CONTRACTOR SHALL INSTALL TEST CORPS AS NECESSARY FOR PRESSURE TESTING AND CHLORINATION. NO DIRECT PAYMENT WILL BE MADE FOR THIS ITEM AND WILL BE INCIDENTAL TO PIPE INSTALLATION.
- EROSION CONTROL SHALL BE COORDINATED WITH NCDOT ROADWAY PLANS.
- CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES AT PROPOSED WATER AND SEWER CROSSINGS PRIOR TO BEGINNING WORK AND CONFLICTS BROUGHT TO THE ATTENTION OF THE ENGINEER. ENGINEER, CONTRACTOR AND UTILITY COMPANIES WILL RESOLVE CONFLICTS PRIOR OR DETERMINE METHOD TO RESOLVE PRIOR TO PROCEEDING WITH THE WORK.
- FIELDWORK, LOCATIONS, ETC. PER NCDOT. CONTRACTOR TO FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CONTACT NC ONE CALL (811) PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY SHOULD IT BE NECESSARY FOR THE UTILITY TO HOLD OR RELOCATE POLES, GROUND BOXES, ETC. WHEN INSTALLING THE UTILITY LINE NEAR POLES, BOXES, ETC. NO EXTRA PAYMENT WILL BE MADE FOR THIS AS THE COST SHALL BE INCLUDED IN THE VARIOUS BID ITEMS.
- THE CONTRACTOR SHALL WORK ON EXISTING RIGHT-OF-WAY AND ON EASEMENTS AS PROVIDED. STAGING AREAS FOR MATERIALS AND EQUIPMENT ARE THE RESPONSIBILITY OF THE CONTRACTOR. ANY AGREEMENTS WITH PRIVATE PROPERTY OWNERS SHALL BE IN WRITING AND WILL HOLD HARMLESS THE CITY AND ENGINEER. COPIES OF ANY AGREEMENTS SHALL BE PROVIDED TO THE CITY AND ENGINEER.
- THE CONTRACTOR SHALL ANTICIPATE TEMPORARY LANE/ROAD CLOSURES AS NECESSARY TO COMPLETE THE WORK AND SHALL INCLUDE ALL COSTS WITH THESE CLOSURES IN THE BID FORM. ALL NECESSARY LANE CLOSURES AND/OR STREET CLOSURES HAVE NOT BEEN DEPICTED WITHIN THESE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL LANDSCAPED AREAS, EXISTING STEPS, EXISTING WALKS AND EXISTING FENCES THAT ARE DISTURBED. THE CONTRACTOR SHALL RESTORE SAID ITEMS TO A CONDITION AS GOOD OR BETTER THAN THEY EXISTED PRIOR TO CONSTRUCTION EVEN IF SAID ITEMS ARE BEYOND REPAIR. THE CONTRACTOR SHALL INCLUDE ALL COSTS FOR REPAIR AND REPLACEMENT IN THE CONTRACT UNIT PRICES FOR THE VARIOUS SIZES OF WATER/SEWER LINE. NO DIRECT COSTS FOR REPAIR AND/OR REPLACEMENT WILL BE MADE.
- THE CONTRACTOR SHALL REPLACE REGULATORY, WARNING & OTHER SIGNS BY THE END OF EACH WORK DAY.
- THE CONTRACTOR SHALL RELOCATE STOP OR YIELD SIGNS, PROVIDE TEMPORARY STOP OR YIELD SIGNS, OR PROVIDE FLAGGERS IF IT IS NECESSARY TO REMOVE A STOP OR YIELD SIGN.
- FIRE HYDRANTS WILL BE STAKED. FIELD ADJUST LOCATION IF REQUIRED BY CITY, NCDOT, OR PROJECT INSPECTOR.
- ALL FITTINGS, VALVES, HYDRANTS, ETC. SHALL HAVE A WORKING PRESSURE RATING OF AT LEAST 350 PSI.
- ALL PIPE SHALL BE DUCTILE IRON CLASS 50.
- FIRE HYDRANTS INSTALLED ON WATER MAINS LESS THAN 12' IN SIZE. MAIN VALVE OPENING SHALL BE 4 1/2" WITH 3'-6" BURY. FOR WATER MAINS 12" AND GREATER IN SIZE. FIRE HYDRANTS SHALL HAVE MAIN VALVE OPENING OF 5 1/4" WITH 4'-6" BURY.
- ALL EXISTING FIRE HYDRANTS SHALL BE REUSED UNLESS DAMAGED. THE CITY WILL PROVIDE A NEW FIRE HYDRANT, IF REQUIRED.
- CONTRACTOR SHALL FIELD LOCATE ELEVATION OF WATER MAIN WHERE THRUST COLLARS AND CONNECTION TO EXISTING MAIN WILL BE MADE AND TO CONFIRM ELEVATIONS OF PROPOSED CONNECTIONS WITH ENGINEER.
- CONTRACTOR SHALL COORDINATE WITH KYLE SMITH WITH THE CITY OF MEBANE REGARDING PUBLIC NOTIFICATION THAT WATER SERVICE WILL BE TEMPORARILY INTERRUPTED. PROVIDE ONE WEEK NOTICE PRIOR TO PLANNED SHUT OFF TO PROVIDE NOTIFICATION.
- CONTRACTOR SHALL NOT OPERATE GATE VALVES. CONTRACTOR SHALL COORDINATE WITH CITY PERSONNEL TO SCHEDULE VALVE OPENING/CLOSURE OPERATIONS. CONTRACTOR SHALL OPEN/CLOSE EXISTING GATE VALVES.
- CONTRACTOR SHALL INSTALL CONCRETE THRUST COLLARS (CONNECT THREADED RODS FROM THRUST COLLAR TO VALVE & BEND) AS SHOWN ON PLANS A MINIMUM OF 24 HOURS PRIOR TO INSTALLING ADJACENT FITTINGS.
- CONTRACTOR SHALL BAG ANY FIRE HYDRANT DURING TIME WHEN WATER TO FIRE HYDRANT IS OFF. CONTRACTOR SHALL NOTIFY KYLE SMITH 48 HOURS IN ADVANCE OF SHUTTING DOWN FIRE HYDRANTS FOR NOTIFICATION OF FIRE DEPARTMENT.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CITY OF MEBANE'S STANDARD SPECIFICATIONS AND DETAIL DRAWINGS.
- CONTRACTOR SHALL PROVIDE A DEWATERING PUMP FOR UTILITY TRENCHES AND DISCHARGE EFFLUENT INTO A SILT BAG, AS NECESSARY.
- THE CONTRACTOR SHALL PLACE CONCRETE OR PRECAST DONUT AROUND ALL GATE VALVE BOXES LOCATED IN OPEN SPACE. NO DIRECT PAYMENT SHALL BE MADE FOR THIS ITEM (SEE FIRE HYDRANT INSTALLATION DETAIL).
- CONTRACTOR SHALL REMOVE EXISTING HIGHWAY SIGNS, STREET SIGNS, MAILBOXES, FENCES, LANDSCAPE BLOCKS, ETC. WHICH INTERFERE WITH UTILITY LINE RELOCATIONS. STORE AT LOCATION TO PREVENT DAMAGE AND REINSTALL TO PRIOR LOCATION INCLUDING HEIGHT IMMEDIATELY AFTER UTILITY LINE RELOCATIONS IN VICINITY OF SIGN IS COMPLETE. PROVIDE TEMPORARY STOP SIGNS AT INTERSECTIONS, IF NECESSARY.
- THE CONTRACTOR SHALL INSPECT THE ENTIRE PROJECT WITH THE OWNER AND PROJECT ENGINEERS INSPECTOR PRIOR TO BEGINNING ANY WORK. ANY DAMAGED AREAS SHALL BE PHOTOGRAPHED AND DOCUMENTED BY THE CONTRACTOR AND INSPECTOR.
- EXISTING SEWER MAIN SHALL BE ABANDONED BETWEEN POINTS OF CONNECTION. CONTRACTOR SHALL FOLLOW NCDOT PROCEDURES FOR ALL UTILITY ABANDONMENT.
- ALL EXISTING WATER LINE PERMANENTLY DISCONTINUED FROM SERVICE SHALL BE REMOVED UNLESS OTHERWISE AUTHORIZED BY NCDOT.
- EXISTING UTILITIES TO BE ABANDONED IN PLACE SHALL BE FILLED SOLID WITH CONCRETE. FLOWABLE FILL OR NON-SHINK GROUT. ALL CONTENTS SHALL BE REMOVED & DISPOSED OF ACCORDING TO LOCAL REGULATIONS.
- WATER METERS AND SERVICE LINES THAT MUST BE RELOCATED DUE TO UTILITY RELOCATIONS SHALL BE RELOCATED WHERE THE R/W LINE HAS BEEN MODIFIED AS A RESULT OF THE NCDOT I-5711 PROJECT. REFER TO DETAILS FOR PROPER PLACEMENT OF METER.
- TEMPORARY WATER SERVICE SHALL BE PROVIDED FOR ANY SERVICE THAT IS LOCATED ON A SECTION OF WATER LINE TO BE RELOCATED. TEMPORARY WATER SERVICE SHALL BE CHLORINATED AND HAVE A CLEAN BACTERIOLOGICAL SAMPLE PRIOR TO CONNECTING TO EXISTING SERVICE.
- ALL LOCATIONS WHERE A PLUG IS TO BE INSTALLED ON AN EXISTING WATER LINE, THE PLUG SHALL BE RODDED BACK TO AN ADJACENT VALVE OR TEE. IF THERE IS NOT AN EXISTING VALVE OR TEE IN THE VICINITY, A DEADMAN SHALL BE INSTALLED WITH RODDING TO THE PLUG. CONCRETE BLOCKING SHALL ALSO BE INSTALLED AT ALL PLUG LOCATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUMP & HAUL AND/OR BYPASS PUMPING OPERATIONS DURING ALL SANITARY SEWER RELOCATIONS.
- CONTRACTOR SHALL PROVIDE THE CITY OF MEBANE WITH A DETAILED SCHEDULE OF PROPOSED WATER OUTAGES FOR UTILITY RELOCATIONS. THE CITY OF MEBANE AND/OR THE ENGINEER OF RECORD WILL ASSIST THE CONTRACTOR WITH LOCATING AND IDENTIFYING EXISTING WATER VALVES FOR WATER OUTAGES. CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING PARTIES AFFECTED BY WATER OUTAGES.
- STREET AND STORM DRAINAGE IMPROVEMENTS SHOWN ON PLANS INDICATE PROPOSED/FUTURE IMPROVEMENTS BY OTHERS.
- CONTRACTOR SHALL COORDINATE POTENTIAL METER REPLACEMENT WITH CITY OF MEBANE. CITY WILL FURNISH METER SHOULD THEY CHOOSE TO REPLACE METER.



**THRUST RESTRAINT WITH ANCHOR RING DETAIL**

| NOMINAL PIPE SIZE | O.D. OF RING          | THICKNESS |
|-------------------|-----------------------|-----------|
| 12"               | PIPE O.D. PLUS 5 3/4" | 1/2"      |
| 16"               | PIPE O.D. PLUS 7"     | 3/4"      |
| 18"               | PIPE O.D. PLUS 7 1/4" | 3/4"      |
| 24"               | PIPE O.D. PLUS 7 3/4" | 3/4"      |
| 30"               | PIPE O.D. PLUS 8"     | 1"        |
| 36"               | PIPE O.D. PLUS 8 3/4" | 1"        |

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ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT

**RELATION OF WATER MAINS TO SEWERS**

(a) Lateral Separation of Sewer and Water Mains. Water Mains shall be laid at least 10 feet laterally from existing or proposed sewer, unless local conditions or barriers prevent a 10 foot lateral separation in which case:

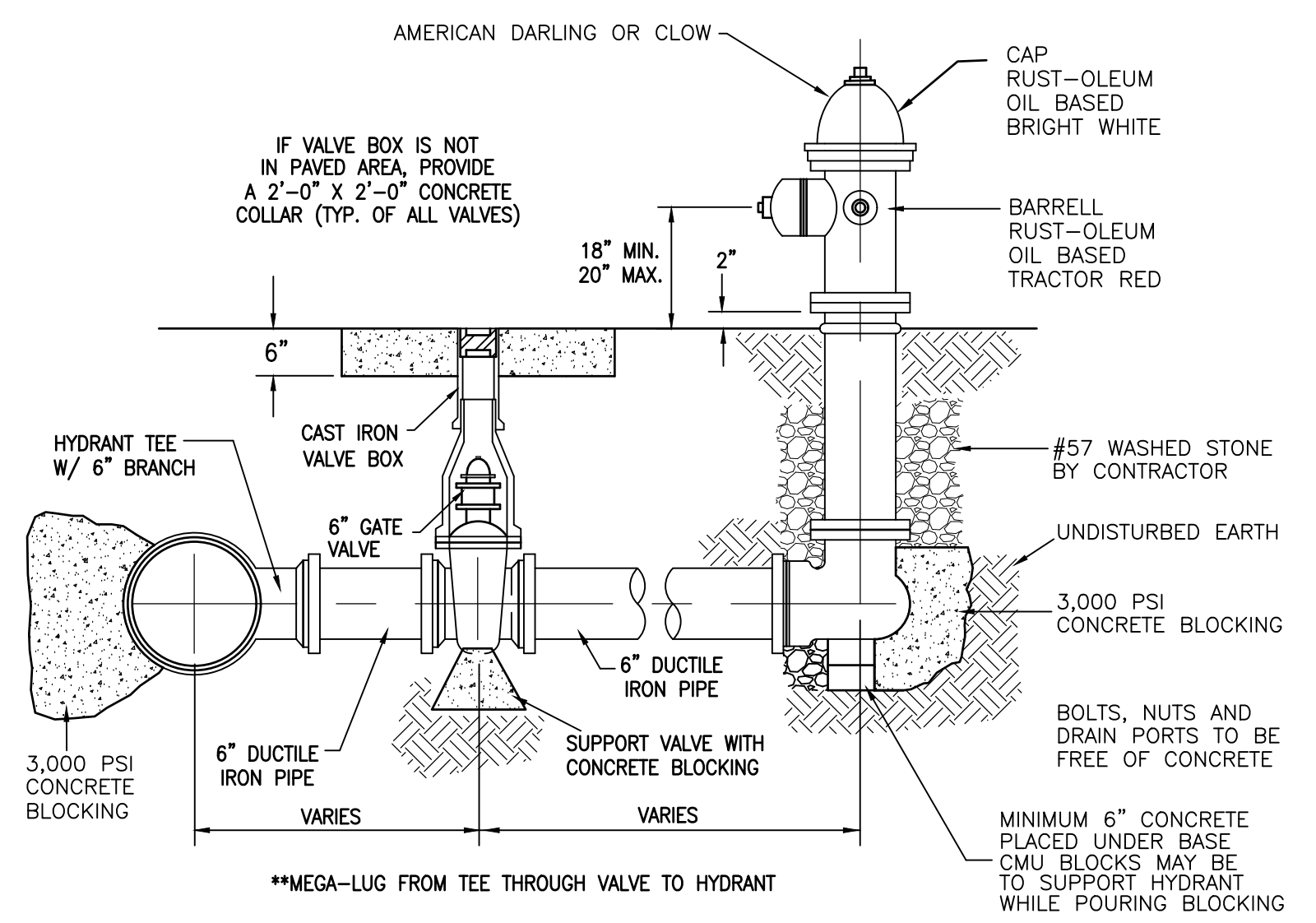
- The water main is laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer, or
- The water main is laid in the same trench as the sewer with the water main located at one side of a bench of undisturbed earth, and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.

(b) Crossing a Water Main over a Sewer. Whenever it is necessary for a water main to cross over a sewer, the water main shall be laid at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer, unless local conditions or barriers prevent an 18 inch vertical separation — in which case both the water main and sewer shall be constructed of ferrous materials and with joints that are equivalent to water main standards for a distance of 10 feet on each side of the point of crossing.

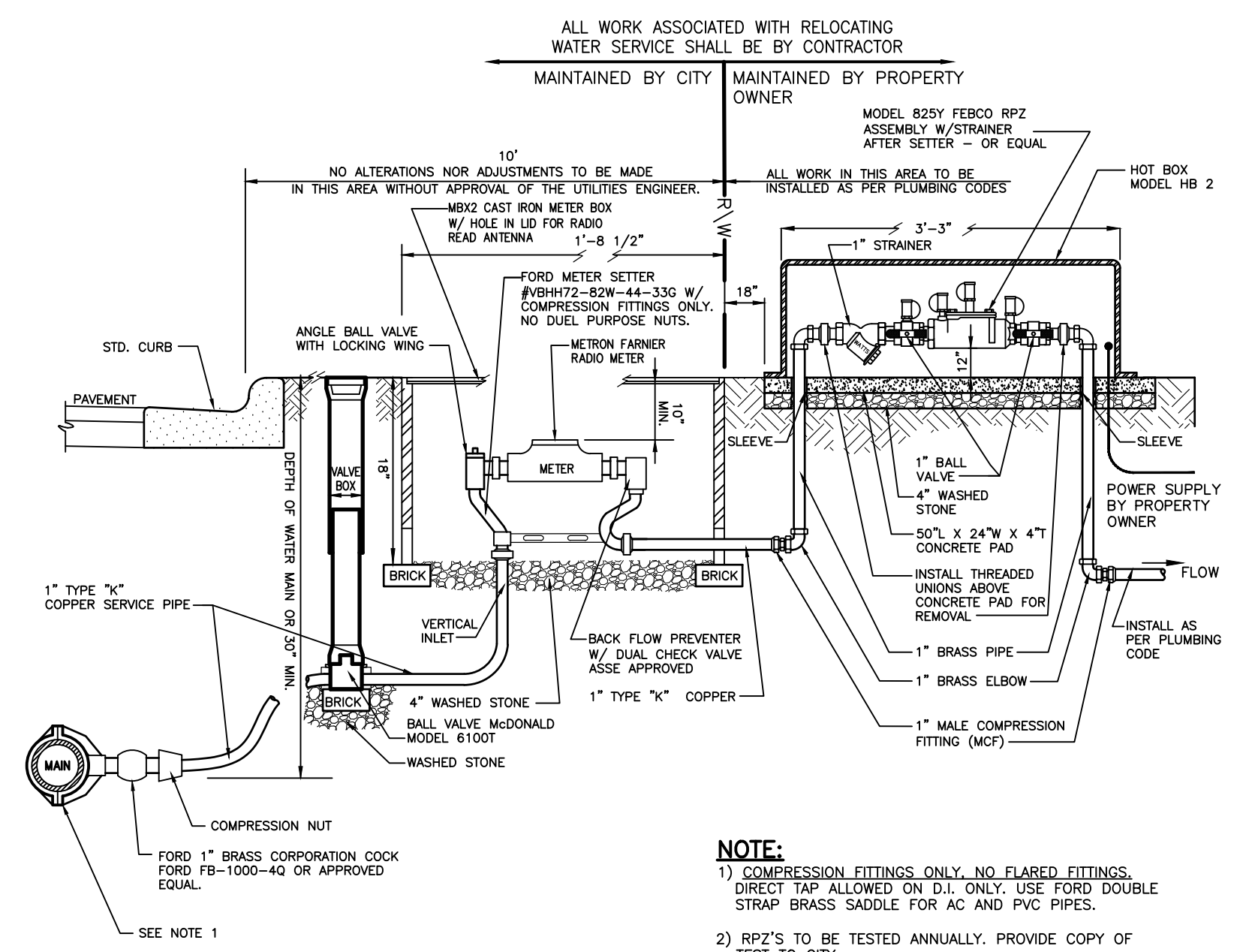
(c) Crossing a Water Main Under a Sewer. Whenever it is necessary for a water main to cross under a sewer, both the water main and the sewer shall be constructed of ferrous materials and with joints equivalent to water main standards for a distance of 10 feet on each side of the point of crossing. A section of water main pipe shall be centered at the point of crossing.

History Note: Statutory Authority G.S. 130-157 to 1611; Eff. January 1, 1977

**RELATION OF WATER MAINS TO SEWERS**

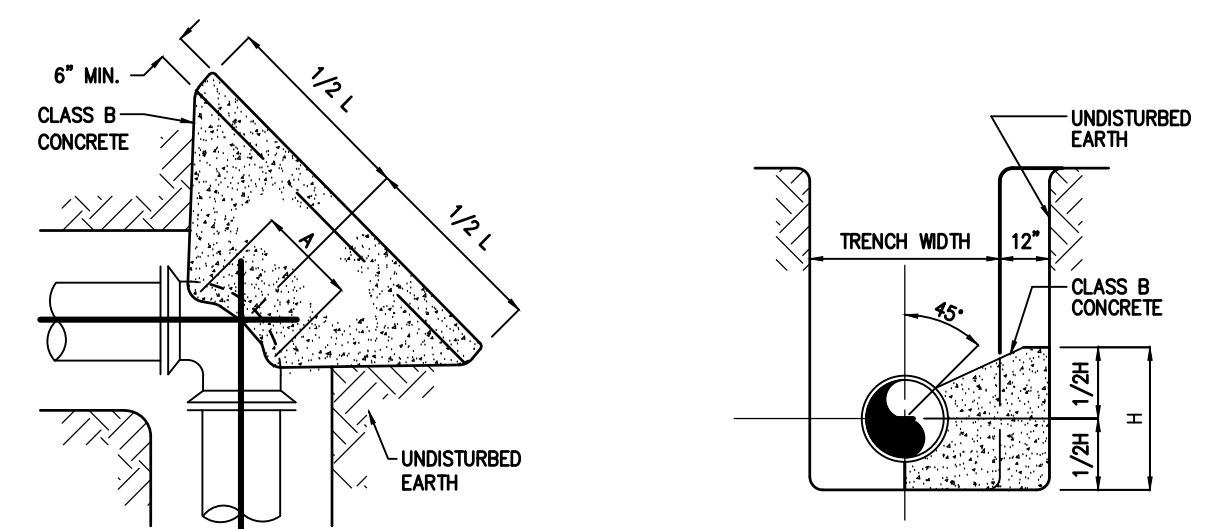


**FIRE HYDRANT INSTALLATION**



**NOTE:**  
 1) COMPRESSION FITTINGS ONLY. NO FLARED FITTINGS. DIRECT TAP ALLOWED ON D.I. ONLY. USE FORD DOUBLE STRAP BRASS SADDLE FOR AC AND PVC PIPES.  
 2) RPZ'S TO BE TESTED ANNUALLY. PROVIDE COPY OF TEST TO CITY.

**1" WATER CONNECTION WITH RPZ BACKFLOW ASSEMBLY**

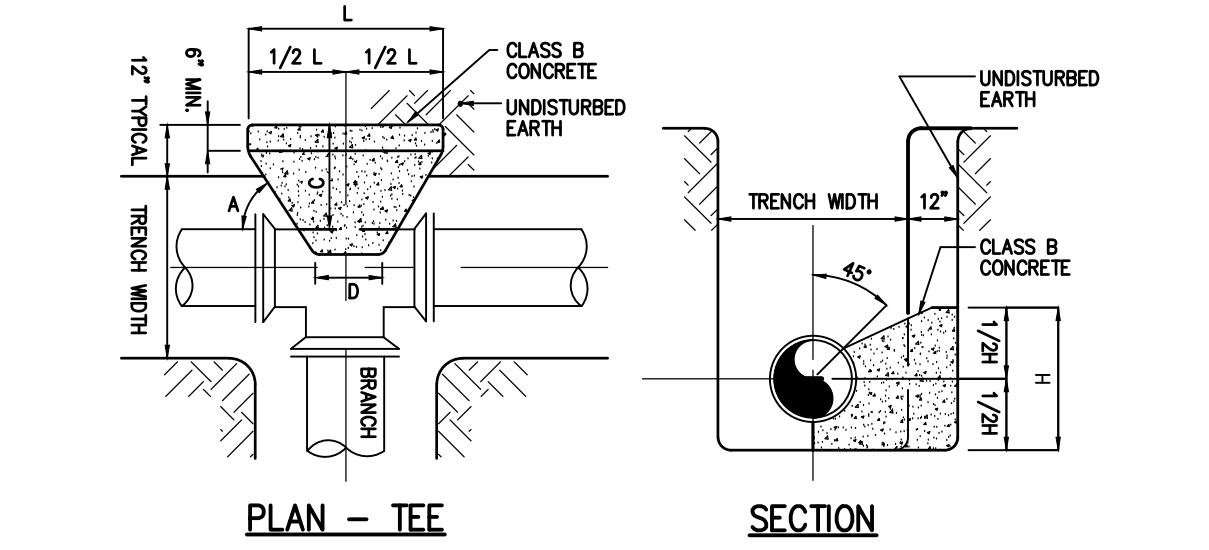


**BUTTRESS DIMENSIONS**

| PIPE SIZE | 22 1/2° BENDS |       | 45° BENDS |        | 90° BENDS |       |
|-----------|---------------|-------|-----------|--------|-----------|-------|
|           | L             | H     | L         | H      | L         | H     |
| 6"        | 1'-0"         | 1'-0" | 1'-0"     | 1'-0"  | 1'-4"     | 1'-2" |
| 8"        | 1'-0"         | 1'-0" | 1'-4"     | 1'-2"  | 1'-10"    | 1'-6" |
| 12"       | 1'-4"         | 1'-4" | 1'-10"    | 1'-10" | 2'-8"     | 2'-3" |

- NOTES:**  
 1. DIMENSION "A" SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH THE MECHANICAL JOINT BOLTS  
 2. THE SHAPE OF THE BACK OF THE BUTTRESS MAY VARY PROVIDED THE CONCRETE IS AGAINST FIRM, UNDISTURBED EARTH.  
 3. BUTTRESS DIMENSIONS ARE BASED UPON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 P.S.I.

**THRUST BLOCK - BENDS**



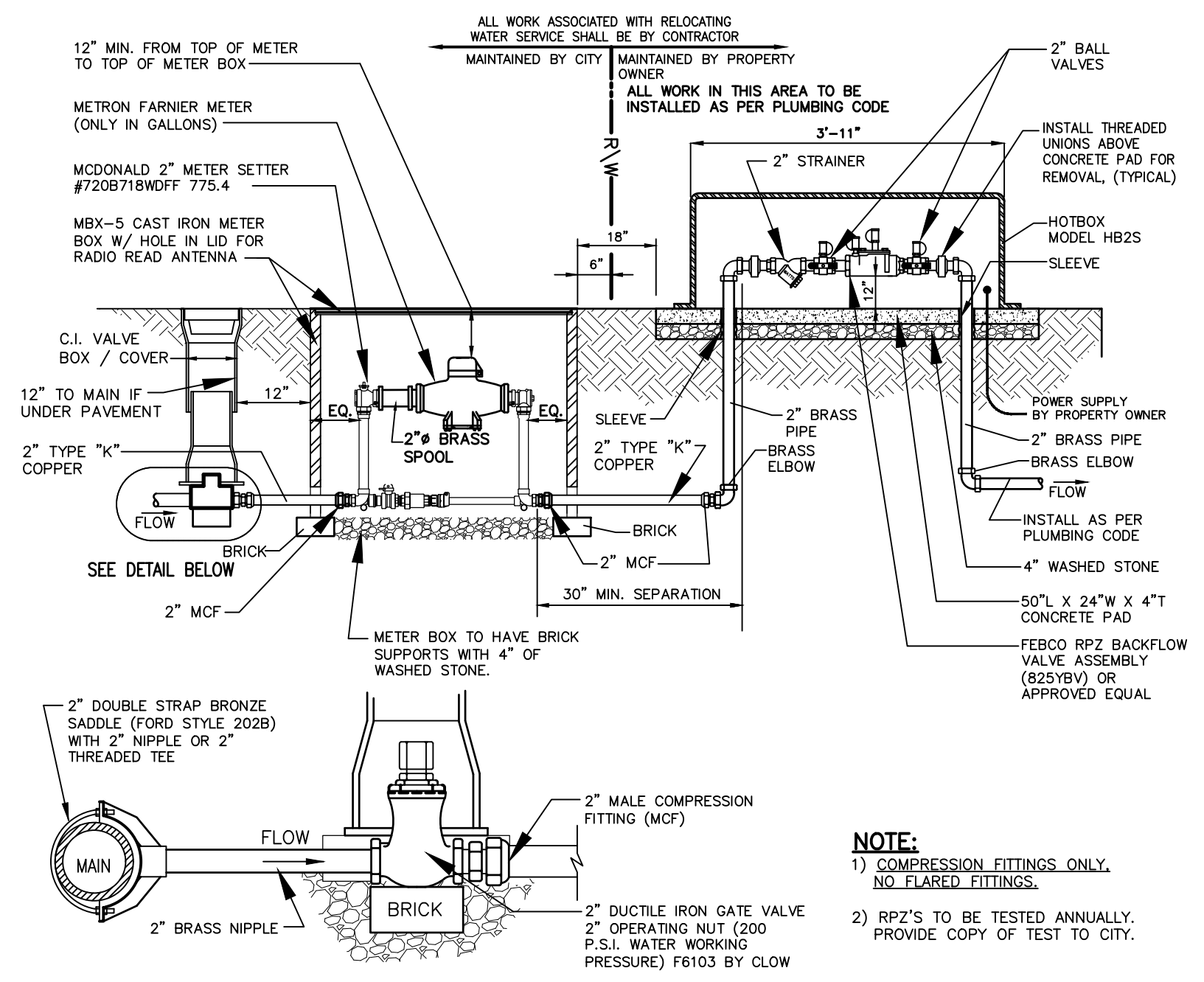
**BUTTRESS DIMENSIONS**

| B. D. | L     | H     | C | D | SEE NOTE | SEE NOTE |
|-------|-------|-------|---|---|----------|----------|
| 6"    | 1'-3" | 1'-0" |   |   | NO. 1    | NO. 2    |
| 8"    | 1'-6" | 1'-4" |   |   | SEE NOTE |          |
| 12"   | 2'-3" | 2'-0" |   |   |          |          |

B. D. = BRANCH DIAMETER

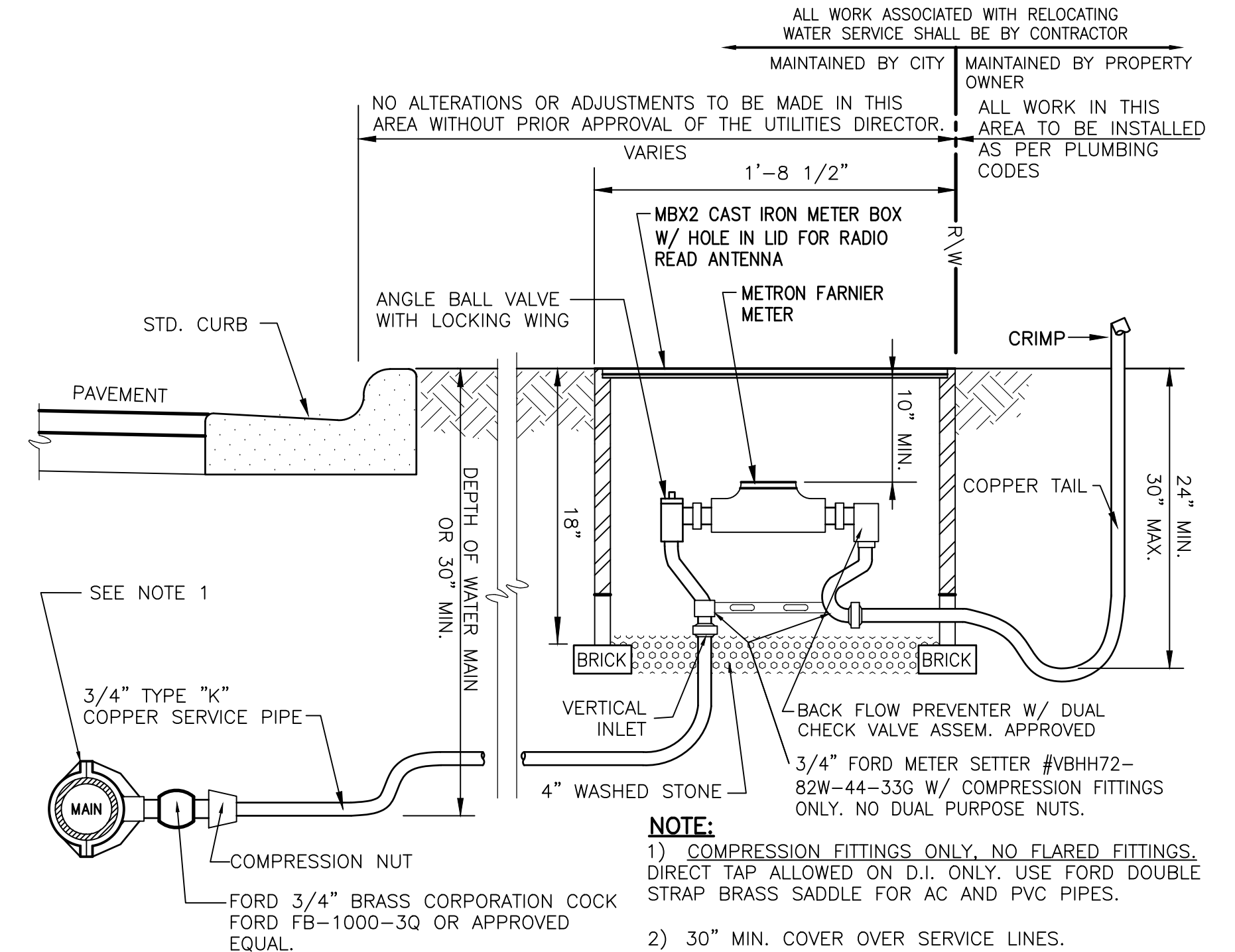
- NOTES:**  
 1. DIMENSION "C" SHOULD BE LARGE ENOUGH TO MAKE ANGLE "A" EQUAL TO OR GREATER THAN 45°.  
 2. DIMENSION "D" SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MECHANICAL JOINTS.  
 3. BUTTRESS DIMENSIONS ARE BASED UPON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 P.S.I.

**THRUST BLOCK - TEES**



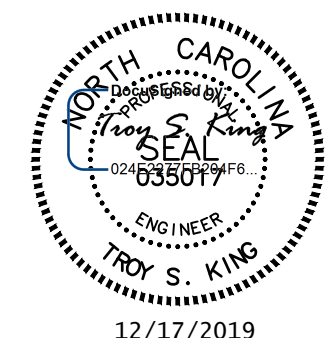
**NOTE:**  
 1) COMPRESSION FITTINGS ONLY. NO FLARED FITTINGS.  
 2) RPZ'S TO BE TESTED ANNUALLY. PROVIDE COPY OF TEST TO CITY.

**2" WATER CONNECTION WITH RPZ BACKFLOW ASSEMBLY**



**NOTE:**  
 1) COMPRESSION FITTINGS ONLY. NO FLARED FITTINGS. DIRECT TAP ALLOWED ON D.I. ONLY. USE FORD DOUBLE STRAP BRASS SADDLE FOR AC AND PVC PIPES.  
 2) 30" MIN. COVER OVER SERVICE LINES.

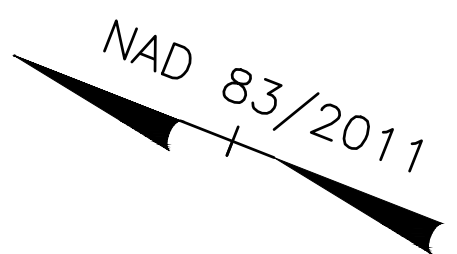
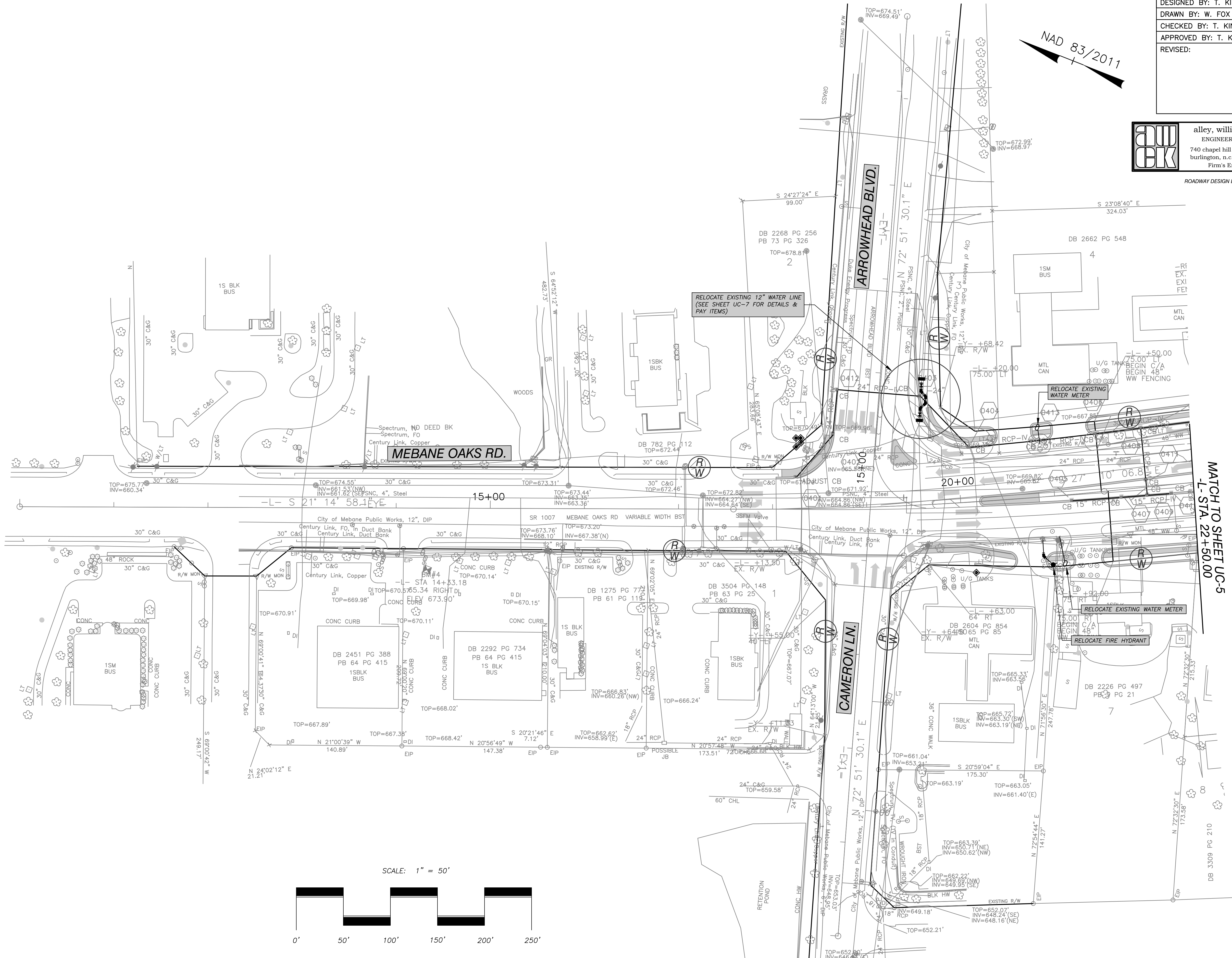
**3/4" DOMESTIC WATER SERVICE CONNECTION**

|                       |   |
|-----------------------|---|
| PROJECT REFERENCE NO. | SHEET NO.   |
| I-5711                | UC-4  |
| DESIGNED BY: T. KING  |  |
| DRAWN BY: W. FOX      |   |
| CHECKED BY: T. KING   |   |
| APPROVED BY: T. KING  |   |
| REVISED:              |   |

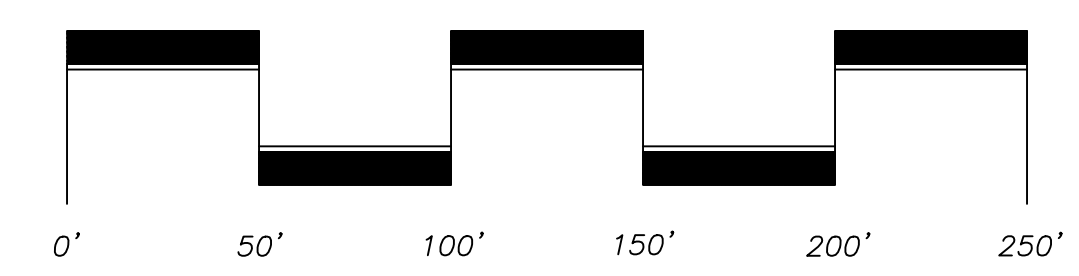
**aw**  
**ck**

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ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT



SCALE: 1" = 50'



MATCH TO SHEET UC-5  
-L- STA. 22+50.00

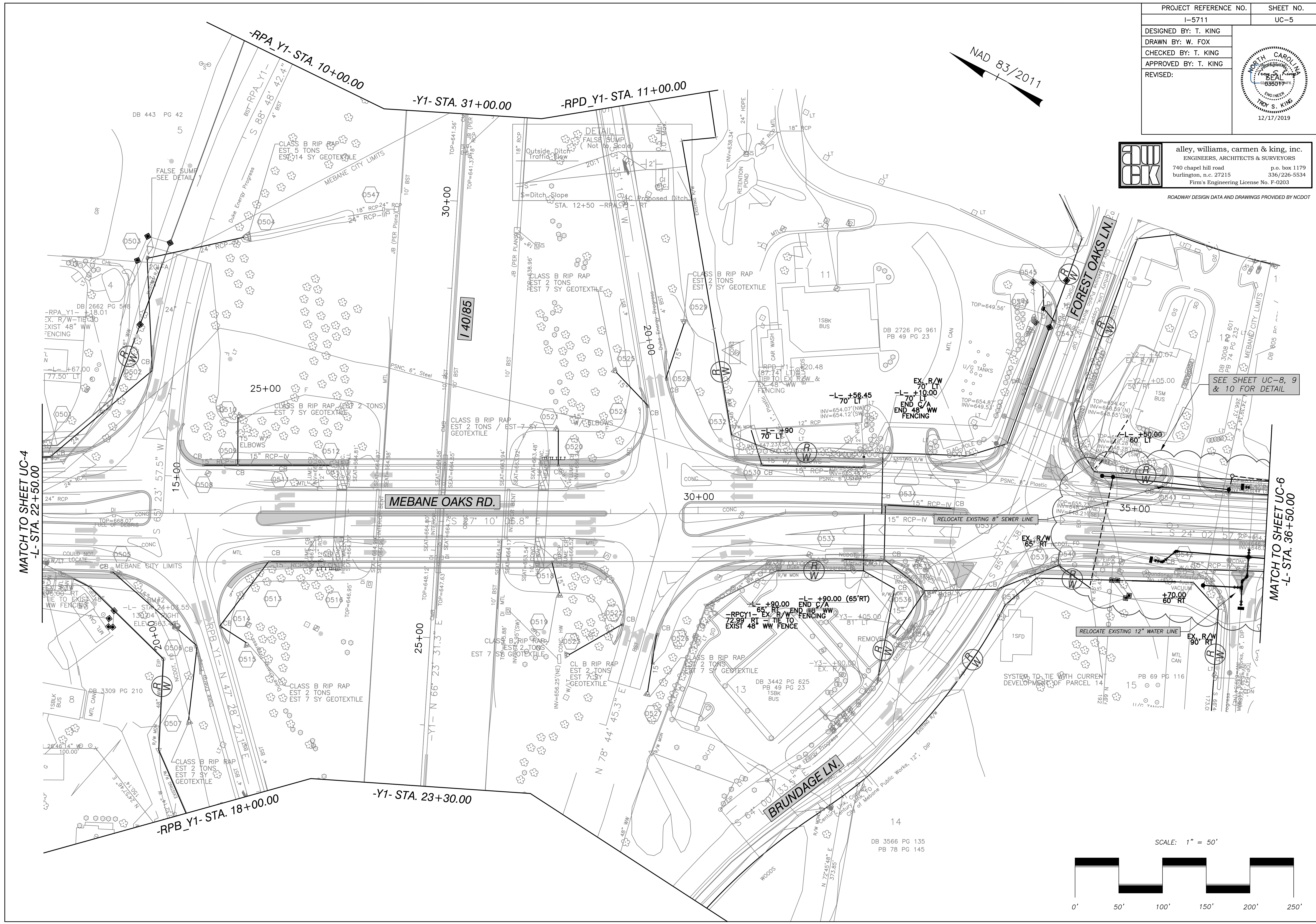
T:\2018\18040 City of Mebane - I-5711 Meb. Oaks Utility Relocations.dwg 12/17/2019 11:15:50 AM AutoCAD PDF (General Documentation) p.3, 11, WDF

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| I-5711                | UC-5      |
| DESIGNED BY: T. KING  |           |
| DRAWN BY: W. FOX      |           |
| CHECKED BY: T. KING   |           |
| APPROVED BY: T. KING  |           |
| REVISED:              |           |

**aw**  
**ck**

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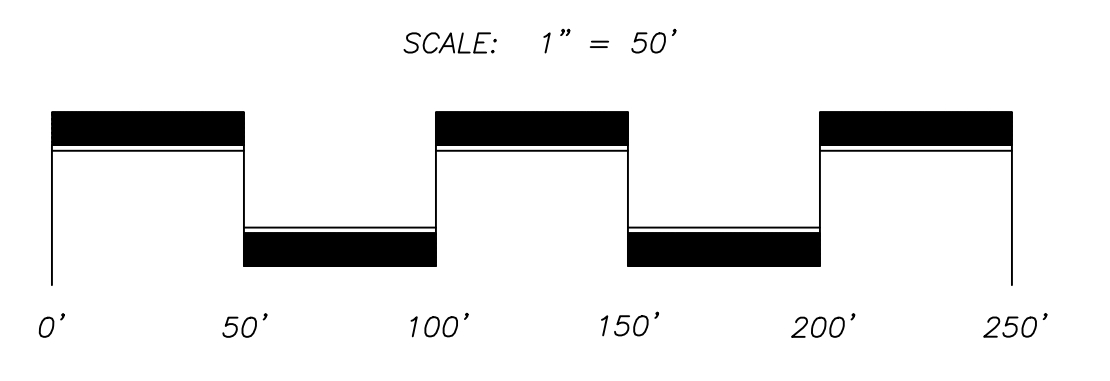
ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT



MATCH TO SHEET UC-4  
-L- STA. 22+50.00

SEE SHEET UC-8, 9  
& 10 FOR DETAIL

MATCH TO SHEET UC-6  
-L- STA. 36+50.00



|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| I-5711                | UC-6      |
| DESIGNED BY: T. KING  |           |
| DRAWN BY: W. FOX      |           |
| CHECKED BY: T. KING   |           |
| APPROVED BY: T. KING  |           |
| REVISED:              |           |

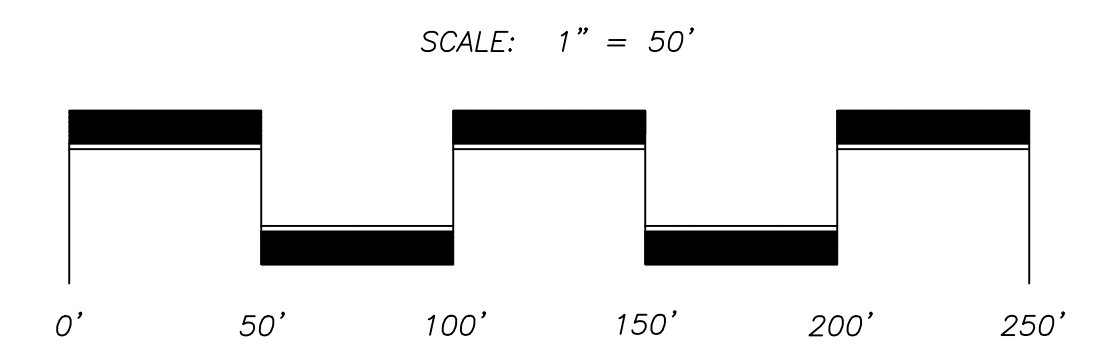
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**ck**

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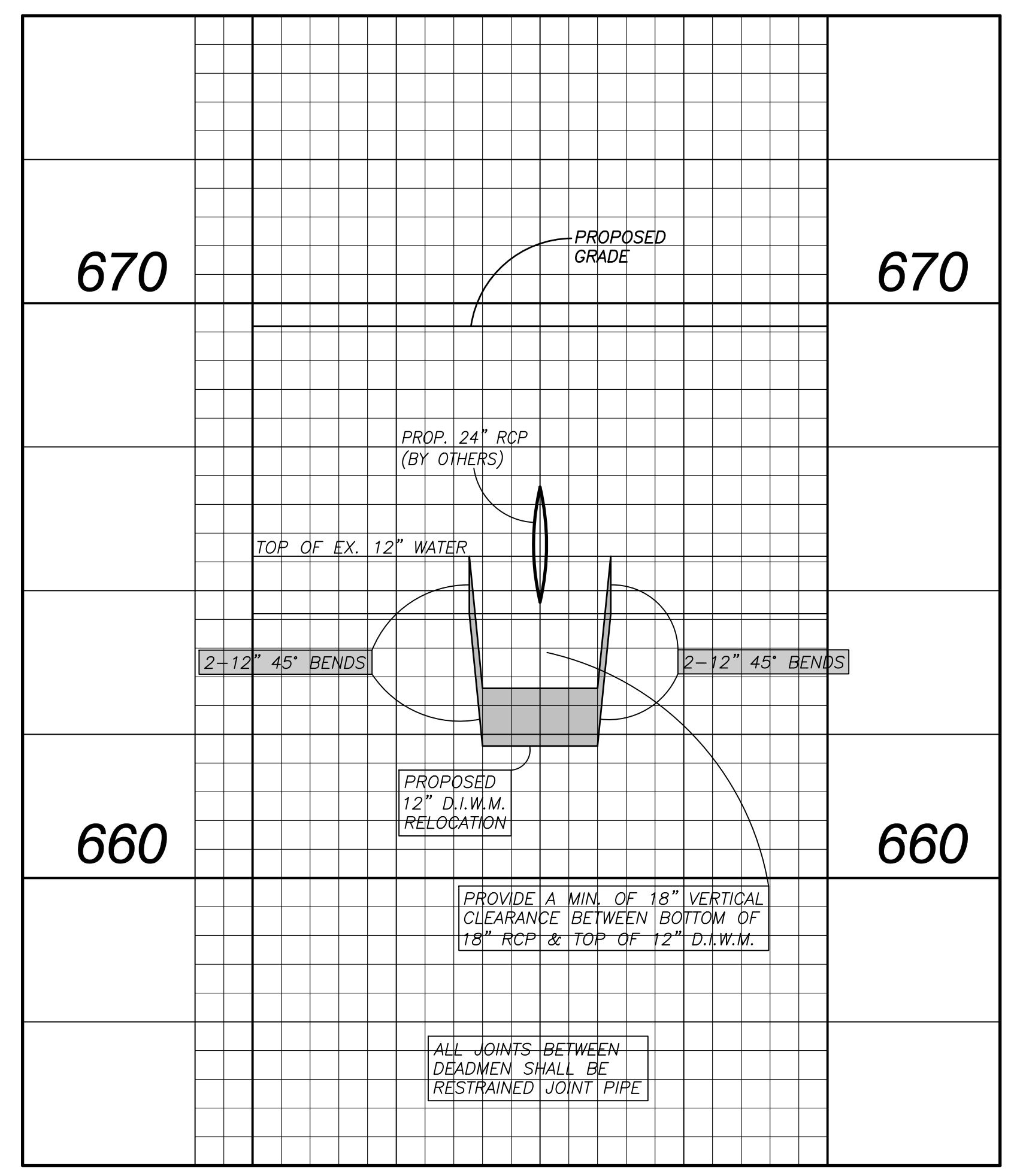
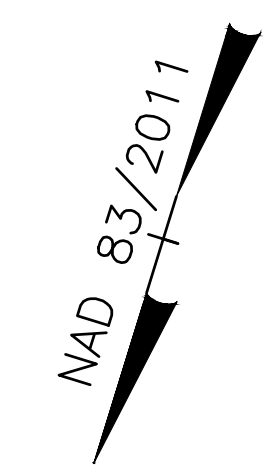
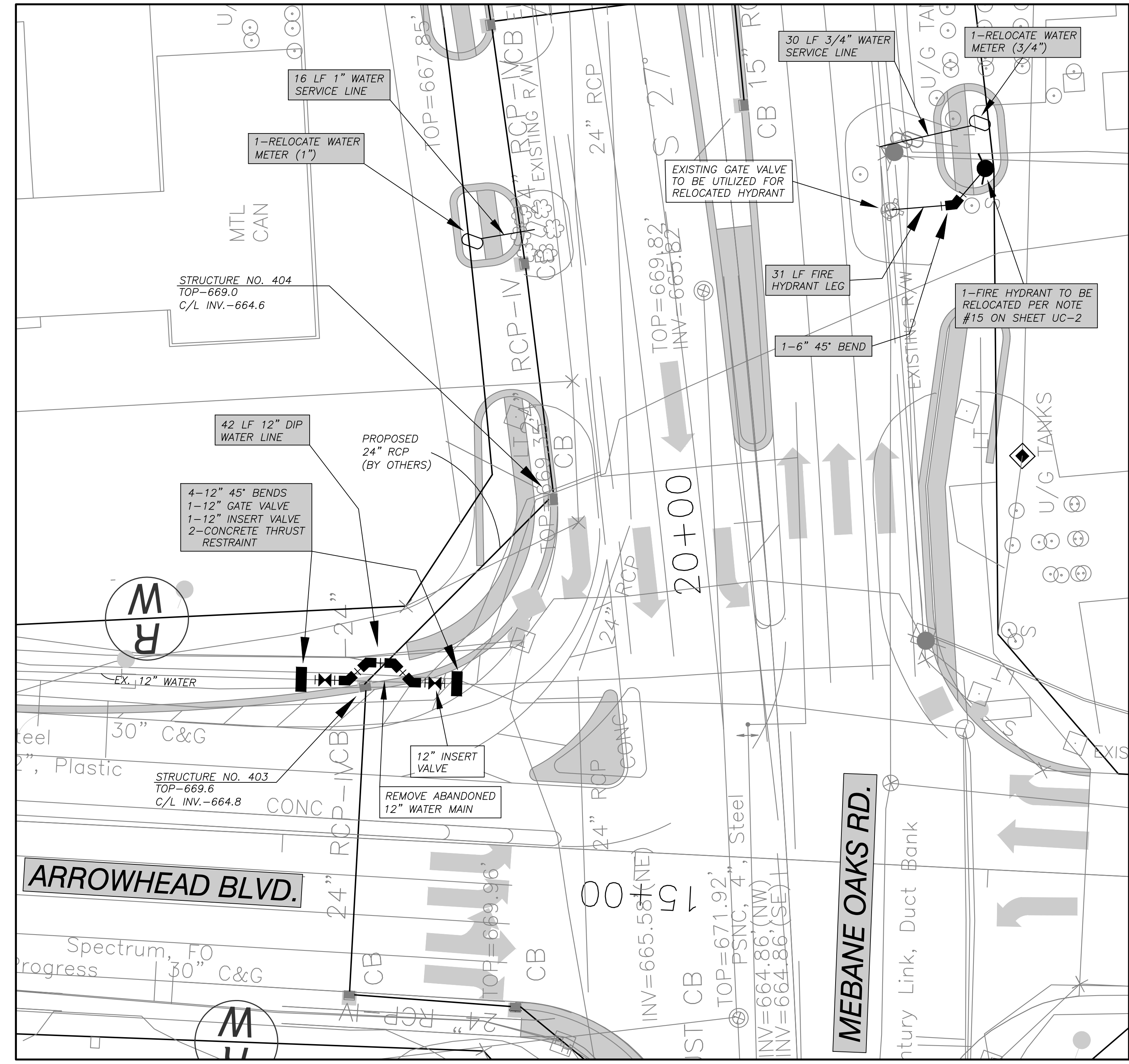
ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT



MATCH TO SHEET UC-5  
L- STA. 36+50.00



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- WATERLINE CONSTRUCTION NOTES:**
- CONTRACTOR TO INSTALL CONCRETE THRUST RESTRAINT AND ALLOW CURING PRIOR TO INSTALLATION OF VALVES.
  - CONTRACTOR TO COORDINATE VALVE INSTALLATION WITH CITY OF MEBANE PUBLIC WORKS DEPARTMENT. VALVE INSTALLATION WILL REQUIRE TEMPORARY DISRUPTION OF WATER SERVICE AND/OR NIGHT WORK. CONTRACTOR SHALL PROVIDE CITY OF MEBANE WITH ONE WEEKS NOTICE PRIOR TO INSTALLATION IN ORDER TO COORDINATE SERVICE DISRUPTION WITH WATER CUSTOMERS.
  - DEMO OR ABANDON (?? WATER LINE TAKEN OUT OF SERVICE).
  - INSTALL NEW WATER MAIN AND TIE INTO VALVES INSTALLED IN STEP #2. PRESSURE TEST NEW WATER MAIN, CHLORINATE AND PULL SAMPLE.
  - ONCE CERTIFICATION HAS BEEN COMPLETED, PLACE LINE IN SERVICE.

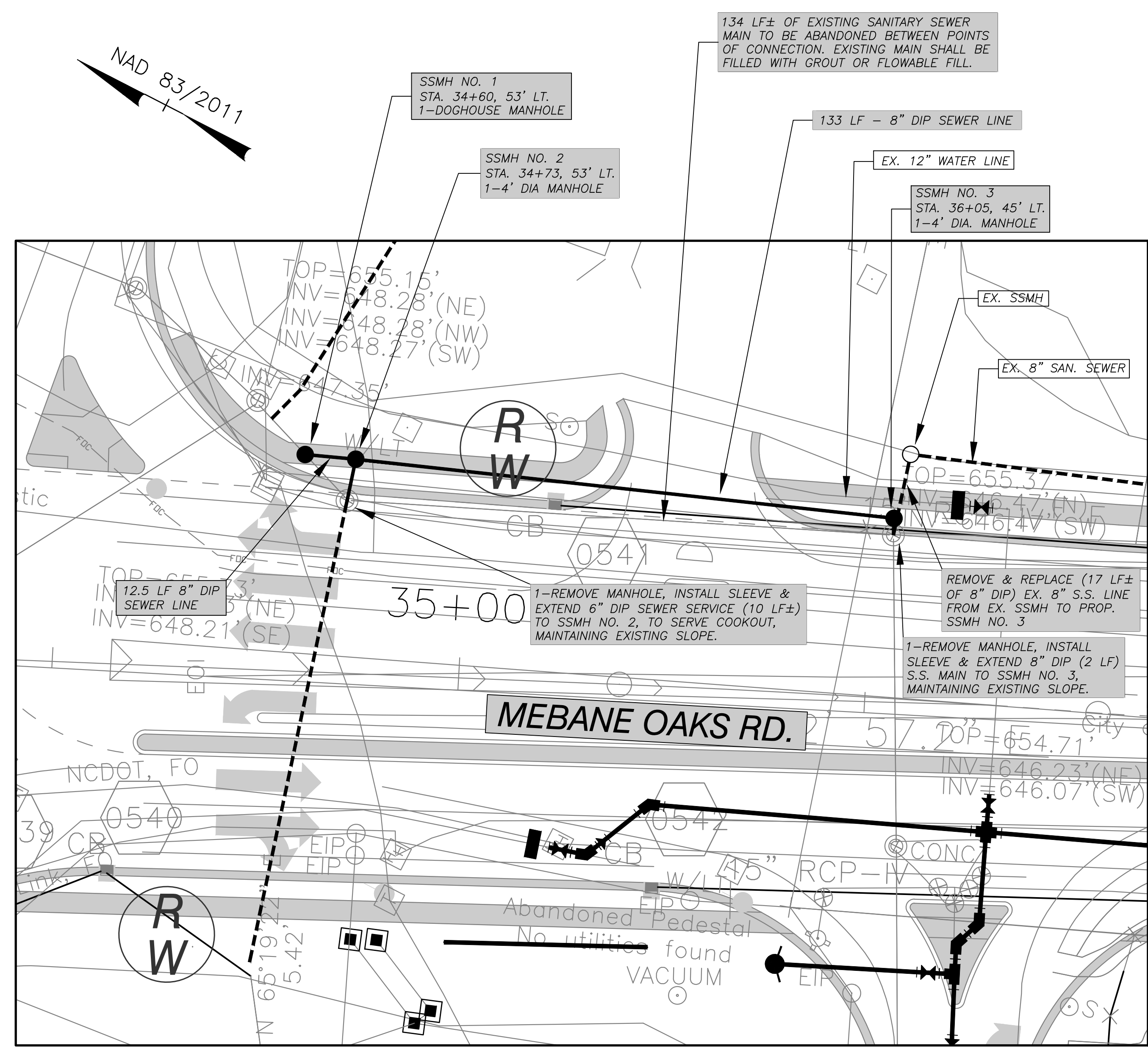
**PROJECT WATER FITTINGS CHART:**

| DESCRIPTION      | NO. | WEIGHT (EA.) | WEIGHT (TOTAL)   |
|------------------|-----|--------------|------------------|
| 12" 45° BEND     | 7   | 215          | 1505             |
| 8" 45° BEND      | 1   | 110          | 110              |
| 6" 45° BEND      | 1   | 75           | 75               |
| 12" 22.5° BEND   | 1   | 220          | 220              |
| 12" 11.25° BEND  | 1   | 220          | 220              |
| 12" X 6" TEE     | 1   | 325          | 325              |
| 12" X 8" REDUCER | 1   | 165          | 165              |
| 12" X 12" CROSS  | 1   | 495          | 495              |
| <b>TOTAL</b>     |     |              | <b>3175 LBS.</b> |

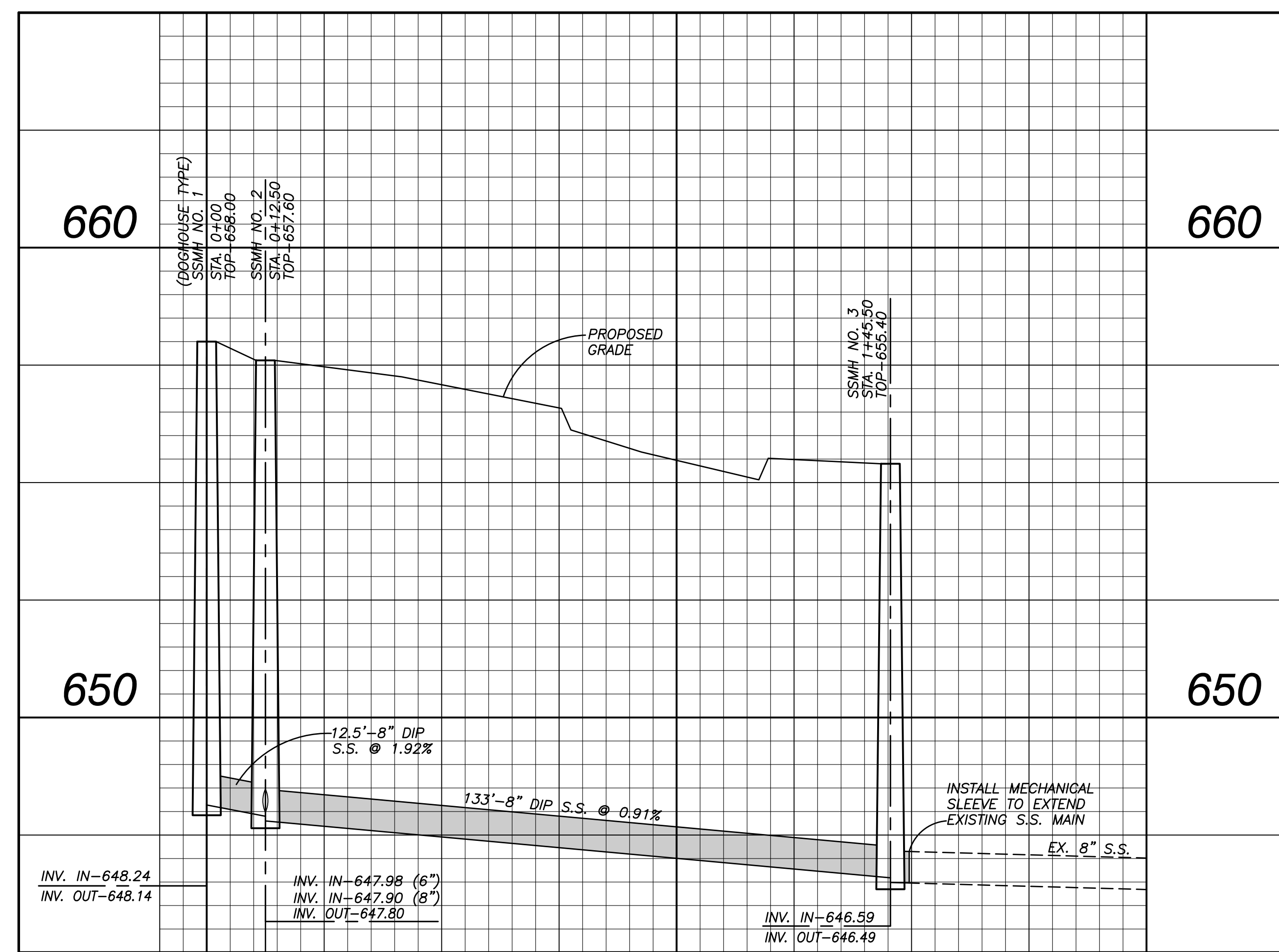
SHADED BOXES INDICATE PAY ITEMS IN BID FORM

UNSHADED BOXES ARE ITEMS TO IDENTIFY WORK INSTRUCTIONS RELATED TO THE WORK AND COST CONSIDERED INCIDENTAL TO THE WORK.

COST OF MEGALUGS ARE CONSIDERED INCIDENTAL TO THE WORK BEING PAID FOR AT THE CONTRACT UNIT PRICE FOR FITTINGS AND/OR WATER LINE PIPE.



- SANITARY SEWER CONSTRUCTION NOTES:**
1. INSTALL ALL 3 PROPOSED MANHOLES AND S.S. MAIN IN BETWEEN.
  2. TEST SEWER MAIN AND MANHOLES.
  3. OBTAIN AS-BUILTS AND CERTIFICATION.
  4. PLUG AND PUMP & HAUL FROM TWO LOCATIONS, SSMH NO. 1 AND "COOK OUT".
  5. CONNECT SSMH NO. 3 TO EXISTING DOWNSTREAM LINE.
  6. EXTEND "COOK OUT" SERVICE TO SSMH NO. 2.
  7. TURN FLOW TO NEW LINE.
  8. DEMO/ABANDON SEWER MAIN TAKEN OUT OF SERVICE, INCLUDING MANHOLES.



SHADED BOXES INDICATE PAY ITEMS IN BID FORM

UNSHADED BOXES ARE ITEMS TO IDENTIFY WORK/INSTRUCTIONS RELATED TO THE WORK AND COST CONSIDERED INCIDENTAL TO THE WORK.

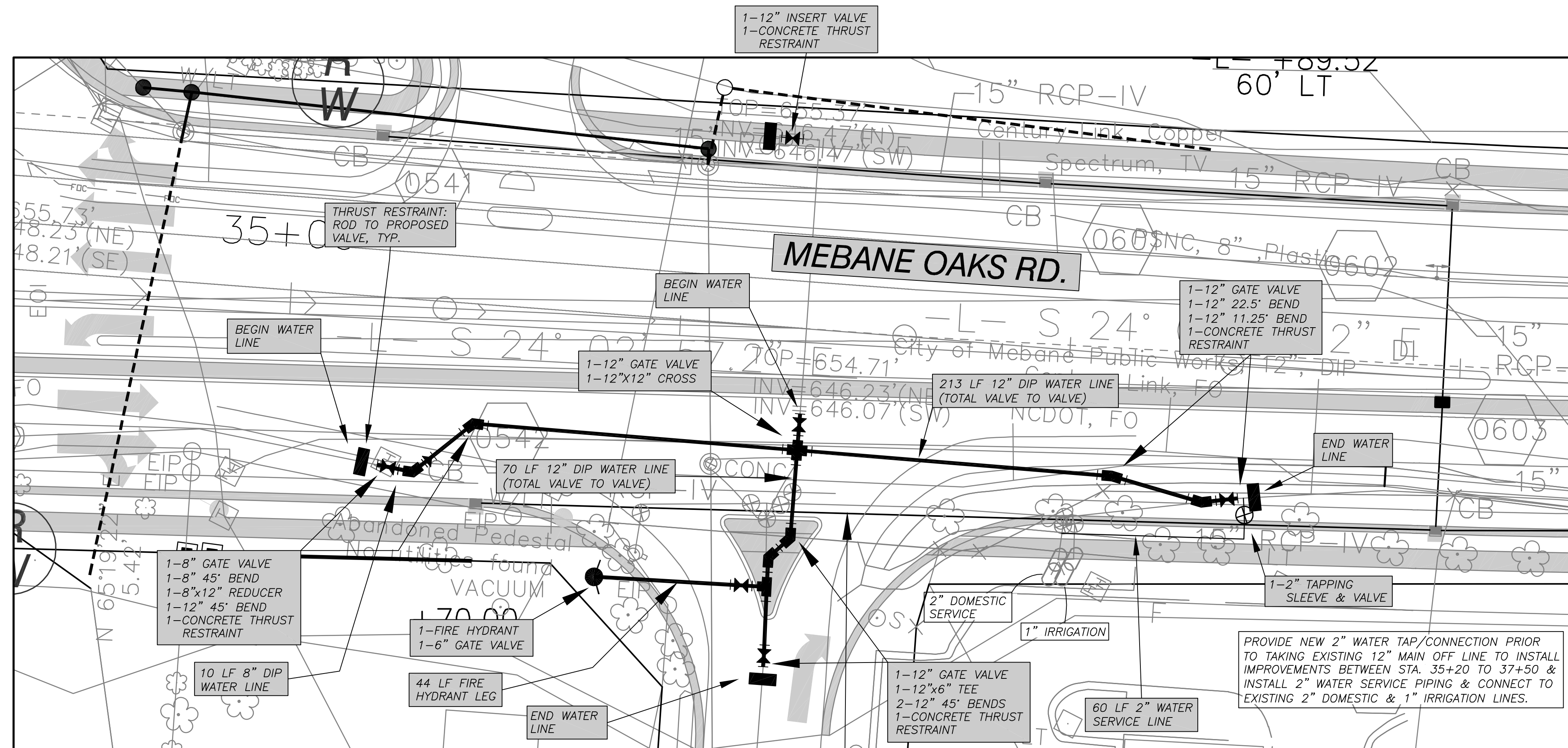
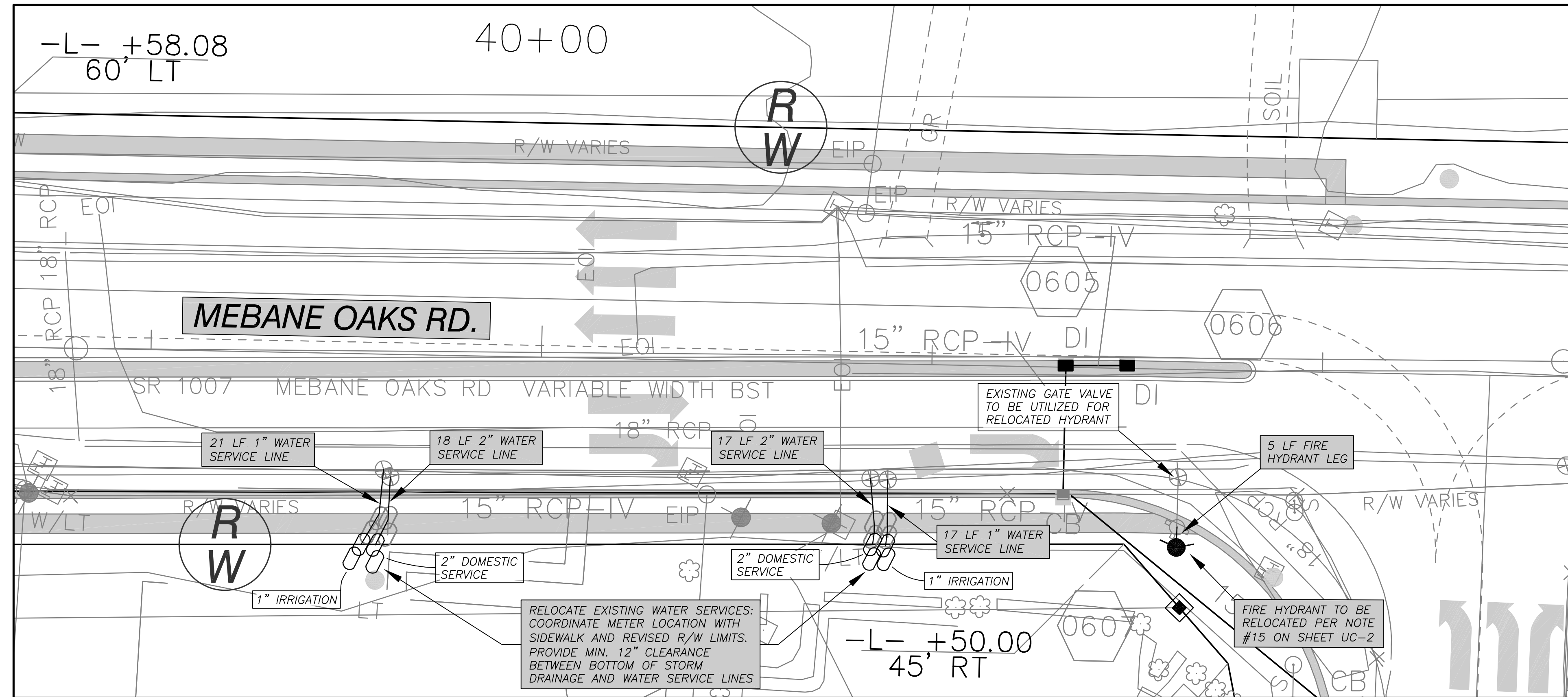


|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| I-5711                | UC-9      |
| DESIGNED BY: T. KING  |           |
| DRAWN BY: W. FOX      |           |
| CHECKED BY: T. KING   |           |
| APPROVED BY: T. KING  |           |
| REVISED:              |           |

**aw**  
**ck**

alley, williams, carmen & king, inc.  
ENGINEERS, ARCHITECTS & SURVEYORS  
740 chapel hill road  
burlington, n.c. 27215  
Firm's Engineering License No. F-0203

ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT



- WATERLINE CONSTRUCTION NOTES:**
1. CONTRACTOR TO INSTALL CONCRETE THRUST RESTRAINT AND ALLOW CURING PRIOR TO INSTALLATION OF VALVES (3 LOCATIONS).
  2. INSTALL HOT TAP VALVE.
  3. INSTALL TEMPORARY SERVICE TO TACO BELL. CONTRACTOR TO COORDINATE CUT-IN VALVE INSTALLATION WITH CITY OF MEBANE PUBLIC WORKS DEPARTMENT. VALVE INSTALLATION WILL REQUIRE TEMPORARY DISRUPTION OF WATER SERVICE AND/OR NIGHT WORK. CONTRACTOR SHALL PROVIDE CITY OF MEBANE WITH ONE WEEKS NOTICE PRIOR TO INSTALLATION IN ORDER TO COORDINATE SERVICE DISRUPTION WITH WATER CUSTOMERS.
  4. DEMO OR ABANDON (?? WATER LINE TAKEN OUT OF SERVICE).
  5. INSTALL NEW WATER MAIN AND TIE INTO VALVES INSTALLED IN STEPS #2 & #3. PRESSURE TEST NEW WATER MAIN, CHLORINATE AND PULL SAMPLE.
  6. ONCE CERTIFICATION HAS BEEN COMPLETED, PLACE LINE IN SERVICE.

SHADED BOXES INDICATE PAY ITEMS IN BID FORM

UNSHADED BOXES ARE ITEMS TO IDENTIFY WORK/INSTRUCTIONS RELATED TO THE WORK AND COST CONSIDERED INCIDENTAL TO THE WORK.

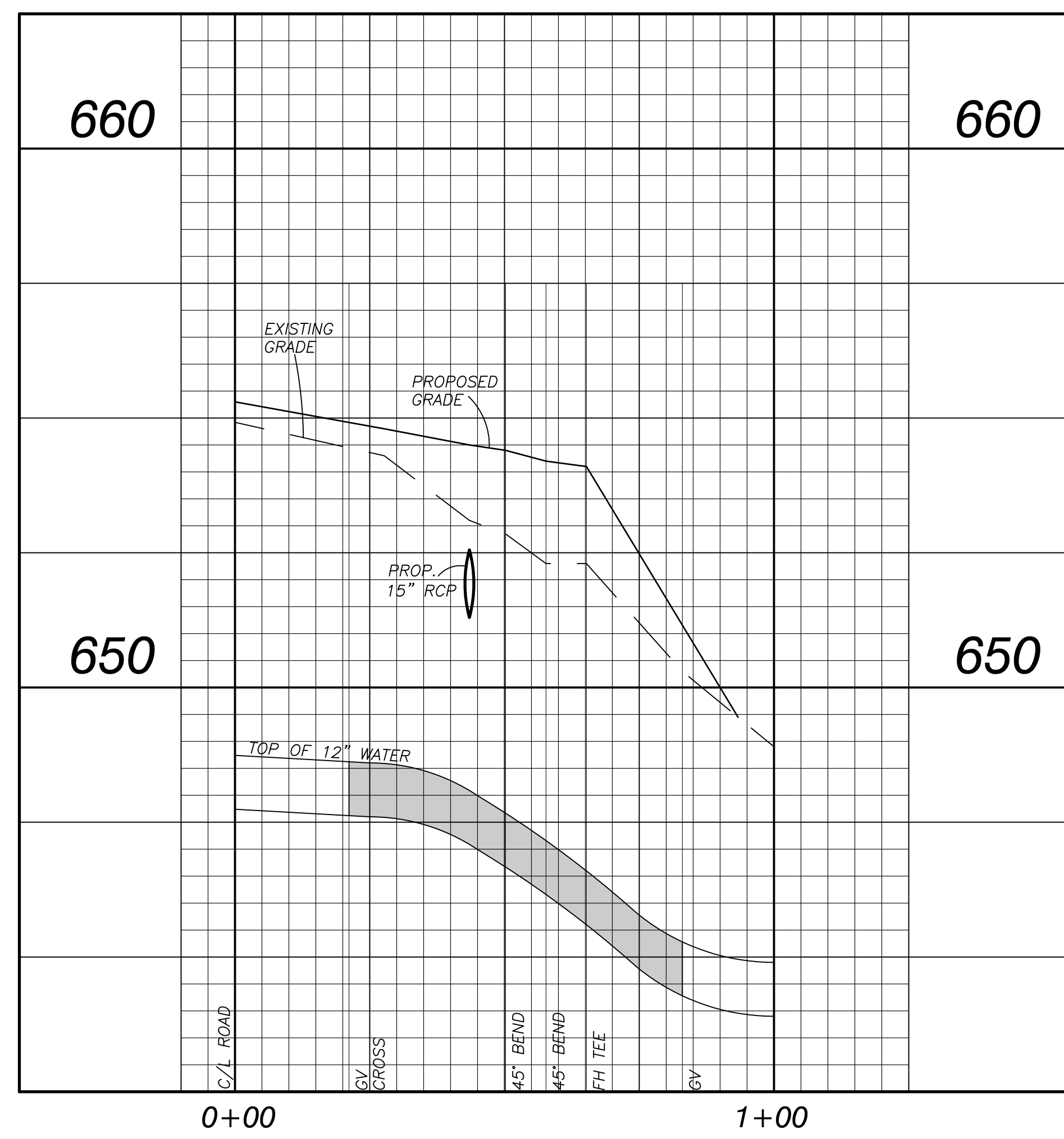
PLAN  
SCALE: 1" = 20'

I:\2019\18040 City of Mebane - I-5711 Meb. Ohio Utility Relocations.dwg, 1/15/2020 8:51:27 AM, Adobe PDF (Temporary).pct, 1:1, TSK

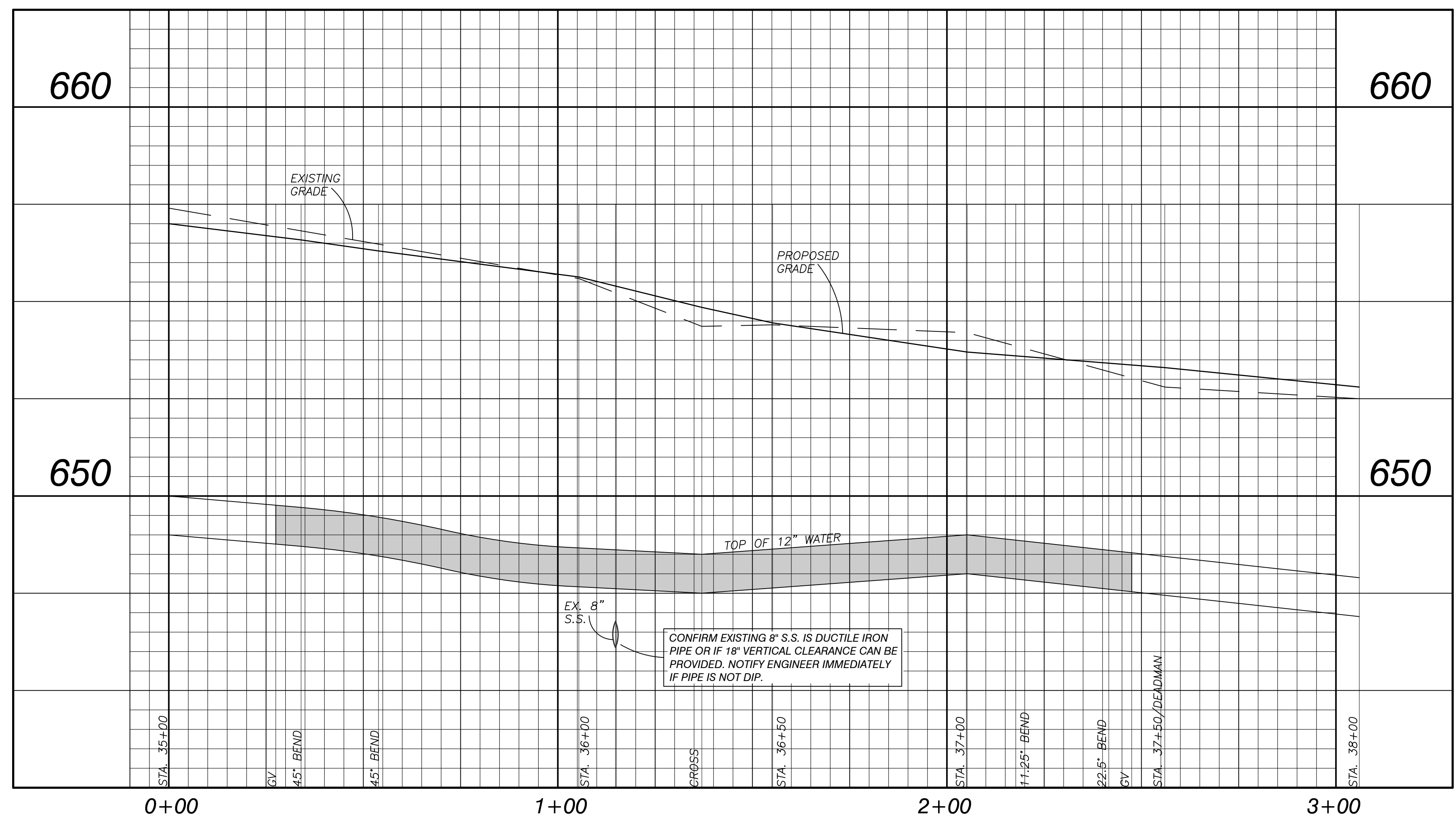
|                       |            |
|-----------------------|------------|
| PROJECT REFERENCE NO. | SHEET NO.  |
| I-5711                | UC-10      |
| DESIGNED BY: T. KING  |            |
| DRAWN BY: W. FOX      |            |
| CHECKED BY: T. KING   |            |
| APPROVED BY: T. KING  |            |
| REVISED:              | 12/17/2019 |

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 burlington, n.c. 27215 336/226-5534  
 Firm's Engineering License No. F-0203

ROADWAY DESIGN DATA AND DRAWINGS PROVIDED BY NCDOT



L-LINE W.L. (36+32±, C/L TO 100' RIGHT)



L-LINE W.L. (35+00 TO 37+50)

PROFILE  
 SCALE: 1" = 20' HOR.  
 1" = 2' VERT.