

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. <b>B-4490</b>	SHEET NO. <b>UC-3J</b>
DESIGNED BY:	
DRAWN BY: <b>NONE</b>	
CHECKED BY:	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 2/2/2015

**UTILITY CONSTRUCTION**

### SEWER SERVICE LATERAL NOTES

- HOLE IN SANITARY SEWER MAIN MUST BE CUT WITH SHELL CUTTER NO HAMMER TAPS ALLOWED.
- LATERAL SHALL CONFORM TO ASTM SPECS. D-3034 SDR-26 UNLESS OTHERWISE INDICATED AS D.I.
- ALL PIPE & FITTINGS SHALL BE 4" OR 6" UNLESS OTHERWISE SPECIFIED.
- ALL D.I. PIPE SHALL HAVE AN INTERIOR LINING OF CERAMIC EPOXY (PROTECTO 401). THE ENTIRE D.I. LATERAL SHALL BE COMPRISED OF D.I. PIPE & MECHANICAL JOINT FITTINGS.
- ALL CONNECTIONS SHALL HAVE RUBBER GASKET SEALS INSTALLED.
- SANITARY SEWER SERVICE C/O STACK SHALL BE LOCATED 18" FROM WATER SERVICE LOCK VALVE WHEN IN THE SAME DITCH.
- INSTALLATION OTHER THAN AS SHOWN MUST BE APPROVED BY THE FAYPWC.
- CONNECTIONS TO THE TOP OF MAIN SHALL NOT BE ALLOWED, UNLESS OTHERWISE APPROVED BY THE FAYPWC PROJECT COORDINATOR.
- SLOPE AND DEPTH OF THE SERVICE LATERAL SHALL BE DETERMINED BY THE TOPOGRAPHY OF THE LOT AS APPROVED BY THE FAYPWC ENGINEER OR AS INDICATED ON THE DRAWINGS.
- LATERAL SHALL CONFORM TO THE 2% MINIMUM SLOPE FOR THE 4" OR THE 1% MINIMUM SLOPE FOR THE 6" MAXIMUM CLEAN OUT SPACING FOR 4" PIPE 75', 6" PIPE 100'.
- SEE INTERIOR DROP STRUCTURE OR SLIDE, MORTAR SLIDE & SHELF DETAIL FOR VERTICAL DROPS OF MAINS AND LATERALS.
- LATERALS LESS THAN 3' IN DEPTH OR GREATER THAN 20' DEPTH SHALL UTILIZE DUCTILE IRON PIPE AND FITTINGS WITH CERAMIC EPOXY (PROTECTO 401), OR WHEN SEPARATION REQUIREMENTS CANNOT BE MET.
- ENTIRE SEWER LATERAL ASSEMBLY SHALL BE AIR TESTED CONCURRENTLY WITH SEWER MAIN.
- INDIVIDUAL LATERALS SHALL BE CLEANED AND FLUSHED PRIOR TO FLUSHING SANITARY SEWER MAINS.
- LATERAL SHALL NOT BE BACK-FILLED UNTIL INSPECTED BY THE FAYPWC PROJECT COORDINATOR.
- WYE CONNECTIONS SHALL NOT BE USED TO TIE LATERALS INTO A MANHOLE.
- IF BENDS ARE APPROVED BY THE PROJECT COORDINATOR, STONE BEDDING IS REQUIRED TO BE INSTALLED FROM UNDISTURBED (SEE DETAIL S.12) SOIL TO BOTTOM OF BEND.
- PVC COMBINATION SHALL BE A MOLDED WYE AND BEND, GASKETED, SDR-26, AS MANUFACTURED BY HARCO, GPK OR APPROVED EQUAL.
- NO MORE THAN 4, FOUR INCH LATERALS OR 3, SIX INCH LATERALS SHALL ENTER A 4' DIAMETER TERNAL MANHOLE. NO MORE THAN 2 LATERALS (REGARDLESS OF SIZE) SHALL ENTER ALL OTHER 4' DIAMETER MANHOLES. ALL LATERALS SHALL HAVE AN INDIVIDUAL TROUGH. 5' DIAMETER MANHOLES SHALL BE USED IF THE ABOVE CONDITIONS ARE NOT MET.
- ALL LATERALS (4" AND 6") SHALL UTILIZE A 4" RISER (STACK).
- REFER TO DETAIL S.12 FOR SEPARATION REQUIREMENTS.
- FOR SINGLE FAMILY RESIDENTIAL LOTS, CLEAN-OUT SHALL BE LOCATED 18" FROM RW OR EASEMENT. FOR ALL NON-SINGLE FAMILY LOTS, CLEAN-OUT SHALL BE NO CLOSER THAN 10' TO FRONT OF BUILDING, UNLESS OTHERWISE APPROVED BY FAYPWC.

THE FOLLOWING TABLE SUMMARIZES THE MATERIALS TO BE UTILIZED FOR SEWER MAIN TO LATERAL CONNECTIONS:

	PVC Main	DI Main
DI Lateral	DI fitting or approved saddle	MJ fitting or approved saddle
PVC Lateral	PVC fitting or approved saddle	MJ fitting with transition gasket or approved saddle

**NOTE:** REFER TO FAYPWC TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.

<b>SEWER SERVICE LATERAL NOTES (4-INCH AND 6-INCH)</b>		<b>PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.</b>		NO.	DATE	REVISION	
SHEET NO. 1 OF 1	DWG. NO. <b>S.11</b>	DWG. BY: FAYPWC		2	OCT 11	REVISED NOTES	
DATE: JULY 01, 2015	APPROVED BY: JEG	<b>WATER RESOURCES ENGINEERING DEPARTMENT</b>		3	JAN. 13	REVISED NOTES AND ADDED TABLE	
					4	JAN. 15	REVISED NOTE 22, TABLE

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**SEWER SERVICE LATERAL UTILITY CONFLICT SEPARATION REQUIREMENTS N.T.S.**

- ALL VERTICAL AND HORIZONTAL SEPARATION SHALL BE IN ACCORDANCE WITH STATE REGULATIONS.
- THE SKETCHES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY.
- THE CONTRACTOR SHALL BE REQUIRED TO VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY AT EACH CROSSING PRIOR TO CONSTRUCTION OF LATERAL TO INSURE PROPER CLEARANCES ARE MAINTAINED.
- ALL PIPE BEND LOCATIONS AND MAX. NUMBER OF BENDS INSTALLED ON LATERALS SHALL BE APPROVED BY THE PROJECT COORDINATOR PRIOR TO INSTALLATION OF BEND OR EXTENDING THE LATERAL FROM THE MAIN.
- ALL REQUIREMENTS FOR SEWER LATERAL NOTES AND DETAILS SHALL BE APPLICABLE.
- REFER TO UNDERGROUND ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION WHEN CROSSING UNDERGROUND ELECTRICAL FACILITIES.

<b>SEWER SERVICE LATERAL UTILITY CONFLICT SEPARATION REQUIREMENTS N.T.S.</b>		<b>PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.</b>		NO.	DATE	REVISION	
SHEET NO. 1 OF 1	DWG. NO. <b>S.12</b>	DWG. BY: FAYPWC		1	JAN 05	REVISED NOTES 1 AND 6	
DATE: JULY 01, 2015	APPROVED BY:	<b>WATER RESOURCES ENGINEERING DEPARTMENT</b>		2	NOV 06	ADDED NOTE ON DI LATERALS	
					3	MAR 10	ADDED LATERAL & WM SEPARATION

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### SEWER BEDDING N.T.S.

**NOTES:**

- ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION", CHAPTER XV11 OF TITLE 29, CFR, PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON THE JOB AT ALL TIMES AND SHALL EMPLOY A PROFESSIONAL ENGINEER TO ACT UPON ALL PERTINENT MATTERS OF THE WORK.
- BEDDING MATERIAL QUANTITIES ARE CALCULATED BASED ON THE FOLLOWING TRENCH WIDTHS. BEDDING MATERIAL SHALL BE INSTALLED REGARDLESS OF PIPE MATERIAL.
  - FOR 48" RCP/DI B=6', D=6'
  - FOR 42" RCP/DI B=6'-6", D=6'-6"
  - FOR 30" RCP/DI B=4'-6", D=4'-6"
  - FOR 24" RCP/DI B=4', D=4'-0"
  - FOR 18" PVC/DI B=3', D=3'
  - FOR 15" PVC/DI B=3', D=3'
  - FOR 12" PVC/DI B=2', D=3'-0"
  - FOR 8" PVC/DI B=2', D=3'-0"
- THE BEDDING MATERIAL SHALL BE GRANULAR, CLEAN, COARSE PEA GRAVEL, OR WELL GRADED CRUSHED ROCK PLACED IN LAYERS NOT TO EXCEED 6" LOOSE LIFTS FOR THE FULL WIDTH OF THE TRENCH.
- BEDDING MATERIAL SHALL BE INSTALLED AND PAID FOR IN ACCORDANCE WITH THE FOLLOWING CHART TO PRODUCE CLASS B BEDDING.
  - FOR 8" PIPE .067yd3/ft. OF PIPE
  - FOR 12" PIPE .09yd3/ft. OF PIPE
  - FOR 15" PIPE .11yd3/ft. OF PIPE
  - FOR 18" PIPE .13yd3/ft. OF PIPE
  - FOR 24" PIPE .15yd3/ft. OF PIPE
  - FOR 30" PIPE .19yd3/ft. OF PIPE
  - FOR 36" PIPE .25yd3/ft. OF PIPE
  - FOR 42" PIPE .32yd3/ft. OF PIPE
  - FOR 48" PIPE .39yd3/ft. OF PIPE
- BEDDING MATERIAL SHALL EXTEND TO UNDISTURBED TRENCH WALLS AND TRENCH BOTTOM. OVERAGE OF BEDDING MATERIAL WILL NOT BE PAID FOR UNLESS SPECIFICALLY APPROVED BY THE PROJECT REPRESENTATIVE AND SHALL ONLY BE PAID FOR IN THE AMOUNT OF THE AUTHORIZED QUANTITY.
- BEDDING MATERIAL SHALL BE PROPERLY RODDED AROUND THE PIPE HAUNCHES.
- CONTRACTOR SHALL USE TRENCH BOX SHORING IN ALL OPEN CUTS IN PAVED AREAS. TRENCH WIDTH SHALL BE MAINTAINED AT THE MINIMUM PRACTICAL WIDTH.

SEE PAVT PATCH DETAIL FOR LAST 3' OF FILL IN PAVED AREAS

COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY ASTM D698

UNDISTURBED SOIL

BACKFILL SHALL BE PLACED IN 6" LAYERS AND COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY ASTM D698 TO 12" ABOVE TOP OF PIPE

SELECT BEDDING MATERIAL NO OVERAGE ALLOWED SEE NOTE 4

SUBBASE SHALL BE UNDISTURBED SOIL. WHERE SOIL IS DEEMED UNSUITABLE BY THE FAYPWC PROJECT REP. AUTHORIZED AREA SHALL BE UNDERCUT AND BACKFILLED WITH SELECT BEDDING MATERIAL. AREAS NOT AUTHORIZED AS UNDERCUT SHALL BE BACKFILLED AT CONTRACTORS EXPENSE WITH SELECT BEDDING MATERIAL.

<b>SEWER BEDDING N.T.S.</b>		<b>PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.</b>		NO.	DATE	REVISION	
SHEET NO. 1 OF 1	DWG. NO. <b>S.13</b>	DWG. BY: FAYPWC		1	JAN 05	REVISED NOTES	
DATE: JULY 01, 2015	APPROVED BY: J.E.G.	<b>WATER RESOURCES ENGINEERING DEPARTMENT</b>					

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### MANHOLE VENT N.T.S.

**NOTES:**

- REFER TO DETAIL S.6 FOR MANHOLE RING AND COVER REQUIREMENTS.
- VENTS SHALL BE PLACED EVERY 1,000 FT OR AS DIRECTED BY FAYPWC.

<b>MANHOLE VENT N.T.S.</b>		<b>PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.</b>		NO.	DATE	REVISION	
SHEET NO. 1 OF 1	DWG. NO. <b>S.17</b>	DWG. BY: FAYPWC					
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2015-S17 MH VENT (NEW).dwg

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