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 NC COA No. F-1255

PROJECT REFERENCE NO. U-3422
 SHEET NO. UC-03E

DESIGNED BY: SSM
 DRAWN BY: SSM
 CHECKED BY: HMH
 APPROVED BY: MAP

REVISIONS:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 UTILITIES ENGINEERING SECTION
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UTILITY CONSTRUCTION PLANS ONLY

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

SEAL 045468
 MICHAEL A. POLLARD, JR.
 PROFESSIONAL ENGINEER
 11/14/2019

UTILITY CONSTRUCTION

NOTES:
 1. ALL PIPE AND FITTINGS SHALL BE APPROVED BY FAYPWC.
 2. CONTRACTOR TO COORDINATE NECESSARY OUTAGES WITH FAYPWC AND AFFECTED CUSTOMERS. MINIMUM 48 HOUR NOTICE REQUIRED.
 3. NEW WATER MAIN TO BE SWABBED WITH A CHLORINE SOLUTION AND FLUSHED PRIOR TO PLACING INTO SERVICE.
 4. ALL NEW FITTINGS AND PIPE TO BE RESTRAINED UTILIZING MEGA LUGS, GRIP-RINGS OR APPROVED EQUAL.
 5. ALL PIPE AND FITTINGS TO BE DUCTILE IRON.
 6. FAYPWC PROJECT COORDINATOR TO BE PRESENT DURING WORK.
 7. BACKFILL AND COMPACT TO CITY OF FAYETTEVILLE OR NCDOT REQUIREMENTS.
 8. PROVIDE STONE BEDDING (NO. 5 OR NO. 57 STONE) TO SUPPORT RELOCATED WATER MAIN AND/OR NEW STORM DRAIN, AS APPROVED BY FAYPWC PROJECT COORDINATOR.
 9. MJ RESTRAINTS NOT ALLOWED ON PVC PIPE.
 10. DIMENSIONS ARE GIVEN AS GENERAL GUIDANCE. EXACT DIMENSIONS ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS AND AS DIRECTED BY FAYPWC.

VERTICAL RELOCATION
HORIZONTAL RELOCATION

PIPE RELOCATION DETAIL N.T.S.
 DWG. NO. W.26
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	07/12	REVISED NOTES, ADDED HORIZONTAL RELOCATION

W26-PIPE-RELOCATION-DETAIL.dwg

NOTES:
 1. ALL MATERIALS SHALL BE APPROVED BY FAYPWC.
 2. FOR USE WITH 1-1/2" OR 2" IRRIGATION METER.
 3. LOCATION OF BOX SHALL BE AS DETERMINED BY FAYPWC PROJECT COORDINATOR. IN NO CASE SHALL BOX BE INSTALLED CLOSER THAN 5' TO BUILDING.
 4. MINIMUM 5' BETWEEN THE METER AND THE BACKFLOW PREVENTER. MAXIMUM 100' FROM THE MAIN TO THE BACKFLOW PREVENTER.
 5. IF THE METER BOX IS LOCATED LESS THAN 5' AWAY FROM THE MAIN, THE 2" PIPING SHALL BE BRASS FROM THE TAP TO THE METER.
 6. WATER LATERAL SHALL BE INSPECTED AND APPROVED BY FAYPWC PROJECT COORDINATOR PRIOR TO BACKFILL.
 7. INSTALLATION SHALL BE IN ACCORDANCE WITH FAYPWC STANDARDS.
 8. CONTRACTOR SHALL INSTALL TRACING WIRE INTO METER BOX. A MINIMUM OF 2' OF WIRE SHALL BE IN BOX.

2" IRRIGATION LATERAL N.T.S.
 DWG. NO. W.28
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	07/17	REVISED NOTES, ADDED SHEET 2

W28-2IN-IRRIG-LAT DWG

NOTE:
 ANY REFERENCE TO FAYPWC PROJECT COORDINATOR, PWC COORDINATOR OR FAYPWC (FAYETTEVILLE PUBLIC WORKS COMMISSION) SHALL BE INTERPRETTED AS A REFERENCE TO THE ENGINEER.

NOTES:
 1. ALL MATERIALS SHALL BE APPROVED BY FAYPWC.
 2. METER BOX SHALL NOT BE LOCATED WHERE H-20 LOADINGS CAN IMPACT BOX OR COVER.
 3. FOR 2" IRRIGATION LATERAL INSTALLATION SEE FAYPWC DETAIL W.28.
 4. DIMENSIONS ± 1/16" U.O.

JUMBO METER BOX FOR IRRIGATION N.T.S.
 DWG. NO. W.29
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	07/17	ADDED SHEET 2 OF 2

W29-JUMBO-METERBOX-IRRIG.dwg

NOTES:
 1. ALL MATERIALS SHALL BE APPROVED BY FAYPWC.
 2. METER BOX AND SETTER SHALL BE IN ACCORDANCE WITH FAYPWC DETAIL W.5.
 3. MINIMUM 5' BETWEEN THE METER AND THE BACKFLOW PREVENTER.
 4. IF THE METER BOX IS LOCATED LESS THAN 5' AWAY FROM THE MAIN, THE 2" PIPING AND FITTINGS SHALL BE BRASS FROM THE TAP TO THE METER.
 5. LATERAL SHALL BE INSPECTED AND APPROVED BY FAYPWC PROJECT COORDINATOR PRIOR TO BACKFILL.
 6. ALL MATERIALS SHALL BE APPROVED BY FAYPWC.
 7. LOCATION OF BOX SHALL BE AS DETERMINED BY FAYPWC PROJECT COORDINATOR. IN NO CASE SHALL BOX BE INSTALLED CLOSER THAN 5' TO BUILDING.
 8. CONTRACTOR SHALL INSTALL TRACING WIRE INTO BOX. A MINIMUM OF 2' OF WIRE SHALL BE IN BOX.

2" DOMESTIC LATERAL N.T.S.
 DWG. NO. W.30
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	07/01/17	REVISED NOTES

W30-2IN-DOMESTIC-LATERAL.dwg

NOTES:
 1. ALL PIPE AND FITTINGS SHALL BE APPROVED BY FAYPWC.
 2. CONTRACTOR TO COORDINATE NECESSARY OUTAGES WITH FAYPWC AND AFFECTED CUSTOMERS. MINIMUM 48 HOUR NOTICE REQUIRED.
 3. NEW WATER MAIN TO BE SWABBED WITH A CHLORINE SOLUTION AND FLUSHED PRIOR TO PLACING INTO SERVICE.
 4. ALL NEW FITTINGS AND PIPE TO BE RESTRAINED UTILIZING MEGA LUGS, GRIP-RINGS, OR APPROVED EQUAL.
 5. ALL PIPES TO BE DUCTILE IRON.
 6. FAYPWC PROJECT COORDINATOR TO BE PRESENT DURING WORK.
 7. BACKFILL AND COMPACT IN ACCORDANCE WITH THE APPLICABLE AGENCY REQUIREMENTS.
 8. PROVIDE STONE BEDDING (NO. 5 OR NO. 57 STONE) TO SUPPORT RELOCATED WATER MAIN, AS APPROVED BY FAYPWC PROJECT COORDINATOR.
 9. MJ RESTRAINTS ARE NOT ALLOWED ON PVC PIPE.
 10. DIMENSIONS ARE GIVEN AS GENERAL GUIDANCE. EXACT DIMENSIONS ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS AND AS DIRECTED BY FAYPWC.
 11. ALL MATERIALS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF FAYPWC.
 12. PIPE REPAIR SHALL EXHIBIT STRAIGHT HORIZONTAL AND VERTICAL ALIGNMENT. DEFLECTIONS OF HORIZONTAL AND VERTICAL ALIGNMENT ARE NOT ACCEPTABLE.
 13. THERE SHALL BE NO MORE THAN 1/4" SPACE BETWEEN THE EXISTING WATER MAIN AND THE REPLACEMENT PIPE AT EACH END.
 14. DAMAGED SECTION SHALL BE CUT OUT WITHOUT DAMAGING THE PIPE TO REMAIN.
 15. PIPE REPAIRS ON MATERIALS OTHER THAN SHOWN, SHALL BE AS DIRECTED BY FAYPWC.
 16. THE MINIMUM LENGTH OF REPAIR SHALL BE 5 FEET, UNLESS OTHERWISE DIRECTED BY FAYPWC.

PIPE REPAIR DETAIL N.T.S.
 DWG. NO. W.31
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	02/07	CREATED S.2A ADDED NOTES 13-17
2	07/13	ADDED SHEET 2 OF 2
3	01/01/24	CLARIFIED NOTES REGARDING MORTAR FOR BENCH AND INVERT.

W31-PIPE-REPAIR-DETAIL.dwg

1. ALL SEWER MAINS, LATERALS, AND APPURTENANCES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH FAYETTEVILLE FAYPWC STANDARDS.
 2. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 3. CONSTRUCTION STAKING IS REQUIRED FOR ALL FAYPWC WATER AND SEWER UTILITY INSTALLATIONS. CUT SHEETS, SIGNAGE AND SEALED BY A N.C.P.S. SHALL BE PROVIDED TO THE FAYPWC WATER RESOURCES ENGINEERING DEPARTMENT AND THE CONTRACTOR IN ADVANCE OF CONSTRUCTION FOR FAYPWC WATER AND SEWER UTILITIES.
 4. CONTRACTOR SHALL MAINTAIN A COPY OF THE SIGNED AND SEALED CUT SHEET ON THE JOB SITE. CONSTRUCTION ON FAYPWC WATER AND SEWER UTILITIES CANNOT BEGIN UNTIL THE CONTRACTOR POSSESSES, ON SITE, A SIGNED AND SEALED CUT SHEET FROM THE PROFESSIONAL LAND SURVEYOR.
 5. ALL NEW WATER AND SEWER MAINS, LATERALS, AND APPURTENANCES SHALL BE TESTED AND/OR OBSPECTED IN ACCORDANCE WITH FAYETTEVILLE FAYPWC STANDARDS PRIOR TO PLACING INTO SERVICE.
 6. CONTRACTOR SHALL COORDINATE TESTING AND INSPECTION WITH THE FAYETTEVILLE FAYPWC PROJECT COORDINATOR.
 7. ALL DUCTILE IRON PIPE IN SANITARY SEWER SERVICE SHALL HAVE AN INTERIOR LINING OF PROTECTED 401 OR BARBERS PROTECT-A-PIPE OR APPROVED EQUAL.
 8. ALL NEW MANHOLES ARE TO BE VACUUM-TESTED IN ACCORDANCE WITH FAYETTEVILLE FAYPWC STANDARDS.
 9. CONTRACTOR SHALL REPAIR ALL SEWER LATERALS AND MAINS DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY REPORT ALL SEWER MAIN AND LATERAL BREAKS TO THE FAYPWC PROJECT COORDINATOR. THE CONTRACTOR SHALL INITIATE IMMEDIATE REPAIRS IN ACCORDANCE WITH FAYPWC STANDARDS.
 10. TRANSFER OF SEWER SERVICES SHALL BE ACCOMPLISHED AS FOLLOWS:
 A. INSTALL AND TEST NEW MAINS, MANHOLES, AND LATERALS. CLEANOUTS SHALL BE INSTALLED 18" INSIDE ROW UNLESS OTHERWISE DIRECTED BY FAYPWC.
 B. CONNECT EXISTING FLUMING TO NEW LATERAL UTILIZING THE NECESSARY FITTINGS AS DIRECTED BY FAYPWC.
 C. AFTER ALL SERVICES HAVE BEEN TRANSFERRED TO THE NEW MAIN, THE EXISTING SEWER SYSTEM SHALL BE ABANDONED IN ACCORDANCE WITH FAYPWC REQUIREMENTS.
 11. CONTRACTOR SHALL ABANDON ("KILL-OUT") ANY EXISTING SEWER SERVICES THAT WILL NOT BE UTILIZED BY UNCOVERING THE EXISTING LATERAL AT THE MAIN, OUT AND PLUG AT BOTH ENDS. REMOVE THE EXISTING CLEANOUT AND COMBINATION, AND PLUG THE TAP OR TEE AT THE MAIN. FOR LATERALS THAT CONNECT TO A MANHOLE AND ARE TO BE ABANDONED ("KILL-OUT"), THE LATERAL SHALL BE REMOVED FROM THE MANHOLE AND THE REMAINING VOID IN THE MANHOLE SHALL BE FILLED WITH BLOCK AND MORTAR.
 12. SEWER PLUGS SHALL BE INSTALLED TO ELIMINATE ANY DEBRIS OR OTHER MATERIAL FROM ENTERING THE ACTIVE SEWER SYSTEM. UPON ACCEPTANCE OF THE NEW SEWER SYSTEM, THE CONTRACTOR SHALL CLEAN THE NEW MAINS, REMOVE ALL DEBRIS, AND THEN REMOVE THE PLUG.
 13. ALL EXISTING UTILITIES IMPACTED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISHED GRADE, IN ACCORDANCE WITH FAYPWC REQUIREMENTS.
 14. ALL WORK ON FAYPWC SEWER UTILITIES (MANS, LATERALS, ETC.) SHALL BE PERFORMED BY A LICENSED UTILITY CONTRACTOR. THE FAYETTEVILLE PUBLIC WORKS COMMISSION SHALL OBSERVE AND APPROVE ALL WORK ON FAYPWC SEWER UTILITIES. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH FAYPWC REQUIREMENTS.
 15. SEPARATION REQUIREMENTS:
 A. LATERAL SEPARATION OF SEWER AND WATER MAINS: WATER MAINS SHALL BE LAD AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWER MAINLATERAL, UNLESS LOCAL CONDITIONS OR BARBERS PROVIDE A 10-FOOT LATERAL SEPARATION. IN WHICH CASE:
 I. THE WATER MAIN IS LAD IN A SEPARATE TRENCH WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MANLATERAL, OR
 II. THE WATER MAIN IS LAD IN THE SAME TRENCH AS THE SEWER MANLATERAL WITH THE WATER MAIN LOCATED AT ONE SIDE ON 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 MANLATERAL.
 B. CROSSING A WATER MAIN OVER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER MANLATERAL, THE WATER MAIN SHALL BE LAD AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MANLATERAL.
 C. CROSSING A WATER MAIN UNDER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MANLATERAL, A MINIMUM OF 24 INCHES OF SEPARATION SHALL BE PROVIDED. BOTH THE WATER MAIN AND THE SEWER MANLATERAL SHALL BE CONSTRUCTED OF DUCTILE IRON MATERIAL 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.
 D. CROSSING STORM DRAINAGE LINES: A MINIMUM OF 24 INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN A SEWER MANLATERAL CROSSING UNDER A STORM DRAINAGE LINE UNLESS DUCTILE IRON PIPE IS USED. IF DUCTILE IRON PIPE IS USED, A MINIMUM OF SIX (6) INCHES OF SEPARATION SHALL BE MAINTAINED, UNLESS OTHERWISE APPROVED BY FAYPWC.

GENERAL NOTES
 SANITARY SEWER UTILITY
 DWG. NO. S.1
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	01/18	ADDED NOTES 5, 8
2	06/21	ADDED NOTES 1-8 AND RENUMBERED
3	11/23	REVISED NOTE 15

51-SEWER-NOTES.dwg

PIPE SIZES	MANHOLE SIZE	MIN. WALL THICKNESS	MIN. REINF. STEEL	MIN. BASE THICKNESS
21" AND LESS	48" DIAMETER	5"	ASTM A.1064 0.12 SQ. IN.	6"
24" - 36"	60" DIAMETER	6"	ASTM A.1064 0.15 SQ. IN.	8"
42" - 48"	72" DIAMETER	7"	ASTM A.1064 0.15 SQ. IN.	8"

MANHOLE DIAMETER SIZES MAY BE ADJUSTED ON THE PLANS TO REFLECT SPECIAL CIRCUMSTANCES. REDUCING SLABS ARE NOT ACCEPTABLE ON MANHOLES LESS THAN 6" DIAMETER.

STANDARD MANHOLE N.T.S.
 DWG. NO. S.2
 DATE: JULY 01, 2024
 APPROVED BY: M.M.M.

FAYETTEVILLE PUBLIC WORKS COMMISSION
 WATER RESOURCES ENGINEERING DEPARTMENT

NO.	DATE	REVISION
1	02/07	CREATED S.2A ADDED NOTES 13-17
2	07/13	ADDED SHEET 2 OF 2
3	01/01/24	CLARIFIED NOTES REGARDING MORTAR FOR BENCH AND INVERT.

S2-STANDARD-MANHOLE.dwg

REVISIONS

-SYSTEMTIME:2024.07.01.10.00.00-ut-dtl-LUC03-3H-dwg