
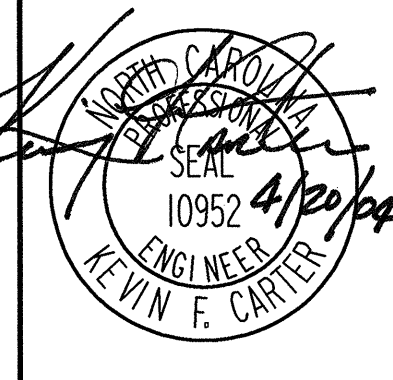



REVISIONS

	PROJECT REFERENCE NO.	SHEET NO.
	R-2813C	UC-2
R/W SHEET NO.		
		
CONST. REV.		
R/W REV.	Kimley-Horn and Associates, Inc. ©, 2003	

UTILITY CONSTRUCTION





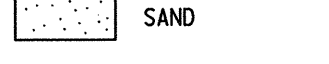

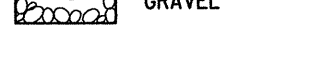
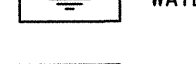








INDEX TO SHEETS

SHEET NO.	DESCRIPTION
UC-1	COVER SHEET
UC-2	INDEX, PROJECT NOTES, AND LEGEND
UC-3	OVERALL PLAN AND PROFILES
UC-4	PLAN SHEET, STA. 9+57.500 TO STA. 11+26.562
UC-5	PLAN SHEET, STA. 11+26.562 TO STA. 14+66.589
UC-6	PLAN SHEET, STA. 14+66.859 TO STA. 17+99.529
UC-7	PLAN SHEET, STA. 17+99.529 TO STA. 21+01.534
UC-8	PLAN SHEET, STA. 21+01.534 TO STA. 24+04.801
UC-9	PLAN SHEET, STA. 24+04.801 TO STA. 27+51.178
UC-10	PLAN SHEET, STA. 27+51.178 TO STA. 30+87.446
UC-11	PLAN SHEET, STA. 30+87.446 TO STA. 34+27.450
UC-12	PLAN SHEET, STA. 34+27.450 TO STA. 37+67.725
UC-13	PLAN SHEET, STA. 37+67.725 TO STA. 38+75.405 (-L2-), STA. 10+00.000 TO STA. 10+64.000 (-Y23-)
UC-14	PROFILE SHEET, STA. 9+57.500 TO STA. 16+20.000
UC-15	PROFILE SHEET, STA. 16+20.000 TO STA. 22+40.000
UC-16	PROFILE SHEET, STA. 22+40.000 TO STA. 29+20.000
UC-17	PROFILE SHEET, STA. 29+20.000 TO STA. 36+00.000
UC-18	PROFILE SHEET, STA. 36+00.000 TO 38+75.405 (-L2-), STA. 10+00.000 TO STA. 10+64.000 (-Y23-)
UC-19	STANDARD DETAILS
UC-20	STANDARD DETAILS
UC-21	STANDARD DETAILS
UC-22	STANDARD DETAILS
UC-23	STANDARD DETAILS

PROJECT NOTES:

- ELEVATIONS SHOWN ARE IN METERS ABOVE MEAN SEA LEVEL.
- TYPICAL DEPTH OF COVER FOR BURIED PIPELINE SHALL BE 0.91m UNLESS OTHERWISE SHOWN OR SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE CITY OF ASHEVILLE FOR ANY ADDITIONAL INFORMATION ON EXISTING WATER AND SEWER UTILITIES.
- LOCATIONS OF EXISTING SHOWN UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXACT LOCATION, ORIENTATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO EXCAVATION FOR THE PIPELINE.
- COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON THE NCDOT LOCALIZED PLANE COORDINATE SYSTEM FOR THIS PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
- UNLESS OTHERWISE SHOWN OR SPECIFIED, ALL WATER PIPELINE TRENCH BEDDING SHALL BE TYPE A, IN ACCORDANCE WITH DETAIL 101.
- THE MINIMUM TRENCH WIDTHS SHALL BE IN STRICT ACCORDANCE WITH THE 'TRENCH EXCAVATION LIMITS' AS SHOWN ON THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ALL GRADE ELEVATIONS SHOWN ARE ALONG THE PIPELINE ALIGNMENT.
- THE CONTRACTOR SHALL PLACE 75mm TO 100mm OF SAND OR SCREENINGS ON ALL ASPHALT SURFACES THAT ARE AFFECTED BY THE INSTALLATION OF THE PIPELINE.
- THE CONTRACTOR SHALL REINSTALL ALL SIGNS AS REQUIRED BY NCDOT ALONG STATE ROADWAYS AND CITY STREETS AS REQUIRED BY THE CITY OF ASHEVILLE.
- THE CONTRACTOR SHALL REMOVE AND REINSTALL ALL EXISTING FENCE MATERIALS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SHEETING REQUIRED FOR THE INSTALLATION OF THE PIPELINE. ALL EXCAVATIONS SHALL BE KEPT WITHIN THE DESIGNATED EASEMENT/RW WIDTHS. EXCAVATION WITHIN PAVED AREAS SHALL BE KEPT TO A MINIMUM SHEETING SHALL BE INSTALLED AS REQUIRED TO PROTECT EXISTING UTILITIES.
- ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF ASHEVILLE AND THE REGIONAL WATER AUTHORITY OF ASHEVILLE, BUNCOMBE, AND HENDERSON CURRENT DESIGN GUIDELINES UNDER THE INSPECTION OF THE CITY OF ASHEVILLE AND BY A LICENSED N.C. UTILITY CONTRACTOR.
- PLACED RIP-RAP SHALL HAVE A MINIMUM DEPTH OF 600mm AND SHALL HAVE A LAYER OF TYPE II GEOTEXTILE SEPARATOR PLACED BETWEEN THE SOIL AND STONE.
- CITY OF ASHEVILLE WILL FURNISH DESCRIPTION OF EASEMENTS UPON REQUEST.
- RESTRAINED PIPE JOINTS SHALL BE INSTALLED BETWEEN THE STATIONS INDICATED ON THE DRAWINGS. IF A BEND OR FITTING IS RELOCATED BY THE CONTRACTOR FOR HIS CONVENIENCE THEN THE REQUIRED LENGTH OF RESTRAINED JOINTS SHALL BE MAINTAINED, AT NO ADDITIONAL COST TO THE OWNER. IF ADDITIONAL BENDS OR FITTINGS ARE INSTALLED BY THE CONTRACTOR FOR HIS CONVENIENCE, THEN THE CONTRACTOR SHALL INSTALL THE REQUIRED LENGTH OF RESTRAINING JOINTS AS DETERMINED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
- PIPELINE ALIGNMENT SHOWN IS BASED ON STANDARD FITTINGS AVAILABLE FOR DUCTILE IRON PIPE, JOINT. DEFLECTIONS SHALL NOT EXCEED 75 PERCENT OF MANUFACTURERS RECOMMENDED DEFLECTION.
- DETECTOR TAPE IS REQUIRED FOR ALL BURIED PIPELINE. SEE SPECIFICATION FOR REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE A MEANS TO KEEP ALL NEW PIPING COMPLETELY ISOLATED FROM EXISTING PIPING UNTIL ALL NEW PIPING HAS BEEN TESTED, DISINFECTED AND ACCEPTED FOR SERVICE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE MEANS FOR FLUSHING NEW PIPELINES.
- A THRUST RESTRAINT DESIGN PRESSURE OF 2.41 MPa SHALL BE USED FOR THIS PROJECT.
- ALL MANHOLE COVERS FOR WATER LINE SHALL READ 'WATER' WITH APPROPRIATE LOGOS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE, AND MATERIALS OF ALL EXISTING WATERLINES TO BE CONNECTED TO THE PROPOSED PIPELINE PRIOR TO EXCAVATION FOR THE PIPELINE OR ORDERING MATERIALS.
- THE CONTRACTOR SHALL RELOCATE WATER SERVICES TO THE PROPOSED WATER MAIN AS REQUIRED TO MAINTAIN SERVICE. SECTIONS OF EXISTING MAINS TO BE ABANDONED SHALL REQUIRE RELOCATED SERVICES CONFORMING TO NCDOT STANDARD SPECIFICATIONS. ALL RELOCATIONS SHALL BE ANTICIPATED AND PERFORMED AS PART OF THE PROJECT CONSTRUCTION CONTRACTOR TO VERIFY EXISTING SERVICE LOCATION AND SIZE PRIOR TO INSTALLATION/RELOCATION.
- ALL UTILITIES SHALL BE CONSTRUCTED WITH MINIMUM SEPARATION REQUIREMENTS AS SPECIFIED IN NCDOT STANDARD SPECIFICATIONS AND APPLICABLE STATE GUIDELINES.
- ALL EXISTING FIRE HYDRANTS REMOVED AS PART OF CONSTRUCTION ACTIVITIES SHALL BE STOCKPILED FOR REMOVAL FROM THE PROJECT SITE. CONTRACTOR SHALL COORDINATE REMOVAL WITH CITY PERSONNEL.

LEGEND

MATERIALS		SYMBOLS	
 GRADE OR EARTH	 ROCK	--- W --- EXIST. WATER LINE	— PROPOSED PIPELINE
 ASPHALT PAVING	 STEEL	--- SS --- EXIST. SANITARY SEWER	— SANITARY SEWER MANHOLE
 SAND	 INSULATION	--- EXIST. STORM DRAIN	— PROPOSED BUTTERFLY VALVE ASSEMBLY
 GRAVEL	 WATER SURFACE	--- P --- EXIST. ELECTRICAL	— PROPOSED GATE VALVE ASSEMBLY
 CONCRETE	 GRATING	--- T --- EXIST. TELEPHONE	— PROPOSED AIR RELEASE VALVE ASSEMBLY
 CONC. FILL OR GROUT	 CHECKERED PLATE	--- G --- EXIST. GAS	— STORM DRAINAGE STRUCTURE
 CONC. MASONRY UNIT	 GLASS	— FH EXIST FIRE HYDRANT	— REDUCER
 BRICK	 WOOD BLOCKING	--- O --- EXIST SAN SEWER MH	— BLOWOFF ASSEMBLY
		--- X --- EXIST. BUTTERFLY VALVE	— BACKFLOW PREVENTER
		--- X --- EXIST. GATE VALVE	— PROPOSED FIRE HYDRANT
		WM □ EXIST. WATER METER	— PROPOSED WATER METER
		PP ○ EXIST POWER POLE	— SOIL BORING/AUGER PROBE
		CO ○ EXIST. SS CLEANOUT	— SR SEISMIC LINE

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