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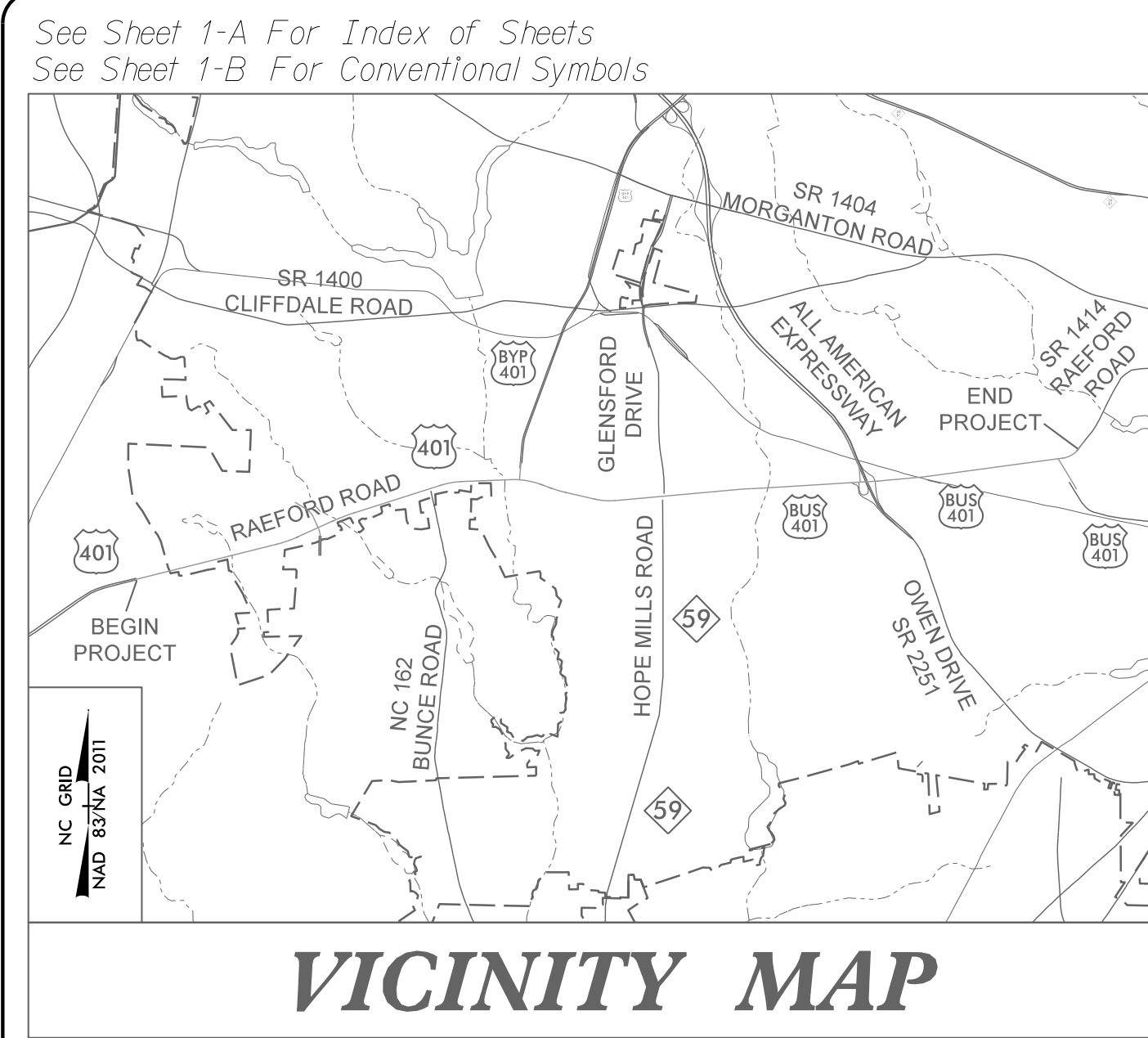
T.I.P. NO.	SHEET NO.
U-4405	UC-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

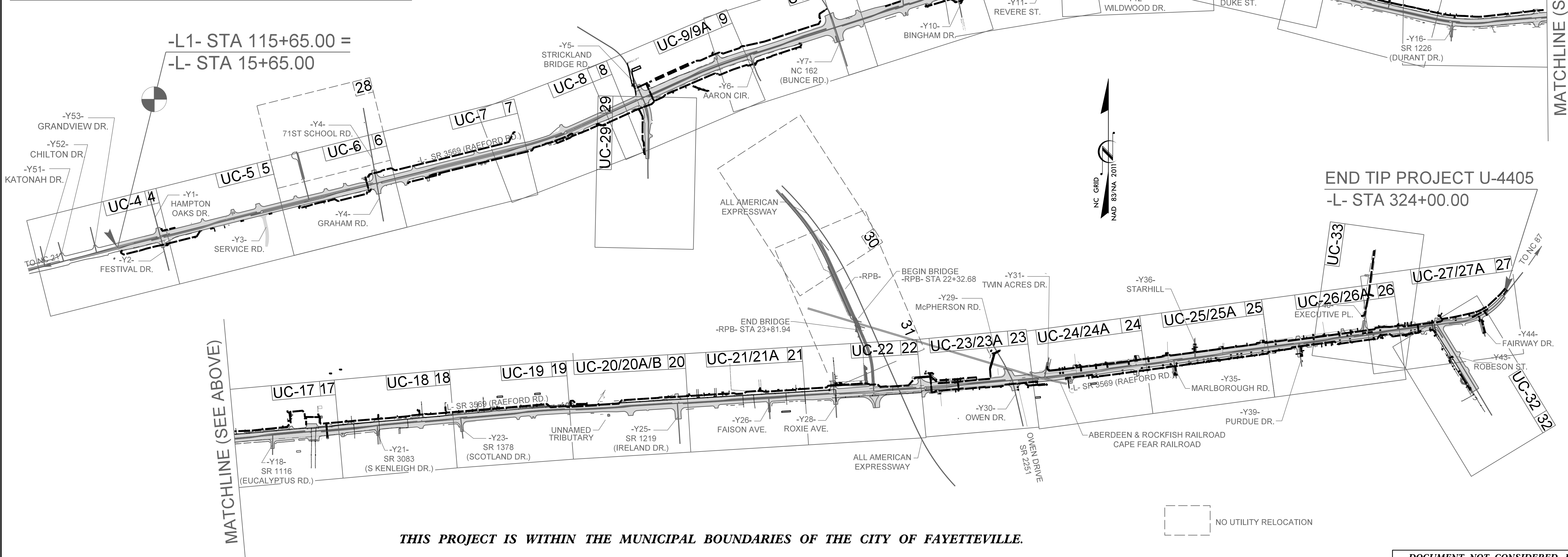
**UTILITY CONSTRUCTION PLANS
CUMBERLAND COUNTY**

LOCATION: US 401 FROM WEST OF HAMPTON OAKS DRIVE
TO EAST OF FAIRWAY DRIVE IN FAYETTEVILLE

TYPE OF WORK: RELOCATION OF WATER AND SEWER

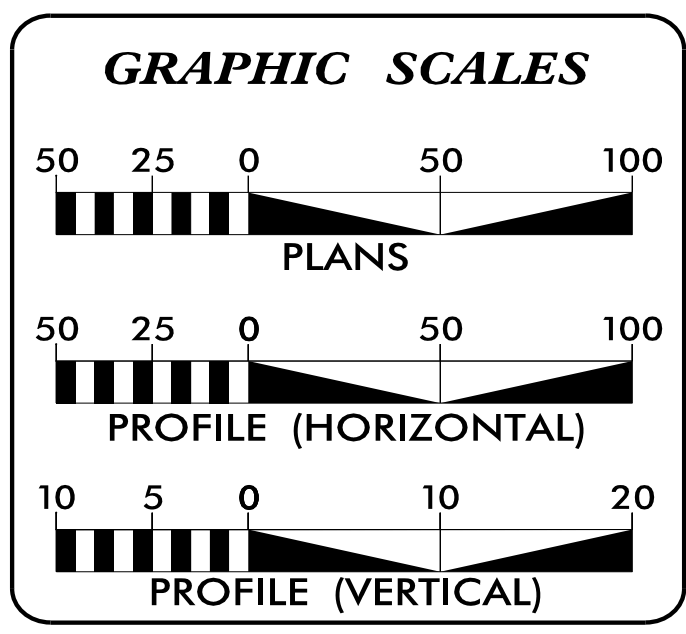


TIP PROJECT: U-4405



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF FAYETTEVILLE.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____.

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



INDEX OF SHEETS

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WATER AND SEWER OWNERS ON PROJECT

(1) WATER: FAYETTEVILLE PWC
(2) SANITARY SEWER: FAYETTEVILLE PWC

Prepared in the Office of:

community infrastructure consultants
720 CORPORATE CENTER DRIVE
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MARK W. FISHER, PE
PROJECT ENGINEER

ALBERT M. HUCKABY, EI
PROJECT DESIGN ENGINEER

SEAL 8/3/2018

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Mark W. Fisher
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1555 MAIL SERVICES CENTER
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KYLE PLEASANT UTILITIES AREA COORDINATOR
LARRY M. JAMES UTILITIES COORDINATOR

REVISIONS
 UTILITY REV. - JULY 27, 2008 - REVISIONS SHEET INDEX
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 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	
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	

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		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

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

5/14/99
 PLANS\Utilities\Engineering\UC\Proj\U4405-ut-sym-UC02.psh.dgn
 Reeford Road NCDOT U-4405\CADD\NCDOT PLANS\Utilities\Engineering\UC\Proj\U4405-ut-sym-UC02.psh.dgn
 MAY-2018 1424
 REV: 2/1/2012

PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-3
DESIGNED BY: AMH	
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: MWF	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

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 2018 AND THE SPECIAL PROVISIONS TO NCDOT SPECIFICATION DIVISION 15.
2. FAYETTEVILLE PWC OWNS AND OPERATES THE EXISTING WATER AND SEWER UTILITIES EXCEPT FOR THE WATER UTILITIES IDENTIFIED AS AQUA AMERICA.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. FAYETTEVILLE PWC 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. THE CONTRACTOR SHALL 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 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.
10. PRIOR TO PLACEMENT OF PROPOSED SANITARY GRAVITY SEWER THE CONTRACTOR SHALL LOCATE ALL EXISTING SEWER SERVICE LATERALS (DEPTH AND PIPE DIAMETER) AND NOTIFY THE RESIDENT ENGINEER IF THERE ARE COMPLICATIONS WITH CONNECTING TO THE PROPOSED SANITARY GRAVITY SEWER. THE CONTRACTOR'S COST FOR ALL WORK ASSOCIATED WITH SEWER SERVICES, IS INCIDENTAL TO SEWER SERVICE PAYMENT ITEM.
11. PRIOR TO PLACEMENT OF PROPOSED WATERLINE THE CONTRACTOR SHALL LOCATE ALL EXISTING WATER SERVICE LATERALS (DEPTH AND PIPE DIAMETER) AND NOTIFY THE RESIDENT ENGINEER IF THERE ARE COMPLICATIONS WITH CONNECTING TO THE PROPOSED WATERLINE. THE CONTRACTOR'S COST FOR ALL WORK ASSOCIATED WITH WATER SERVICES, IS INCIDENTAL TO WATER SERVICE PAYMENT ITEM.
12. THE CONTRACTOR SHALL REFER TO THE "UTILITIES BY OTHERS" PLANS FOR PROPOSED GAS, TELECOMMUNICATIONS, AQUA AMERICA WATER, AND POWER UTILITY RELOCATIONS.

PROJECT SPECIFIC NOTES:

1. ALL PROPOSED WATER LINE 2" IN DIAMETER SHALL BE SDR21, PRESSURE CLASS 200 IN ACCORDANCE WITH ASTM D 2241 OR SDR-17 WITH A PRESSURE RATING OF 250 PSI, IN ACCORDANCE WITH ASTM D-224. ALL PROPOSED WATER LINE 4"-12" IN DIAMETER SHALL BE DI (DUCTILE IRON PUSH-ON) PC 350 PIPE, UNLESS SPECIFIED TO BE RESTRAINED JOINT PIPE AND/OR SPECIAL THICKNESS CLASS AS SHOWN ON THE PLAN/PROFILE. ALL PROPOSED WATERLINE LINE 16" IN DIAMETER AND LARGER SHALL BE DI (DUCTILE IRON PUSH-ON) PC 250 PIPE, UNLESS SPECIFIED TO BE RESTRAINED JOINT PIPE AND/OR SPECIAL THICKNESS CLASS AS SHOWN ON THE PLAN/PROFILE.
2. ALL PROPOSED GRAVITY SEWER LINES 12" IN DIAMETER AND SMALLER SHALL BE PROTECTO 401 LINED DI (DUCTILE IRON PUSH ON) PC 350 PIPE UNLESS OTHERWISE SPECIFIED. ALL PROPOSED GRAVITY SEWER LINES 16" IN DIAMETER AND GREATER SHALL BE PROTECTO 401 LINED DI (DUCTILE IRON PUSH ON) PC 250, UNLESS OTHERWISE SPECIFIED.
3. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
4. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL. IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.
5. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL FAYETTEVILLE PWC AND/OR NCDOT STANDARDS AND SPECIFICATIONS.
6. TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE. THIS REQUIREMENT IS APPLICABLE TO ALL UTILITY CONSTRUCTION SHEETS.

7. UTILITY CONSTRUCTION NOTE SHEETS PROVIDE SEQUENCE OPTIONS FOR THE CRITICAL INSTALLATIONS AND KILL OUTS OF THE PROPOSED WATER AND SEWER LINES. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SEQUENCE FOR ALL WATER LINE AND SEWER LINE SEGMENTS AND KILLOUTS PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL BY ENGINEER. CONTRACTOR SHALL UPDATE CONSTRUCTION SEQUENCES WHERE ACTUAL CONDITIONS REQUIRE AJDUSTMENTS OR ALTERATIONS TO THE PLANNED WORK. CONSTRUCTION SEQUENCE OPTIONS THAT ARE PROVIDED ARE INTENDED TO MINIMIZE IMPACTS TO WATER AND SEWER OPERATIONS. INSTALLATION SHALL NOT BEGIN UNTIL AN APPROVED SEQUENCE PLAN IS IN PLACE.
8. ANY REFERENCE TO THE FAYPWC COORDINATOR OR PWC COORDINATOR SHALL BE INTERPRETED AS A REFERENCE TO THE ENGINEER.

UTILITY CONSTRUCTION
 DOCUMENT NOT CONSIDERED FINAL
 UNTIL ALL SIGNATURES ARE COMPLETED

REVISIONS

UTILITY REV.- JULY 23,2018 - REVISED GENERAL NOTES

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PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-3A
DESIGNED BY: AMH	
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: MWF	
REVISED:	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

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UNTIL ALL SIGNATURES ARE COMPLETED

UTILITY CONSTRUCTION

UC-4 UTILITY NOTES:

- FULLY GROUT MIN. 60LF OF 24" EXIST MAIN. PLUG EACH END OF ABANDONED MAIN PER UTILITY OWNER KILLOUT DETAIL W-22.
- KILL OUT OF BRANCH LINE SIDE OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXIST ALIGNMENT (SEE SHEET UC-5).
- WL-2, WL-3 AND WL-1 BETWEEN TAP AT -WL-1- STA 0+00 AND VALVE AT APPROX -WL-1- STA. 8+95 SHALL BE INSTALLED AND OPERATIONAL BEFORE INSTALLING ANY OTHER PORTION OF WL-1
- PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETE WITH THE PORTION OF WL-1 AND WL-2 AS DEFINED IN NOTE 3 BEFORE BEGINNING INSTALLATION OF WL-3. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.
- WL-3 TO BE CONNECTED TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-2A AND EV-2B SHALL BE CRITICAL IN ISOLATING CONNECTING POINTS.
- KILL-OUT OF 24" SIDES OF 24"x24"x8"x8" CROSS TO BE FACILITATED BY SHUTDOWN WHEN KILLING OUT 24" MAIN AT TAPPING SLEEVE FOR WL-1. VALVES TO ISOLATE KILL OUT INCLUDE EV-1, EV-2A, EV-2B, EV-4 AND TAPPING VALVE FOR WL-1.

UC-5 UTILITY NOTES:

- CONTRACTOR SHALL LAY BACK INTO EXISTING 24" WATER MAIN WITH A MINIMUM OF 20 LF OF RESTRAINED JOINT UNDER PLANNED SERVICE INTERRUPTION.
- CONTRACTOR SHALL PROVIDE A TEMPORARY RESTRAINED PLUG AND TEMPORARY BLOW OFF ASSEMBLY FOR TESTING AND FLUSHING BEFORE RECONNECTING TO EXISTING 24" MAIN. NO SEPARATE PAYMENT SHALL BE MADE FOR TEMPORARY BLOW-OFF ASSEMBLIES.
- CONTRACTOR SHALL REMOVE TEMPORARY 24" PLUG AND SLEEVE TO EXISTING 24" WATER MAIN USING MJ x MJ FULL BODY SLEEVE AND RESTRAIN WITH RESTRAINING GLANDS.
- AFTER SLEEVING OF PROPOSED 24" MAIN TO EXISTING 24" MAIN, CONTRACTOR SHALL ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS WHEN REINSTATING THE 24" MAIN.
- WL-2, WL-3 AND WL-1 BETWEEN TAPPING SLEEVE AND VALVE AT -WL-1- STA 0+00 AND VALVE AT -WL-1- STA 8+95 SHALL BE INSTALLED AND OPERATIONAL BEFORE INSTALLING ANY OTHER PORTION OF WL-1.
- PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETE WITH THE PORTION OF WL-1 AND WL-2 BEFORE BEGINNING INSTALLATION OF WL-3. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.
- SHUTDOWN TO CONNECT WL-1 TO EXISTING 24" MAIN AND PERFORM KILL-OUT OF EXISTING 24" MAIN AT TAPPING LOCATION SHALL BE FACILITATED THROUGH EV-1, EV-2A, EV-2C, EV-4 AND 24" TAPPING VALVE AND NEW IN-LINE VALVE AT STA. 8+95. WL-2 AND WL-3 SHALL BE INSTALLED AND OPERATIONAL PRIOR TO SHUTDOWN FOR WL-1 TO BACKFEED EXISTING SERVICES ON SKATEWAY DRIVE.
- UTILITY OWNER'S SAMPLING STATION SHALL NOT BE DISTURBED. PROVIDE NEW TAP AND LATERAL TO SAMPLING STATION IF SAMPLING STATION'S 1" SERVICE LATERAL IS IN CONFLICT WITH PROPOSED DRAINAGE. SAMPLING STATION SHALL NOT BE INTERRUPTED DURING ANNUAL BURN OUT, WHICH OCCURS EVERY MARCH. OTHERWISE, SERVICE TO SAMPLING STATION MAY BE INTERRUPTED SHOULD PLANNED SHUTDOWNS IMPACT THIS SERVICE LATERAL.
- CITY OF FAYETTEVILLE HAS A 1" SERVICE FOR MEDIAN IRRIGATION. PROVIDE NEW TAP AND LATERAL TO RECONNECT 1" IRRIGATION SERVICE IF IT IS IN CONFLICT WITH PROPOSED DRAINAGE. CONTRACTOR SHALL REPLACE ALL DAMAGED IRRIGATION PIPING (INCIDENTAL AND THAT IS IN CONFLICT WITH WORK) AT NO ADDITIONAL COST. EXISTING IRRIGATION PIPING HAS NOT BEEN LOCATED AND IS NOT SHOWN ON SHEET.
- ALL DUCK AND UNDERS BETWEEN WL-1 AND WL-5 SHALL BE PERFORMED DURING PLANNED OUTAGES. CONTRACTOR SHALL CONFORM TO CUT IN CONSTRUCTION REQUIREMENTS WHEN PERFORMING THIS WORK.

UC-6 UTILITY NOTES:

- EXISTING METER AND SERVICE WAS NOT LOCATED FOR MULTIPLE PARCELS. CONTRACTOR TO PROVIDE 1" METER SERVICE FOR THOSE PARCELS THAT CURRENTLY ARE SERVED BY UTILITY OWNER. COORDINATE LOCATION WITH UTILITY OWNER'S PROJECT COORDINATOR.
- INSTALL AND HAVE OPERATIONAL WL-5 BETWEEN TAPPING VALVE AND 24"x24"x24" TEE AT WL-5, STA 8+37.33. STUB-OUT WL-5 FOR CONNECTION TO EXISTING 24" MAIN. INSTALL AND HAVE OPERATIONAL WL-6 BETWEEN WL-5 AND 24" TAPPING VALVE FOR WL-6. STUB-OUT WL-7.
- PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETED WITH WORK ON WL-5 AS DEFINED NOTE 2 (ABOVE) BEFORE BEGINNING INSTALLATION ON WL-6. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.
- TRANSFER EXISTING METERS FROM EXISTING 24" MAIN TO WL-5 BEFORE PERFORMING DUCK AND UNDERS ON EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8.

UC-6 UTILITY NOTES:

- COORDINATE SHUTDOWN TO PERFORM EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8 WITH UTILITY OWNER'S PROJECT COORDINATOR AND KILLING OUT EXISTING MAIN AT TAPPING SLEEVE FOR WL-5, STA 0+00. EXISTING VALVES EV-4, EV-5, EV-8, AND TAPPING SLEEVE FOR WL-5 AT STA 0+00 SHALL FACILITATE SHUTDOWN AND MAINTAIN UNINTERRUPTED SERVICE TO CUSTOMERS.
- AFTER COMPLETING ALTERATIONS IN NOTE 5 (ABOVE), COMPLETE CONNECTION OF WL-5 TO EXISTING 24" MAIN BY CUTTING IN AND KILLING OUT EXISTING MAIN AT TAPPING SLEEVE FOR WL-6 UNDER PLANNED SHUTDOWN. CONSTRUCTION TIME FOR THIS WORK SHALL BE LIMITED TO WEEKEND AND SHALL NOT BEGIN UNTIL 6:00 P.M. ON FRIDAY. ALL WORK MUST BE COMPLETED AND WATER MAIN BACK IN OPERATION BEFORE 6:00 A.M. MONDAY. EXISTING VALVES EV-4, EV-5, EV-8A AND EV-9 SHALL FACILITATE SHUTDOWN TO MINIMIZE SERVICE INTERRUPTIONS.
- SLEEVING OF WL-5 INTO EXISTING MAIN SHALL ENTAIL THE REMOVAL OF ONE 24" RJ BUTTERFLY VALVE AND ONE 24"x24"x24" RJ TEE. EV-8A IS RESTRAINED AND SHALL NOT BE DAMAGED SO WL-5 CAN BE RECONNECTED TO IT USING SPOOL PIECE AND FULL BODY MJ SLEEVE AND RESTRAINING GLANDS.
- DURING INSTALLATION OF WL-5, CONTRACTOR SHALL REMOVE AND REPLACE 48 LF OF RCP AS SHOWN ON PLANS UNLESS ACTUAL CONDITIONS DIFFER, OR WORK CAN BE PERFORMED SO AS NOT TO INTERFERE WITH EXISTING DRAINAGE.

UC-7 UTILITY NOTES

- WL-8 SHALL BE BUILT OUT FROM TAPPING SLEEVE AND VALVE (SEE SHEET UC-8) TO TIE INTO EXISTING 24" MAIN ON THIS SHEET.
- SEE UTILITY NOTES ON SHEET UC-8 FOR SPECIAL SEQUENCING OF INSTALLATION AND CUT IN REQUIREMENTS FOR WL-8, WL-10, AND 24" MAIN ABANDONMENT.
- LAY BACK MINIMUM OF ONE FULL RESTRAINED JOINT WHEN SLEEVING INTO EXISTING MAIN.

UC-8 UTILITY NOTES:

- THE PORTION OF WL-8 WITHIN RAEFORD ROAD (BETWEEN APPROX. WL-8- STA 12+00 AND APPROX. WL-8- STA 17+00) SHALL BE INSTALLED DURING WEEKNIGHT TIMES TO FACILITATE MAXIMUM OF TWO LANES OF CLOSURE. WORK EACH NIGHT SHALL NOT BEGIN BEFORE 7:00 P.M. ALL WORK UTILITIZING THE SECOND LANE OF CLOSURE SHALL BE COMPLETED BEFORE 6:00 A.M.
- FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.
- KILL OUT OF LINE SIDE OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXISTING ALIGNMENT (SEE SHEET UC-7 FOR WL-8 AND UC-8 FOR WL-10).
- INSTALL WL-8 AND WL-10 AND HAVE EACH SEGMENT OPERATIONAL TO LAST IN LINE VALVE ON EACH SEGMENT (BETWEEN WL-8- STA 1+10 AND APPROX. WL-8- STA 17+10 AND BETWEEN APPROX. WL-10- STA 1+00 AND WL-10- STA 25+50). ALL EXISTING METERS THAT OVERLAP THESE RELOCATION SEGMENTS SHALL BE TRANSFERED TO THESE NEW SEGMENTS. ALL CROSS-LINES FOR WL-10 SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES. ARRAN CIRCLE AND STRICKLAND BRIDGE ROAD (WL-11 AND WL-12) RECONNECTION SHALL BE COMPLETED AND OPERATIONAL CONCURRENT WITH WL-10 INSTALLATION. EXISTING BRANCH VALVES FOR ARRAN CIRCLE AND STRICKLAND BRIDGE ROAD SHALL BE PERMANENTLY CLOSED AND PROPERLY ABANDONED. SEE UC-9 UTILITY NOTES FOR ADDITIONAL SEQUENCING PROVISIONS FOR UC-12 THAT SHALL BE PERFORMED BEFORE SHUTDOWN FOR WL-8 AND WL-10.

- PRIOR TO TAPPING THE EXISTING 24" WATER MAIN, CONTRACTOR SHALL INSTALL SPLIT RING BELL HARNESSSES ON EXISTING PIPE EQUIVALENT TO 3 FULL JOINT LENGTHS. MJ x MJ FULL BODY SOLID TAPPING SLEEVE WITH RESTRAINING GLANDS SHALL BE PLUGGED AND RESTRAINED ON LINE SIDE. NO SEPARATE PAYMENT SHALL BE MADE FOR PIPE HARNESSSES.

- TEMPORARILY BURY TEMPORARY 6" MAIN AT ALL DRIVEWAY CROSSINGS TO MAINTAIN INGRESS/EGRESS FOR THESE PARCELS.

- RECONNECT WL-8 AND WL-10 TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-8A, EV-12, EV-12A, EV-13, EV-20, EV-20A AND EV-22 IN ISOLATING EXISTING 24" MAIN. KILL-OUT OF 24" TAPPING SLEEVE (LINE SIDE OF 24"x24"x24") FOR WL-8 AND WL-10 TO BE FACILITATED UNDER SAME SHUTDOWN. AFTER COMPLETION OF KILLOUTS AND CUT IN CONSTRUCTION, RESUME OPERATION OF EXISTING 24" WATER MAIN BY OPENING EV-8A, EV-20, EV-20A AND EV-22 AND COMPLETE ABANDONMENT OF 24" ADJACENT TO WL-8 AND WL-10

- EXISTING 24" WATER MAIN IS RESTRAINED AT DESIGNATED LOCATION OF CUT IN FOR WL-10. WL-10 CAN BE SLEEVED IN WITH FULL BODY SLEEVE AND RESTRAINING GLANDS WITHOUT LAYING BACK ONE FULLY JOINT INTO EXISTING SYSTEM UNLESS ACTUAL CONDITIONS.

UC-9 UTILITY NOTES:

- ADHERE TO SPECIAL PROVISIONS OF OPEN CUTTING EXISTING PAVEMENT.
- EXISTING IN LINE VALVE TO FACILITATE SHUTDOWN FOR RECONENCTION OF THE EXISTING WATER MAIN IN OAK FOREST DR IS APPROXIMATELY 325 LF FROM PROPOSED RECONNECTION POINT.
- FULLY GROUT MIN. 60 LF OF 12" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.
- KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-13 SHALL BE COORDINATED WITH 12" MAIN SHUTDOWN.
- INSTALL WL-12 AND HAVE OPERATIONAL PRIOR TO PLANNED SHUTDOWN FOR CONNECTION OF WL-10 BACK TO EXISTING 24" MAIN. WL -12 SHALL BE CONNECTED AS SHOWN TO EXISTING 12" MAIN TO MAINTAIN OPERATION AND TO FACILITATE KILL OUT OF EXISTING 12" MAIN CROSSING OF RAEFORD ROAD.
- 12"x12"x12" TAPPING SLEEVE AND VALVE AND SHORT LOOP BETWEEN EXISTING 12" MAIN AND WL-13 SHALL BE INSTALLED TO MAINTAIN OPERATION UNTIL WL-13 IS INSTALLED AND OPERATIONAL. THIS SHORT LOOP SHALL BE ABANDONED AFTER WL-13 IS IN OPERATION.
- KILL OUT OF PORTION OF EXISTING 12" MAIN THAT FEEDS STRICKLAND BRIDGE ROAD (NORTH) AND NORTH SIDE OF RAEFORD ROAD SHALL BE FACILITATED BY EV-13, EV-14 AND EV-15.
- PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, NO WORK ON THE SOUTH SIDE SHALL BE IN PROGRESS WHILE INSTALLING WL-12 AND CONNECTING IT TO THE EXISTING 12" MAIN ON STRICKLAND BRIDGE ROAD. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

UC-9A UTILITY NOTES

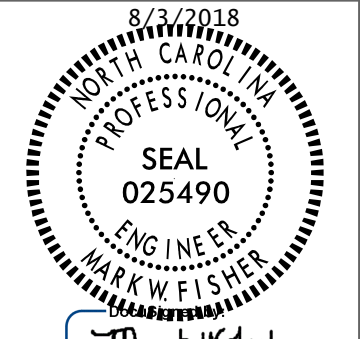
- CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS
- CONTRACTOR SHALL VERIFY EXISTING SEWER SERVICE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.
- CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO DETERMINE IF PARCEL 87 IS CONNECTED TO EXISTING SEWER. IF CONNECTED, CONTRACTOR SHALL DETERMINE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.

UC-9A UTILITY NOTES

- CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS
- CONTRACTOR SHALL VERIFY EXISTING SEWER SERVICE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.
- CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO DETERMINE IF PARCEL 87 IS CONNECTED TO EXISTING SEWER. IF CONNECTED, CONTRACTOR SHALL DETERMINE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.

REVISIONS
 UTILITY REV. - JULY 23, 2008 - REVISED ALL CONSTRUCTION NOTES
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DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

PROJECT REFERENCE NO.		SHEET NO.
U-4405		UC-3B
DESIGNED BY:	AMH	 Mark W. Fisher Professional Engineer License No. 025490 State of North Carolina
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UTILITY CONSTRUCTION

UTILITY CONSTRUCTION

UC-10 UTILITY NOTES:

1. EXISTING IN LINE VALVE TO FACILITATE SHUTDOWN FOR RECONNECTION OF THE EXISTING WATER MAIN IN ARRAN CIRCLE IS APPROXIMATELY 760 LF FROM PROPOSED RECONNECTION POINT.

2. CONTRACTOR SHALL LAY BACK A MINIMUM OF 1 FULL JOINT OF RESTRAINED DUCTILE IRON PIPE.

3. FULLY GROUT MIN. 60LF OF 24" EXIST MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

4. KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-10 SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXIST ALIGNMENT (SEE SHEET UC-5).

5. REFERENCE UC-8 UTILITY NOTES FOR SEQUENCE OF WL-10 AND ABANDONMENT OF EXISTING 24" MAIN.

6. WL-13 UP TO PROPOSED IN LINE VALVE NEAR STATION WL-13- STA 24+00 AND THE EXISTING CROSS-LINE THAT SERVES OAK FOREST DRIVE SHALL BE INSTALLED AND IN OPERATION PRIOR TO RECONNECTING TO THE EXISTING 12" MAIN IN BUNCE ROAD. ADHERE TO PROVISIONS FOR OPEN CUTTING PAVEMENT AND WORKING WITHIN TRAFFIC TO RECONNECT PROPOSED 12" MAIN TO EXISTING MAIN. EXISTING MAIN AT POINT OF CONNECTION IS RESTRAINED. CONNECT TO EXISTING RESTRAINED JOINT PIPE WITH FULL BODY MJ x MJ SLEEVE AND RESTRAINING GLANDS UNLESS ACTUAL CONDITIONS DIFFER.

7. CONNECT WL-13 TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-20, BRANCH VALVE EV-21, EXISTING IN LINE VALVE EV-21A, NEW TAPPING VALVE ON WL-12 THAT LOOPEO TO EXISTING MAIN (SEE SHEET UC-9) TO FACILITATE SHUTDOWN. SHUTDOWN SHALL BE PERFORMED BETWEEN 11:00 P.M. AND 6:00 A.M. SERVICE SHALL BE RESTORED TO EXISTING 12" MAIN TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS BETWEEN 1103 BUNCE RD AND 1165 BUNCE RD. IF SERVICE OUTAGE EXTENDS LONGER THAN 8 HOURS, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICES TO IMPACTED METERS.

8. AFTER RECONNECTION OF WL-13, ABANDON CROSS-OVER LINE FROM WL-12 TO EXISTING WATER MAIN. SEE SHEET UC-9 AND KILL OUT EXISTING 12" MAIN AT VALVE EV-20.

UC-11 UTILITY NOTES:

1. FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

2. KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-14 SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXISTING ALIGNMENT (SEE SHEET UC-13).

3. INSTALL AND HAVE OPERATIONAL THE FOLLOWING SEGMENTS: WL-14 TO ITS LAST IN LINE VALVE, WL-15, WL-17 AND CROSS LINES AT BINGHAM DRIVE, REVERE STREET AND WILDWOOD DRIVE. TRANSFER ALL EXISTING SERVICES TO WL-14 AND WL-17. SEE ADDITIONAL SEQUENCING FOR WL-15 ON UC-12 UTILITY NOTES AND WL-17 ON UC-13 AND UC-14 UTILITY NOTES.

4. KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-14 SHALL BE COORDINATED WITH CUT IN CONSTRUCTION (SLEEVE IN) OF WL-14 TO EXISTING 24" MAIN (SEE SHEET UC-13). KILL OUT SHALL BE PERFORMED UNDER PLANNED SHUTDOWN OF EXISTING 24" MAIN AND SHALL BE PERFORMED BETWEEN 6:00 P.M. AND 6:00 A.M. ON SUNDAY. EXISTING 24" MAIN SHALL BE BACK IN OPERATION SO WATER SERVICE TO PARCELS 107, 112, 113 AND 115 ARE NOT IMPACTED DURING NORMAL BUSINESS HOURS. ADHERE TO PWC'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-22, EV-28, EV-31 AND EV-28A SHALL FACILITATE SHUTDOWN. AFTER COMPLETION OF KILLOUTS AND CUT IN CONSTRUCTION, RESUME OPERATION OF EXISTING 24" WATER MAIN BY RE-OPENING EV-22 AND EV-31.

5. RECONNECTION OF EXISTING 24" MAIN ON BINGHAM DRIVE SHALL BE BY PLANNED SHUTDOWN. EXISTING VALVES TO FACILITATE SHUTDOWN INCLUDE EV-23A AND EV-23B. LAY BACK 20 LF OF RESTRAINED JOINT DUCTILE IRON PIPE AND RECONNECT TO EXISTING MAIN USING FULL BODY MJ SLEEVE WITH RESTRAINING GLANDS. RECONNECTION SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. ONLY ON A WEEKNIGHT.

UC-12 UTILITY NOTES:

1. CONNECTION OF WL-15 TO EXISTING WATER MAIN SHALL BE UNDER PLANNED SHUTDOWN. EXISTING VALVE EV-28 AND EV-28A SHALL FACILITATE SERVICE INTERRUPTION. REMOVE PLUG AND CONNECT TO EXISTING MAIN USING FULL BODY MJ SLEEVE AND RESTRAINING GLANDS. WL-15 SHALL BE INSTALLED AND OPERATIONAL TO MAINTAIN SERVICE TO THE NORTH SIDE AND FACILITATE KILL OUT OF THE 24" MAIN ON THE SOUTH SIDE.

2. PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, NO WORK ON THE SOUTH SIDE SHALL BE IN PROGRESS WHILE INSTALLING WL-15 AND CONNECTING IT TO THE EXISTING MAIN ON THE NORTH SIDE. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

UC-13 UTILITY NOTES:

1. INSTALL WL-14 AND HAVE IT OPERATIONAL TO ITS LAST IN LINE VALVE (APPROX. STAT 31+75). ALL EXISTING METERS THAT OVERLAP THESE RELOCATION SEGMENTS SHALL BE SWITCHED OVER TO THESE NEW SEGMENTS. ALL CROSS-LINES FOR WL-14 SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES. BINGHAM DRIVE, WL-15, WL-15A AND WILDWOOD DRIVE RECONNECTIONS SHALL BE COMPLETED AND OPERATIONAL CONCURRENT WITH WL-14 INSTALLATION. EXISTING BRANCH VALVES FOR THESE CROSS LINES SHALL BE PERMANENTLY CLOSED AND PROPERLY ABANDONED. SEE UC-12 UTILITY NOTES FOR ADDITIONAL SEQUENCING PROVISIONS FOR WL-15 THAT SHALL BE PERFORMED BEFORE SHUTDOWN TO CONNECT WL-14 BACK TO EXISTING MAIN.

2. PRIOR TO SHUTTING DOWN 24" MAIN TO FACILITATE KILL OUT OF EXISTING 24" MAIN AT WL-14 TAPPING SLEEVE AND CUT IN CONSTRUCTION FOR WL-14 TIE BACK TO EXISTING 24" MAIN, INSTALL WL-16 AND HAVE IT OPERATIONAL. RECONNECT ALL SERVICES TO WL-16. SEE UC-13 UTILITY NOTES FOR ADDITIONAL SEQUECING PROVISIONS FOR WL-16 THAT SHALL BE PERFORMED BEFORE SHUTDOWN FOR WL-14.

3. BORE AND JACK FOR WL-15A SHALL BE INSTALLED AHEAD OF WL-14 SO BORE PIT WILL NOT BE IN CONFLICT WITH WL-14. BORE INSTALLATION IS ANTICIPATED TO BE IN CONFLICT WITH EXISTING SEWER. INSTALL TEMPORARY DOGHOUSE SSMH FOR RECEIVING SEWAGE BYPASS. READY SEWER BYPASS TO MAINTAIN SEWER SERVICE. UPON COMPLETION OF ENCASEMENT INSTALLATION AND THREADING OF 2-INCH MAIN, COMPLETE SEWER REPLACEMENT AS SHOWN ON UC-13A WHILE SEWER FLOW IS UNDER BYPASS. SEE ADDITIONAL PROVISIONS ON UC-13A UTILITY NOTES.

4. PROTECT WORK AREA TO MAINTAIN INGRESS/EGRESS TO BUSINESS AND STORE FRONT PARKING.

5. REMOVE INSITU MATERIAL COMPLETELY FOR 2" WATER MAIN ACROSS PARCEL 140 DUE TO POTENTIAL OF PRIOR CONTAMINATION. MINIMUM TRENCH WIDTH FOR INSITU MATERIAL AND SELECT BACKFILL SHALL BE 2 FEET WIDE BY 4 FEET DEEP.

6. TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET

7. METER RECONNECTION NOTES FOR PARCEL NO. 136:

A. PROVIDE 2" TAP WITH 2" CURB STOP AND 2" BLOW OFF ASSEMBLY. 4-1" STD. PWC METER ASSEMBLIES SHALL BE PROVIDED UNLESS ACTUAL CONDITIONS DIFFER.

B. RECONNECT TO CUSTOMER'S EXIST. 3-1" PVC WATER LATERALS. FIELD COORDIANTE WATER SERVICE PIPING ROUTE.

C. RECONNECT PROPOSED IRRIGATION METER TO CUSTOMERS EXIST. RPZ. FIELD COORDINATE IRRIGATION PIPING TO ENCLOSURE.

UC-13A UTILITY NOTES:

1. PLUG EXISTING 8" OPENING IN EXIST. SSMH ON 42" DIA. OUTFALL AFTER PROPOSED SEWER IS OPERATIONAL.

2. PROP. SSMH SHALL BE CUT IN (DOG-HOUSE STYLE) ON THE 8" EXISTING SEWER LINE FOR TEMPORARY SEWAGE BYPASS. IT SHALL BE OPERATIONAL PRIOR TO INITIATING BORE AND JACK AND SETTING PROPOSED UPSTREAM SSMH. PROP. SSMH FOR TEMPORARY BYPASS PUMPING SHALL BE ABANDONED AFTER NEW SEWER IS OPERATIONAL AND BYPASS PUMPING CAN BE DISCONTINUED.

3. PROP. SSMH SHALL BE 4" DIA. RECONNECT EXISTING DI AT SAME SLOPE USING DI COUPLING RATED FOR SEWER SERVICE.

4. CONNECTION TO EXISTING SSMH ON EXIST. 8" OUTFALL BEHIND GAS STATION SHALL BE BY FIELD CORE. CORE SHALL BE NEAT AND EQUIPPED WITH BOOTED CONNECTION.

5. LOCATE ELECTRICAL CIRCUITRY TO LIGHTS ON PARCEL 138 PRIOR TO SEWER INSTALLATION. ALL CIRCUITRY SHALL BE PROTECTED. ANY DAMAGE SHALL BE REPAIRED AND SHALL MEET LOCAL ELECTRICAL REQUIREMENTS.

6. TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE

7. CONTRACTOR SHALL VERIFY SEWER SERVICE DEPTH AND LOCATION PRIOR TO ORDERING MATERIALS.

8. CONTRACTOR SHALL REPLACE EXISTING CLEAN OUT AND SEWER SEVICE LINE AT SAME DEPTH AND SLOPE.

9. CONTRACTOR SHALL REMOVE EXISTING CLEAN OUT AND EXISTING SEWER SERVICE TO PROPOSED CLEAN OUT LOCATION. CONTRACTOR SHALL GROUT FILL EXISTING SERVICE CORE IN MANHOLE WITH NON-SHRINK GROUT.

UC-14 UTILITY NOTES:

1. CONNECTION OF WL-16 TO EXISTING 8" SHALL BE PERFORMED UNDER PLANNED SERVICE INTERRUPTION. LENGTH OF BURIED PIPE BETWEEN DEAD END PLUG AND EV-33A IS LESS THAN 95 LF FOR ESTIMATED BURIAL DEPTH OF 3 FEET. EXISTING VALVE EV-33A, EV-33B AND EXISTING HYDRANT BETWEEN THESE TWO VALVES SHALL FACILITATE SHUTDOWN TO REMOVE EXISTING DEAD-END PLUG AND TO INSTALL PROPOSED 8" RJ GATE VALVE AND MINIMUM OF THREE JOINTS OF PROPOSED PIPE. PROPOSED VALVE AND MINIMUM OF THREE JOINTS OF PIPE INSTALLATION SHALL BE PERFORMED DURING NON-BUSINESS HOURS (BETWEEN 10:00 P.M. AND 6:00 A.M.). COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR. EV-33A AND EV-33B SHALL BE TEMPORARILY CLOSED AND EXISTING HYDRANT SHALL BE UTILIZED TO REDUCE PRESSURE SO EXISTING 8" PLUG CAN BE SAFELY REMOVED AND CONNECTION CAN BE MADE. REFERENCE UTILITY OWNER'S DETAIL M.15.

2. AFTER INSTALLATION OF 8" RJ GATE VALVE AND MINIMUM OF 60 LF OF PIPE, COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO RESTORE OPERATION OF EV-33B. MAINTAIN CLOSURE OF EV-33A UNTIL WATER MAIN LENGTH EXCEEDS 125 LF FROM NEW 8" RJ VALVE. AT THAT POINT, DISINFECT EXISTING MAIN BETWEEN EV-33A AND NEW VALVE AND PERFORM BACTERIOLOGICAL TESTING BEFORE PLACING IT BACK IN OPERATION. UTILIZE EXISTING 2" BLOW ASSEMBLY TO FLUSH EXISTING MAIN. MAINTAIN CLOSURE OF NEW 8" RJ GATE VALVE AND RESUME OPERATION OF EV-33A AND CONTINUE INSTALLATION OF WL-16.

3. AFTER EXISTING SEGMENT BETWEEN EV-33A AND NEW VALVE HAS BEEN PLACED BACK IN SERVICE, ABANDON EXISTING 2" TAP AND REMOVE BLOW ASSEMBLY.

4. WL-16 SHALL BE IN OPERATION BEFORE CUT IN CONSTRUCTION TO CONNECT WL-14 TO EXISTING 24" MAIN. SEE UC-13 UTILITY NOTES FOR ADDITIONAL SEQUENCE PROVISIONS.

5. ADHERE TO NCDOT TRAFFIC CONTROL PROVISIONS. WL-16 INSTALLATION SHALL BE COORDINATED SO THAT IT IS PERFORMED WHEN LONGITUDINAL WORK ON THE SOUTH SIDE OF RAEFORD ROAD IS NOT OCCURRING.

6. COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR FOR EXISTING VALVES TO FACILITATE TEMPORARY SHUT DOWN.

7. PROP. 8" GATE VALVE SHALL BE CUT IN AND MIN. 40 LF OF 8" PVC PIPE SHALL BE REMOVED AND REPLACED WITH RESTRAINED JOINT DIP AND SLEEVED BACK TO EXISTING PVC ON THE SOUTH SIDE OF RAEFORD ROAD. LAYING BACK OF THE MIN. 40 LF OF RESTRAINED JOINT DIP IS ANTICIPATED TO OVERLAP WITH EXISTING SERVICE OF WAFFLE HOUSE. WORK SHALL BE PERFORMED UNDER SERVICE INTERRUPTION USING EV-31 AND EV-35, AND IT SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO HAVE MINIMUM IMPACT ON ADJACENT BUSINESSES. SERVICE INTERRUPTION SHALL BE CONSISTENT WITH UTILITY OWNER'S REQUIREMENTS. THIS WORK SHALL BE PERFORMED AND COMPLETED PRIOR TO BEGINNING WORK ON EXTENSION OF EXISTING 84" CMP AND TRENCHLESS 72" STORM CROSSINGS. COORDINATE PLANNED OUTAGE WITH UTILITY OWNER'S PROJECT COORDINATOR. IF CONTRACTOR ANTICIPATES OUTAGE WILL BE LONGER THAN 8 HOURS TO COMPLETE WORK, CONTRACTOR SHALL PROVIDE TEMPORARY WATER SERVICE TO ALL IMPACTED BUSINESSES WITHIN ESTIMATED OUTAGE SEGMENT INCLUDING PARCELS 156, 157 AND 158. LAYOUT OF TEMPORARY WATER MAIN HAS NOT BEEN SHOWN, BUT ALL BUSINESS DRIVEWAYS SHALL NOT BE IMPACTED BY A TEMPORARY WATER MAIN. BUSINESS DRIVES SHALL BE MAINTAINED AND REMAIN OPEN.

8. NEW RESTRAINED CUT IN VALVE AND EXISTING 8" TAPPING VALVE AT 8" CONNECTION TO EXISTING 24" MAIN SHALL BE UTILIZED TO ISOLATE EXISTING 8" FOR DRAINAGE WORK.

9. WL-18 SHALL BE INSTALLED AND OPERATIONAL PRIOR TO EXTENDING 84" CULVERTS AND INSTALLING 72". WL-18 WILL BE REQUIRED TO BACK FEED CUSTOMERS WHEN ISOLATING EXISTING 8" MAIN AS DEFINED IN NOTE 8 (ABOVE).

10. FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN AT DESIGNATED LOCATIONS. PLUG EACH END OF ABANDONED MAIN PER PWC DETAIL W-22.

11. KILL OUT OF LINE SIDE OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXISTING ALIGNMENT (SEE SHEET UC-14).

REVISIONS

UTILITY REV. - JULY 23, 2008 - REVISED ALL CONSTRUCTION NOTES

7 Jul 2018 14:14
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7/14/09

PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-3C
DESIGNED BY: AMH	
DRAWN BY: AMH/AB	
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UTILITY CONSTRUCTION

UTILITY CONSTRUCTION

UC-14 UTILITY NOTES:

12. INSTALLATION OF WL-17 AND INTERRUPTION OF EXISTING 24" ON NORTH SIDE THAT CROSSES OVER EXISTING TWIN 84" CMPS AND PROPOSED 72" TRENCHLESS CROSSING SHALL BE CLOSELY COORDINATED WITH INSTALLATION OF CULVERT IMPROVEMENTS. WL-17 SHALL BE INSTALLED FOLLOWING THE COMPLETION OF THE 84" CMP EXTENSIONS AND THE TRENCHLESS CROSSING OF THE 72" DRAINAGE PIPE SO AS TO NOT CONFLICT WITH THE DRAINAGE WORK. WL-20R1 AND THE 8" AND 2" TEMPORARY WATER LINES SHALL BE OPERATIONAL PRIOR TO INITIATING ANY WORK ON THE EXISTING 84" CMPS AND THE 72" TRENCHLESS CROSSING. THE DRAINAGE WORK MAY REQUIRE THE EXISTING 24" MAIN BETWEEN SKIBO ROAD AND HOPE MILLS ROAD TO BE SHUTDOWN AS A PORTION OF THIS SEGMENT OF THE EXISTING 24" MAIN IS VERY CLOSE TO EXCAVATION LIMITS. EXISTING VALVE SPACING DOES NOT ALLOW ANY SHORTER RUN TO BE ISOLATED THAN THAT BETWEEN SKIBO AND HOPE MILLS ROAD. SEE SEQUENCE ON UC-15 AND UC-17 UTILITY NOTES FOR ADDITIONAL DETAILS. IF ANY PORTION OF THE EXISTING 24" MAIN THAT IS LOCATED ABOVE THE EXISTING CMPS AND POTENTIALLY WITHIN EXCAVATION LIMITS OF THE CONCRETE COLLARS FOR THE EXTENSIONS OF THE 84" CMPS, THEN REMOVE AND REPLACE WITH RESTRAINED JOINT 24" DUCTILE MAIN BETWEEN THE PROPOSED TAPPING SLEEVE FOR WL-17 AND THE EXISTING 24" X24" X24" TEE JUST INSIDE THE RADIUS OF THE INTERSECTION OF SKIBO ROAD AND RAEFORD ROAD; AND INSTALL 24" X24" X24" RJ TEE AND RJ 24" BRANCH VALVE TO FACILITATE WL-17 AS OPPOSED TO THE TAPPING SLEEVE AND VALVE. EXISTING VALVES TO ISOLATE THIS SEGMENT OF THE 24" MAIN ARE EV-31, EV-32, EV-33 AND EV-45 (SEE UC-17).

13. ABANDONMENT OR KILL-OUT OF EXISTING 24" MAIN THAT CROSSES RAEFORD ROAD AND THAT IS LOCATED BETWEEN EV-33 AND CUT IN FOR WL-17 SHALL BE PERFORMED UNDER SERVICE INTERRUPTION AND SEQUENCED ONCE WL-17 IS OPERATIONAL. EV-33, EV-31, PROPOSED VALVE ON WL-14 AT STA. 32+75, PROPOSED VALVE ON WL-20R1 AT STA. 154+51.95 AND PROPOSED VALVE ON WL-17 AT STA. 0+00 SHALL FACILITATE SHUTDOWN. EXISTING 24" WATER MAIN IS FULLY RESTRAINED AT DESIGNATED KILL-OUT LOCATION, BOTH ON THE ACTIVE AND KILL-OUT SIDES OF THIS LOCATION. INSTALL RJ PLUG AND KICKER PER KILLOUT DETAIL. COORDINATE THIS KILL-OUT WITH KILL-OUT OF EXISTING 24" BETWEEN TAPPING SLEEVE AND VALVE ON WL-20R1 AND WL-19 CONNECTION TO EXISTING 24" MAIN ON HOPE MILLS ROAD, UNLESS INSTALLATION OF WL-17 AND DRAINAGE IMPROVEMENTS FOR CULVERT UPGRADES HAS LONGER TIME FRAME OR INSTALLATION SCHEDULES DO NOT OVERLAP.

14. CONNECTION OF WL-17 INTO EXISTING 24" MAIN ALONG SKIBO ROAD SHALL BE PERFORMED BY A COMBINATION OF A 24" TEMPORARY LINE STOP AND CLOSURE OF EV-33. INSTALL AND HAVE WL-17 OPERATIONAL TO LAST IN LINE VALVE AT APPROX. STA. 3+65. TEMPORARY LINE STOP IS NECESSITATED BECAUSE OF LONG VALVE SPACING TO NEXT NEAREST IN LINE VALVE ON 24" MAIN UP SKIBO ROAD. ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS AND HAVE LINE STOP OPERATIONAL PRIOR TO INITIATING CUT IN. COORDINATE LINE STOP PLACEMENT WITH UTILITY OWNER'S PROJECT COORDINATOR. LAY BACK INTO EXISTING MAIN A MINIMUM OF 20 LF WITH 24" RESTRAINED JOINT PIPE. WORK INCLUSIVE OF LINE STOP INSTALLATION SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO AVOID TRAFFIC CONGESTION. PROVIDE TRAFFIC RATED PLATING FOR LINE STOP EXCAVATION AND TIE IN EXCAVATION UNLESS EXCAVATIONS ARE DRIVABLE AT THE END OF EACH WORKING NIGHT.

15. WL-18 INSTALLATION SHALL BEGIN AT STA. 0+00 AND CONTINUE TOWARDS HOPE MILLS ROAD. ADHERE TO CUT IN CONSTRUCTION FOR CONNECTION TO EXISTING MAINS AT STA. 0+00 AND ITS TERMINUS, APPROX. STA. 38+50. CONNECTION TO EXISTING MAIN AT STA. 0+00 SHALL BE UNDER SERVICE INTERRUPTION SCHEDULED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE SERVICE INTERRUPTION TO IMPACTED BUSINESSES. PERFORM EXISTING MAIN ALTERATION ON DUKE STREET DURING THE PLANNED OUTAGE FOR THE CONNECTION OF WL-18 TO EXISTING TERMINUS OF 8" MAIN. ISOLATE EXISTING MAINS BY TEMPORARY CLOSURE OF EV-35, EV-35A AND EV-35B. PARCELS 164, 165 AND 166 ARE SERVED FROM THE REAR AND FROM DAIRY STREET. AFTER COMPLETION OF ALTERATION OF EXISTING MAIN ON DUKE STREET, RE-OPEN EV-35B. MAINTAIN CLOSURE OF EV-35 AND EV-35A UNTIL NEW WATER MAIN LENGTH FOR WL-18 EXCEEDS 125 LF FROM NEW 8" RJ VALVE. AT THAT POINT, RE-OPEN EV-35 AND EV-35A AND KEEP NEW VALVE AT WL-18 STA. 0+00 CLOSED UNTIL PHASING IN OPERATION OF WL-18 AS IT CONTINUES TOWARD HOPE MILLS ROAD.

UC-15 UTILITY NOTES:

- FULLY GROUT MIN. 60 LF OF 24" EXIST MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.
- KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-20R1 SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR DRAINAGE IMPROVEMENTS AS DEFINED IN NOTE 8 ON UC-17 UTILITY NOTES.
- SEE SEQUENCE NOTES (NOTE 1.C) ON UC-17 UTILITY NOTES FOR WL-20R1.
- PROVIDE TEMPORARY WATER LINE TO MAINTAIN WATER SERVICES BETWEEN RAEFORD ROAD AND GREENLEAF DRIVE DURING 24" SHUTDOWNS. TEMPORARY 8" MAIN SHALL BE CONNECTED TO EXISTING HYDRANT TO MAINTAIN ADEQUATE FIRE FLOW. PROVIDE 2" TEMPORARY WATER MAIN OFF 8" TEMPORARY WATER MAIN TO SERVE ACTIVE METERS (PARCELS 160 AND 162). COORDINATE UTILITY OWNER PROJECT COORDINATOR TO OPEN AND CLOSE EXISTING BRANCH VALVE ON GREENLEAF AS NEEDED DURING 24" MAIN SHUTDOWNS. TEMPORARY WATER SYSTEM SHALL REMAIN IN PLACE UNTIL RELOCATION WATER MAIN BETWEEN SKIBO AND HOPE MILLS ROAD AND KILL OUTS ARE COMPLETED.

5. COMPLETE CROSS-LINE RECONNECTION AT DURANT DRIVE FOR WL-18 AND WL-20R1 CONCURRENT WITH KILLOUT OF EXISTING 24" MAIN BETWEEN TAPPING SLEEVE AND VALVE FOR WL-20R1 AND CONNECTION OF WL-19 TO EXISTING 24" MAIN IN HOPE MILLS ROAD. RECONNECTIONS SHALL ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS TO RETAIN EXISTING AND ENCASED 8" PVC UNDER RAEFORD ROAD.

UC-16 UTILITY NOTES:

1. INSTALL WL-18 AND HAVE IT OPERATIONAL UP TO STA. 19+00 INCLUSIVE OF THE BRANCH FOR THE RECONNECTION OF THE EXISTING MAIN ON DURANT DRIVE. RESTRAIN TEE AND BRANCH VALVE FOR THE RECONNECTION. RECONNECT EXISTING BRANCH MAIN ON DURANT DRIVE UNDER PLANNED SERVICE INTERRUPTION AND ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS. PERFORM RECONNECTION OF DURANT DRIVE CROSS-LINE CONCURRENT WITH RECONNECTION OF THE EXISTING 8" MAIN TO WL-20R1. THIS SEQUENCE WILL MINIMIZE INTERRUPTION OF SERVICE ON DURANT DRIVE AND ALLOW THE EXISTING 8" PVC CROSS-LINE UNDER RAEFORD ROAD TO BE RETAINED.

UC-17 UTILITY NOTES:

1. PRIOR TO BEGINNING WORK ON PORTION OF WL-18 BETWEEN EUCALYPTUS AND HOPE MILLS ROAD, CONTRACTOR SHALL COMPLETE FOLLOWING:

A. WL-18 SHALL BE OPERATIONAL UPTO PROPOSED IN LINE VALVE AT APPROX. STA. 33+75 (EUCALYPTUS ROAD). ALL EXISTING SERVICES SHALL BE TRANSFERRED TO WL-18.

B. WL-19 SHALL BE INSTALLED AND OPERATIONAL BETWEEN THE CONNECTION TO EXISTING 8" MAIN AT FRED ANDERSON AND THE IN-LINE VALVE AT APPROX. STA. 1+60 SHALL BE OPERATIONAL. ALL EXISTING SERVICES AND EXISTING BRANCH MAINS ALONG THIS SEGMENT SHALL BE TRANSFERRED TO THIS PORTION OF WL-19.

C. WL-20R1 SHALL BE INSTALLED AND OPERATIONAL UP TO STA. 38+81. ALL EXISTING BRANCH MAINS AND EXISTING SERVICES THAT ARE ON THE SAME SIDE OF RAEFORD ROAD AS THE EXISTING 24" MAIN AND THAT ARE CONNECTED TO EXISTING 6"/8" ON SOUTH SIDE OF RAEFORD ROAD SHALL BE TRANSFERRED AND CONNECTED TO WL-20R1. ALTERNATIVELY, CONTRACTOR CAN TEMPORARILY TRANSFER THESE EXISTING SERVICES TO THE EXISTING 24" MAIN TO PROVIDE FLEXIBILITY IN SEQUENCING THE INSTALLATION OF WL-20R1 WITH RELOCATION AND STORM DRAINAGE WORK ON THE NORTH SIDE. NO SEPARATE PAYMENT FOR THE "TEMPORARY" TRANSFER OF THESE SERVICES SHALL BE PROVIDED.

D. TEMPORARY 2" MAIN TO MAINTAIN WATER SERVICES FOR PARCEL 21 SHALL BE OPERATIONAL. DURING INSTALLATION OF TEMPORARY 2" MAIN, INSTALL NEW METERS FOR BUSINESSES AT DESIGNATED LOCATION.

2. COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO INTERRUPT SERVICE OF EXISTING 6" AC/EXISTING 8" CONNECTION POINT FOR WL-18 SINCE WL-18 WILL BE PLACED IN SAME TRENCH AS EXISTING 8" MAIN. ADHERE TO PWC'S POLICIES FOR WATER MAIN OUTAGE. WORK SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS. EXISTING VALVES TO FACILITATE OUTAGE INCLUDE EV-47A AND EV-48A (SEE SHEET UC-18). REMOVE AND REPLACE EV-47 WITH NEW RESTRAINED VALVE AS SHOWN TO FACILITATE PRESSURE TEST. AFTER PROPOSED SEGMENT BETWEEN NEW EV-47 AND EUCALYPTUS ROAD IS OPERATIONAL AND IS READY FOR WATER SERVICES, REMOVE TEMPORARY LATERALS AND TEMPORARY MAIN FOR PARCEL 21 AND PROVIDE NEW LATERALS FROM METER TO MAIN. NO PORTION OF THE TEMPORARY LATERAL SHALL BE UTILIZED. CLOSE LOOP BETWEEN THE GANG METERS USING 2" MAIN. NO PORTION OF THE TEMPORARY 2" MAIN SHALL BE UTILIZED TO PROVIDE A LOOPED 2" SERVICE LINE. MAINTAIN VALVE CLOSURE OF EV-47A, NEW VALVE-47 AND EV-48 TO FACILITATE WATER MAIN INSTALLATION BETWEEN THE HOPE MILLS ROAD (EAST SIDE) AND THE INSTALLED PORTION OF WL-19 AS DEFINED IN ITEM 1.A.

3. ADHERE TO NCDOT TRAFFIC CONTROL PROVISIONS. WL-20R1 INSTALLATION SHALL BE COORDINATED SO THAT IT IS PERFORMED WHEN LONGITUDINAL WORK ON THE SOUTH SIDE OF RAEFORD ROAD IS NOT OCCURRING. IF CONTRACTOR ELECTS TO INSTALL WL-20R1 INSTALLATION AS DEFINED IN NOTE 1.C ABOVE, NO RELOCATION WORK ON THE SOUTH SIDE CAN BE PERFORMED UNTIL ALL WORK ON WL-20R1 IS COMPLETED. COORDINATE WITH THE DEPARTMENT TO IMPLEMENT ANY ADDITIONAL TRAFFIC CONTROL MEASURES THAT MAY BE REQUIRED FOR INSTALLATION OF WL-20R1 DURING THE SOUTHSIDE PHASING.

4. RECONNECTION OF THE GLENSFORD DRIVE CROSS-LINE SHALL BE BY SERVICE INTERRUPTION AND COMPLY WITH CUT IN CONSTRUCTION REQUIREMENTS. WL-20R1 SHALL BE OPERATIONAL PRIOR TO RECONNECTING THE CROSS-LINE. ITS BRANCH FOR THE RECONNECTION OF THIS EXISTING CROSS-LINE SHALL BE RESTRAINED. RECONNECT THE EXISTING CROSS-LINE BY ISOLATING THE SEGMENT BETWEEN RAEFORD ROAD AND BELFORD ROAD TRAFFIC CIRCLE USING EV-46 AND OR EV-46A AND THE EXISTING IN LINE VALVE AT THE TRAFFIC CIRCLE. OUTAGE SHALL BE PLANNED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE IMPACT TO EXISTING SERVICES ALONG THIS SEGMENT IN NOTE 1.B AS NOTED ABOVE. RECONNECTION OF GLENSFORD DRIVE TO WL-20R1 SHALL BE PERFORMED JUST PRIOR TO 30" CUT IN CONNECTION OF WL-19 TO EXISTING 24" IN HOPE MILLS ROAD. CLOSE AND KILLOUT OF EV-46.

UC-17 UTILITY NOTES:

5. ADHERE TO FOLLOWING CONSTRUCTION SEQUENCE FOR CUT IN CONNECTION TO EXISTING 24" WITHIN HOPE MILLS ROAD:

A. INSTALL WL-18A, WL-19 BETWEEN INSTALLED PORTION AS DEFINED IN NOTE 1.A (STA. 1+60) AND 24" VALVE (APPROX. STA. 0+50) AND PROPOSED 24" CROSSING UNDER RAEFORD ROAD (WL BETWEEN WL-20R1 AND WL-19) AND HAVE THESE MAINS OPERATIONAL.

B. INSTALL WL-20R2 BETWEEN STA. 0+00 AND IN LINE VALVE NEAR STA. 8+75, HAVE IT OPERATIONAL AND ALL CROSS-LINE CONNECTIONS AND METERS TRANSFERRED. WORK ON THIS SEGMENT SHALL ADHERE TO TRAFFIC CONTROL PROVISIONS AND BE PERFORMED WHEN NO OTHER WORK LONGITUDINAL TO THE SOUTH SIDE IS OCCURRING. ALTERNATIVELY, A 12" TEMPORARY LINE STOP CAN BE INSTALLED ON EXISTING 12" MAIN TO PROVIDE FLEXIBILITY IN SEQUENCING THE INSTALLATION OF WL-20R2 WITH RELOCATION AND STORM DRAINAGE WORK ON THE NORTH SIDE. NO SEPARATE PAYMENT FOR THIS TEMPORARY LINE STOP SHALL BE PROVIDED. INSTALLATION OF WL-20R2 AS NOTED OR 12" TEMPORARY LINE STOP SHALL BE NECESSARY TO MAINTAIN EXISTING SERVICES FOR ALDI AND OTHER BUSINESSES SINCE EXISTING 12" BETWEEN EV-50A (SHEET UC-18) AND INTERSECTION OF GLENSFORD DRIVE AND RAEFORD ROAD WILL HAVE TO BE ISOLATED.

C. EV-47A AND NEW VALVE-27 SHALL BE RE-OPENED TO ALLOW BACKFEEDING OF THE EXISTING 24" MAIN THAT SERVES PORTIONS OUT TO HOPE MILLS WHILE ITS CONNECTION TO THE 24" MAIN ON THE NORTH SIDE IS ISOLATED TO FACILITATE RECONNECTION.

6. EXISTING MAIN BETWEEN NEW VALVE-47 AND APPROX. STA. 0+22 ON WL-18 SHALL BE INSTALLED UNDER SERVICE INTERRUPTION THROUGH VALVE CLOSURE CONSISTING OF EV-47A, NEW VALVE-47 AND EV-48.

7. WL-19 CONNECTION TO EXISTING 24" MAIN WITHIN HOPE MILLS ROAD SHALL BE PERFORMED BY A COMBINATION OF A 24" TEMPORARY LINE STOP AND CLOSURE OF EV-45 AND EV-50A (SHEET UC-18). TEMPORARY 24" LINE STOP IS NECESSITATED BECAUSE OF LONG VALVE SPACING TO NEAREST IN LINE VALVE ON 24" MAIN DOWN HOPE MILLS ROAD. ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS AND HAVE LINE STOP OPERATIONAL PRIOR TO INITIATING CUT IN. COORDINATE LINE STOP PLACEMENT WITH UTILITY OWNER'S PROJECT COORDINATOR. REMOVE EXISTING 24" VALVE AND SLEEVE INTO EXISTING MAIN. LAYING BACK A MINIMUM OF 20 LF WITH 24" RESTRAINED JOINT PIPE IS NOT REQUIRED AS RECORDS INDICATE EXISTING MAIN IS RESTRAINED, UNLESS ACTUAL CONDITIONS DIFFER. WORK INCLUSIVE OF LINE STOP INSTALLATION SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO AVOID TRAFFIC CONGESTION. PROVIDE TRAFFIC RATED PLATING FOR LINE STOP EXCAVATION AND TIE IN EXCAVATION UNLESS ROAD IS RETURNED TO DRIVABLE CONDITIONS AT END OF EACH WORK PERIOD.

8. COORDINATE KILLOUT OF EXISTING 24" WATER MAIN BETWEEN WL-20R1 TAPPING SLEEVE AND VALVE AND WL-19 CONNECTION TO EXISTING 24" MAIN CONCURRENTLY.

9. PARCEL 25A (CVS PHARMACY) HAS 2-1" METERS AND 6" FIRELINE THAT WILL NEED TO BE REPLACED AND RECONNECTED TO WL-19.

10. REMOVE AND REPLACE EXISTING SEWER IN KARR DRIVE AS SHOWN WITH DUCTILE IRON PRIOR TO INSTALLATION OF WL-20R1.

UC-18 UTILITY NOTES:

1. SEE UC-17 UTILITY NOTE 1 FOR SEQUENCE OF WL-19 AND WL-20R2 BETWEEN STA. 0+00 AND STA. 8+75.

2. BUILDOUT WL-20R2 FROM STA. 8+75 TO PROP. IN LINE VALVE NEAR STA. 24+35 (SEE SHEET UC-19). INSTALL, HAVE OPERATIONAL AND CONNECT ALL CROSS-LINES WITHIN THIS SEGMENT. TRANSFER ALL IMPACTED METERS TO THIS SEGMENT OF WL-20R2.

3. BUILD OUT WL-19 FROM TAPPING SLEEVE TO IN LINE VALVE NEAR STA. 9+60 (SEE SHEET UC-17). PERFORM KILL-OUT ON THE LINE SIDE OF TAPPING SLEEVE FOR WL-19 AT STA. 9+60 ONCE EXISTING 12" ON THE NORTH SIDE BETWEEN EV-50 AND EV-50A (NEAR INTERSECTION OF MONTCLAIR AND RAEFORD, SEE SHEET UC-19) IS READY TO BE ABANDONED. KILL OUT OF THIS EXISTING 6" WATER MAIN BETWEEN WL-19 TAPPING SLEEVE AND EXISTING 12" MAIN ON NORTH SIDE WILL INVOLVE PERMANENTLY CLOSING EV-50, EV-50A AND EV-50C AND TEMPORARILY CLOSING EV-50D TO AVOID BACKFEEDING FROM FRED ANDERSON DURING KILL-OUT PROCEDURE.

4. BUILD OUT WL-19B FROM STA. 2+06.32 (SEE SHEET UC-19) TO END OF LINE. SEE ADDITIONAL SEQUENCE NOTES ON UC-19 UTILITY NOTES.

REVISIONS

UTILITY REV. - JULY 23, 2008 - REVISED ALL CONSTRUCTION NOTES

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