

UTILITY CONSTRUCTION

Kimley»Horn

P.O. BOX 33068
RALEIGH, N.C. 27636-3068

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

PROJECT REFERENCE NO. EB-4707B	SHEET NO. UC-3
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: Alan Rainey	2/3/2017

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 2012.
2. THE EXISTING WATER AND SEWER UTILITIES BELONG TO THE CITY OF DURHAM AND THE ORANGE WATER AND SEWER AUTHORITY (OWASA).
3. ALL WATERLINES SHALL BE INSTALLED IN 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 SHALL BE INSTALLED IN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER 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. 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 OPPROTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
6. THE DRAWINGS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, ORIENTATION, ELEVATION, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, ORIENTATION, ELEVATION, AND TYPE MATERIAL OF THE EXISTING UTILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING UTILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING UTILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITONAL COST TO THE DEPARTMENT.

7. THE CONTRACTOR SHALL COORDINATE THE RELOCATION AND/OR PROTECTION OF THE EXISTING GAS, CABLE, COMMUNICATION, ELECTRIC, ETC. UTILITIES WHERE IN CONFLICT WITH THE PROPOSED WATER AND SEWER UTILITIES, AT NO ADDITIONAL COST TO THE OWNER.
8. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE DRAWINGS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
9. 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.
10. 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.
11. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF WATER AND SEWER IMPROVEMENTS WITH OTHER WORK INCLUDING GRADING, RETAINING WALL PLACEMENT, BRIDGE WORK, ETC. TO AVOID DAMAGE TO THE UTILITIES.
12. 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.
13. 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.
14. THE CONTRACTOR SHALL REFER TO THE "UTILITIES BY OTHERS" PLANS FOR PROPOSED GAS, TELECOMMUNICATION, AND POWER UTILITY RELOCATIONS.
15. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY AS NECESSARY TO SUPPORT POWER POLES.

PROJECT SPECIFIC NOTES:

1. ALL PROPOSED WATER LINE 2" IN DIAMETER SHALL BE COPPER PIPE. ALL PROPOSED WATER LINE 4"-12" IN DIAMETER SHALL BE DI (DUCTILE IRON PUSH-ON) PC 350 RESTRAINED JOINT WATER LINE. ALL PROPOSED WATER LINE 16" IN DIAMETER AND LARGER SHALL BE DI (DUCTILE IRON PUSH-ON) PC 250 RESTRAINED JOINT WATER LINE.
2. ALL PROPOSED GRAVITY SEWER AND FORCE MAIN LINES 12" IN DIAMETER AND SMALLER SHALL BE PROTECTO 401 LINED DI (DUCTILE IRON PUSH-ON) PC 350 PIPE. ALL PROPOSED GRAVITY SEWER AND FORCE MAIN LINES 16" IN DIAMETER AND GREATER SHALL BE PROTECTO 401 LINED DI (DUCTILE IRON PUSH-ON) PC 250 PIPE.
3. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE ENCASEMENT.
4. ALL VALVES 16 INCHES AND SMALLER SHALL BE 250 PSI RESILIENT SEAT GATE VALVES. ALL VALVES LARGER THAN 16 INCHES SHALL BE CLASS 150B BUTTERFLY VALVES, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
5. PRIOR TO DEFLECTING THE WATER LINE AROUND THE EXISTING OR PROPOSED DRAINAGE STRUCTURE OR ANY OTHER DEFLECTION, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER. THE CONTRACTOR'S COST FOR ALL WORK ASSOCIATED WITH THESE DEFLECTIONS IS INCIDENTAL TO THE WATER LINE PAYMENT ITEM.
6. ALL WATER AND SEWER SERVICES TO BE REMOVED THAT ARE CONNECTED TO ACTIVE MAINS SHALL BE ABANDONED FROM SERVICE TO MAIN. ABANDONMENT OF WATER SERVICES SHALL INCLUDE EXCAVATING DOWN TO CORPORATION STOP, TURNING IT OFF AND CUTTING SERVICE LINE FREE FROM CORPORATION STOP. THE METER, IF PRESENT, SHALL BE RETURNED TO WATER MANAGEMENT DEPARTMENT AND THE METER NUMBER VERIFIED AND CODED PROPERLY AS RETURNED. UTILITY SERVICE ABANDONMENTS WILL TAKE PLACE PRIOR TO BEGINNING UTILITY CONSTRUCTION WORK FOR A PROJECT. ANY EXCAVATION AS PART OF ABANDONING UTILITIES WILL REQUIRE BACKFILLING PER CITY OF DURHAM STANDARDS. ABANDONMENT OF SANITARY SEWER SERVICE LINES SHALL CONSIST OF EXCAVATING DOWN TO THE SERVICE CONNECTION TO THE MAIN, CUTTING THIS CONNECTION AND INSTALLING A WATERTIGHT PLUG IN THE MAIN. THE SERVICE LINE AND ALL CLEAN-OUT RISERS ON THE SERVICE LINE SHALL BE REMOVED. UTILITY SERVICE ABANDONMENTS WILL TAKE PLACE PRIOR TO BEGINNING UTILITY CONSTRUCTION WORK FOR A PROJECT. ANY EXCAVATION AS PART OF ABANDONING UTILITIES WILL REQUIRE BACKFILLING PER CITY OF DURHAM STANDARDS.
7. A BYPASS PLAN SEALED BY A NC PROFESSIONAL ENGINEER MUST BE SUBMITTED TO THE CITY OF DURHAM PRIOR TO PUMPING OPERATIONS TO COORDINATE WITH ADMINISTRATIVE ENGINEERING STAFF. PUMPS SHOULD BE SIZED TO HANDLE THE PEAK DAILY FLOW (2.5 TIMES THE AVERAGE DAILY FLOW) FOR THE LINE OR AREA OF WORK. THE CONTRACTOR SHALL SECURE PUMPS FROM A PUMP SUPPLIER ACCORDING TO THE DETERMINED FLOW REQUIREMENTS. PUMPING OPERATIONS MUST BE MONITORED 24 HOURS A DAY FOR EACH DAY OF THE PUMPING OPERATION BY QUALIFIED PERSONNEL IN ORDER TO RESPOND TO PROBLEMS OR FAILURES. 100% REDUNDANCY IS REQUIRED FOR PUMPING OPERATIONS. IN ADDITION, BACKUP PUMPS ARE TO BE CONNECTED TO THE BYPASS FORCE MAIN TO FACILITATE IMMEDIATE USE UPON FAILURE OF THE PRIMARY PUMPS.
8. A THRUST RESTRAINT PRESSURE OF 200 PSI SHALL BE USED FOR THIS PROJECT.

K:\RAL_Roadway\01036290 - EB-4707 Part B\PlanUtilities\Plan View Sheets\EB-4707_ut_notes_UC03_pshdgn 12/14/2016