

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT ITS EXPENSE, UNLESS PREVIOUSLY OBTAINED BY THE OWNER(S) AND PROVIDED AT THE PRECONSTRUCTION CONFERENCE.
2. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR WRITTEN CONSENT OF THE UTILITY OWNER OR THEIR AUTHORIZED REPRESENTATIVE MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE UTILITY OWNER(S) AND PUBLIC. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE WORK ZONE TRAFFIC CONTROL PLANS AND SHALL ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, TO ENSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK.
5. ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO NCDEQ REGULATIONS, AND TO CURRENT UTILITY OWNER REGULATIONS, STANDARDS, AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN FROM EACH UTILITY OWNER AND ENGINEER APPROVED SUBMITTALS FOR ALL MATERIALS PROPOSED TO BE INCORPORATED IN THE WORK PRIOR TO ORDERING ANY MATERIALS OR COMMENCING UTILITY CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY OWNERS LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION, OR AS OTHERWISE SPECIFIED HEREIN. TOWN OF SOUTHERN PINES INSPECTIONS CAN BE REACHED VIA PHONE AT 910-692-1983. TOWN OF ABERDEEN PUBLIC WORKS CAN BE REACHED VIA PHONE AT (910) 944-4504.
7. ALL PIPE LENGTHS ARE MEASURED ALONG A HORIZONTAL PLANE. SANITARY SEWER LINES ARE MEASURED TO CENTER OF MANHOLE.
8. THE CONTRACTOR SHALL PROVIDE ALL STAKEOUT SURVEY. ANY EXISTING STAKEOUT OR BENCHMARKS SHALL NOT BE RELIED UPON BY THE CONTRACTOR.
9. COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD 83).
10. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE UTILITY OWNER PRIOR TO CONSTRUCTION.
11. LOCATIONS OF EXISTING SHOWN UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE SIZE, DEPTH, MATERIAL AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND TO TAKE WHATEVER STEPS ARE NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER AND THE OWNER(S) ASSUME NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. PRIOR TO DIGGING ON AND OFF SITE, THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY "NC 811" 1-800-632-4949. THE CONTRACTOR SHALL CONTACT ANY UTILITY OWNER WHOSE UTILITIES ARE NOT LOCATED BY "NC 811" FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR TO PRECONSTRUCTION CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.
12. DEPTH AND LOCATION OF BURIED DATA AND TELECOMMUNICATIONS CABLES (FIBER OPTICS AND CONVENTIONAL) ARE KNOWN TO VARY DUE TO INSTALLATION TECHNIQUES. CONTRACTOR SHALL COORDINATE ITS WORK WITH CONFLICTING CABLES AS NECESSARY FOR INSTALLATION OF THE PROPOSED WATER AND SEWER. COORDINATION WITH EXISTING UTILITIES SHALL BE INCLUDED IN THE PROJECT SCHEDULE. COORDINATION AND PHASING RELATED TO EXISTING UTILITIES ARE INCLUSIVE TO THE PROJECT AND NO SPECIFIC OR ADDITIONAL PAYMENT SHALL BE MADE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY PROVIDERS ANY SUPPORT OF EXISTING UTILITY POLES OR OTHER ITEMS AS REQUIRED FOR TRENCH EXCAVATION. ALL COSTS OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR.
14. THE CONTRACTOR SHALL VERIFY THE VOLTAGES OF ALL ELECTRICAL UTILITIES AND FOLLOW THE APPROPRIATE OSHA STANDARDS WHEN WORKING IN THEIR VICINITY.
15. UNLESS OTHERWISE INDICATED, ALL GRADE ELEVATIONS SHOWN ARE ALONG THE PIPE CENTERLINE.
16. ALL PAVEMENT CUTS SHALL BE SAWCUT OR MILLED ALONG A CONTINUOUS STRAIGHT LINE AND REPAVED PER NCDOT REQUIREMENTS AND AS SPECIFIED HEREIN.
17. TRAFFIC ISLANDS, CURBS, CONCRETE DRIVEWAYS, AND OTHER CONCRETE SURFACINGS SHALL BE REPLACED TO THE FIRST EXPANSION JOINT BEYOND THE TRENCH EXCAVATION LIMITS AND TO THE FULL WIDTH. ALL CONCRETE WORK SHALL MATCH EXISTING.
18. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SHEETING AND/OR ACTIVE SHORING REQUIRED FOR THE INSTALLATION OF THE UTILITY. ALL EXCAVATIONS SHALL BE KEPT WITHIN THE LIMITS SPECIFIED. EXCAVATION WITHIN PAVED AREAS SHALL BE KEPT TO A MINIMUM. SHEETING AND/OR ACTIVE SHORING SHALL BE INSTALLED AS REQUIRED TO PROTECT EXISTING UTILITIES.
19. PLACED RIP-RAP SHALL HAVE A MINIMUM DEPTH OF 1.5 TIMES THE MAXIMUM STONE DIAMETER AND SHALL HAVE A LAYER OF TYPE II GEOTEXTILE SEPARATOR PLACED BETWEEN THE SOIL AND STONE.
20. IMMEDIATELY PRIOR TO DISTURBANCE, CONTRACTOR SHALL OBTAIN DIGITALLY RECORDED VIDEO OF THE UTILITY ALIGNMENTS INCLUDING EACH DRIVEWAY, SIDEWALK, SIGN, LANDSCAPING, ETC., TO BE DISTURBED. EACH SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER. VIDEO SHALL BE SUBMITTED TO THE UTILITY OWNER(S) AND THE ENGINEER PRIOR TO WORK.
21. CONTRACTOR SHALL MAINTAIN A MEANS FOR ACCESS TO EACH PROPERTY, RESIDENCE, AND BUSINESS AT ALL TIMES.

22. DURING CONSTRUCTION, EMERGENCY VEHICLE APPARATUS ACCESS AND ACCESS TO FIRE HYDRANTS SHALL BE MAINTAINED AT ALL TIMES.

23. ALL CONSTRUCTION SHALL BE LIMITED TO STREET RIGHTS-OF-WAY AND OBTAINED EASEMENTS. WHERE THE CONTRACTOR DETERMINES THAT ENCROACHMENT ONTO PRIVATE PROPERTY IS NECESSARY AND AN EASEMENT HAS NOT BEEN PROVIDED, THE CONTRACTOR SHALL CONTACT INDIVIDUAL PROPERTY OWNERS AND OBTAIN WRITTEN APPROVAL FOR THAT ENCROACHMENT. SUCH APPROVALS SHALL BE PROVIDED TO THE UTILITY OWNER, NCDOT, AND THE ENGINEER.

24. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AND TENNANTS AT LEAST 7 DAYS PRIOR TO CONSTRUCTION THAT CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THEIR AREA.

25. CONTRACTOR SHALL REMOVE AND REPLACE ALL CONFLICTING MAIL BOXES, CULVERTS, HEADWALLS, ORNAMENTAL STRUCTURES, SIGNS, HARDCAPING, ETC. WITHIN THE RIGHT OF WAY OR PERMANENT EASEMENT UNLESS OTHERWISE SHOWN ON THE PLANS OR IN THE CONTRACT DOCUMENTS. CONFLICTING TREES WITHIN THE RIGHT OF WAY SHALL BE REMOVED AND NOT REPLANTED.

26. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL TRAFFIC CONTROL MEASURES AND PUBLIC NOTICE AS REQUIRED BY NCDOT ALONG STATE ROADWAYS AND AS REQUIRED BY TOWN OF SOUTHERN PINES OR TOWN OF ABERDEEN ALONG TOWN STREETS AND PUBLIC PARKING AREAS.

27. TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED OR COVERED WITH ROAD PLATES AT THE END OF EACH WORK DAY. OPEN ENDS OF INSTALLED PIPE SHALL BE CAPPED WITH A WATERTIGHT CAP DESIGNED FOR THE INTENDED USE.

28. CONTRACTOR SHALL MAKE PAVEMENT REPAIRS WITHIN 3 DAYS OF PAVEMENT CUT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

29. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL TOOLS, APPLIANCES, CONSTRUCTION EQUIPMENT AND MACHINERY, SURPLUS MATERIALS, AND DEBRIS AND SHALL RESTORE TO ORIGINAL CONDITION OR BETTER ALL PROPERTY NOT DESIGNATED FOR ALTERATION BY THE CONTRACT DOCUMENTS.

30. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS FOR ALL UTILITY CONSTRUCTION AND MEET ALL UTILITY OWNER REQUIREMENTS PRIOR TO PLACING THE PIPELINE(S) IN SERVICE OR, IF SO AUTHORIZED BY THE UTILITY OWNER, IMMEDIATELY THEREAFTER. SEE UC PROJECT SPECIAL PROVISIONS FOR RECORD DRAWING REQUIREMENTS.

UTILITY NOTES:

1. UTILITY SEPARATION REQUIREMENTS:
 - A. DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - B. WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE OWNER. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - C. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - D. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - E. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, DIP MATERIALS & A CONCRETE CRADLE IN ACCORDANCE WITH DETAIL 4/UC-3D SHALL BE INSTALLED.
 - F. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
2. MINIMUM PIPE COVER FOR DISTRIBUTION WATER MAINS SHALL BE 3 FEET AND TRANSMISSION WATER MAINS SHALL BE 5 FEET, UNLESS DUCTILE IRON PIPE IS USED AND LESS COVER IS SPECIFICALLY SHOWN ON DRAWINGS OR AS APPROVED BY THE UTILITY OWNER OR ENGINEER.
3. TRENCH EXCAVATION SHALL BE PER DETAIL 3/UC-3D. BEDDING AND BACKFILL FOR SERVICE LINES SHALL BE PER DETAIL 1/UC-3D, AND BEDDING AND BACKFILL FOR MAINS SHALL BE IN ACCORDANCE WITH DETAIL 2/UC-3D.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING USERS THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE COORDINATED WITH AND TAKE PLACE AT A TIME AND DATE ACCEPTABLE TO THE UTILITY OWNER. A 72 HOUR ADVANCE NOTICE SHALL BE PROVIDED TO AFFECTED CUSTOMERS.
5. ALL UTILITY PIPELINES FOR THIS PROJECT SHALL BE MATERIAL AND SIZE AS NOTED ON THE DRAWINGS.
6. ALL PRESSURIZED FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT WITH PRESSURE RATING EQUAL TO OR HIGHER THAN HOST PIPE, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
7. ALL MECHANICAL JOINTS SHALL BE FITTED WITH WEDGE-TYPE MECHANICAL RESTRAINT ACCESSORY KITS DESIGNED FOR THE INTENDED USE AND MATERIAL, AS APPROVED BY UTILITY OWNER. RESTRAINED JOINT PIPING SHALL BE INSTALLED TO THE STATIONS SHOWN ON THE PROFILE DRAWINGS AT MINIMUM. DEVIATIONS FROM THE DESIGN MAY RESULT IN ADDITIONAL REQUIRED RESTRAINED LENGTH. SEE GENERAL NOTE 2.
8. PIPE ALIGNMENT SHOWN IS BASED ON STANDARD DUCTILE IRON MECHANICAL JOINT FITTINGS. JOINT DEFLECTIONS SHALL NOT EXCEED 75 PERCENT OF MANUFACTURER'S RECOMMENDED DEFLECTION. CONTRACTOR SHALL ADJUST PIPELINE ALIGNMENT AND DEFLECT JOINTS AS NECESSARY TO ACCOMMODATE THE STANDARD BENDS SHOWN.

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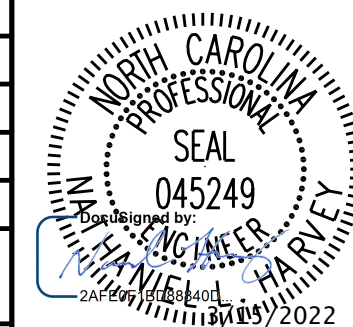
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9. DETECTABLE WARNING TAPE AND TRACER WIRE IS REQUIRED FOR ALL BURIED PIPE AND SHALL BEAR THE APPROPRIATE AWPA COLORING AND TEXT FOR THE APPLICABLE UTILITY. INSULATED 14GA TRACER WIRE SHALL BE INSTALLED ALONG ALL PIPELINES AND SHALL BE ACCESSIBLE FROM THE FINISHED GRADE WITHIN ALL VALVE BOXES, MANHOLES, AND OTHER END POINTS OF TRACER WIRE. SPLICES IN TRACER WIRE SHALL BE MADE WITH SPLICE CONNECTORS DESIGNED FOR THE INTENDED PURPOSE AND IN ACCORDANCE WITH TRACER WIRE MANUFACTURER'S RECOMMENDATIONS.

10. ALL MANHOLE COVERS AND VALVE BOX LIDS FOR WATER SHALL READ "WATER", ALL MANHOLE COVERS AND VALVE BOX LIDS FOR SEWER SHALL READ "SEWER", AND ALL SHALL BE IN ACCORDANCE WITH NCDOT AND APPLICABLE UTILITY OWNER STANDARDS AND DETAILS.

11. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE OWNER(S) AND ENGINEER.

12. EXISTING WATER SERVICES SHALL REMAIN IN SERVICE AT ALL TIMES UNTIL THE PROPOSED MAIN IS TESTED AND PHASED INTO SERVICE.

GENERAL SEQUENCE:

1. FOR EACH WATER LINE AND SEWER LINE RELOCATION, THE CONTRACTOR SHALL PROVIDE THE UTILITY OWNER WITH A DETAILED INSTALLATION, CONNECTION, AND SERVICE INTERRUPTION PLAN FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE RELOCATION. AT A MINIMUM, EACH PLAN SHALL ADDRESS THE FOLLOWING:

- A. SEQUENCE OF CONSTRUCTION OPERATIONS.
- B. PROCEDURE FOR FLUSHING, TESTING, AND DISINFECTION OF ALL AFFECTED PIPING AND VALVES, AS REQUIRED BY THE UTILITY OWNER.
- C. PHASING AND SCHEDULE FOR ALL CONNECTIONS, INCLUDING PLANNED SERVICE OUTAGES, DURATION, AND CONTINGENCY PLAN.

2. NO INTERRUPTION OF SERVICE WILL BE PERMITTED UNTIL THE FOREGOING PLAN HAS BEEN APPROVED BY THE UTILITY OWNER. THE UTILITY OWNER'S PERSONNEL SHALL OPERATE THE UTILITY OWNER'S EXISTING FACILITIES INVOLVED IN THE INTERRUPTIONS OF SERVICE.

3. PLANNED SERVICE CONNECTION INTERRUPTIONS SHALL LAST NO LONGER THAN 8 HOURS UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER. ALL INTERRUPTIONS OF SERVICES SHALL BE COORDINATED WITH AND SCHEDULED AT TIMES ACCEPTABLE TO THE UTILITY OWNER.

4. WRITTEN WATER SERVICE INTERRUPTION NOTICES SHALL BE PROVIDED TO ALL AFFECTED CUSTOMERS AT LEAST 72 HOURS PRIOR TO EACH PLANNED INTERRUPTION.

TRANSMISSION MAIN SEQUENCE:

1. ALL REQUIREMENTS LISTED UNDER "GENERAL SEQUENCE" NOTES SHALL APPLY TO THE TOWN OF SOUTHERN PINES TRANSMISSION MAIN.

2. INSTALL PROPOSED TRANSMISSION WATER MAIN TO THE MAXIMUM EXTENT POSSIBLE, FILL/FLUSH VIA THE JUMPER SHOWN ON SHEET UC-4, AND PASS ALL ACCEPTANCE TESTS REQUIRED BY OWNER PRIOR TO MAKING FINAL CONNECTIONS. FILL, FLUSH, AND TEST WITHIN A SCHEDULE AND DURATION ACCEPTABLE TO THE OWNER AND THE DEPARTMENT.

4. TAKE ALL PREPARATIONS NECESSARY TO MINIMIZE SHUTDOWN DURATION PRIOR TO INITIATING SHUTDOWN, INCLUDING BUT NOT LIMITED TO TRENCHING AND EXCAVATION FOR CONNECTIONS, REMOVAL OF TEMPORARY PIPING AND BLOWOFF(S), ENSURING ALL NECESSARY EQUIPMENT, PERSONNEL, AND MATERIALS ARE ON SITE.

5. INSTALL PROPOSED LINE STOP SHOWN ON SHEET UC-9, ALLOWING CONCRETE FOR THRUST RESTRAINT AND FOOTING TO CURE MIN 7-DAYS. ACTIVATE LINE STOP AND REPLACE 18" BUTTERFLY VALVE SHOWN ON SHEET UC-9. LINE STOPPAGE AND VALVE REPLACEMENT MUST TAKE PLACE BETWEEN THE HOURS OF 11:00PM AND 5:00AM. REMOVE LINE STOP.

6. MAKE FINAL CONNECTIONS AT -W1- STA 96+50 AND -W1- STA 10+00. FINAL CONNECTIONS MUST BE MADE SIMULTANEOUSLY ON A SINGLE WEEKEND DAY BETWEEN 9:00AM AND 4:00PM. DISINFECT FINAL CONNECTION COMPONENTS BY SWABBING/SPRAYING AND VISUALLY LEAK CHECK PRIOR TO LINE ACTIVATION.

7. ABANDON 18" TRANSMISSION MAIN BY DRAINING ALL WATER AND CAPPING WITH DI MJ CAPS.