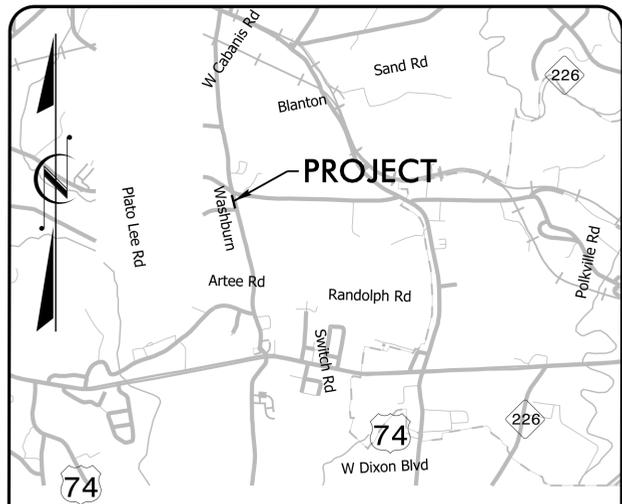


T.I.P. NO.	SHEET NO.
R-5849	UC-1

TIP PROJECT: R-5849



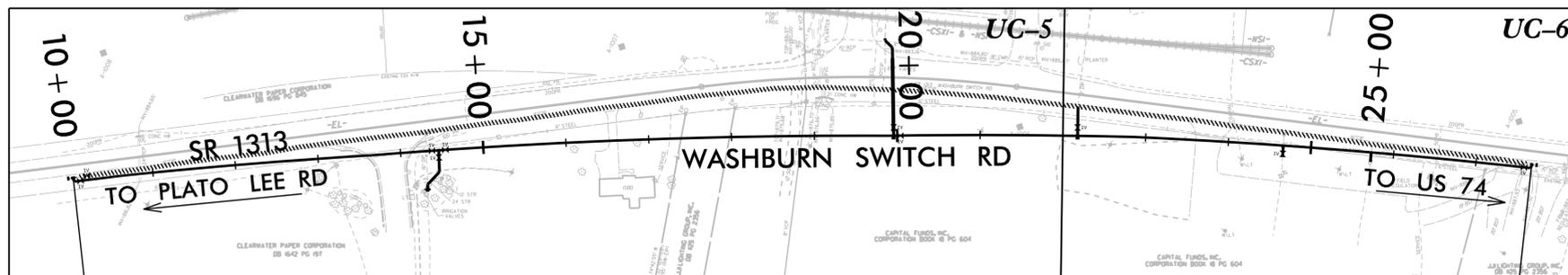
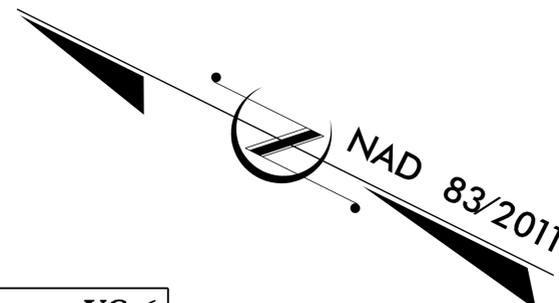
VICINITY MAP

RIGHT OF WAY PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS
SHELBY COUNTY**

**LOCATION: WASHBURN SWITCH BUSINESS PARK
WATERLINE RELOCATION ALONG SR 1313 (WASHBURN SWITCH RD.)
TYPE OF WORK: WATER RELOCATION**



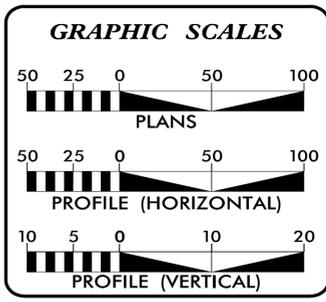
**BEGIN WATERLINE CONSTRUCTION
STA. 10 + 00.00**

**END WATERLINE CONSTRUCTION
STA. 27 + 70.84**

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE
LIMITS ESTABLISHED BY METHOD II.

CITY OF SHELBY PUBLIC WORKS DEPARTMENT APPROVED	
ENGINEERING	DATE
STORM WATER	DATE
TRANSPORTATION	DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-4A THRU UC-4B	DETAILS
UC-5 THRU UC-7	UTILITY CONSTRUCTION SHEETS
UC-8	PROFILE SHEET

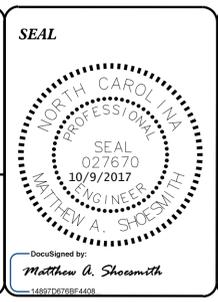
WATER AND SEWER OWNERS ON PROJECT
(1) WATER - CITY OF SHELBY

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn

1482767076P-4408

Matthew A. Shoemith, P.E. UTILITIES PROJECT ENGINEER
Rachel E. Rausch, EIT UTILITIES PROJECT DESIGNER



PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING**

1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

UTILITIES SECTION ENGINEER
UTILITIES SQUAD LEADER PROJECT ENGINEER
UTILITIES PROJECT DESIGNER

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CITY OF SHELBY PUBLIC WORKS DEPARTMENT APPROVED	
ENGINEERING _____	DATE _____
STORM WATER _____	DATE _____
TRANSPORTATION _____	DATE _____

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	PS(W)
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

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

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

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

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

EXISTING UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Utility Pole	
Utility Pole with Base	
H-Frame Pole	
Power Transmission Line Tower	
Water Manhole	
Power Manhole	
Telephone Manhole	
Sanitary Sewer Manhole	
Hand Hole for Cable	
Power Transformer	
Telephone Pedestal	
CATV Pedestal	
Gas Valve	
Gas Meter	
Located Miscellaneous Utility Object	
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

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

*For Existing Utilities

Utility Line Drawn from Record (Type as Shown)

Designated Utility Line (Type as Shown)

K:\CHL_PRJ\07072000_City of Shelby\07 Washburn Switch Water/line Relocation\04_CADD\PlanSheets\07072_UC_UC2_PSH.dgn 10/9/2017

8/17/19

REVISIONS

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION OR PRIOR TO MANUFACTURE OF PIPE. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR THE COMPLETENESS OF ANY SUCH INFORMATION AND DATA; AND, THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND FOR REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE NC ONE CALL TELEPHONE NUMBER IS 1-800-632-4949.
2. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF SHELBY UTILITIES DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO CUTTING OR CONNECTING TO EXISTING UTILITY LINES. PUBLIC WORKS DEPARTMENT PERSONNEL SHALL DETERMINE THE MOST APPROPRIATE TIME FOR THESE ACTIVITIES TO TAKE PLACE. THE CONTRACTOR SHALL CONTACT THE PUBLIC WORKS DIRECTOR AT 704-484-6840 AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
3. THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. THIS ITEM SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
4. CONTRACTOR SHALL FIELD LOCATE EXISTING UTILITY LINES TO BE CONNECTED TO PRIOR TO COMMENCING WORK. IF A DISCREPANCY EXISTS BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CITY IMMEDIATELY.
5. CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION AND ANGULATIONS OF EXISTING LINES PRIOR TO CONSTRUCTION. THIS ITEM SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT.
7. THE CONTRACTOR SHALL MAINTAIN A NEAT AND ACCURATE RECORD OF CONSTRUCTION FOR THE CITY'S RECORDS. THE CONTRACTOR SHALL PROVIDE THE CITY FULL SIZE REPRODUCIBLE MARKUPS THAT RECORD ALL CONSTRUCTION DEVIATING FROM THE PLANS AT SUBSTANTIAL COMPLETION.
8. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR AS APPROVED BY THE ENGINEER. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE PROJECT.
9. WHERE THE CONTRACTOR DESIRES TO MOVE EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS ON OR ACROSS ANY PAVEMENT, HE SHALL PROTECT THE PAVEMENT FROM ALL DAMAGE.
10. THE CONTRACTOR SHALL NOT PLACE FILL OR WASTE MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN AGREEMENT WITH PROPERTY OWNER.
11. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT NCDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EXCEPT WHERE MODIFIED IN THESE PLANS OR THE SPECIFICATIONS.
12. THE CONTRACTOR SHALL REVEGETATE UNPAVED AREAS DISTURBED BY CONSTRUCTION PRIOR TO ACCEPTANCE OF THE PROJECT. REVEGETATION SHALL CONSIST OF SEED SOWING, STRAW MULCHING, FERTILIZING AND WATERING. REVEGETATION SHALL BE ACCEPTABLE WHEN VEGETATION ACHIEVES ONE (1) INCH IN HEIGHT, WITH 85% COVERAGE AND NO GREATER THAN 10 SQUARE FEET BARE.
13. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. TRENCH SIDE SLOPES SHALL MEET OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS THAT ARE IN EFFECT AT THE TIME OF CONSTRUCTION. SHEETING, SHORING AND BRACING SHALL BE REQUIRED WHEN SIDE SLOPE STANDARDS ARE NOT MET. A PULL BOX, MEETING OSHA STANDARDS, MAY BE ACCEPTABLE, UNLESS NEGATED BY GROUNDWATER CONTROL MEASURES. CONTRACTOR SHALL HAVE A TRENCH SAFETY PLAN AT THE TIME OF PRE-CONSTRUCTION MEETING. NO OPEN TRENCHES WILL BE ALLOWED OVERNIGHT WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CITY OF SHELBY. ONSITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL SUBMIT IN WRITING A SEQUENCE OF CONSTRUCTION AND WORK SCHEDULE TO THE ENGINEER AT THE TIME OF THE PRE-CONSTRUCTION MEETING.
15. ALL PHASES OF CONSTRUCTION MUST BE COORDINATED WITH THE CITY OF SHELBY. FIELD ADJUSTMENTS MAY BE NECESSARY AND WILL BE CARRIED OUT AS DIRECTED BY THE CITY OF SHELBY AT NO EXTRA PAY.
16. CONSTRUCTION DEWATERING, IF ANY, IS INCIDENTAL TO THE PROJECT BID ITEMS. ALL DEWATERING DISCHARGE SHALL BE FILTERED THROUGH SILT BAGS AND/OR OTHER APPROVED EROSION CONTROL MEASURES.
17. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING ALL CONSTRUCTION LAYOUTS FROM THE SITE LAYOUT CONTROL POINTS, AND FROM THE DIMENSIONS AND CENTERLINES SHOWN. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSITION FROM ONE PIPE MATERIAL TO ANOTHER, WHERE INDICATED ON THE PLANS. MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR PROPER TRANSITION BETWEEN MATERIALS SHALL BE SUBSIDIARY TO THE COST OF THE PROJECT.
19. UNTIL THE WORK IS ACCEPTED BY THE CITY OF SHELBY, THE PROJECT SHALL BE UNDER THE CHARGE AND CUSTODY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE EVERY NECESSARY PRECAUTION AGAINST INJURY AND/OR DAMAGE TO THE WORK.

20. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY INSPECTOR OF ANY DAMAGE OR CHANGED CONDITION CAUSED BY CONSTRUCTION ACTIVITIES THAT MAY RESULT IN COMPROMISED WATER QUALITY ENTERING THE DISTRIBUTION SYSTEM.
21. THE CONTRACTOR SHALL DISTRIBUTE LETTERS TO ALL AFFECTED PROPERTY OWNERS PRIOR TO BEGINNING WORK ON EACH PROPERTY. THIS LETTER SHALL INCLUDE NAMES AND TELEPHONE NUMBERS OF CONTRACTOR CONTACTS, A DESCRIPTION OF WORK TO BE DONE, AND THE TIME FRAME FOR DOING THE WORK. COPIES OF THE LETTER SHALL BE FORWARDED TO THE CITY INSPECTOR. THE CONTRACTOR SHALL NOTIFY RESIDENTS 48 HOURS IN ADVANCE OF PERFORMING ANY WORK ON PRIVATE PROPERTY. DISTRIBUTION OF LETTERS SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
22. THE CONTRACTOR SHALL NOT COMMENCE WORK BEFORE 7:00AM AND SHALL ARRANGE HIS WORK SO THAT NO MACHINERY OR EQUIPMENT SHALL BE CLOSER THAN 30 FEET TO ANY TRAVEL LANES AFTER SUNSET EXCEPT AS AUTHORIZED BY THE OWNER. NO WORK IS ALLOWED ON SUNDAY.
23. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY DAMAGE TO PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO, FENCES, BRICKS, WALLS, PAVEMENT, GRASS, AND TREES, AT NO ADDITIONAL COST TO THE OWNER. THIS WORK SHALL BE SUBSIDIARY TO THE COST OF THE CONTRACT UNLESS OTHERWISE NOTED.
24. CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS IN VICINITY OF ANY OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL ABIDE BY NATIONAL ELECTRIC CODE AND ANY REQUIREMENT BY OWNER OF ELECTRIC LINE.
25. CONTRACTOR SHALL INSTALL TEMPORARY BACKFILL AS REQUIRED FOR OPEN TRENCH IN ESTABLISHED ROADWAYS. NO OPEN TRENCH WILL BE ALLOWED IN EXISTING PAVEMENT EXCEPT DURING DAYLIGHT HOURS AND DURING CONSTRUCTION OPERATIONS. TEMPORARY BACKFILL SHALL BE INSTALLED TO THE FINISHED GRADE OF THE EXISTING PAVEMENT AND SHALL BE MAINTAINED BY THE CONTRACTOR TO ENSURE A SMOOTH DRIVING SURFACE FREE OF RUTTING AND POTHOLE. REPAIR DAMAGED PAVEMENT IN ACCORDANCE WITH SPECIFICATIONS. A LIMIT OF 40 LF OF TRENCH MAY BE CLOSED BY PLATES OUTSIDE OF CONSTRUCTION HOURS.
26. TOPSOIL REPLACEMENT IS REQUIRED IN ALL AREAS WHERE TOPSOIL EXISTS. TOPSOIL SHALL INCLUDE THE TOP SIX (6) INCHES OF TRENCH, UNLESS ROCK DEPTH IS LESS THAN SIX (6) INCHES. TOPSOIL SHALL BE KEPT SEPARATE FROM GENERAL TRENCH EXCAVATED MATERIAL AND SHALL BE PLACED ON TOP OF TRENCH BACK FILL. CONTRACTOR SHALL REMOVE ALL ROCK FROM TOPSOIL IN CULTIVATED AREAS.
27. ALL TESTING SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS.
28. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND PROPERTIES ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION AT ALL TIMES.
29. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.
30. CONTRACTOR SHALL NOT STORE MATERIALS, EQUIPMENT OR OTHER CONSTRUCTION ITEMS ON ADJACENT PROPERTIES OR RIGHT-OF-WAY WITHOUT THE PRIOR WRITTEN CONSENT OF THE PROPERTY OWNER OR THE CITY OF SHELBY (FOR R.O.W.) ALL CONSTRUCTION MATERIALS TO BE REMOVED SHALL BE DISPOSED OF AT A LEGAL DISPOSAL LOCATION OFF SITE, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE PROPERTY OWNER.
31. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF AT A LEGAL DISPOSAL FACILITY OFF SITE BY THE CONTRACTOR AT HIS EXPENSE UNLESS OTHERWISE SPECIFIED OR AGREED TO BY OWNER.
32. ALL PAVING DIMENSIONS ARE TO EDGE OF PAVEMENT AND/OR FACE OF CURB UNLESS OTHERWISE NOTED.
33. THE CONTRACTOR SHALL GIVE THE OWNER A MINIMUM OF 5 DAYS NOTICE PRIOR TO THE TIME A STREET SIGN IS TO BE REMOVED DUE TO CONSTRUCTION OPERATIONS. AT NO TIME SHALL THE CONTRACTOR REMOVE OR RELOCATE A STOP OR YIELD SIGN WITHOUT THE APPROVAL OF THE CITY.
34. THE CONTRACTOR SHALL PROTECT ALL FRANCHISE UTILITIES DURING ALL CONSTRUCTION PHASES (INCLUDING POWER POLES, TELEPHONE RISERS, ETC.). THE CONTRACTOR SHALL PROTECT AND SALVAGE ALL EXISTING UTILITIES IN ACCORDANCE WITH CITY OF SHELBY REQUIREMENTS AND RETURN SALVAGED UTILITIES TO THE CITY.
35. CONTRACTOR SHALL FURNISH AND INSTALL ALL THERMOPLASTIC PAVEMENT MARKINGS AS SHOWN ON THE PLANS. STOP BARS SHALL BE INSTALLED AT ALL STREET INTERSECTIONS.
36. CONTRACTOR SHALL SAW-CUT TO PROVIDE SMOOTH TRANSITION AT TIE-IN TO EXISTING EDGE OF PAVEMENT AND MEET EXISTING PAVEMENT AS NECESSARY TO ENSURE POSITIVE DRAINAGE.
37. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FENCING ALONG THE PROJECT.
38. CONTRACTOR SHALL MAKE ALL ATTEMPTS TO PROTECT ALL TREES WITHIN THE LIMITS OF CONSTRUCTION. IF CONSTRUCTION REQUIRES ANY TREE TO BE REMOVED, THE CONTRACTOR SHALL NOTIFY CITY STAFF OF THE NECESSARY REMOVAL PRIOR TO CONSTRUCTION. THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
39. CONTRACTOR SHALL MAKE ALL ATTEMPTS TO PROTECT ALL SIGNS WITHIN THE LIMITS OF CONSTRUCTION. ANY SIGN REQUIRING REMOVAL AND REPLACEMENT AS A RESULT OF CONSTRUCTION SHALL BE REPLACED AT EQUAL OR BETTER CONDITION AND IN ACCORDANCE WITH NCDOT GUIDELINES. ANY SIGNS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS A NON-PAY ITEM.

40. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY. THE CONTRACTOR SHALL VIDEO THE ENTIRE PROJECT CORRIDOR AND PROVIDE A COPY OF THE CD TO THE CITY PRIOR TO CONSTRUCTION.
 41. TEMPORARY MAILBOXES SHALL BE PROVIDED AS REQUIRED. THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE LOCATION OF MAILBOXES IS TO BE DETERMINED BY PROPERTY OWNERS. MAILBOXES MUST MEET POST OFFICE STANDARDS
- WATER LINE NOTES
1. THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE.
 2. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION BY USE OF TEMPORARY METHODS APPROVED BY THE OWNER. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
 3. CONTRACTOR SHALL INSTALL STANDARD BENDS AT LOCATIONS SHOWN. ALL NON-STANDARD VERTICAL AND HORIZONTAL BENDS SHALL BE INSTALLED USING STANDARD BENDS AND 50% OF THE MAXIMUM ALLOWABLE JOINT DEFLECTIONS AND MINIMUM RADIUS AS RECOMMENDED BY THE PIPE MANUFACTURER.
 4. THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
 5. THE 16-INCH WATER LINE SHALL BE DUCTILE IRON, PRESSURE CLASS 250.
 6. ALL TEES, BENDS, REDUCERS, AND PLUGS SHALL BE MECHANICALLY RESTRAINED AND BLOCKED. MECHANICAL RESTRAINT SHALL BE BY EBAA MEGALUG FOR DUCTILE IRON OR APPROVED EQUAL.
 7. ALL VALVES, FIRE HYDRANTS, FITTINGS, AND OTHER METAL APPURTENANCES LOCATED BELOW GROUND SHALL BE POLYETHYLENE-ENCASED IN ACCORDANCE WITH AWWA C-509.
 8. WATER PIPE SHALL HAVE A MINIMUM OF 42 INCHES OF COVER (UNLESS NOTED OTHERWISE).
 9. THE CONTRACTOR SHALL INSTALL A FULL JOINT OF PIPE ON BOTH SIDES OF ALL FITTINGS WHERE POSSIBLE.
 10. WHERE THE CONTRACTOR CROSSES AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL WITH THE NEW POTABLE WATER LINE PIPE, ONE SEGMENT OF THE WATER LINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATER LINE PIPE ARE EQUIDISTANT AND AT LEAST TEN FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. INSTALL IN ACCORDANCE WITH CITY OF SHELBY STANDARD DETAIL 6.19.
 11. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE AWWA, NCDEQ, AND ASTM STANDARDS FOR CONNECTIONS TO EXISTING ASBESTOS CEMENT PIPES.
 12. CONTRACTOR TO FIELD VERIFY SIZES OF ALL SERVICES TO BE CONNECTED TO NEW WATER MAIN. ALL SERVICE CONNECTIONS SHALL INCLUDE AN ISOLATION VALVE INSTALLED ON THE SERVICE. CONTRACTOR TO VERIFY RESTRAINT ON EXISTING SERVICE LINES PRIOR TO TIE IN. IF UNRESTRAINED, CONTRACTOR SHALL INSTALL THRUST COLLAR ON EXISTING PIPE PRIOR TO TIE IN.
 13. ALL DUCTILE IRON PIPE SHALL BE RESTRAINED JOINT AND POLYETHYLENE ENCASED (POLYWRAPPED). POLYETHYLENE ENCASEMENT SHALL MEET AWWA C105 STANDARDS.
- WATER LINE CONSTRUCTION SEQUENCING
1. COORDINATE ALL STEPS WITH CITY OF SHELBY UTILITY DEPARTMENT. NOTIFY CITY 72 HOURS PRIOR TO ANY SERVICE INTERRUPTIONS.
 2. ALL THRUST BLOCKING SHALL BE COMPLETED AND CURED PRIOR TO CUTTING ASSOCIATED PIPING. INSTALL THRUST COLLAR ON EXISTING 16" WATER LINE AT STA 10+00 AND 27+70.
 3. CITY TO LOCATE AND CLOSE EXISTING VALVES AT RUSTLING WIND DRIVE AND CLEARWATER SERVICE TEE LABELED EV-1 ON PLANS.
 4. CUT-IN TWO 16"x16" TEES AND GATE VALVES AT STA 10+00 AND ADJACENT TO PARCEL 32618 (SHEET W-04). PLACE EXISTING WATER LINE BACK IN SERVICE.
 5. CONSTRUCT THE NEW 16" DI WATERLINE AS SHOWN IN PLANS THROUGH ISOLATION VALVE AT STA. 27+70. PRESSURE TEST, DISINFECT, AND UPON AUTHORIZATION, PLACE NEW WATER LINE SEGMENT IN SERVICE.
 6. MOVE ALL SERVICES INTO NEW WATER LINE.
 7. CITY TO LOCATE AND CLOSE EXISTING VALVE AT 639 WASHBURN SWITCH ROAD AND EXISTING VALVE AT CLEARWATER SERVICE TEE LABELED EV-2 ON PLANS.
 8. CUT AND CONNECT PROPOSED WATERLINE AT STA 27+70. AND PLACE PROPOSED LINE IN SERVICE.
 9. CLOSE VALVE ON EXISTING ON SOUTH SIDE OF TEE AT STA 10+00. CUT, CAP, AND ABANDON EXISTING WATER LINE.

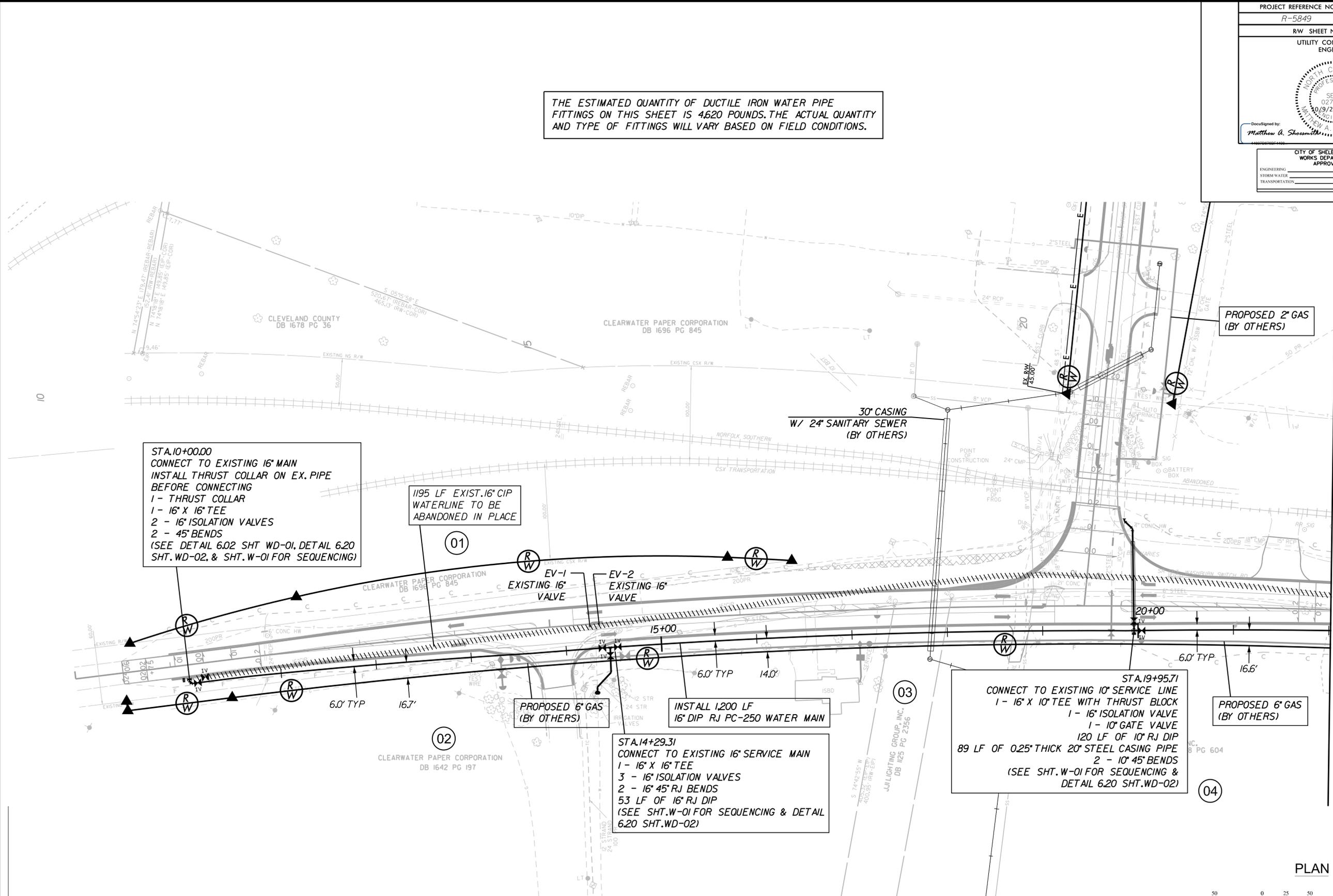
PROJECT REFERENCE NO. <i>R-5849</i>	SHEET NO. <i>UC-3</i>
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: <i>Matthew A. Shoemith</i>	

CITY OF SHELBY PUBLIC WORKS DEPARTMENT APPROVED			
ENGINEERING	DATE	DATE	DATE
STORM WATER	DATE	DATE	DATE
TRANSPORTATION	DATE	DATE	DATE

PROJECT REFERENCE NO.	SHEET NO.
R-5849	UC-5
RW SHEET NO.	
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: Matthew A. Shoemith	
CITY OF SHELBY PUBLIC WORKS DEPARTMENT APPROVED	
ENGINEERING	DATE
STORM WATER	DATE
TRANSPORTATION	DATE

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS SHEET IS 4620 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

REVISIONS



STA. 10+00.00
CONNECT TO EXISTING 16" MAIN
INSTALL THRUST COLLAR ON EX. PIPE
BEFORE CONNECTING
1 - THRUST COLLAR
1 - 16" X 16" TEE
2 - 16" ISOLATION VALVES
2 - 45° BENDS
(SEE DETAIL 6.02 SHT. WD-01, DETAIL 6.20
SHT. WD-02, & SHT. W-01 FOR SEQUENCING)

1195 LF EXIST. 16" CIP
WATERLINE TO BE
ABANDONED IN PLACE

PROPOSED 6" GAS
(BY OTHERS)

STA. 14+29.31
CONNECT TO EXISTING 16" SERVICE MAIN
1 - 16" X 16" TEE
3 - 16" ISOLATION VALVES
2 - 16" 45° RJ BENDS
53 LF OF 16" RJ DIP
(SEE SHT. W-01 FOR SEQUENCING & DETAIL
6.20 SHT. WD-02)

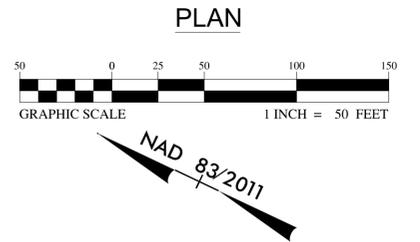
INSTALL 1,200 LF
16" DIP RJ PC-250 WATER MAIN

STA. 19+95.71
CONNECT TO EXISTING 10" SERVICE LINE
1 - 16" X 10" TEE WITH THRUST BLOCK
1 - 16" ISOLATION VALVE
1 - 10" GATE VALVE
120 LF OF 10" RJ DIP
2 - 10" 45° BENDS
(SEE SHT. W-01 FOR SEQUENCING &
DETAIL 6.20 SHT. WD-02)

PROPOSED 6" GAS
(BY OTHERS)

PROPOSED 2" GAS
(BY OTHERS)

MATCH LINE STA. 22 + 00.00
MATCH TO SHEET UC-6



8/17/19

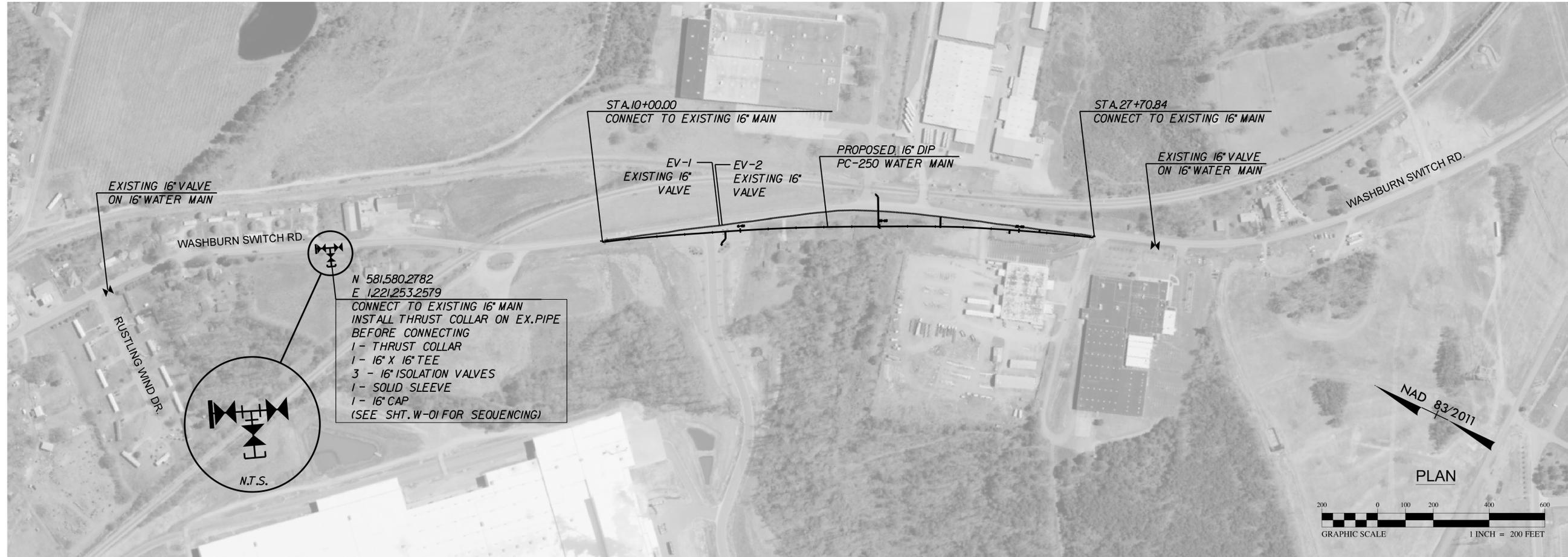
8/17/19

PROJECT REFERENCE NO. 47336	SHEET NO. UC-7
RW SHEET NO.	
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: <i>Matthew A. Shoemith</i>	

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS SHEET IS 1,490 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

CITY OF SHELBY PUBLIC WORKS DEPARTMENT APPROVED	
ENGINEERING	DATE
STORM WATER	DATE
TRANSPORTATION	DATE

REVISIONS



11
 10
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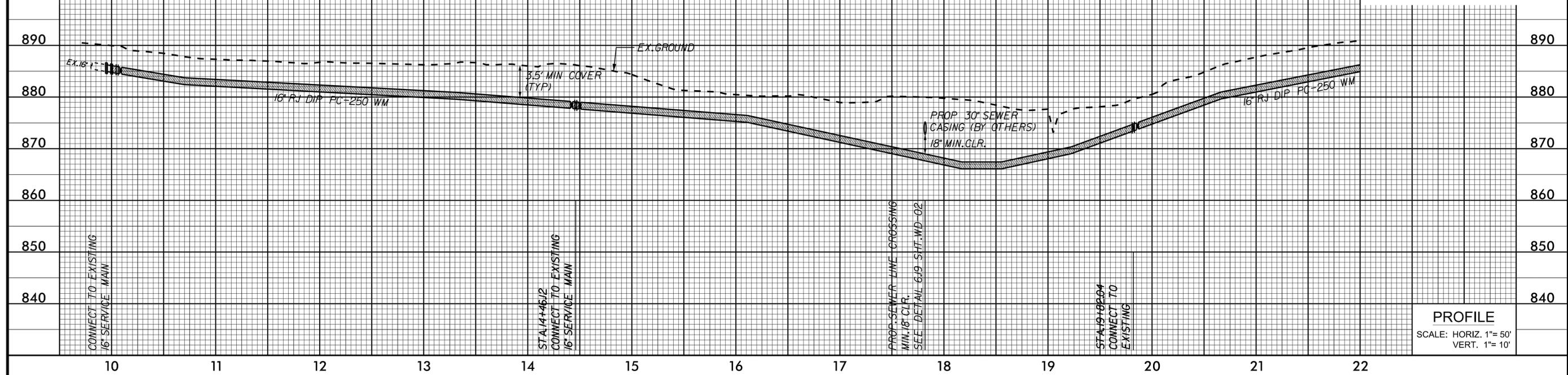
CITY OF SHELBY PUBLIC WORKS DEPARTMENT APPROVED	
ENGINEERING	DATE
STORM WATER	DATE
TRANSPORTATION	DATE

PROJECT REFERENCE NO.	SHEET NO.
R-5849	UC-8

UTILITY CONSTRUCTION ENGINEER

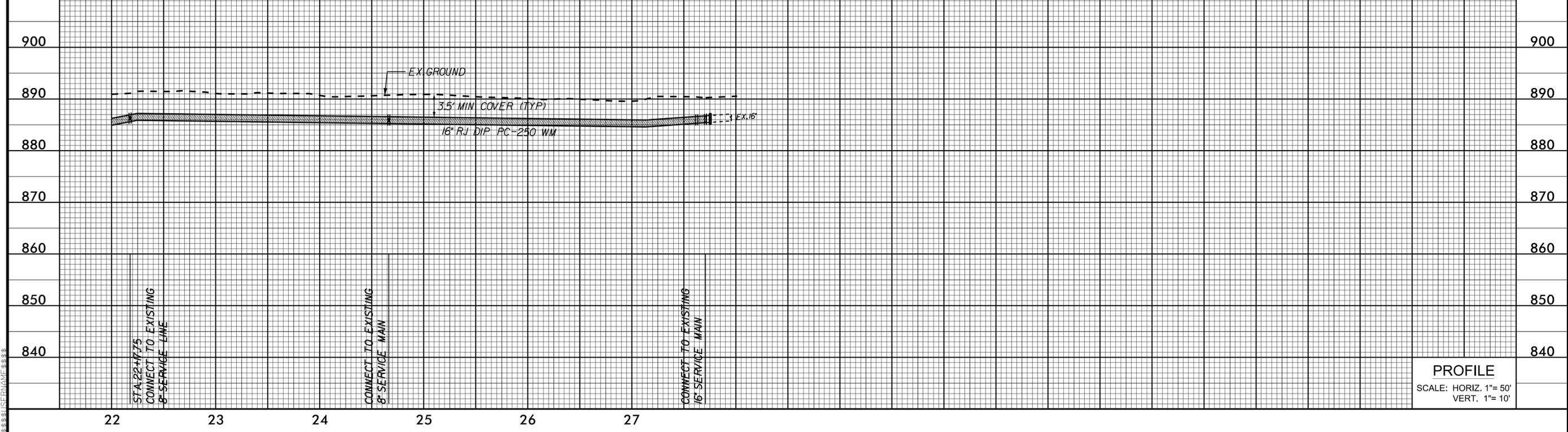
DocuSigned by: Matthew A. Shoemith

SEE SHEET UC-5 FOR PLAN



PROFILE
SCALE: HORIZ. 1"= 50'
VERT. 1"= 10'

SEE SHEET UC-6 FOR PLAN



PROFILE
SCALE: HORIZ. 1"= 50'
VERT. 1"= 10'

5/28/99